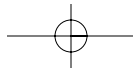
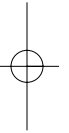
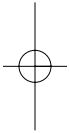
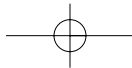


Website Development & Hosting



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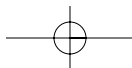
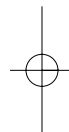
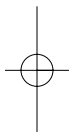
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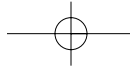
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PREFACE

Over the last 10 years, NESIS has been involved in capacity-building programmes in Africa through training workshops, developing technical manuals and sharing experiences. At the annual NESIS meeting, held in March 2001, presentation emerged as a priority area among countries engaged in capacity building. In response to their concerns, a Technical Working Group (TWG) was appointed to develop a proposal for increased training opportunities on the presentation of statistical data. A technical team at the NESIS Regional Centre in Harare is now developing training material on how to organise, analyse and present statistical data, and on how to communicate this information among countries.

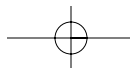
The following year, a workshop on Statistics, Publications, and Information Systems, held in Nairobi in February, focused on producing information products and services for consumers and users of statistics. The NESIS Regional Centre in Harare, under the sponsorship of the Working Group on Education Statistics of the Association for the Development of Education in Africa (ADEA), organised the workshop.

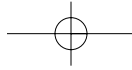
During the Nairobi workshop, two sessions on Cyberspace Communication and Website Development focused on using modern communication tools to enhance interaction among countries, working groups and the NESIS branches. During the Website Development session, participants were introduced to website communication and participated in an interactive lab session. The session covered the following topics:

- **Introduction to Microsoft FrontPage 2000** – a guided tutorial on the use of FrontPage 2000 in which participants learnt the use of various menus and functions of the programme.
- **Using FrontPage to create a simple website** – participants managed to experiment with the knowledge gained in the first session by creating sample test pages.

The ultimate goal is for countries to be able to link the databases and statistical evaluation reports being generated from their ministries of education to individual websites, and to network these websites through the Internet, making information available to all. NESIS will make available a series of tutorials on its website: <http://www.unesco.org/nesis> or <http://nesis.easynet.fr>.

It is against this background that NESIS developed a manual on Website Development and Hosting as a reference guide for future capacity-building workshops. Additional material coming from feedback from workshop participants and resource persons will be incorporated in it. In addition, NESIS has produced a manual on Communicating in Cyberspace.





THE NESIS PROGRAMME



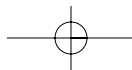
Initiated in 1991 as a project to develop technical modules, the National Education Statistical Information Systems (NESIS) programme has become a multi-donor, Africa-wide capacity-building programme to develop self-sustainable statistical information systems for education policy needs. NESIS is to play a catalytic role in the development process by bringing together institutions, agencies and experts in joint ventures and networks as agents of change.

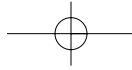


To date, over 47 countries have participated in different NESIS activities. These activities include diagnostic surveys, formulating national plans, and developing and testing of methods and tools in priority areas. Team experts from different countries meet regularly in technical workshops to share experiences. Parallel to the activities at country level, NESIS has compiled and published generic technical modules based on national experiences.



Facilitated by the NESIS Regional Centre and its branch offices, technical working groups (TWG) are now conducting capacity-building activities in diverse areas of importance to specific countries in the respective sub-regions. It has become a comprehensive country policy driven programme, supported by the participating African countries and directly financed by 11 agencies.



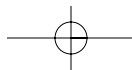


ACKNOWLEDGEMENTS

My sincere gratitude goes to the ADEA WGES and NESIS programmes for the central role they have played in the production of this manual, and which they continue to play in the manual's current and future enhancements. In particular I would like to thank the following:

- Dr. Ko-Chih R. Tung, the ADEA WGES Regional Co-ordinator for Sub-Saharan Africa and Director and Representative, a.i. UNESCO Office Harare – for his constant advice throughout the concept, planning, development, and production of the manual, and his consistent interest in the area of information and communication technology.
- The NESIS Regional Centre team, comprising of Rudo C. Rhuwaya, Creed Chingwena, Simplisio Rwezuva, Tegegn N. Wako, and Charlotta Mockrish – for all the technical and administrative input that has made the publication of this manual a reality.
- The Nairobi workshop participants – their participation in performing the tasks and feedback has helped to improve the overall content of the manual.
- All staff at the UNESCO Office Harare, for all the moral support during the production of the manual.
- My wife and children for accomodating my long after work hours at the office.

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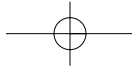


TABLE OF CONTENTS



1. Introduction

Page

1



2. Web Hosting

6



3. Web Design

12



4. Domain Naming

25



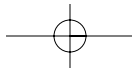
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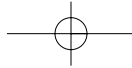
28



6. Tutorial – Website Development Using FrontPage 2000

29





INTRODUCTION

What Is a Website?

Essentially, a website is a way to present oneself online. Your website is a place on the Internet where anyone in the world can visit whenever they want to find out more about you, ask you questions, give you feedback, or even buy your products. In a realm where the Internet is thought of as the world's biggest trade show, your website would be your booth.

Why Use a Website?

In the past, it was trendy to have a website. Today, however, having a website is a necessity. People are using the web for everything, from researching schoolwork to buying dinner. It is quick, convenient, and you never need to leave your desk. Even people who prefer to shop off-line are researching products on the web. Nowadays when people are trying to find you, the first place they look is on the web – and if they don't find you, they will probably find someone else!

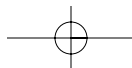
Your website can be used for a large number of tasks such as:

- Making public announcements
- Providing support to your customers
- Receiving feedback from your visitors
- Sharing/distributing files and images
- Selling your products
- Acting as a point of presence.

With a website, you will be able to do these things for people around the world at any time of day or night. You have the potential to become a household name 10,000 miles away.

How a Website Works

A website is a collection of files that reside on a computer connected to the Internet. When people visit your site, they are actually contacting the computer that is hosting your site, and that computer (called a web server) gives the visitors the files they want to see. Most normal computers do not have the power or the software needed to respond constantly to all the requests made by all the visitors to a site. Those that have would still require a fast and solid connection to the Internet to keep up with all the requests. Most people and small companies do not have the resources to run a web server and instead opt for virtual **web hosting**.



The Web



The web represents a particular way of accessing and moving through the Internet. It is based on **hypertext**, which allows the user to jump to other places within a document, to other documents, and to other sites. Unlike traditional Internet access that requires the user to move in a strict hierarchical/linear fashion, the web lets the user bounce through cyberspace, jumping in at the beginning, middle, end or anywhere else within a location or document, as long as that particular location or document is linked.



To use the web, you need a **browser**. There are two basic kinds: **line or text browsers**, such as **Lynx®**, and **graphical browsers**, such as **Netscape®** and **Internet Explorer®**. Text browsers let users see the text files of documents mounted on the web; graphical browsers let users see the text and also access any other kinds of files that might appear, such as photographic files, sound files, or video files.



Sometimes the browser is referred to as the client and the machine holding the data or information being accessed is called the server.



The physical appearance of the document and how much of it you can access depends on several things:

- the kind and version of browser that you have
- the way in which the data within the document was entered (that is, the kind of markup or modelling language used, and the version or standard of that language)
- the way you have set your preferences
- the hardware and software available on your computer
- permissions and rights (password-protected sections that are accessible only to authorised visitors).



Hypertext



Websites and pages are joined by the use of hypertext links. These links are embedded in the **source code** of the documents offered on the Web and appear to the user as coloured, shaded, underlined, or otherwise distinguishable items (text, icons, and pictures). Clicking on the coded item activates the link, causing the user to jump to another part of the document, to hear an audio file, to view a video or to move to another computer anywhere in the world. These links have to be built into the document by the creator.



Addresses



To access an Internet site via the web, you need to know the URL, the **Uniform Resource Locator**. The URL has **standard parts**:

- **a protocol**
- **a machine name**
- **a path/file name.** (Occasionally, a port may be given as well.)

The protocol indicates the **application (telnet, gopher, ftp, nntp, http, etc.)** being used to access the machine (site) and file. URLs that are not persistent undergo frequent changes. The file you accessed yesterday may be moved today and removed tomorrow. This has a tendency to frustrate novice users. With a bit more experience you will learn to track down files that have moved and accept the complete removal of files as “just the way it is on the web”.

Addresses on the web are often case, space and symbol sensitive. You should always enter them exactly.

Browsers

The browser governs what you can do within a particular site on the web. Many of the graphical browsers have incorporated a variety of Windows® features such as the ability to select and save portions of text, save files, print files and electronic mail.

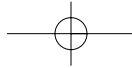
Browsers such as Netscape® and Internet Explorer® let the user set personal preferences. These personal preferences, especially those relating to colour and font, will have an impact on the appearance of your document on the user’s machine. Conversely, your personal preferences should be set to standard when you are using your browser/computer to create web documents or what you see may not be what anyone gets.

Occasionally, you may go to a website and see absolutely nothing, although your browser tells you the document loading is complete. The creator may have placed colour and font settings in her document that are incompatible with your personal preferences – similar to wearing blue in front of a blue screen. In fact, the document is there and it may highlight and/or print normally.

Remember, the browser only interprets the code to the best of its ability. The closer that code is to standard, the closer you will come to seeing the coded item in the way in which its creator intended.

Source Code

Web documents consist of displayed content and source code. The most common source codes used to create web pages include **hypertext markup language (html)**, **XML**, and **Cold Fusion**. Html is a formatting language. It allows the creator to code a document so that a displayed version of the document will look somewhat like the original – for instance, so that **bold type** will stand out. Other kinds of markup language, such as **sgml**, are meta-languages, which do much more than simply format the documents. They may allow the content of a document or documents to be manipulated in various ways, creating, for example, a table of contents, a nominal index, or a collection of items based on a requested set of criteria. The more you know about markup language and how it works, the more efficiently and effectively you will be able to move through the web and access needed materials.



Realities



Constructing a website, whether for an organisation or for an individual, is a lot like constructing a house. Your first thoughts should not be of buying the nails, the wood and the tools, or telling your friends the new address. There are more important things to think about first. What kind of a house would you like? Is it appropriate to your lifestyle? Can you afford to maintain it? Does it fit in with the neighbourhood? Are there zoning regulations to consider? Will you need help building it?



In terms of a website, the questions you should ask yourself are similar.

Before beginning, accept two basic realities:



- Except for pages whose access are restricted through appropriate authentication and authorisation procedures (such as usernames and passwords), you have **no control** over the way in which users will proceed through your website.
- You have **no control** over the way in which your page will appear in every kind of application, browser, or computer that may be used to view your site.

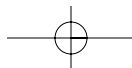


If you can truly accept these realities, you will spend far more time on the **content, functionality** and **usefulness** of your site, and far less time worrying about constructing a perfectly designed, beautiful site.



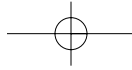
Contents

- This is probably the single most important decision to make. It has an impact on design, on links, on content, and even on site maintenance.
- If you are putting up institutional or organisational information, are you the source of that information? Most institutions and organisations have particular departments or units that are responsible for the currency and accuracy of particular pieces of information. You should not usurp their authority by adding your own version to your web page. Instead, you should link to the authoritative source, after receiving any necessary permissions.
- If you have volumes of text with few or no links, you need to put it on a **gopher** or **ftp** site, or link your site to a database of information. Web-based organisation is non-linear, and non-hierarchical. Structure of the information should be based on standards and on a thorough knowledge of how automated robots, wanderers and spiders index web-based information and sites.
- Just as libraries may have several editions of the same book and indicate in their catalogues when new items are on order, **you may want a spot on your site for archived materials** (older versions of information or older items) **and an indication that future items are expected.**
- There is nothing less conducive to return visits than a dead-end site. Self-contained sites are often nothing more than advertisements or elaborate brochures; once you have seen them, you don't bother with them again.



- The homepage and all adjacent pages need to look and feel similar to the user. Consistency is reassuring and allows the user to scan materials efficiently once they have a feel for the site's layout. As well, many users may come to a page on your site without passing through your homepage. Always, always, always, make sure they can tell immediately where they are, and where your homepage is. Location, as they say, is everything.
- When you build a house, you want tight joints and square corners – it is the same on a website. Make sure your content is coherent and logical. The most important information needs to be up front. Who, what, when, where, why, how, and how much will provide a quick guide for creators and users.
- People all over the world can and will access your site. Is what you are saying appropriate to a global audience, whose first language is not English (have you incorporated a translation function?), who may not understand cute icons, contractions or slang expressions? Are your addresses and telephone numbers complete enough for a global audience? Is the organisation of your information based on standards, or did you simply organise it in a way you liked? Do you have applets that eat bandwidth and cause the download time to increase beyond the patience of the average user? W3, the World Wide Web Consortium, has issued [Web Content Accessibility Guidelines 1.0](http://www.w3.org/TR/WAI-WEBCONTENT/), which discuss some of these issues and more. The site address is <http://www.w3.org/TR/WAI-WEBCONTENT/>.
- Be discreet. While you might think it is cool to have your picture on a website, you may be courting trouble. Personal information such as the name and address of your significant other, your children's names and ages, your hobbies, etc. is just that – personal. Not everyone on the Internet is there for legitimate purposes. Stalkers, harassers, pornographers, and con men will use all the information they can find. **Identity theft is a growing problem.**
- Remember your users have rights as well. Do not ask for unnecessary personal information and under no circumstances use such things as bots, intelligent agents, and cookies to collect and/or disseminate personal information without the users' informed consent.
- Make sure the important links are the first links the users see. Add a table of contents of some sort (this might be a navigation bar, a site map, a tab index).





WEB HOSTING



What Is Web Hosting?

To have a website on the Internet you first need to have a web server. Unfortunately, owning a web server can be costly and requires technical expertise that most businesses do not have. This is where web hosts come in. Web hosting companies provide the equipment and other necessary technical resources without the headaches that come with individual hosting.



A web host is like the landlord of building. A landlord rents out storefronts to various businesses. The businesses decorates and run their stores differently, and do not worry about the maintenance of the building. In a similar way, a web host rents out space on a web server (or entire web servers), to various businesses. Each business builds its own website and never has to worry about the maintenance of the web server.



In other words, the web host provides the place on the Internet where your website lives. It is a lot cheaper than buying your own server, and you do not have to hire any technical staff.



Choice of Server

Shared Server

Shared servers offer clients the ability to host their website on a powerful, professionally managed server, at a low monthly cost. Shared servers provide individual websites with redundant connectivity, 99 percent uptime and 24/7 monitoring for a fraction of the cost of a dedicated server.



- *Intended Clients and Uses* – Shared servers are an excellent solution for entry-level hosting needs. Designed to host small-scale e-commerce sites and static web pages, shared servers offer first-time webmasters without advanced skills a reliable web presence.
- *Server Response Time* – The activity of other sites and the number of other sites on the server can affect shared server performance.
- *Flexibility and Scalability* – As you are restricted to the server box space, upgrade capacity is primarily focused on disk size and throughput.
- *Software* – Shared servers are limited to the software the hosting provider installs.
- *No technical skills required to use a shared server.*

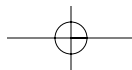


Shared server hosting provides a cost-effective way for entry-level webmasters to maintain a reliable web presence without extensive technical resources.



Virtual Private (VPS) Server

Virtual Private Servers (VPS) combine the flexibility of a dedicated server with the economical prices of shared server hosting. VPS websites reside in private and protected areas on a shared



server. They maintain an independent set of applications, allowing the client to share the expenses of hardware and network connections while maintaining a secure allocation of RAM and CPU.

- *Intended Clients and Uses* – Virtual Private Servers are intended to meet entry-to-mid-level hosting needs. The potential functions of a VPS are wide and varied. It can be used as a simple FrontPage server or as an advanced, database-driven commerce server.
- *Server Response Time* – Virtual environments are not affected by the activity of other sites on the server, but their allocated resources and bandwidth limit site performance.
- *Flexibility and Scalability* – Upgrade capacity is primarily focused on disk size, number of processors and throughput.
- *Software* – As you maintain your private section of the server, you are able to incorporate many software options.
- *Moderate technical skill level is required* – UNIX administration, basic programming, and database capabilities are needed to operate a VPS.

Virtual Private Servers provide customers with an independent set of web applications to handle more advanced web-based applications, without the costs associated with a dedicated server.

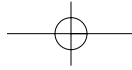
Dedicated Server

Dedicated servers are a single computer fully devoted to the needs of one customer. They allow for faster access to information and provide the customer with greater flexibility to add advanced database and e-commerce applications. As the customer does not share RAM, disk space or a connection to the router, dedicated servers provide customers with the most advanced web hosting solutions.

- *Intended Clients and Uses* – Dedicated servers are designed for mid-to-advanced-level hosting needs such as “mission critical” and high-traffic sites. The servers can handle heavy data-driven sites, advanced e-commerce programmes, video streaming and multimedia programmes.
- *Server Response Time* – Dedicated server response time depends solely on the volume of activity on the customer’s website.
- *Flexibility and Scalability* – All aspects of the platform (disk space, memory, etc.) are upgradeable since dedicated servers are single-client machines.
- *Software* – Unlimited ability to download software programmes to your server.
- *Advanced technical knowledge is recommended* – Experienced programming and database capabilities.

Dedicated servers provide high levels of security, connectivity and scalability to support high-volume and mission-critical web-based applications.





Procedure for Building a Web Presence



Choose a Domain Name for Your Site and Register It

The first thing you need to do when establishing a web presence is decide on a Domain Name and register it. Choosing the right Domain Name is very important, as it directly affects how easy it is for potential visitors to find your site. Try for something that is easy to recognise, easy to remember, and to easy to guess. For example, if your business is Children's Toys then childrenstoys.com would be a good Domain Name since it is logical, easy to remember, and easy to spell. It is also a good idea to think of alternate Domain Names in case the first one you think of is taken.



If you are not planning on building your website right away, you might still want to consider registering your Domain as soon as possible. Thousands of Domain Names are registered every day, and there's no guarantee that yours will still be around when you decide to build your site. See the section on *Domain Naming* later in the manual.



Build and Publish Your Website

Building your own website can be gratifying, but does not have to be difficult. Currently, a lot of software packages are available – such as Microsoft FrontPage 2000 – that make creating and publishing your website relatively quick and painless. Others include Macromedia Dreamweaver, HotDog Web Editor, CofeeCup software, Stone Studio, and Adobe Golive.



Promote Your Website

To really succeed on the web, you need more than just a website. You need “traffic” – a steady stream of visitors coming to check out your products, services, information, and everything else you offer online. In order to draw people to your site, you need to be listed in the web's most popular search engines and web directories. Services like www.netannounce.com can help you get traffic to your site by listing your site with search engines and giving you tips for making your site easier to find online.

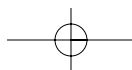


Analyse the Results

The success of a website is generally measured by how many visitors it gets. Your web server automatically logs each time someone accesses one of your web pages. Looking at these logs can tell you how much traffic your site gets, how popular different parts of your site are, and when your site is the busiest. Analysing your traffic can even give you an idea of which parts of your site may need to be improved or expanded.



Most web hosting companies have built-in tools such as [Urchin](http://www.urchin.com) that you can use to help you analyse your traffic. Once you become a customer, it is easy to log into a custom control panel and access current site statistics.



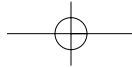
E-commerce

E-commerce is the buying and selling of goods and services across the Internet. An e-commerce site can be as simple as a catalogue page with a phone number. Or, it can range all the way to a real-time credit card processing site where customers can purchase downloadable goods and receive them on the spot. E-commerce merchants can range from the small business with a few items for sale all the way to a large online retailer such as Amazon.com and eBay.com.

Some definitions relating to e-commerce

- **Ad Clicks:** Number of times that a viewer clicks on an ad banner.
- **Address Verification:** Process used by a credit card processor or other party to verify that customers' ordering addresses matches their records.
- **Automated Clearing House:** An ACH transaction is an electronic fund transfer through the Federal Reserve Bank from a checking or savings account.
- **Authorisation:** The process of checking the validity and available balance of a customer's credit card before the transaction can be accepted.
- **Bandwidth:** The amount of information (web pages, text, graphics, video, sound, etc) that is downloaded through a connection.
- **Banner:** An interactive ad placed on a web page that is linked to an external advertiser's website or another internal page within the same website.
- **"Card Not Present" Merchant Account:** An account that allows merchants to process credit cards without a face-to-face transaction with the purchaser.
- **Certificate Authority:** A Certificate Authority (CA) is a third party who verifies the identity of merchants and their sites. The certificate authority issues a certificate (also called a digital certificate or an authentication certificate) to an applicant company, which can then put the certificate up on its site.
- **Commerce Server:** The server that manages and maintains all transactional and backend data for a commerce website.
- **Cross Promotion:** The promotion of a website through other traditional forms of advertising such as magazines, newspapers, radio, TV, billboards, etc.
- **Delayed Settlement Processing:** Once a transaction has been authorised, the merchant must ship the hard goods before a transaction can be settled. Delayed settlements are stored online until the merchant selects the transactions for settlement.
- **Digital Certificate:** A Digital Certificate issued by a Certificate Authority certifies that a merchant and a particular website are connected, just as a photo on your driver's licence connects your identity with your personal details. A Digital Certificate verifies to the shopper that the virtual store is actually associated with a physical address and phone number, increasing the shopper's confidence in the authenticity of the merchant.





Website Development & Hosting



➤ **Distribution Channel:** The method through which a product is sold, including retailers, cataloguers, Internet commerce websites, etc.



➤ **Domain Name:** The unique name of an Internet website. For example, yahoo.com is a Domain Name.



➤ **Download:** The transfer of information from the Internet to the browsing computer.



➤ **Drop Ship:** The shipping of a product directly from the manufacturer to the customer without requiring the retailer to carry inventory.



➤ **Electronic Software Distribution:** Software that can be purchased and downloaded directly from the Internet.



➤ **Hit:** Each time a web server sends a file to a browser, a “hit” is recorded in the server file logs.



➤ **Homepage:** The first page through which a viewer usually enters a website.



➤ **HTTP:** Hyper Text Transfer Protocol is a protocol that allows computers to communicate with each other.



➤ **Keywords:** Words that viewers searching for information may use. Keywords can be purchased from search engine companies so that an appropriate ad banner may be displayed when a viewer searches for a particular word.

➤ **Merchant Account:** A “bank account” established with a payment processor for the settlement of credit card transactions. Any merchant who wants to take credit card orders must establish a merchant account. Internet merchants need a “Card Not Present Merchant Account.”

➤ **Off-line Transaction Processing:** Capture of order and credit card information for later authorisation and transaction processing through a traditional card swipe terminal or through a computer.

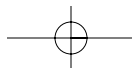
➤ **Order Confirmation:** An email message notifying a customer that an order has been received and will be processed.

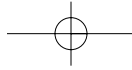
➤ **Order Management System:** A system that accepts orders and initiates a process that results in the outbound shipment of a finished good.

➤ **Real Time Credit Card Processing:** Online authorisation of a credit card number in real time, informing the merchant that the card has been approved.

➤ **Settlement:** Once the goods have been shipped to the customer, the merchant can key a transaction for settlement at which time the customer’s credit card is charged for the transaction and the proceeds are deposited into the merchant account.

➤ **SSL:** Secure Socket Layer is an encryption technology on the server that scrambles important data such as credit card numbers and order information when it is being stored or passed from one computer to another.

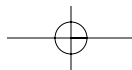
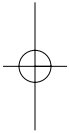
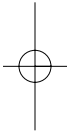


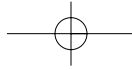


- **Shipping Confirmation:** An email message notifying a customer that an order has been shipped.
- **URL:** Uniform Resource Locator describes the “address” for a document on the Internet.

Companies that provide free web hosting services include:

1. Yahoo! Geocities
2. Free Servers.com
3. Webnax.com





WEB DESIGN



- Make sure your pages are not crowded with so many bells and whistles that your users cannot find what they want. **White space is important and you should use it effectively.**



- Each page on your site should be functional (just as the kitchen in your house is designed for cooking, the dining room is designed for dining, etc.).



- Many people do not have fast connections to the Internet. Graphics take forever to load. Many serious researchers shut off the image-display function to speed up load times and avoid the distraction of advertisements and other extraneous information. **If you have to use graphics, make them minimal and/or provide a text path.**



- Blinking text, running footers, and tinny music may be popular with designers; they are not popular with serious web users.



- As noted, this is the web – you are supposed to be making hypertext connections, not linear and hierarchical connections.

- If you designed your page for Netscape 4.5® on a high resolution monitor using a specific web editor that may be the only configuration in which it looks good. Try checking your page in several different browsers such as Internet Explorer 5® and on several levels of computers before mounting it. You may be surprised at how it appears.

Standards and Guidelines

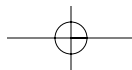
If you want to have your page mounted on a server, you will have to follow the standards and guidelines laid down by the server's owner. The owner of the web server shares legal liability for the content mounted.

Intellectual property, as it relates to the ownership of materials mounted on the server, permission for certain links to be made, third party ownership of technology/applications used for document creation, etc. are matters of valid concern for server owner, website creator and website maintainer. Once mounted, your page is available worldwide.

If you have violated someone's intellectual property rights, he or she will find out about it. Every document, design, file and the like has an owner. You must not mount anything on your page that is owned by someone else without written permission. **Further, you must not indicate you are the property owner if, in fact, you are not.**

Generally speaking:

- All documents should be coded to the accepted markup standard.
- All documents/pages should provide a link to the site homepage.
- The URL should appear within every document/page.
- All documents/pages should carry accurate creation and revision dates.



- If you must have large graphics, you must provide estimated times of download.
- Any required viewers, plug-ins, applications, and other utility tools should be noted, and, if possible, links should be provided to allow users to download needed programmes.

Maintenance

Maintenance is where the real cost of a website surfaces. The cost is hidden in the amount of time it takes to answer questions, check links, rebuild old pages and build new ones.

Every page should have a mailto: and/or some other form of email contact for the creator and/or maintainer of the page/site.

- Mail should be read and answered at least every two to three days (more often if your page is an institutional or organisational homepage).

Links to other sites should be checked frequently to determine if the URLs are still active and the sites are still useful.

- Especially pages that are heavily used.

Pages should be updated/revised/alterd on a regular basis.

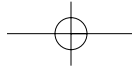
URL-naming structure should be based on standards and on a thorough knowledge of how automated robots, wanderers and spiders index websites.

Anatomy of a Web Page

Before you start thinking about coding a web page, try to place yourself in the proper mindset. First, you are creating something that will be, potentially, available to anyone in the world with access to the Internet and a browser. Second, you are writing for a non-traditional media; your page should not look and act like a book or a pamphlet. You may want similar information on your page, but you will have to re-create that information for a global web environment. Third, you will have to maintain your page. **Unlike a book, a web page is never finished and is always under construction.** *As new documents appear and disappear on the web, your page should change. As new standards develop, your page should change. As new technologies appear, your page should change.*

In its most basic form, a web page is created in plain ASCII text using any standard text editor, and saved as an html file, which can be opened and interpreted by a web browser. How the page looks, operates, is indexed and interacts with the client will depend in part on how you code the page – so coding is important. All pages should be coded to accepted standards and the policies of your institution, organisation or Internet service provider. Checking with your webmaster before you start may save you time and energy later.





Tags and Attributes



Tags are designed to tell the computer how to interpret the document you created for viewing by a human reader. Html is a formatting language and the tags are its tools. There are dozens of different tags, and **html writers must be careful not to use tags that are browser or platform specific.**



In addition, the tags may be affected by the defaults set on your computer when you create the document and on the client computer when the user views the document.



The format of your text is not governed by the codes generated through keyboard commands. In other words, **hitting return will not necessarily space lines in an html document.** All formatting must be done with standard tags that are understood by the client's browser.



Most tags come in pairs to indicate the beginning of the format and the end of the format. For example, `<p>` indicates the commencement of a paragraph and `</p>` closes the paragraph. Many people are careless with the end tags and may not include them. This is not a good habit to develop for a couple of reasons. First, browsers are designed to work with standard code. Although some browsers are more forgiving than others, remember, you do not know what browser your potential users may have and you would like that page to work as you expect it to. Second, a newer form of markup language, XML, is currently making great strides in the web world and gaining in popularity. **XML requires that tags opened must be closed.**



Various attributes (size, shape, position etc.) can be used with some tags to further enhance or clarify the format.

Among the types of tags that will help you are:



- character tags, which alter the appearance of the characters found between them and, in the case of header tags, may have an impact on how the document is indexed by automated indexers



- divider tags, which help you divide portions of your text or portions of your page into paragraphs, by adding a single line between lines of text, or by using horizontal rules as spacers

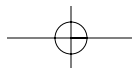


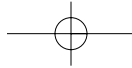
- alignment tags, which align the text between them; for example, centering it on a page



- list tags, which come in various kinds, allow you to indent, provide numbered lists and bulleted lists.

Perhaps most important of all are the **linking or anchor tags** that allow your client to make the hypertext jumps the web is known for.





Basic Layout

You begin a document by entering the html element. Your document is placed between two tags that tell the server to interpret that document as hypertext.

```
<html> </html>
```

The head element contains descriptive information about the document.

```
<head> </head>
```

Between the head tags, there should be **<title> </title>** title tags. Title tags are extremely important to the proper indexing of your page by automated web indexers; you should choose the text they enclose with care. The information to be “served” to clients should be contained within body tags – one following the head information and the other probably immediately preceding the close html tag at the bottom of your document. **<body> </body>**

Thus, the basic layout of an html file is:

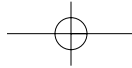
```
<html>
<head>
<title>Title of the document</title>
</head>
<body>
<p>Displayed title of the document</p>
<p>The content and information</p>
</body>
</html>
```

Applications Integrating Desktop Publishing Functionality

Below are some applications used for web design without using html directly – what you create is what will be seen on a web browser (the html is automatically generated in the background). Using the html view, however, you can edit parts of the site by modifying, adding, or deleting the code as appropriate.

1. Microsoft FrontPage
2. Macromedia DreamWeaver
3. Adobe Golive
4. HotDog Web Editors
5. CofeeCup software
6. Stone Studio





Ten Good Deeds in Web Design



1. Place your **name and logo** on every page and make the logo a link to the homepage (except on the homepage itself, where the logo should not be a link: never have a link that points right back to the current page).



2. Provide **search** if the site has more than 100 pages.



3. Write straightforward and simple **headlines** and **page titles** that clearly explain what the page is about and that will make sense when read out of context in a search engine results listing.



4. Structure the page to **facilitate scanning** and help users ignore large chunks of the page in a single glance: for example, use grouping and subheadings to break a long list into several smaller units.



5. Instead of cramming everything about a product or topic into a single, infinite page, use **hypertext to structure the content space** into a starting page that provides an overview and several secondary pages that each focus on a specific topic. The goal is to allow users to avoid wasting time on those subtopics that do not concern them.



6. Use **product photos**, but avoid cluttered and bloated product family pages with many photos. Instead have a small photo on each of the individual product pages and link the photo to one, or more, larger ones that show as much detail as users need. This varies depending on type of product. Some products may even need zoomable or rotatable photos, but reserve all such advanced features for the secondary pages. The primary product page must be fast and should be limited to a thumbnail shot.



7. Use **relevance-enhanced image reduction** when preparing small photos and images: instead of simply resizing the original image to a tiny and unreadable thumbnail, zoom in on the most relevant detail and use a combination of cropping and resizing.



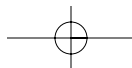
8. Use **link titles** to provide users with a preview of where each link will take them, *before* they have clicked on it.



9. Ensure that all-important pages are **accessible for users with disabilities**, especially blind users.

10. **Do the same as everybody else**: if most big websites do something in a certain way, then follow along since users will expect things to work the same on your site. Remember **Jakob's Law of the Web User Experience**: users spend most of their time on *other* sites, so that's where they form their expectations for how the web works.

Finally, always **test your design with real users** as a reality check. People do things in odd and unexpected ways, so even the most carefully planned project will learn from usability testing.



Other Points to Consider

1. Using Frames

Splitting a page into frames may be confusing for users since **frames break the fundamental user model of the web page**. The user cannot bookmark the current page and return to it (the bookmark points to another version of the frameset), URLs stop working and printouts become difficult.

2. Cutting-Edge Technology

Exercise caution on the use of the latest web technology. You may attract a few nerds, but **mainstream users will care more about useful content and your ability to offer good customer service**. Using the latest and greatest before it is even out of beta is a sure way to discourage users: if their system crashes while visiting your site, you can bet that many of them will not be back. **Unless you are in the business of selling Internet products or services, it is better to wait until some experience has been gained with respect to the appropriate ways of using new techniques**. When desktop publishing was young, people put 20 fonts in their documents: let's avoid similar design bloat on the web.

3. Scrolling Text, Marquees, and Constantly Running Animations

Minimise the inclusion of page elements that move incessantly. Moving images have an overpowering effect on the human peripheral vision. A web page should not emulate a well-decorated Christmas tree in its constant attack on the human senses: give your user some peace and quiet to actually read the text! Avoid <BLINK> tag.

4. Complex URLs

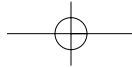
Even though machine-level addressing like the URL should never have been exposed in the user interface, it is there and we have found that users actually try to decode the URLs of pages to infer the structure of websites. Users do this because of the horrifying lack of support for navigation and sense of location in current web browsers. Thus, **a URL should contain human-readable directory and file names that reflect the nature of the information space**.

Also, users sometimes need to type in a URL, so try to minimise the risk of typos by using short names with all lower-case characters and no special characters (**many people don't know how to type a ~**).

5. Orphan Pages

Make sure that all pages include a clear indication of what website they belong to since users may access pages directly without coming in through your homepage. For the same reason, every page should have a link up to your homepage as well as some indication of where they fit within the structure of your information space.





6. Long Scrolling Pages

Although users are willing to scroll beyond the information that is visible on the screen when a page comes up, all critical content and navigation options should be on the top part of the page. Also, punctuate your long page with back-to-top links, at appropriate points. Where possible, minimise the length of your pages to ease readability.



7. Lack of Navigation Support

Don't assume that users know as much about your site as you do. They always have difficulty finding information, so they need support in the form of a strong sense of structure and place. Start your design with a good understanding of the structure of the information space and communicate this structure explicitly to the user. Provide a site map and let users know where they are and where they can go. Also, you will need a good **search** feature since even the best navigation support will never be enough.



8. Non-Standard Link Colours

Links to pages that have not been seen by the user are blue; links to previously seen pages are purple or red. Unless absolutely necessary, retain these colours since the ability to understand what links have been followed is one of the few navigational aides that is standard in most web browsers. Consistency is key to teaching users what the link colours mean.



9. Outdated Information

Budget to hire a web gardener as part of your team. You need somebody to root out the weeds and replant the flowers as the website changes. Most people would rather spend their time creating new content than on maintenance. In practice, maintenance is a cheap way of enhancing the content on your website since many old pages keep their relevance and should be linked into the new pages. Of course, some pages are better off being removed completely from the server after their expiration date.



10. Overly Long Download Times Caused by Complex Graphics

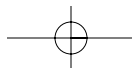
Traditional human-factors guidelines indicate 10 seconds as the maximum response time before users lose interest. On the web, users have been trained to endure so much suffering that it may be acceptable to increase this limit to 15 seconds for a few pages.

Even websites with high-end users need to consider **download times**: it has been found that many users access websites from home computers in the evening because they are too busy to surf the web during working hours. Bandwidth is getting worse, not better, as the Internet adds users faster than the infrastructure can keep up.



11. Temporarily Disabling the Use of the *Back* Button

The *Back* button is the lifeline of the web user and the second-most used navigation feature (after hypertext links). Users happily know that they can try anything on the web and *always* be saved by a click or two on *Back* to return them to familiar territory.



Except for those sites that break *Back* by:

- opening a **new browser window** (some users assume these are pop-up advertisements and close the window before anything is displayed)
- using an **immediate redirect**: every time the user clicks *Back*, the browser returns to a page that bounces the user forward to the undesired location
- **preventing caching** such that the Back navigation requires a fresh trip to the server; all hypertext navigation should be sub-second and this goes double for backtracking

12. Opening New Browser Windows

Minimise the number of **New Windows** on your site. Those visitors to your site who will require new windows most of the time will open them. Designers open new browser windows on the theory that it keeps users on their site. The strategy may be self-defeating, however, since it disables the *Back* button, which is the normal way users return to previous sites. Users often don't notice that a new window has opened, especially if they are using a small monitor where the windows are maximised to fill up the screen. So a user who tries to return to the origin will be confused by a greyed-out *Back* button.

Consistency is one of the most powerful usability principles: when things always behave the same, users do not have to worry about what will happen. Instead, they *know* what will happen, based on earlier experience. Every time you release an apple over Sir Isaac Newton, it will drop on his head. That's *good*.

The more users' expectations prove right, the more they will feel in control of the system and the more they will like it. And the more the system dashes users' expectations, the more they will feel insecure.

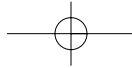
Interaction consistency is an additional reason for not opening new browser windows: the standard result of clicking a link is that the destination page replaces the origination page in the *same* browser window. Anything else is a violation of the users' expectations and makes them feel insecure in their mastery of the web.

13. Lack of Biographies

Web studies have shown that users want to know the people behind information on the web. In particular, biographies and photographs of the authors help make the web a less impersonal place and increase trust. Personality and point-of-view often win over anonymous bits coming over the wire.

Sites with by-lines often forget the link to the author's biography and a way for the user to find other articles by the same author. Instead, a by-line is made into a mailto: link as opposed to a link to the author's biography. Two reasons:

- it is much more common for a reader to want to know more *about* an author (including finding the writer's other articles) than it is for the reader to want to contact the author – sure, *contact* info is often a good part of the biography, but it should not be the primary or only piece of data about the author



Website Development & Hosting

- it breaks the conventions of the web when clicking on blue underlined text spawns an email message instead of activating a hypertext link to a new page.



14. Lack of Archives

Old information is often good information and can be useful to readers. Even when new information is more valuable than old information, there is almost always *some* value to the old stuff, and it is very cheap to keep it online. Estimates show that having archives may add about 10% to the cost of running a site but increase its usefulness by about 50%.



15. Moving Pages to New URLs

Anytime a page moves, you break any incoming links from other sites. Avoid hurting the people who send you free customer referrals by clear notification of the new URL and, where possible, incorporate an automatic redirect at the old site.



16. Headlines that Make No Sense Out of Context

Headlines and other micro-content must be written differently for the web than for old media: they are **actionable items** that should help users navigate.



Headlines are often removed from the context of the full page and used in tables of content (e.g., homepages or category pages) and in search engine results. In either case, the writing needs to be very plain and meet two goals:



- tell users what is at the other end of the link with no guesswork required
- protect users from following the link if they would not be interested in the destination page (so no teasers – they may work once or twice to drive up traffic, but in the long run they will make users abandon the site and reduce its credibility)



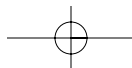
17. Jumping at the Latest Internet Buzzword

Although it is a good idea (depending on the site's mission and objectives) to have *community*, *chat*, *free email*, *3D sitemaps*, *auctions* etc, these are by no means magic bullets. Most Internet buzzwords have some substance and might bring small benefits to those few websites that can use them appropriately. Most of the time however, implementing the latest buzzword may hurt most websites. The opportunity cost is high from focusing attention on a fad instead of spending the time, money, and management bandwidth on improving basic customer service and usability.



18. Slow Server Response Times

Slow response times are the worst offender against web usability: in a survey evaluating how many companies are able to attain “the 10-second response time”, major sites had an 84% violation score. Bloated graphic design was the original offender in response time. Some sites still have too many graphics or too big graphics; or they use applets where plain or Dynamic HTML would have done the trick.



The growth in web-based applications, e-commerce, and personalisation often means that **each page view must be computed on the fly**. As a result, the experienced delay in loading the page is determined not simply by the download delay (bad as it is) but also by the server performance. Sometimes building a page also involves connections to back-end mainframes or database servers, slowing down the process even further. Users do not care *why* response times are slow. All they know is that the site does not offer good service: slow response times often translate directly into a reduced level of trust and they *always* cause a **loss of traffic as users take their business elsewhere**. So invest in a fast server and get a performance expert to review your system architecture and code quality to optimise response times.

19. Anything that Looks Like Advertising

Selective attention is very powerful, and web users have learned to stop paying attention to any ads that get in the way of their goal-driven navigation.

Unfortunately, users also ignore legitimate design elements that look like prevalent forms of advertising. After all, when you *ignore* something, you don't study it in detail to find out what it is. Therefore, it is best to avoid any designs that look like advertisements.

20. Prioritise: Good Content Bubbles to the Top

If everything is equally prominent, then *nothing* is prominent. It is the job of the designer to **advise the users** and guide them to the **most important or most promising choices** (while ensuring their freedom to go anywhere they please).

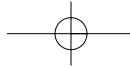
On today's web, the most common mistake is to make everything too prominent: over-use of colours, animation, blinking, and graphics. Every element of the page screams, "look at me" (while all the other design elements scream "no, look at *me*"). **When everything is emphasised, nothing is emphasised.**

But it's just as bad to make everything equally bland.

Here are some ways of using **prioritisation to guide users**:

- **Editorially select** the most important stories or items. Give them bigger headlines or more prominent placement – an old principle that newspapers have used for more than 100 years.
- Use **sales statistics** to discover the best-selling products and place them on top of search listings. By definition, most customers will be looking for the best-sellers. It is user-hostile to bury them in a search listing that is organised by some impenetrable information retrieval algorithm (or worse: sorted by SKU numbers or other internal attributes that don't matter to users).
- Use **server traffic** to track areas of the site that are seeing unusually strong activity and place links to these areas on the homepage. Not only will you save users clicks, you will also make people aware of the current buzz.





Website Development & Hosting



➤ Use reputation management to **predict who will write the best contributions**. If somebody was highly rated in the past, then their new material deserves featured placement.



➤ Simply **highlight the most popular items** in a list that is sorted by another criterion.

➤ On slowly changing pages, mark **new** items with a little “new” glyph. This is not necessary on pages that change all the time (say, newspaper homepages) since the assumption is that most items will be new on such pages.

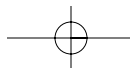
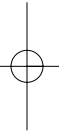
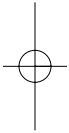


There are two main types of prioritisation:

1. In **lists of items**, make sure the ones the user is most likely to want come out on top or stand out.
2. Content that is **deep within the site** sometimes needs to be brought out and featured at higher levels to make users understand what’s new or hot.



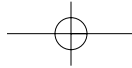
The goal is to give users **more of what they need**. And easier access to what they need. This is not always the same as giving people what they *want*.



Five Criteria for Evaluating Web Pages

Evaluation of Web Documents	How to Interpret the Basics
<p>1. Accuracy of Web Documents</p> <ul style="list-style-type: none"> ➤ Who wrote the page and can you contact the writer? ➤ What is the purpose of the document and why was it produced? ➤ Is this person qualified to write this document? 	<p>Accuracy</p> <ul style="list-style-type: none"> ➤ Make sure author provides email or a contact address/phone number ➤ Know the distinction between author and webmaster
<p>2. Authority of Web Documents</p> <ul style="list-style-type: none"> ➤ Who published the document and is it separate from the webmaster? ➤ Check the domain of the document, what institution publishes this document? ➤ Does the publisher list his or her qualifications? 	<p>Authority</p> <ul style="list-style-type: none"> ➤ What credentials are listed for the author(s)? ➤ Where is the document published? Check URL domain
<p>3. Objectivity of Web Documents</p> <ul style="list-style-type: none"> ➤ What goals/objectives does this page meet? ➤ How detailed is the information? ➤ What opinions (if any) are expressed by the author? 	<p>Objectivity</p> <ul style="list-style-type: none"> ➤ Determine if page is a mask for advertising; if so information might be biased ➤ View any web page as you would an infomercial on television. Ask yourself why was this written and for whom?
<p>4. Currency of Web Documents</p> <ul style="list-style-type: none"> ➤ When was it produced? ➤ When was it updated? ➤ How up-to-date are the links (if any)? 	<p>Currency</p> <ul style="list-style-type: none"> ➤ How many dead links are on the page? ➤ Are the links current or updated regularly? ➤ Is the information on the page outdated?
<p>5. Coverage of the Web Documents</p> <ul style="list-style-type: none"> ➤ Are the links (if any) evaluated and do they complement the documents' theme? ➤ Is it all images or a balance of text and images? ➤ Is the information presented cited correctly? 	<p>Coverage</p> <ul style="list-style-type: none"> ➤ If page requires special software to view the information, how much are you missing if you don't have the software? ➤ Is it free or is there a fee to obtain the information? Is there an option for text only, or frames, or a suggested browser for better viewing?





Website Development & Hosting

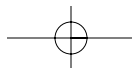


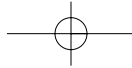
Evaluation of Web Documents

How to Interpret the Basics

Putting it all together

- **Accuracy.** Ensure that your page lists the author and institution that published the page and provides a way of contacting them.
- **Authority.** Ensure that your page lists the author's credentials; the domain is preferred (.edu, .gov, .org, or .net).
- **Objectivity.** Ensure that your page provides accurate information with limited advertising and is objective in presenting the information.
- **Currency.** Ensure that your page is current and updated regularly (as stated on the page) and the links (if any) are also up to date.
- **Coverage.** Ensure that you can view the information properly – not limited to fees, browser technology, or software requirement.





DOMAIN NAMING

What Is a Domain Name?

Your Domain Name is your address on the web. Just as people use your phone number to call you on the phone, your Domain Name allows people to access your site on the web. Clever, simple, or easy to remember Domain Names are most desirable as they can play a large part in attracting visitors to your site. Most Domain Names end with “.com” (such as microsoft.com), but other extensions such as “.net” and “.org” are also available. In addition, Domains can be used with your email accounts, allowing you to send and receive email with addresses such as “support@yourcompany.com”

Internet Domain Namespace

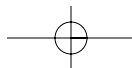
The root (the topmost level) of the Internet domain namespace is managed by an Internet name registration authority, which delegates administrative responsibility for portions of the domain namespace to organisations that connect to the Internet.

Beneath the root DNS domain lie the top-level domains that are assigned by organisation and by country, and are managed by the Internet name registration authority. These domain names follow the International Standards Organization (ISO) 3166. Each organisation is assigned authority for a portion of the domain namespace and is responsible for administering, subdividing, and naming the DNS domains and computers within that portion of the namespace.

Subdividing is an important concept in DNS. Creating subdivisions of the domain namespace and private TCP/IP network DNS domains supports new growth on the Internet and the ability to continually expand name and administrative groupings. Generally, subdivisions are based on departmental or geographic divisions. There are three types of top-level domains:

- **Organisational domains.** These are named by using a 3-character code that indicates the primary function or activity of the organisations contained within the DNS domain.
- **Geographical domains.** These are named by using the 2-character country/region codes established by the International Standards Organization (ISO) 3166.
- **Reverse domains.** This is a special domain, named in-addr.arpa, that is used for IP address-to-name mappings (referred to as *reverse lookup*). There is also a special domain, named IP6.INT, used for IP version 6 reverse lookups. For information, see RFC 1886.

Abbreviations are reserved for use by organisations and by countries. The most commonly used top-level DNS name components for organisations and countries are described in the table below:



Top-Level Name Component of the Domain Naming System (DNS) Hierarchy



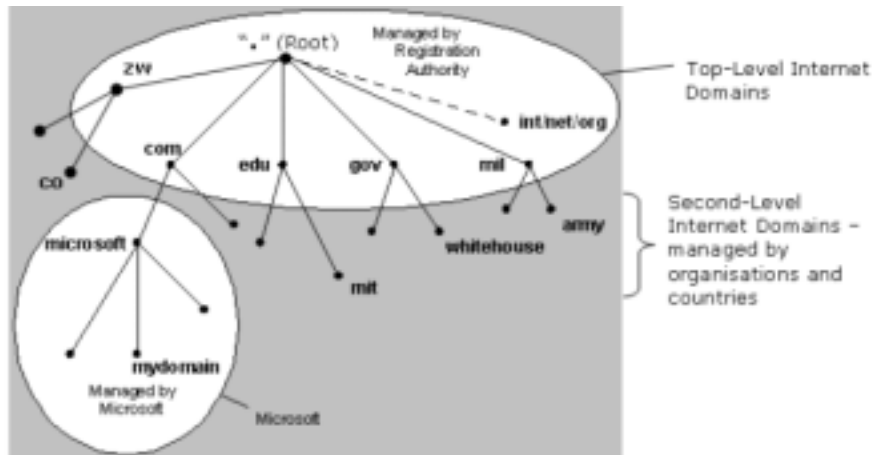
Top-Level Name Component	Description of Organisation Type	Example of Domain Name
.com	An Internet name authority delegates portions of the domain namespace under this level to commercial organisations, such as the Microsoft Corporation. microsoft.com	microsoft.com
.edu	An Internet name authority delegates portions of this domain namespace to educational organisations, such as the Massachusetts Institute of Technology (MIT).	mit.edu
.gov	An Internet name authority delegates portions of this domain namespace to governmental organisations, such as the White House in Washington, D.C.	whitehouse.gov
.int	An Internet name authority delegates portions of this domain namespace to international organisations, such as the North Atlantic Treaty Organization (NATO).	nato.int
.net	An Internet name authority delegates portions of this domain namespace to networking organisations, such as the National Science Foundation (NSF).	nsf.net
.org	An Internet name authority delegates portions of this domain namespace to non-commercial organisations, such as the Center for Networked Information Discovery and Retrieval (CNIDR).	cnidr.org
.mil	An Internet name authority delegates portions of this domain namespace to military operations, such as the Defence Data Network (DDN).	ddn.mil
.xx (e.g. .zw, .za, .sz, .ke, .ca etc.)	An Internet name authority delegates portions of this domain namespace to individual countries. For example, .zw is the top-level domain for Zimbabwe.	co.zw

Beneath the top-level domains, an Internet name authority delegates domains to organisations that connect to the Internet. The organisations to which an Internet name authority delegates a portion of the domain namespace are then responsible for naming the computers and network devices within their assigned domain and its subdivisions e.g. www.africaonline.co.zw, www.nation.co.ke, www.mweb.co.za, www.sitesofafrica.8m.net, www.microsoft.com.

Examples of Domain Names

The naming system on which DNS is based is a hierarchical and logical tree structure called the *domain namespace*. Domain names consist of individual labels separated by dots. For example: *mydomain.microsoft.com*.

A Fully Qualified Domain Name (FQDN) uniquely identifies the host's position within the DNS hierarchical tree by specifying a list of names separated by dots on the path from the referenced host to the root. The following figure shows an example of a DNS tree with a host called *mydomain* within the *microsoft.com* domain. The FQDN for the host would be *mydomain.microsoft.com*.

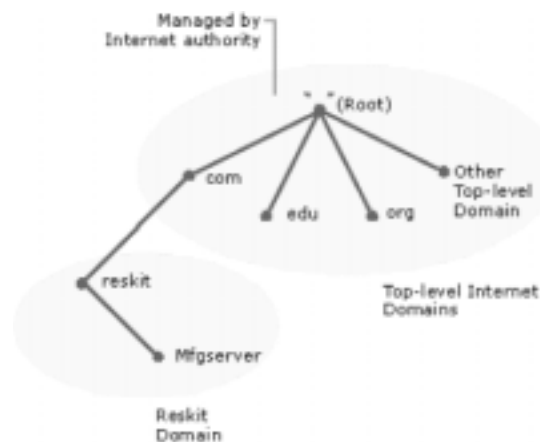


Source: Microsoft Corporation.

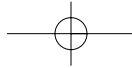
Note: In general, FQDNs have naming restrictions that allow only the use of characters a-z, A-Z, 0-9, and the dash or minus sign (-). The use of the period (.) is allowed only between domain name labels (for example, "microsoft.com") or at the end of a FQDN. Domain names are not case-sensitive.

The figure at the right shows part of the Internet domain namespace, from the root domain and top-level Internet DNS domains, to the fictional DNS domain named *reskit.com* that contains a host (computer) named *Mfgserver*.

Computers and DNS domains are named based on their position in the domain tree. For example, because *reskit* is a subdomain of the *.com* domain, the domain name for *reskit* is *reskit.com*.



Source: Microsoft Corporation



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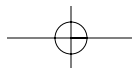
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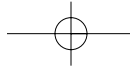
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TUTORIAL

Website Development Using Microsoft FrontPage 2000

Website Development Using Microsoft FrontPage 2000

The World Wide Web (www) enables millions of people to communicate with each other throughout the globe. While conversations occur between and among people through Internet email and Internet newsgroups, individuals or groups can also publish websites – a collection of single or multiple pages on which information can be shared, statically or interactively.

This tutorial introduces you to web page creation, an aspect that shows you how easy it is to build a website using Microsoft FrontPage 2000. You will create a “testweb” site that provides information about Cyberspace Communication. Its pages will contain information on Online Communication, Netiquette, Online Learning (eLearning), Discussion Boards, and the NESIS Partners.

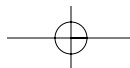
The best way of learning how to use Microsoft FrontPage 2000 is through hands-on practice. You will learn how to:

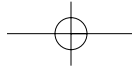
- Start Microsoft FrontPage
- Create and edit web pages and folders
- Insert and format tables, rows, columns and cells
- Work with text and hyperlinks
- Insert pictures
- Position objects
- Save your work

The contents for the web pages you will prepare, which will consist of text and pictures, are available on the NESIS website at <http://nesis.easynet.fr> or <http://www.unesco.org/nesis>.

Initial Preparation Tasks

1. You must have Microsoft FrontPage 2000 and Internet Explorer 4.0 or later installed on the computer you want to use for this exercise. It is assumed that the computer you are using meets the minimum system requirements for FrontPage 2000 (if you have the full version of Microsoft Office 2000 installed, then FrontPage 2000 and Internet Explorer 5.0 are already installed). For more information in case you are not sure, please visit the FrontPage homepage at <http://www.microsoft.com/frontpage>.
2. You can use more than one web browser – if you already have another type of web browser installed on your computer, you can still safely install Microsoft Internet Explorer. When designing web pages, you will find that it is actually beneficial to test your work in more than one type of web browser, before you publish your website.





Website Development & Hosting



3. The screen examples (also called screen dumps) in this tutorial assume that you have a standard monitor set to a screen resolution of 800x600, at the minimum. If you are using a different resolution or monitor, the pages you create during the tutorial may look slightly different on your screen.



4. The tutorial also assumes that you are working in a Windows 95 or Windows 98 operating system environment. If you are using Windows NT, 2000, or XP, you may notice minor differences in the user interface and the locations where files are stored. For example, the "My Documents" folder in Windows 95/98 is called "Personal" in Windows NT/2000/XP. These differences do not affect the functionality of FrontPage nor do they prevent you from successfully completing the tasks in this tutorial.



5. Use an Internet connection to access the NESIS website (<http://nesis.easynet.fr> or <http://www.unesco.org/nesis>).

6. Click on the link relating to the "Nairobi Statistical Workshop".

7. Scroll down to the section on "Website development user files".



8. Download the documents IMAGES.ZIP and PAGES.ZIP. Once you will have created your empty web containing, among others, the Images and Pages folders, unzip and transfer the unzipped files to these respective folders, **BEFORE YOU BEGIN CREATING YOUR WEB PAGES.**



9. Close the NESIS website and, if applicable, disconnect your Internet connection.


10. You are now ready to begin the tutorial.

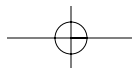
Note:



If you have neither WinZip (for zipping and unzipping files) nor Acrobat Reader (for reading *portable data files* or pdf files), evaluation copies can be obtained from <http://www.winzip.com> and <http://www.adobe.com> respectively.



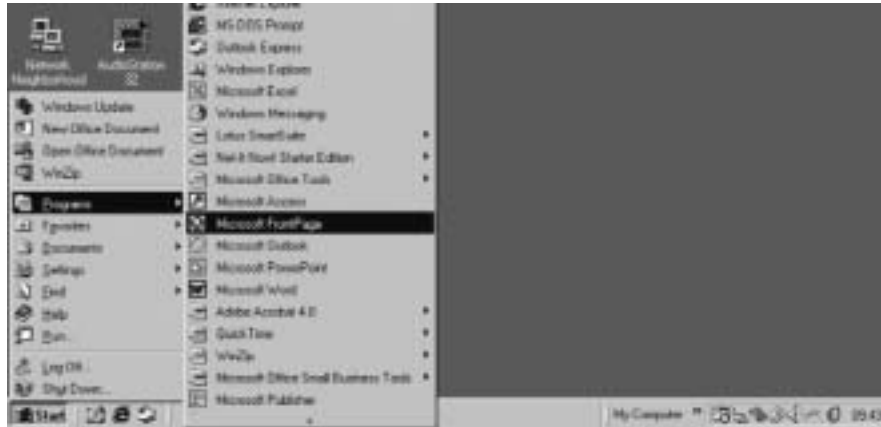
To learn more about FrontPage, you may click on the help button , which identifies key features and their associated keywords for online Help system and the Answer Wizard in FrontPage.



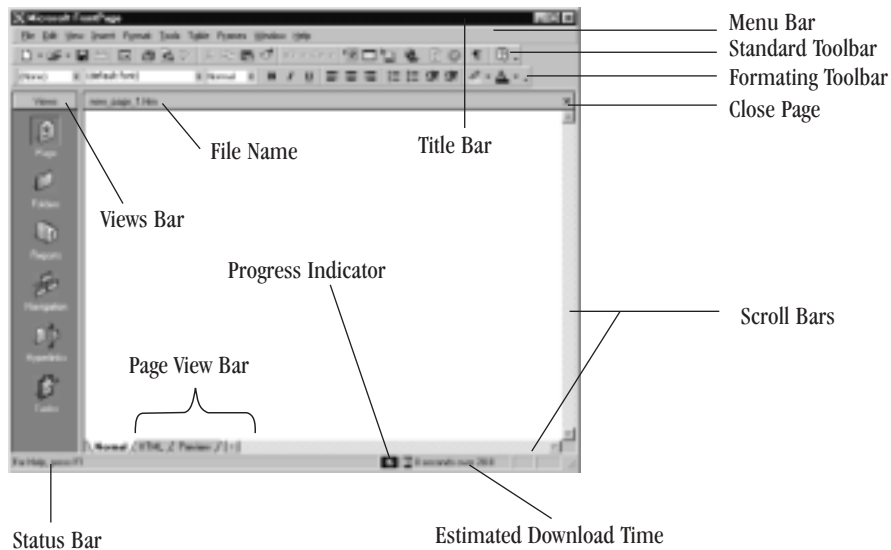
Tasks

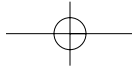
A. Starting Microsoft FrontPage and Creating a New Website

1. To start Microsoft Front Page, on the Windows taskbar click the **Start** button, point to **Programs** and then click **Microsoft FrontPage**.



FrontPage opens and displays a blank page (**new_page_1**) ready for editing. FrontPage 2000 has a new, integrated interface that allows the creation and editing of web pages and managing entire websites – all within one application. All toolbars and menus are consistent with Microsoft Office applications and can be fully customised. Convenient keyboard shortcuts also can be used to accelerate common tasks such as opening webs and pages, printing and many other commands.





Website Development & Hosting

The **Standard** and **Formatting** toolbars provide easy access to the commands you will use most often when working with FrontPage; they are displayed by default.

The icons on the **Views Bar** provide different ways of looking at the information on your page or in your web page. You will notice in the upcoming tutorials that as you work with FrontPage, you will frequently switch between views to match the current task at hand – from the early steps of page creation to the web publishing stage.

When you start FrontPage, Page view is displayed by default. Page view is a powerful editing tool for creating and designing web pages. As you enter text, place pictures, insert documents, create tables, make lists and design the overall appearance of your web pages, Page view displays them as they will appear in a Web browser. All the html code is automatically created in the background and, in future tutorials, we shall show you how to manually edit your html code so as to change the appearance of your page.

2. Close the “**new_page_1**” window that appears by default.

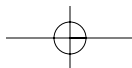
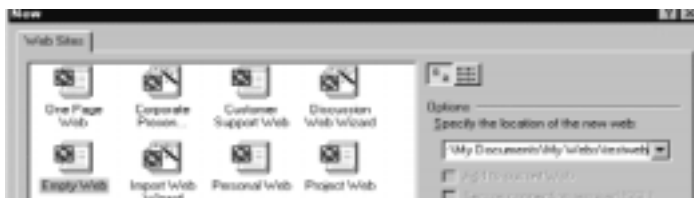


For this tutorial, you will create a website with seven pages (including the homepage). Until it is published for the first time, a website is a work in progress. Unlike printed letters, memos, and word-processing documents, websites can be dynamically changed or updated even after they have been published. You can add, delete, and modify text, pictures and entire pages at any time.

3. Create a new website: **File > New > Web.**



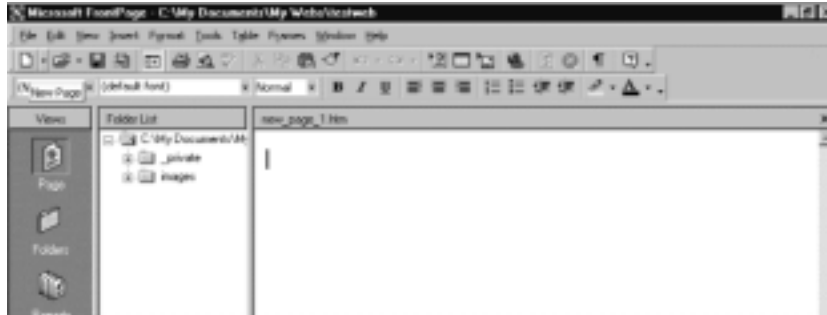
4. Select **Empty Web**. Rename your web as **<drive>:\My Documents\My Webs\testweb** (<drive> shall be either **C** or **D** or **E**, depending on which drive you are using). Click **OK**.



B. Creating and Saving the Homepage

The homepage is the front door to your website. Greeting your visitors and providing some information about the content or subject matter of your site will spark interest in people looking at your site. It also contains links to other pages in a web.

5. Click on the **New Page** icon on the left.



6. Save the created page: **File > Save As >** (type **index** next to Filename).



7. Click **Change** button to change the **Page title** from **New Page 1** to **Welcome to the NESIS site!** Then click **OK**.

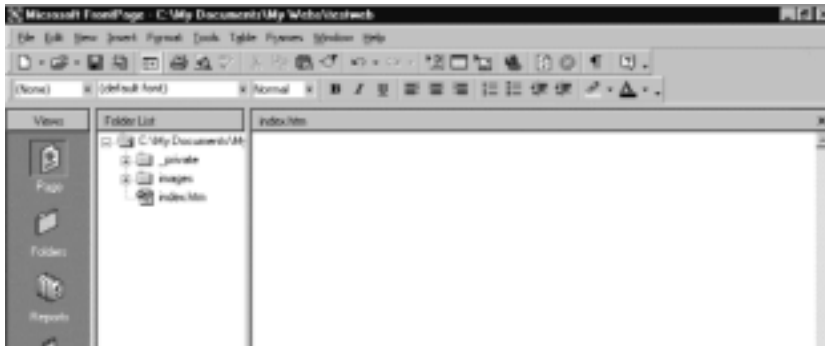


Website Development & Hosting

8. Click the **Save** button.



9. The **index.htm** (homepage) page appears on the right column as shown below:

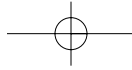


C. Creating and Saving the Rest of the “testweb” Site

10. Create and save the following six web pages using the steps in **B** above:

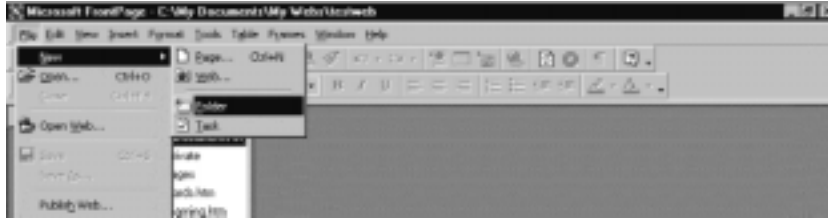


Filename	Page Title
onlinecommunication	Online Communication
netiquette	Core Rules of Cyberspace
elearning	Online Learning
boards	Bulletin Boards
partners	NESIS Partnership
exercise	Tasks in Website Development

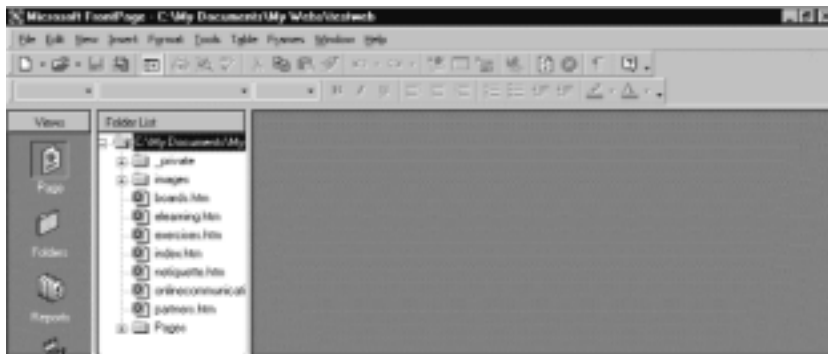


D. Performing Housekeeping

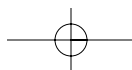
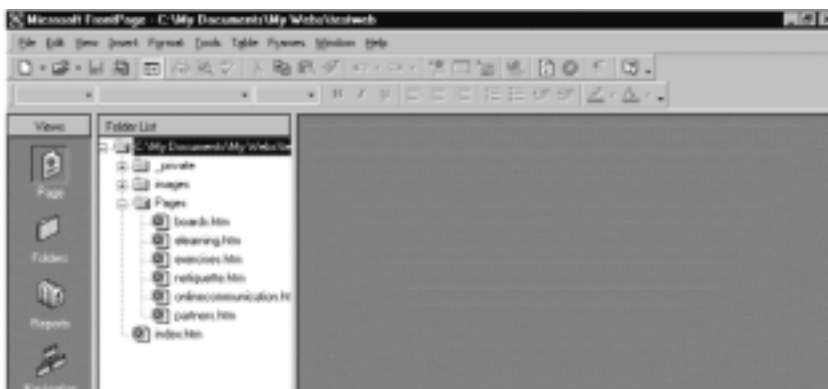
Create a folder called **Pages**.

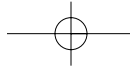


11. On the **View** menu, point to and click **Folder List** to see the list of folders and web files on the left column (or click the folder list icon).



12. Using your mouse, drag each of the six saved pages above (except **index.htm**) into the **Pages** folder.





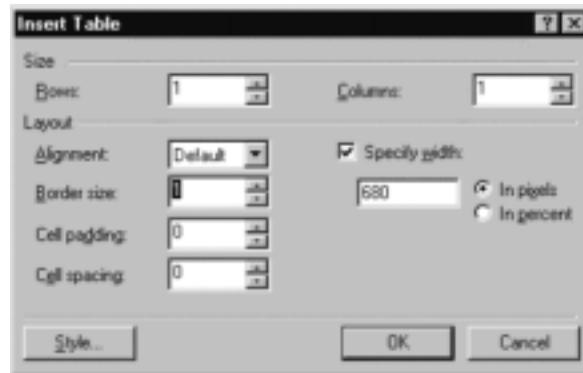
Website Development & Hosting

E. Developing the Page Contents

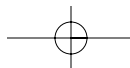
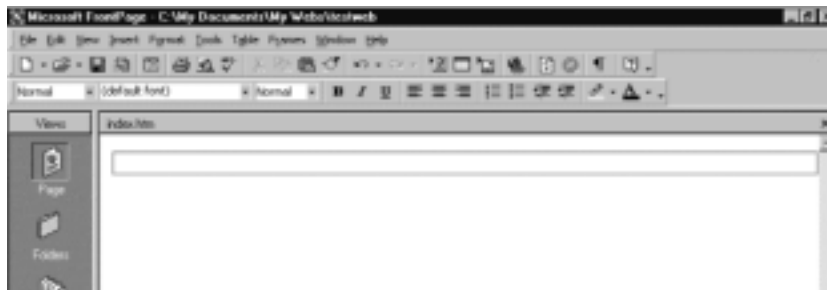
- 13. On the **Table** menu, point to **Insert**, and then click **Table** to create an outline table.

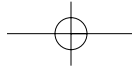


- 14. Specify the following in the **Insert Table** window: 1 row, 1 column, 1 border thickness, 0 cell padding, 0 cell spacing, specify width, 680 pixels.

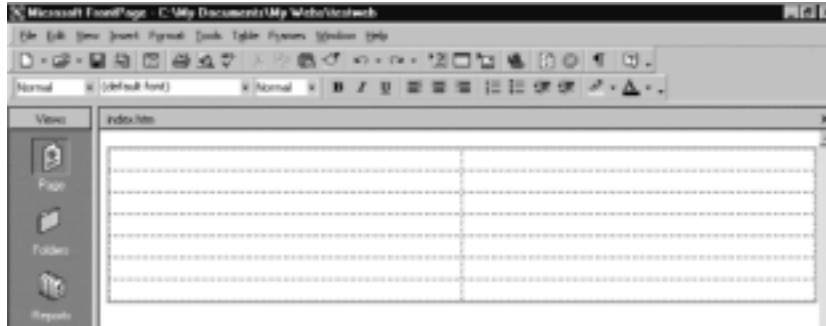


- 15. Click **OK**.

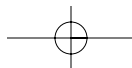
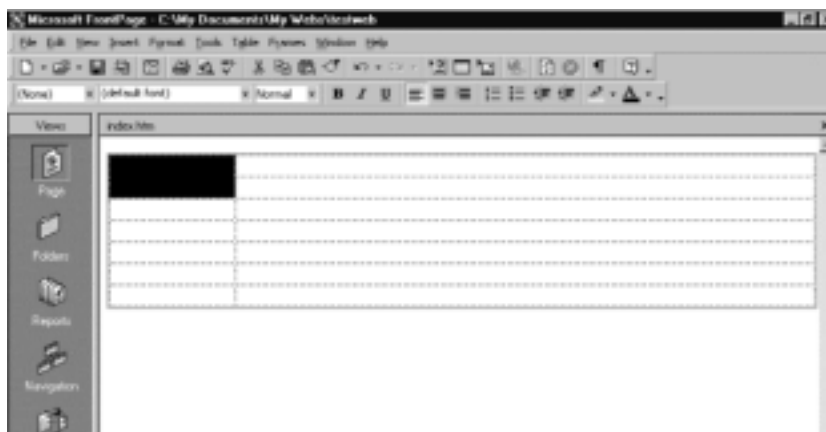
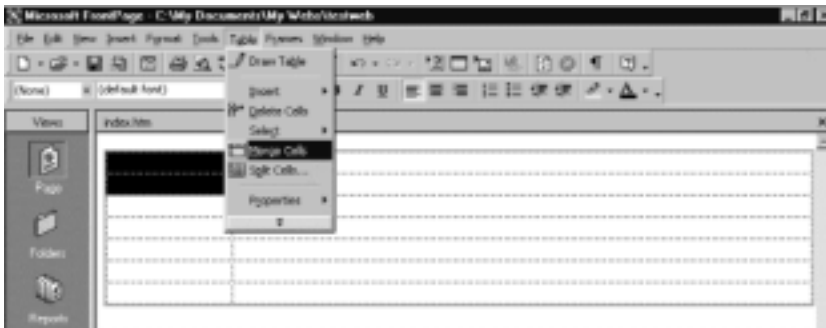


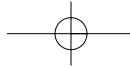


16. Create a second table **inside** the first table: **7 rows, 2 columns, 0 border thickness, 0 cell padding, 0 cell spacing, specify width, 100 percent.**



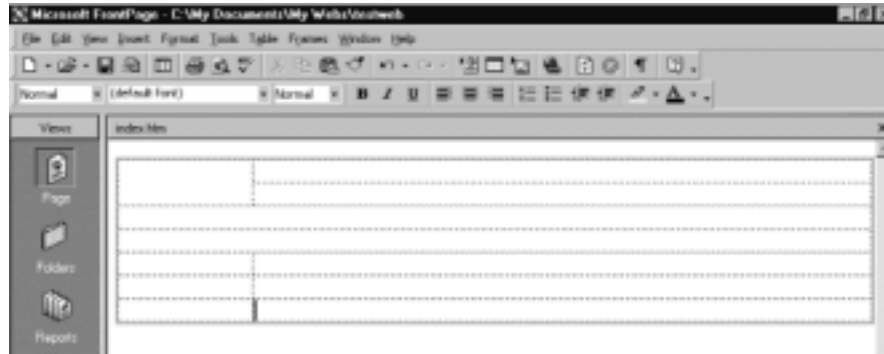
17. Drag the dividing column line to the left, so that the inside table is approximately divided in a ratio of 1-to-5. Select the first 2 cells of the first column, and use **Table > Merge cells** to combine the two cells into a single cell.



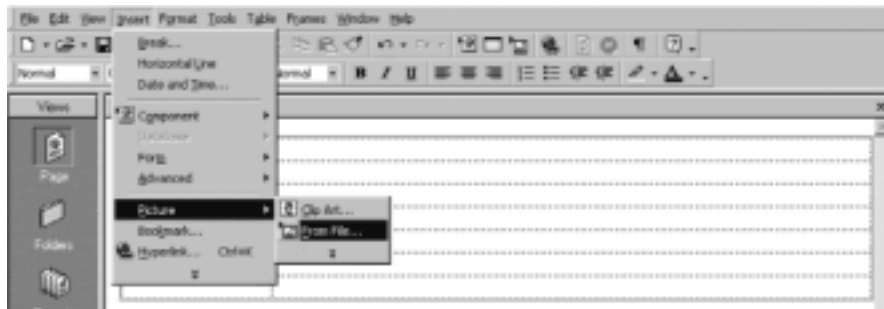


Website Development & Hosting

- Use the same method to **merge the third cells in both columns, and the fourth cells in both columns**, as shown below:



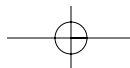
- Inserting the NESIS logo:** Place the **mouse cursor on the first (merged) cell on the top left corner** of the table. On the **Insert** menu, point to **Picture**, and then click **From File**.

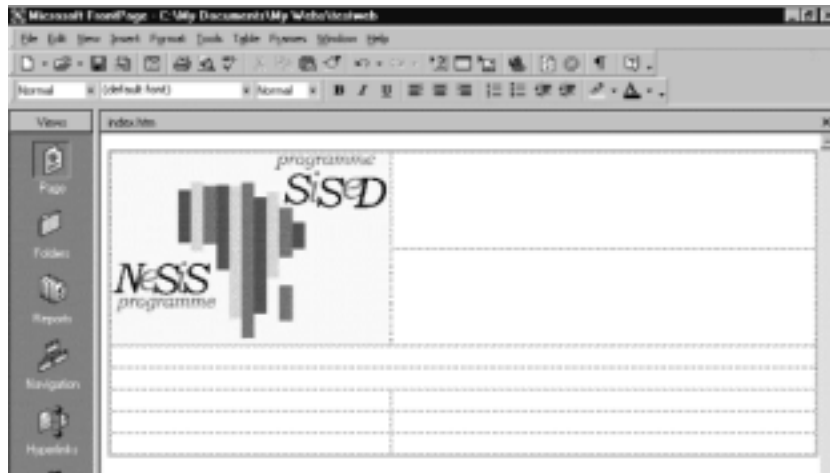


- In the **Select File** dialogue box, navigate to the **Images** folder, click **nesis_logo**.

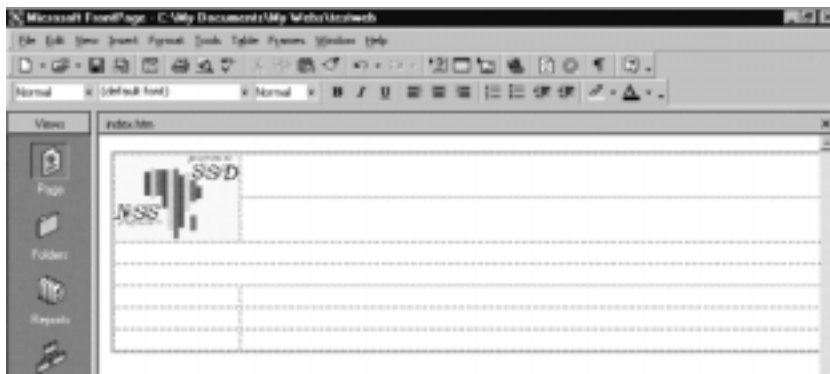


- Click **OK** to insert the logo into the **index.htm** page (your homepage).





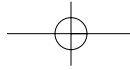
22. Select and reduce the logo proportionally to fit into the original column size. Your page should now look like this:



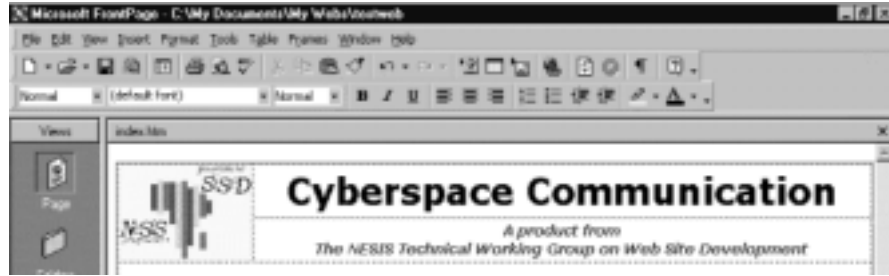
23. On the top cell of the second column, type “**Cyberspace Communication**”. Select this title, centre it, change the font type to **Verdana** and the font style to **Heading 1**.



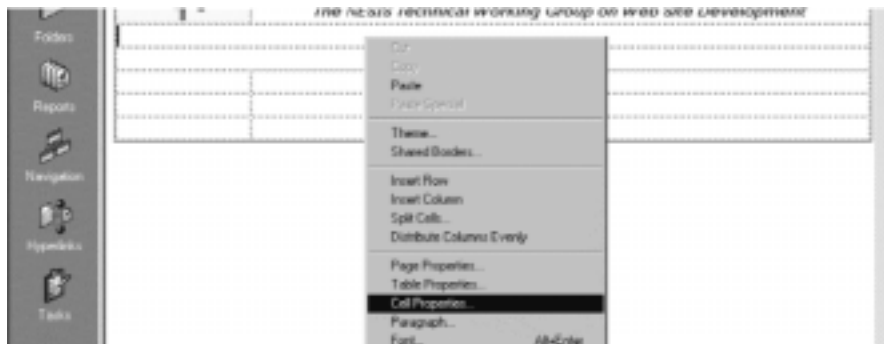
24. Type “**A product from**” (*press Shift + Enter key*), “**The NESIS Technical Working Group on Website Development**”. Select the typed text: change font type to **Verdana**, font colour to **red**, font style to **Heading 5**, and centre it.



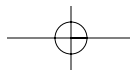
Website Development & Hosting



25. Right-click the **third row** and select **Cell Properties**.



26. From the **Cell Properties** dialogue box, change the cell Background colour to **black**.

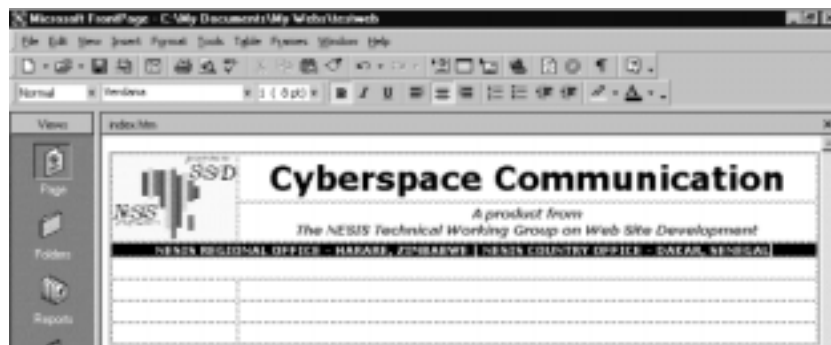


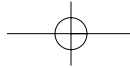


27. Click **OK**.



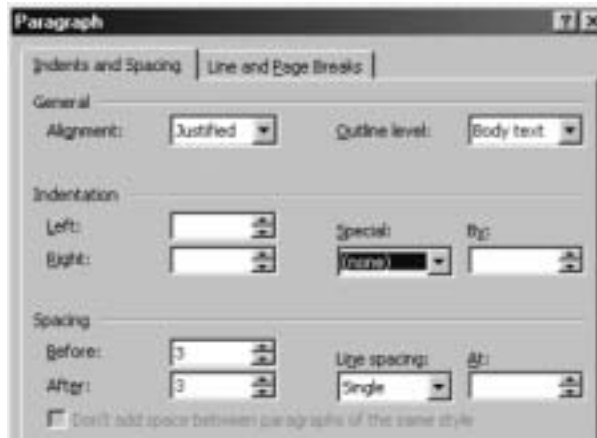
28. With the cursor on the third cell, change the font type to **Verdana**, font size to **2 (10 pt)**, font colour to **white**, select **bold**, **centre**, activate **Caps Lock**, and type: **NESIS REGIONAL OFFICE – HARARE, ZIMBABWE | NESIS COUNTRY OFFICE – DAKAR, SENEGAL**.



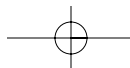


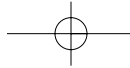
Website Development & Hosting

29. Place the cursor in the fourth row. Obtain the text from the downloaded and unzipped file **pages.doc** under the title "Introduction", and paste it on the fourth row. Select the pasted text (if it is still not selected) and ensure the font type is **Verdana**, and the font size is **2 (10 pt)**. Also use **Format > Paragraph** to put a value of **3** both in **Spacing: Before** and **Spacing: After**.

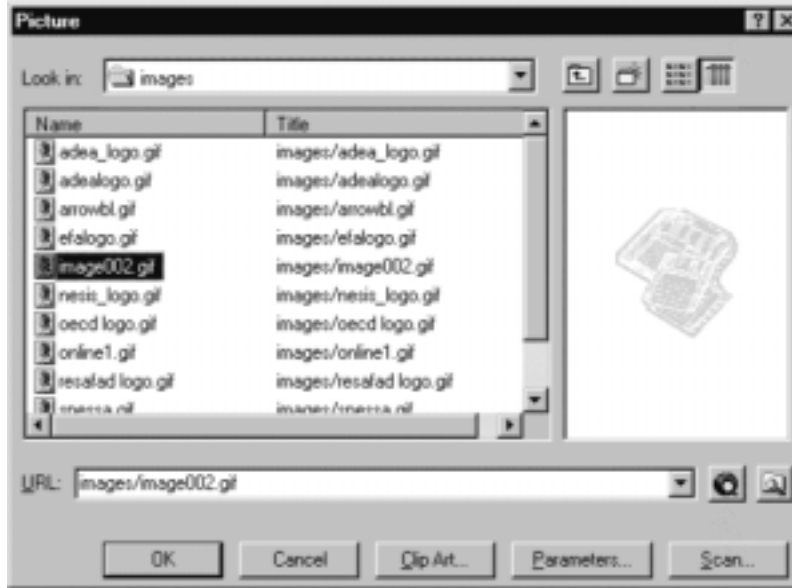


30. Place the cursor at the end of the first line, in the last paragraph as shown. Then use **Insert > Picture > From file**.

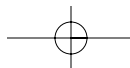
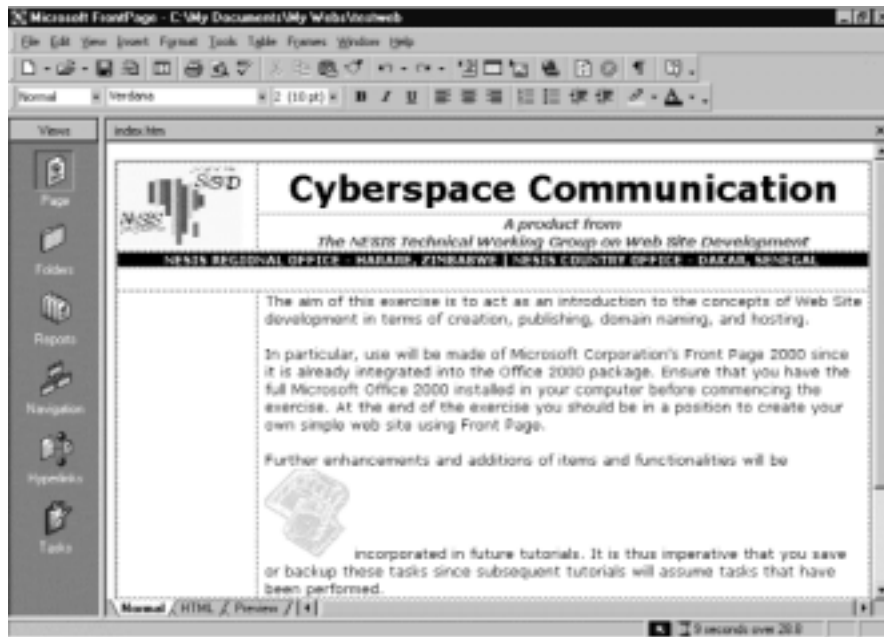


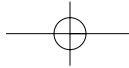


- In the **Image** folder, select **image002.gif**.



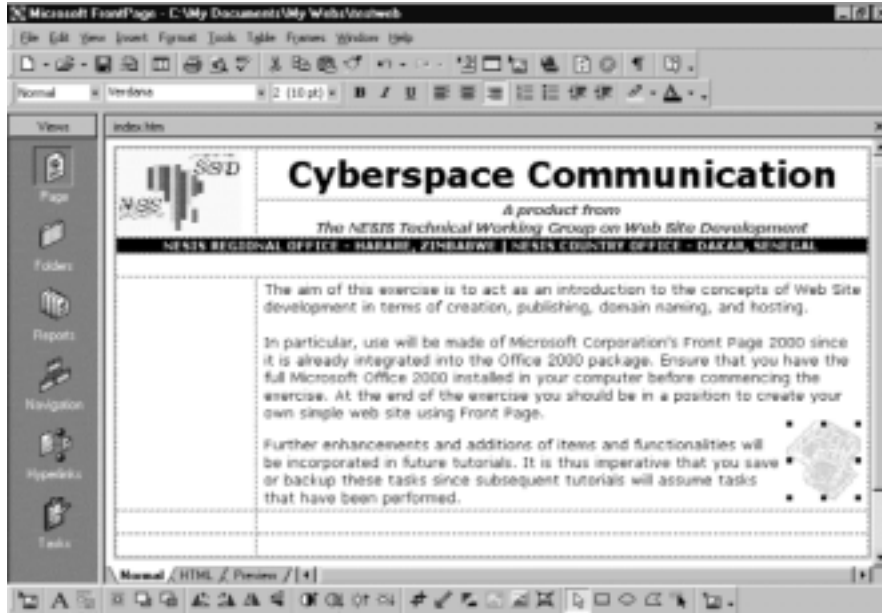
- Click **OK** to insert picture.



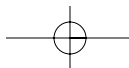
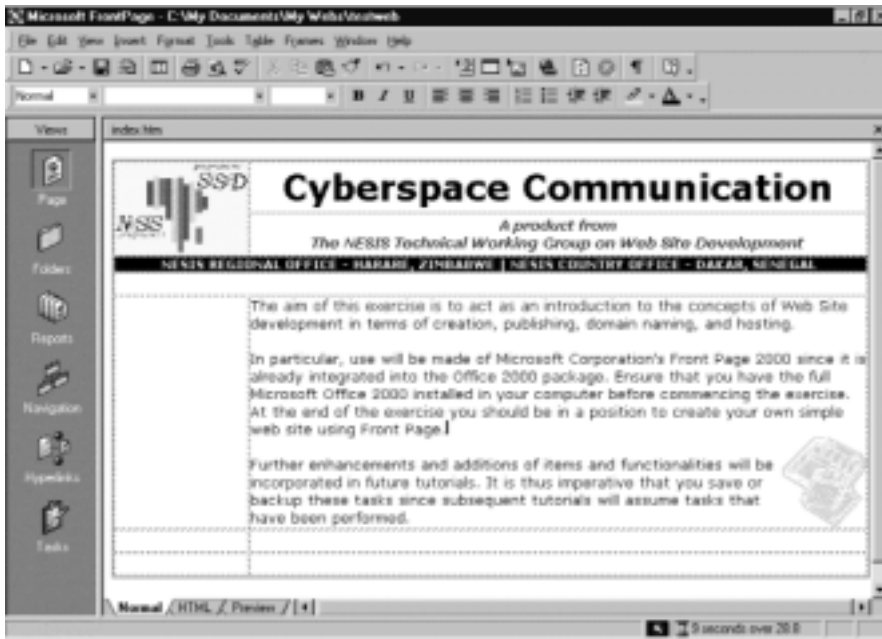


Website Development & Hosting

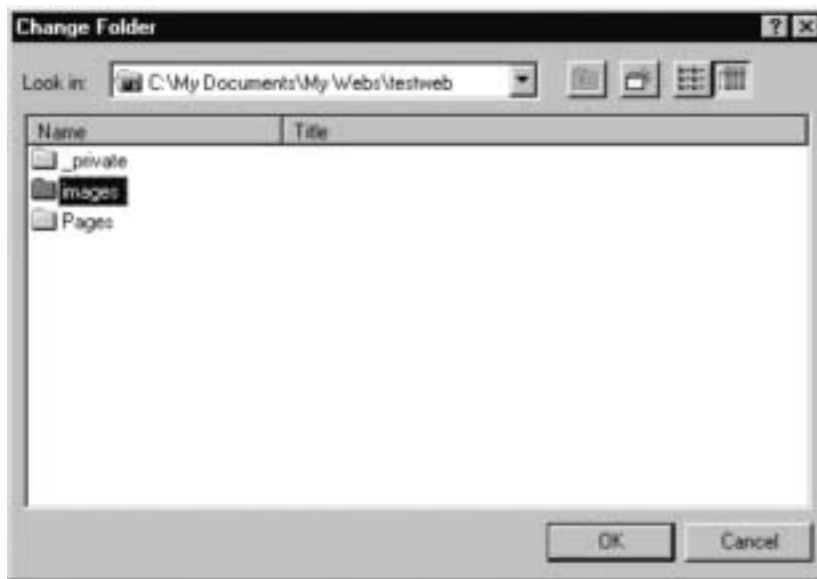
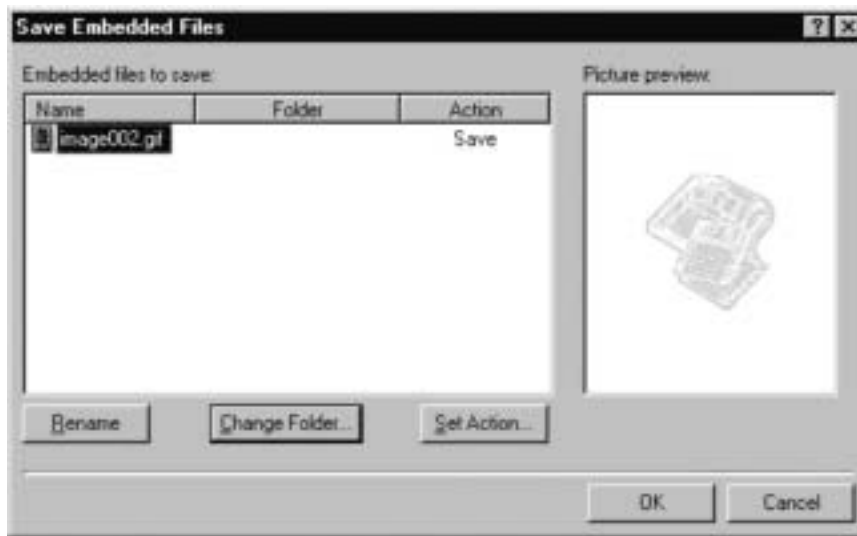
33. Select the inserted picture. In the **Alignment** list, click-right (or click on the icon) and then click **OK**.

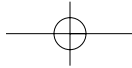


34. Reduce slightly the picture and position it in such a manner that it is in line with the text in the last paragraph, as shown below:

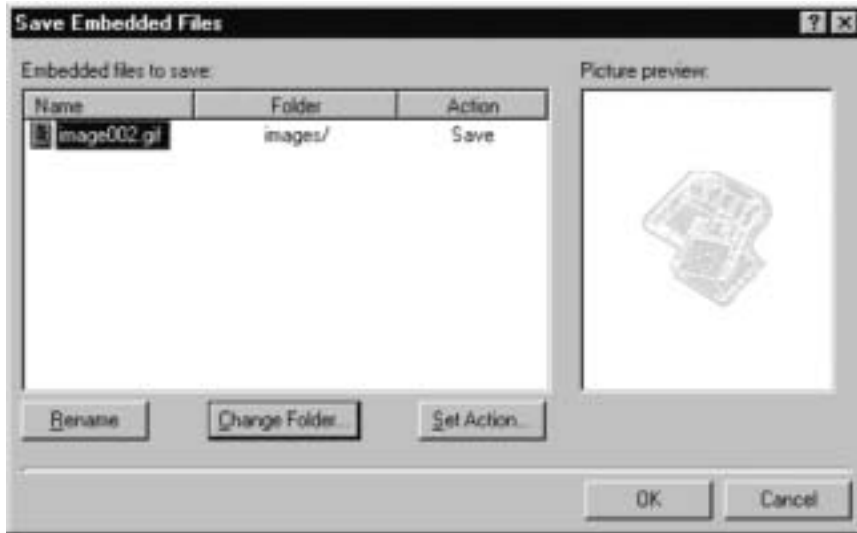


35. **Save your work at this point** (although all the graphics are currently in the image folder, if at any point during saving you are prompted to change the folder for images, ensure that all the pictures are saved under the **images** folder as shown below – otherwise ignore all graphics below, related to this point).

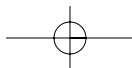
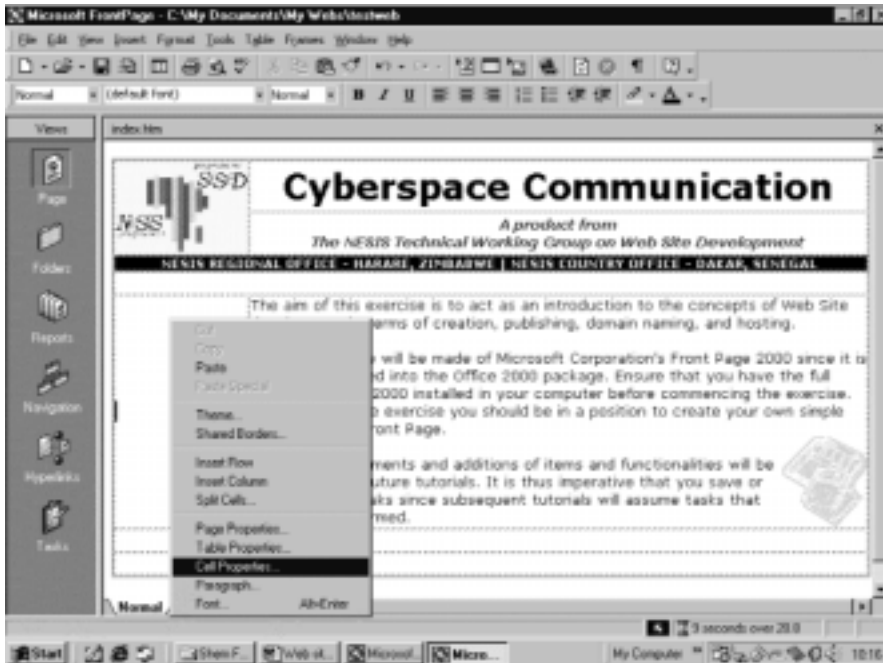


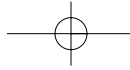


Website Development & Hosting



36. Click **OK**.
37. Right-click on the cell to the left of the one containing the main text (as shown), and select **Cell Properties**.

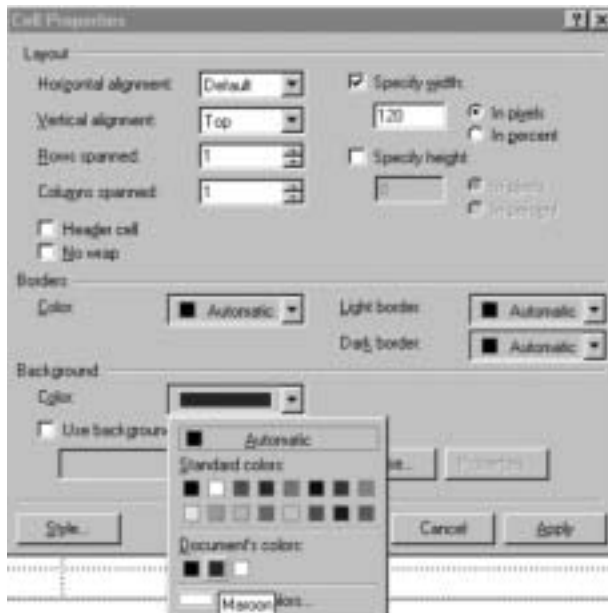




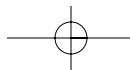
38. Under **Vertical alignment** select **Top**.

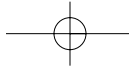


39. Select **Maroon** as the background colour.



40. Click **OK**.

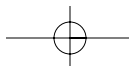


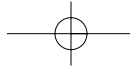


Website Development & Hosting



41. With the cursor still inside the maroon cell, create a table of 1 row, 1 column, 0 border thickness. Leave the rest of the values to their default.

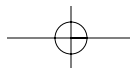
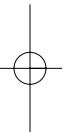
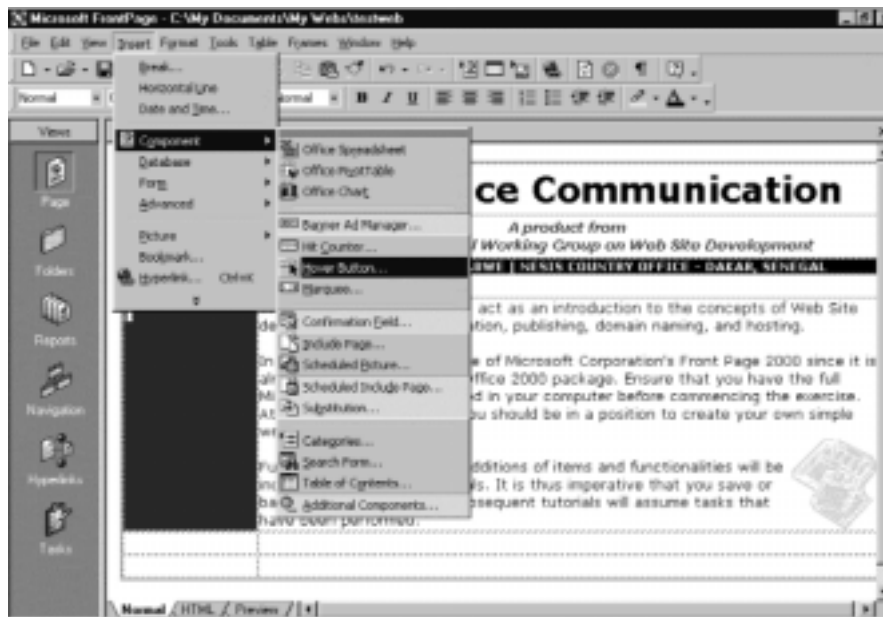


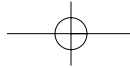


42. Right-click the new table and change its **background colour to white**.



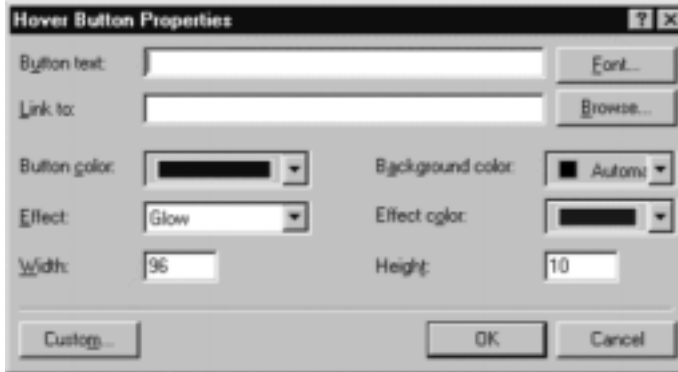
43. Insert a Hover Button with no text on it: **Insert > Component > Hover Button**.



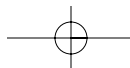


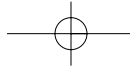
Website Development & Hosting

44. Delete the default text appearing under **Button text**; change the width to **96**, and the height to **10**. Leave other values to their default.



45. Click **OK**. Type the following text below the Hover Button, as shown: **Introduction, Netiquette, eLearning, Boards, Partners, Exercises**. Then place a copy of the upper Hover Button at the end of the last text.

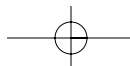


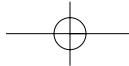


- 46. Select this new text plus the Hover Buttons, **centre** it, and ensure font is **Verdana**, size **2 (10 pt)**. Go to **Format > Paragraph** and make value changes as shown below:



- 47. Click **OK**.





Website Development & Hosting

48. Select the last cells of both columns. Use **Table > Properties > Cell**.



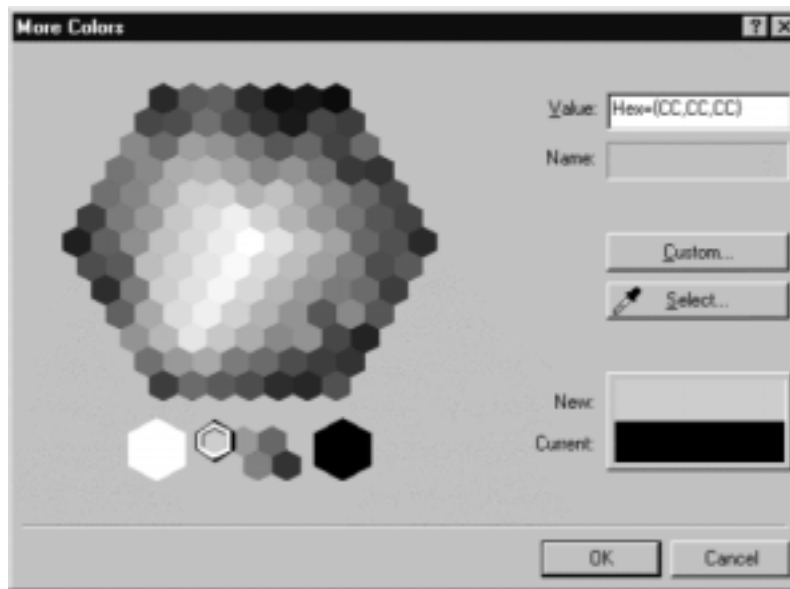
49. Change the **Background** color to **black** and click **OK**.

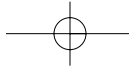


- 50. With your cursor inside the bottom left cell, use **Format > Font**. Select **Verdana, Regular, 2 (10 pt)**. Open the **Color** tab and click on **More Colors**.



- 51. Select the grey color shown below (Hex value: CCCCCC).



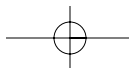
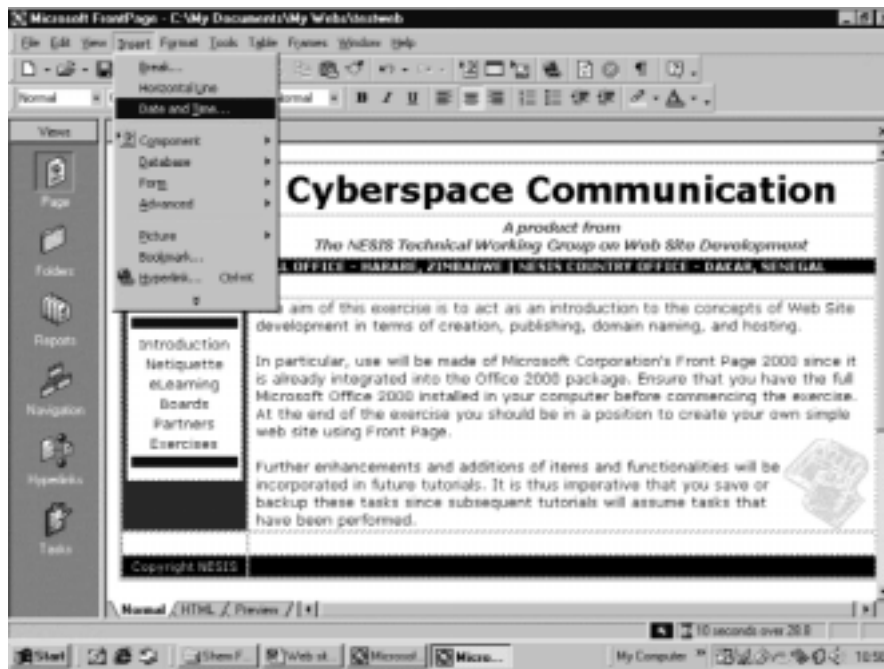


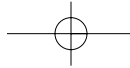
Website Development & Hosting

52. Click **OK**. Then type **Copyright NESIS**.

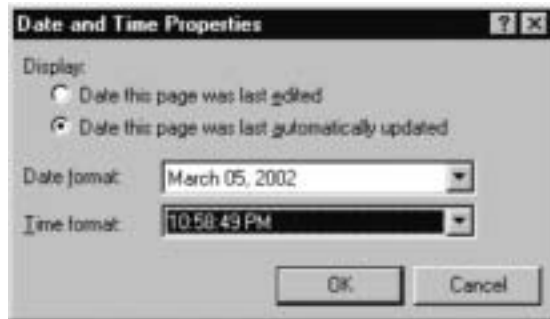


53. With the cursor on the bottom cell of the second column, follow the same procedure as 37 and 38 above. In addition, **right-justify** the text. Use **Insert > Date and Time**.

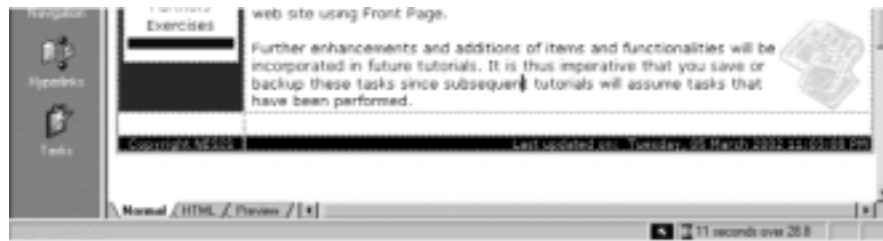




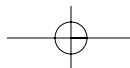
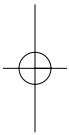
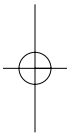
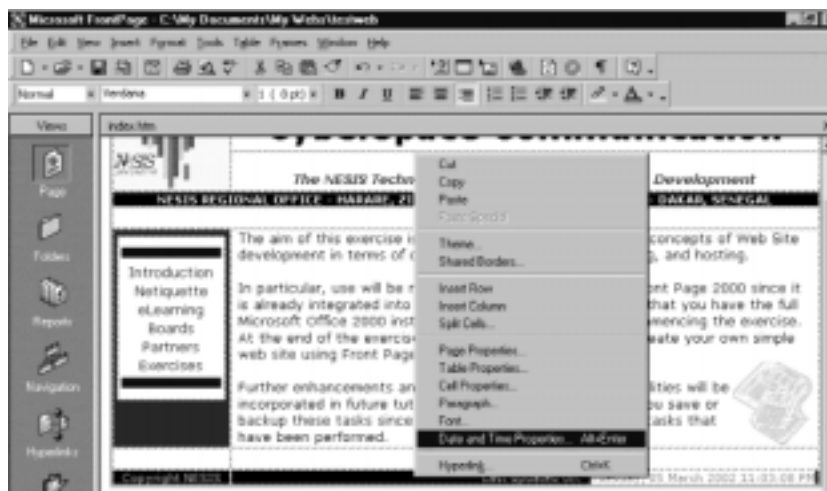
54. Select the appropriate Date and Time formats as shown below:

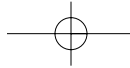


55. Click **OK** to insert the automatic page-update information. This information will automatically change each time a page is updated. Place the cursor at the start of the date and time component, press the space bar twice, then add the following: **Last updated on:**



56. To modify the Date and Time properties at any time, **right-click on the information** and select **“Date and Time Properties”**, as shown below. This will take you back to the window on 41.

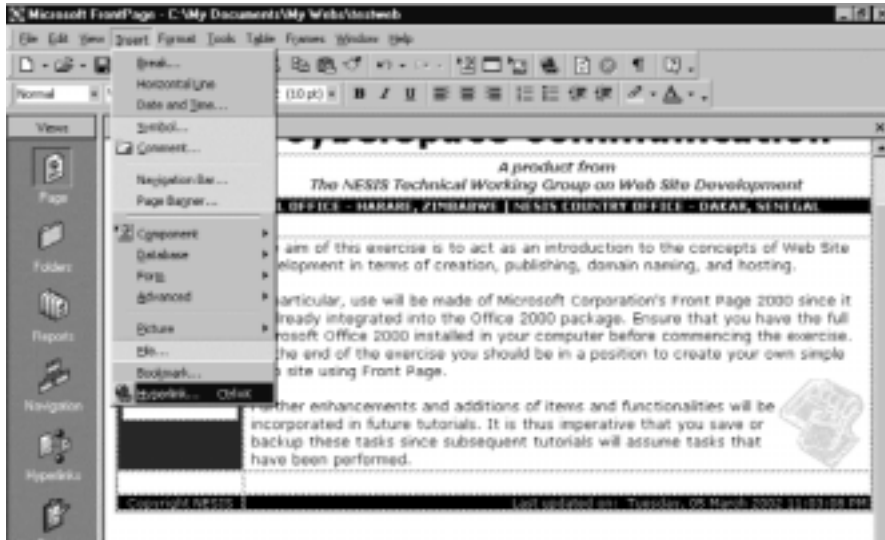




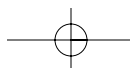
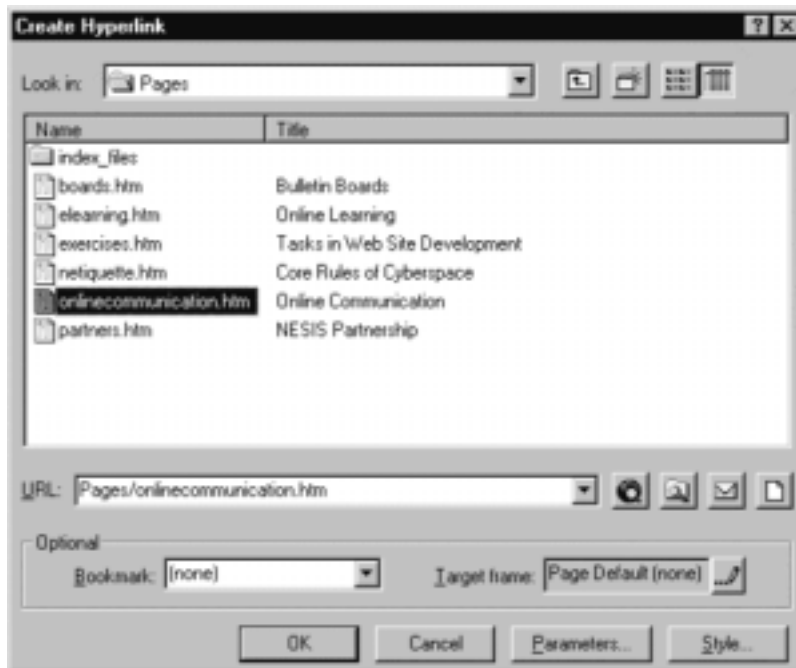
Website Development & Hosting

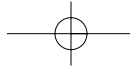
F. Linking Web Pages

57. On the navigation column on the left, select **Introduction**. Use **Insert > Hyperlink** (or use the hyperlink icon).

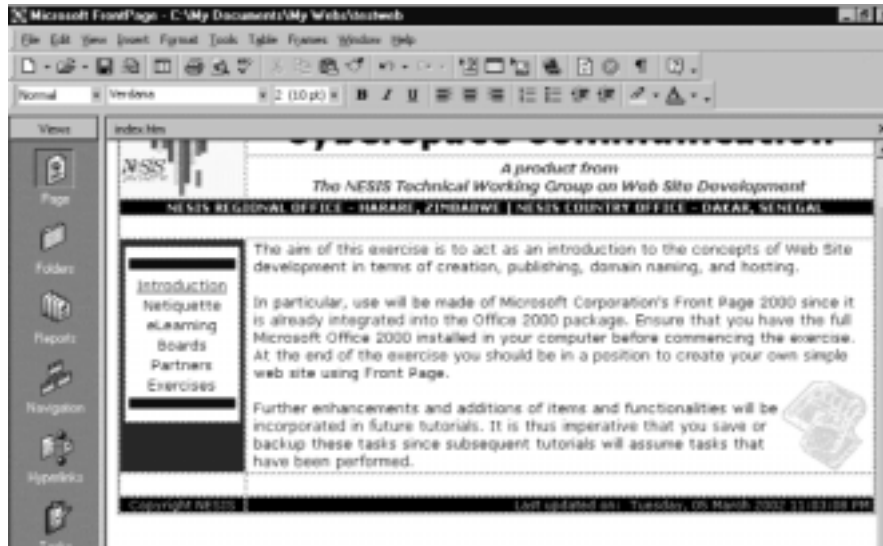


58. On the **Create Hyperlink** dialogue box, under the **Pages** folder, select **onlinecommunication.htm**.

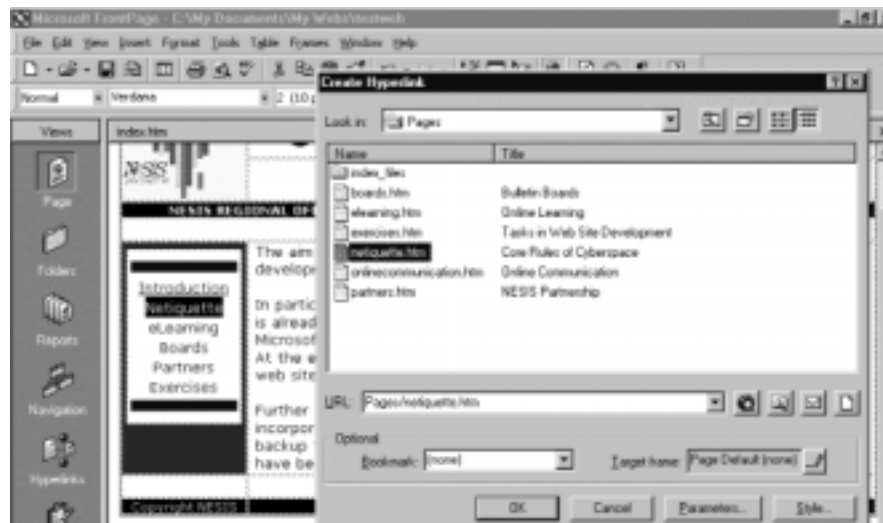




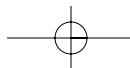
- Click **OK** to create the first hyperlink to the introduction page – the Introduction hyperlink now appears **blue and underlined**.

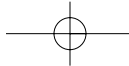


- Select **Netiquette** and link it to **netiquette.htm**.

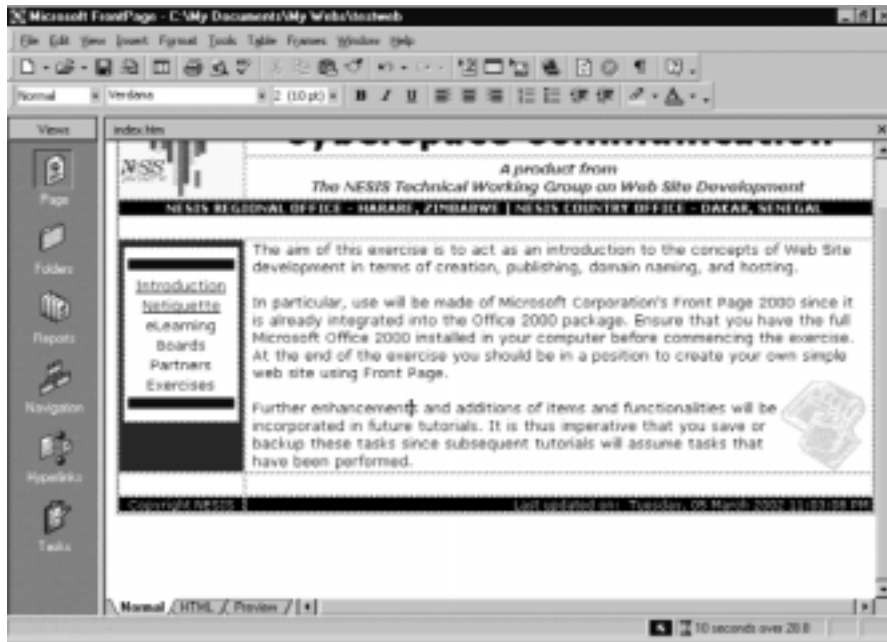


- Click **OK**.

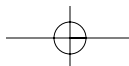




Website Development & Hosting



62. Now link the four remaining navigation titles to their respective web pages.



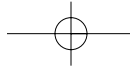
G. Previewing the Page in FrontPage and in a Web Browser

- 63. To preview your page within FrontPage (so as to see how it will appear when using a web browser like Internet Explorer or Netscape), click on **Preview** – found at the bottom of the page, next to Normal and html tabs.



- 64. To use a web browser, use **File > Preview in Browser**.



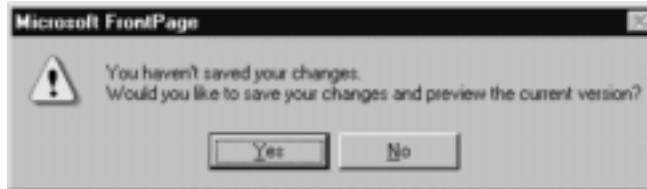


Website Development & Hosting

- 65. Select the default settings in the **Preview in Browser** popup window. If you are using more than one browser, then select one of them.



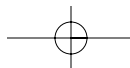
- 66. Click the **Preview** tab. The message below appears since **Automatically save page** is not checked.

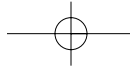


- 67. Click **Yes** to view the Homepage in a browser. This is how your homepage will be displayed to any public visitor using a web browser.



- 68. Go back to the FrontPage session and save the index.htm page.



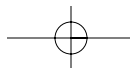
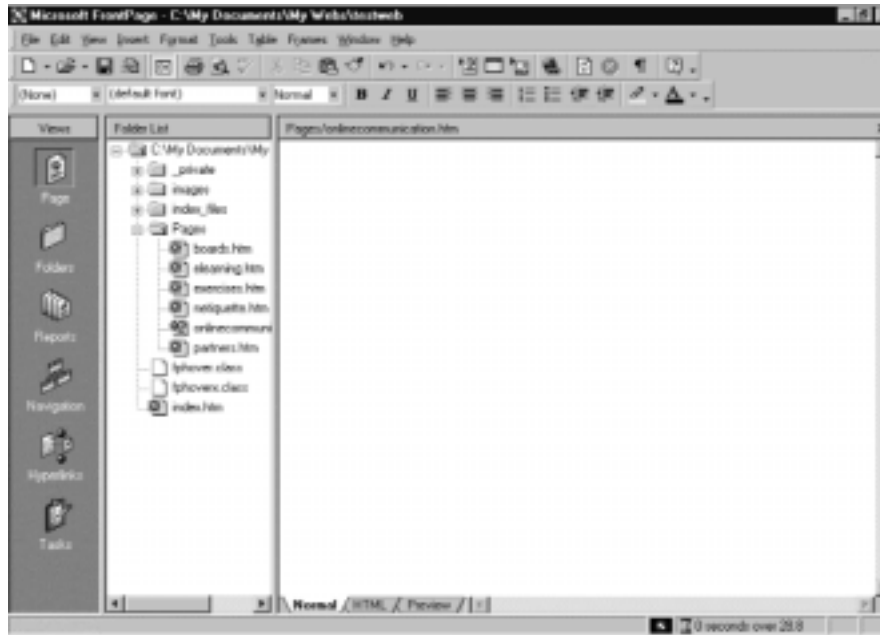


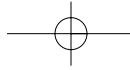
H. Developing the Rest of the Pages

69. Activate the folder list – use the **icon** or **View > Folder List**.



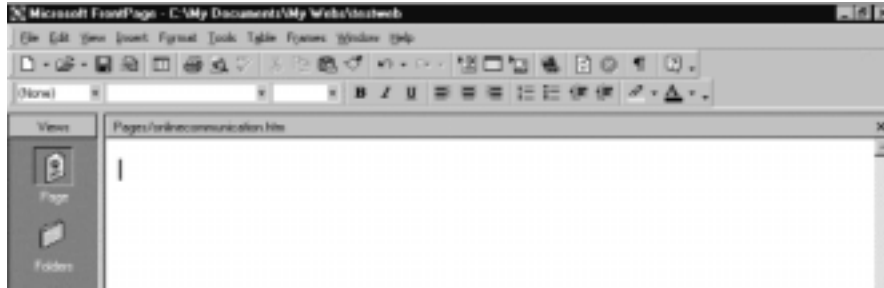
70. Expand the **Pages** folder to see all the pages.



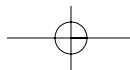
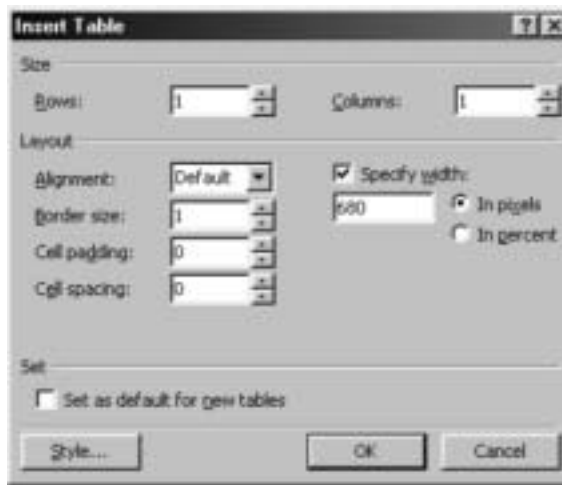


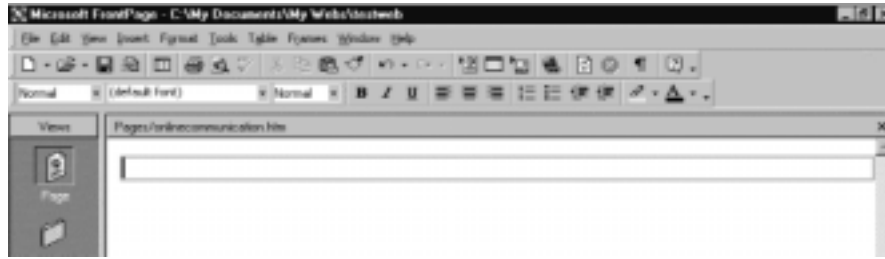
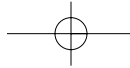
Website Development & Hosting

- 71. Double-click **onlinecommunication.htm** page to open it. Click the **Folder List** icon to remove it and have a full-page view.

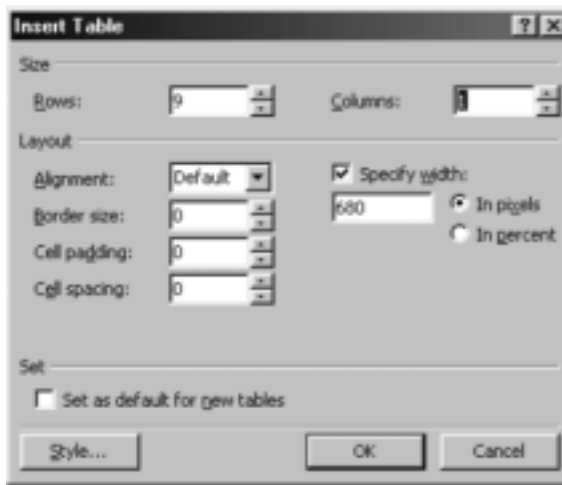


- 72. Create a table of 1 row, 1 column, a border thickness of 1, and a specified width size of 680 pixels.

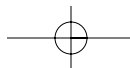
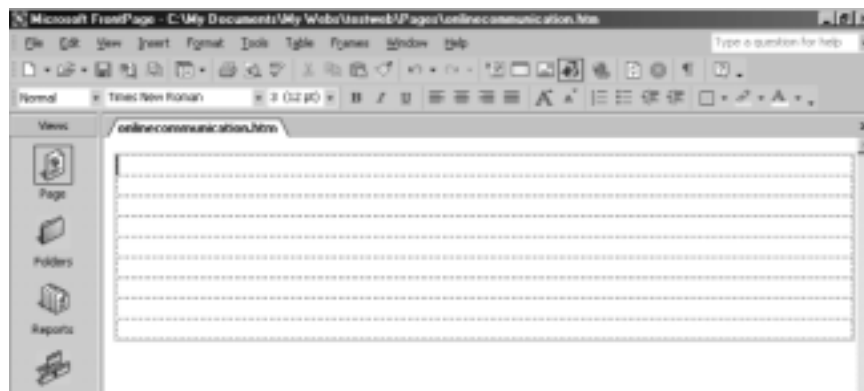


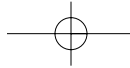


73. With the cursor inside the first table, create a second table with values shown below:



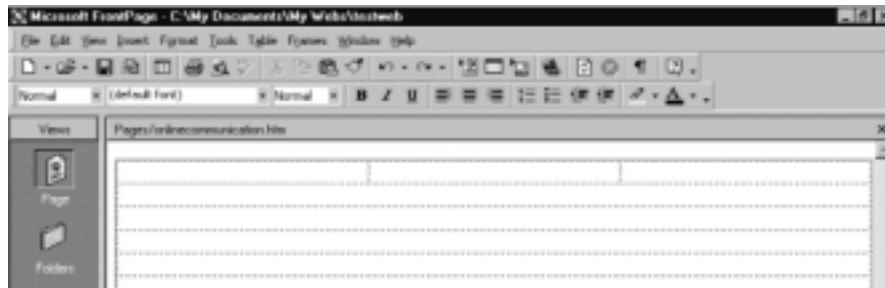
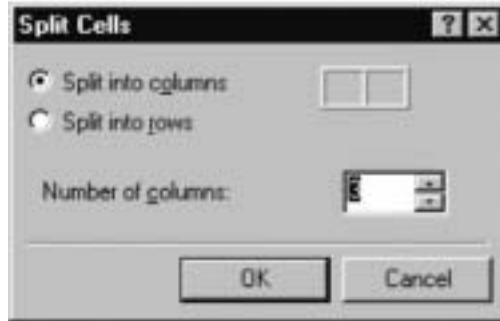
74. The resulting two tables will be as shown below:



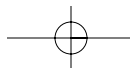
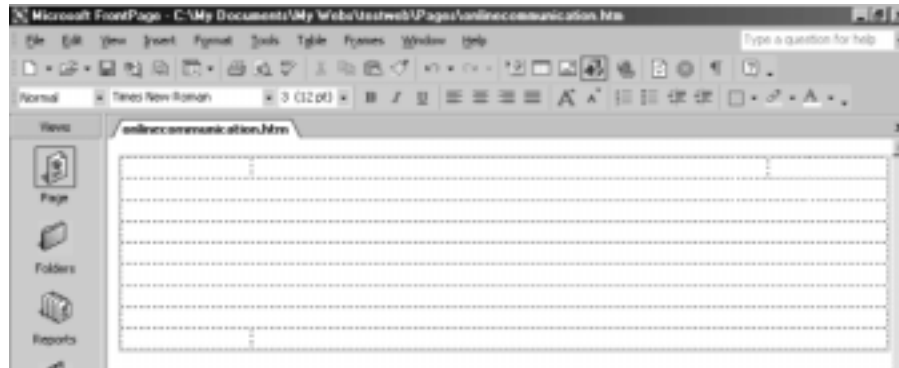


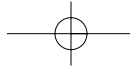
Website Development & Hosting

75. Split the **first row** into **three columns**.

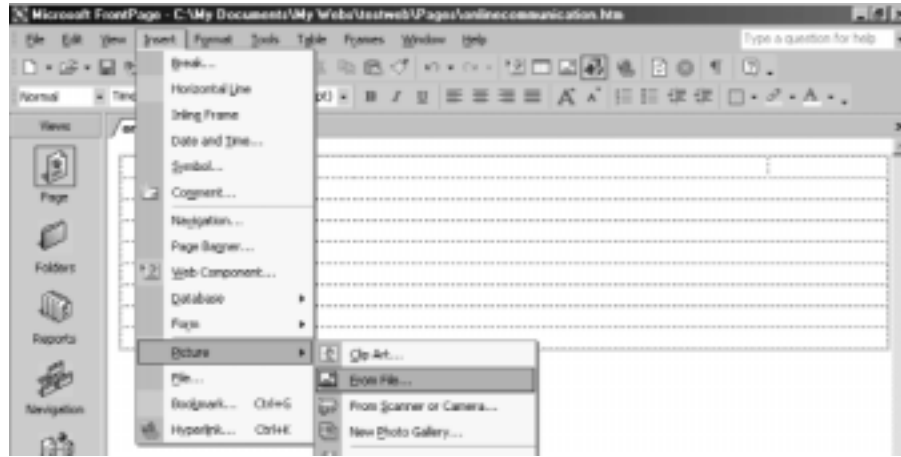


76. Split the **last row** into **two columns**.

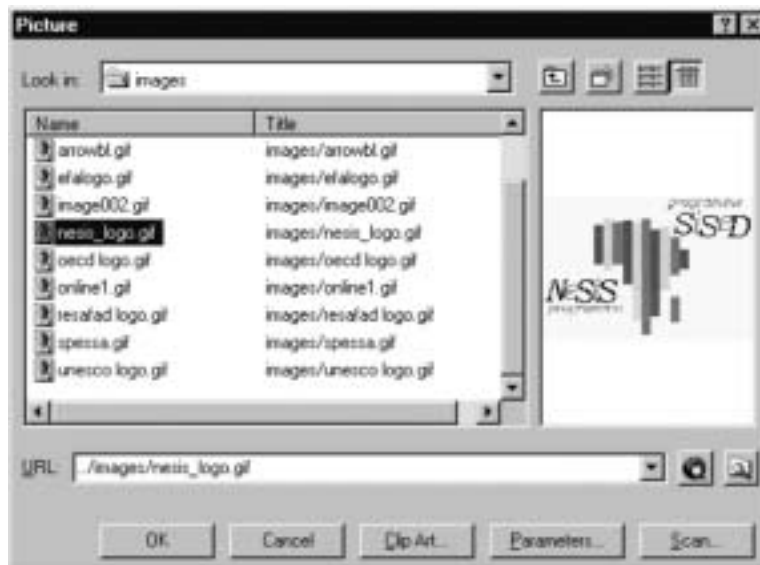




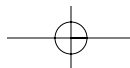
- 77. Insert the NESIS logo, using **Insert > Picture > From File**.

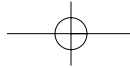


- 78. In the **Images Folder**, select the image file **nesis_logo.gif**.



- 79. Click **OK**.

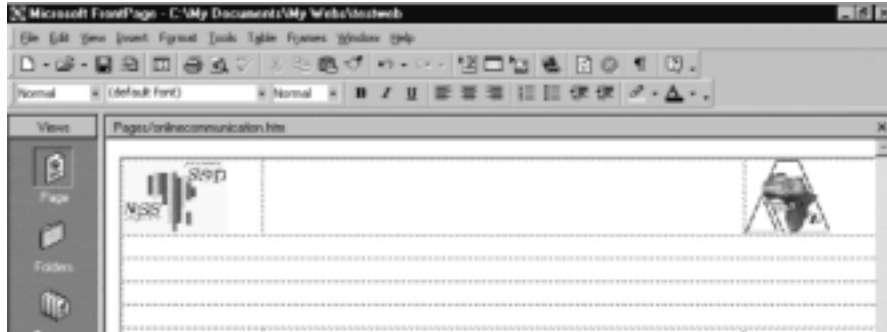




Website Development & Hosting



80. Reduce both cell and logo to the proportion shown below (left). Using the same procedure, insert the **ADEA logo** (image file **adealogo.gif** found in the **Images** folder) on the third cell of the first row, and size both cell and logo appropriately as shown below (right).



81. With the cursor in the second cell of the first or top row, type the title “**Online Communication**”. Select the title and make the font **Verdana**, style **Heading 2**, and alignment **centre**.

82. Change the backgrounds of the rows in the following manner: third and fifth rows red, seventh row **green** and ninth row **black**.

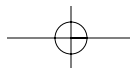


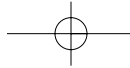
83. Type the following in the third row: **Introduction | Netiquette | eLearning | Boards | Partners | Exercises | Homepage**. Select the text and make the font type **Verdana**, font size **2 (10 pt)**, **bold** and **centered**.



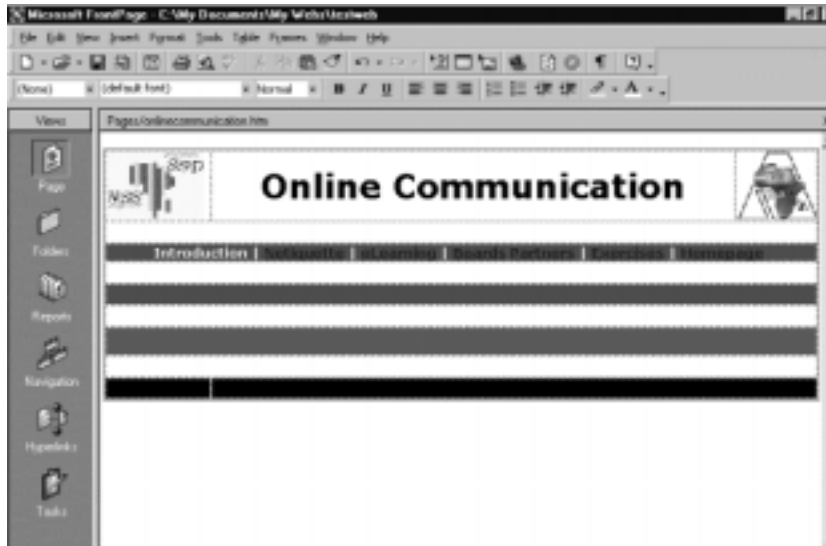
84. For each text (**except Introduction**) create a link to the respective existing web page – as per the table below:

Link text	Web Page
Netiquette	netiquette.htm
eLearning	elearning.htm
Boards	boards.htm
Partners	partners.htm
Exercises	exercises.htm
Homepage	index.htm

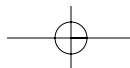
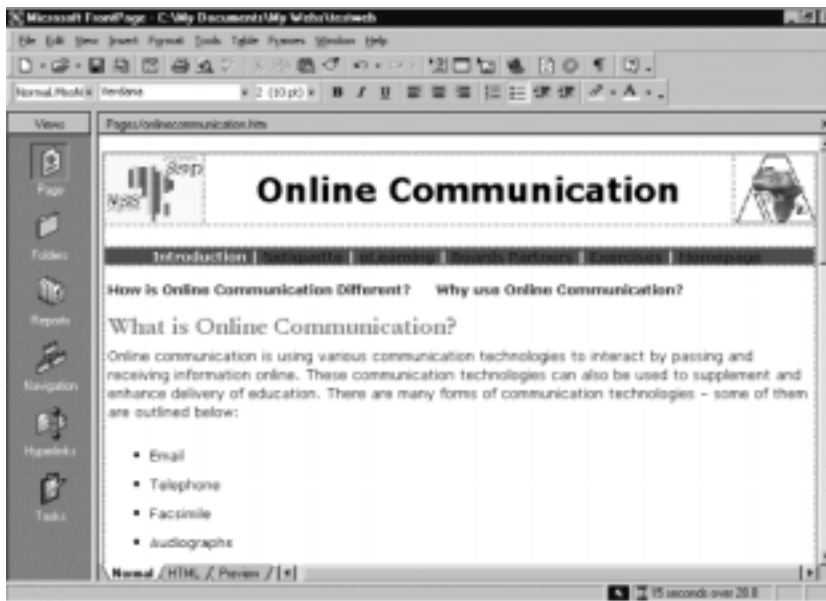


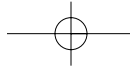


85. The screen dump below shows the result of the above actions.



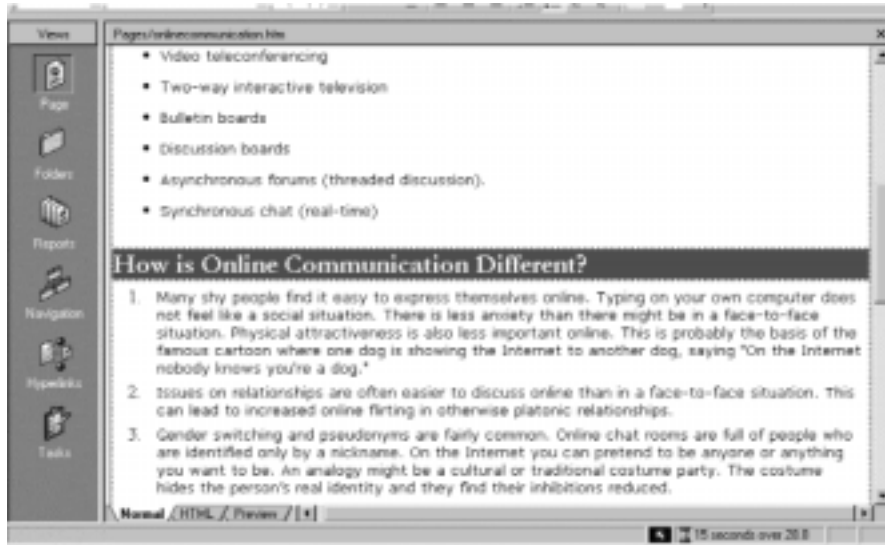
86. Open the downloaded, unzipped and saved document containing the text to be put on the web created. Scroll to the portion under the title **What is Online Communication?** copy the text and paste it in the fourth row, as shown below:



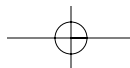
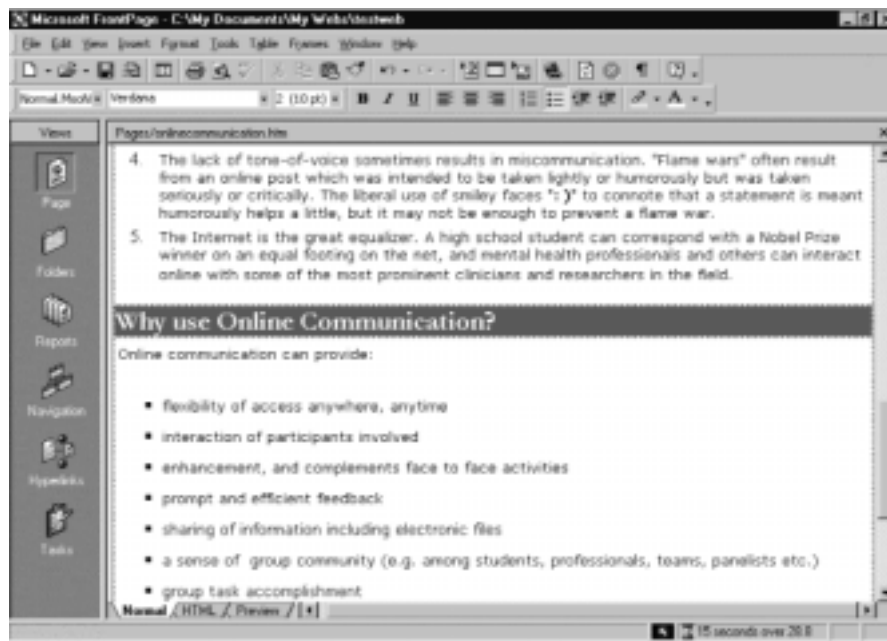


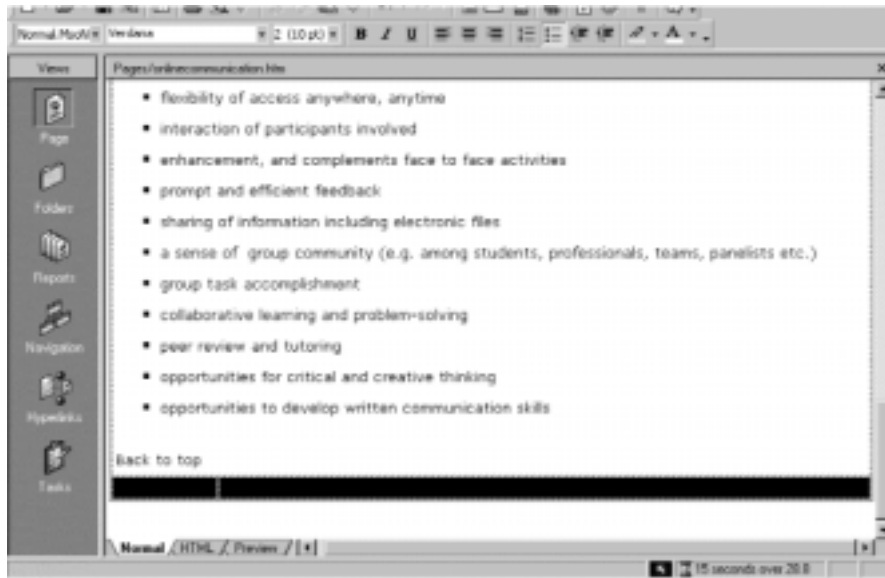
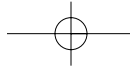
Website Development & Hosting

87. Still on the opened document, scroll down to the section with the title **How Is Online Communication Different?** Copy this **title** and paste it in the **fifth row** as shown. Copy the remaining text under this title and paste it in the **sixth row**.



88. Follow the same procedure for the following two rows (**seven and eight**), with the result below:

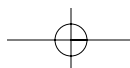
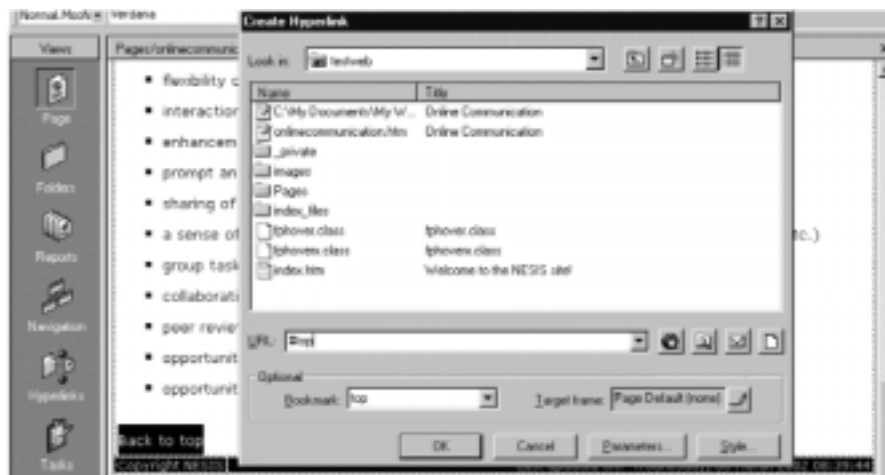


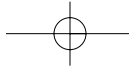


89. Copy the contents of the last row from **onlinecommunication.htm** and paste into the last two cells of the last row, as shown below:



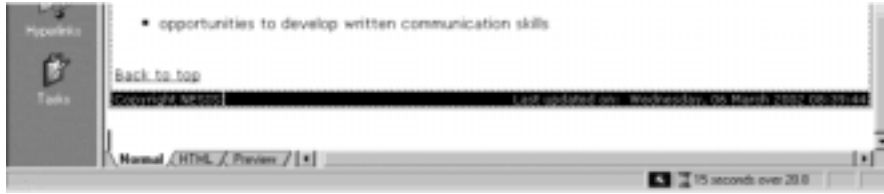
90. Select the phrase **Back to top** click on the **Hyperlink icon** and type **#top** in the **URL** box, as shown below. Click **OK** to close the **Create Hyperlink** window.





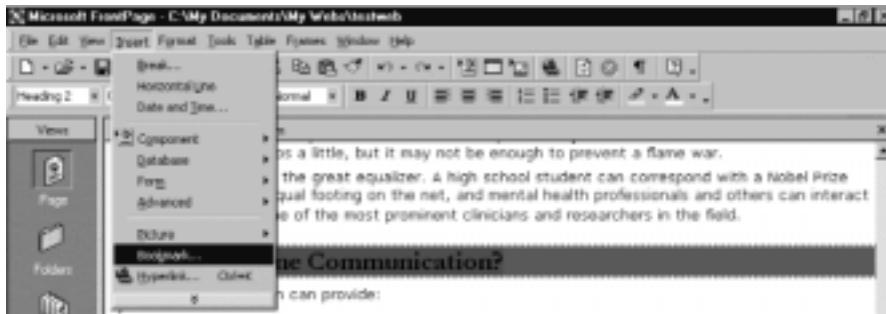
Website Development & Hosting

91. The link colour changes to blue and underline, as shown below:

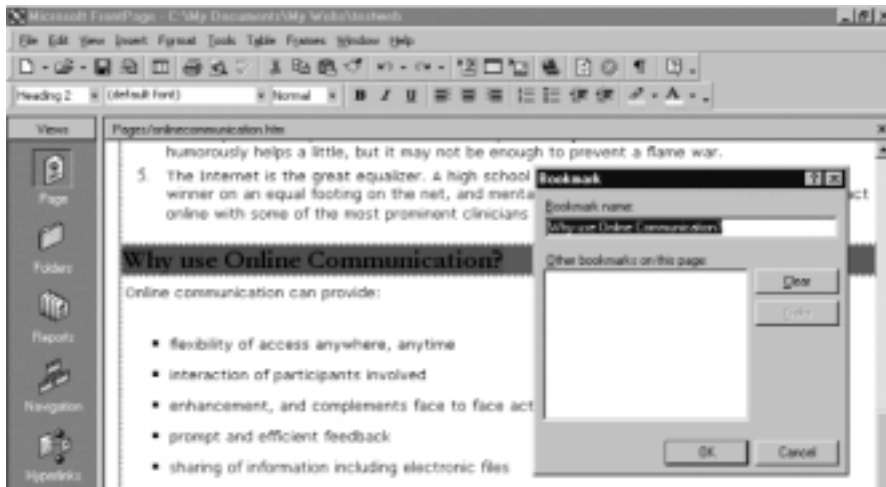


I. Creating a Bookmark – allows you to go directly to a heading within a page

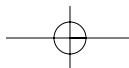
92. Select the title in the green-coloured cell: **Why Use Online Communication?** Use **Insert > Bookmark**.

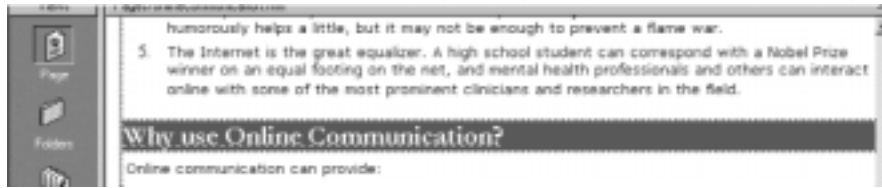
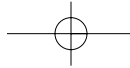


93. In the **Bookmark** dialogue box, type **Why Use Online Communication?** under the **Bookmark name**.

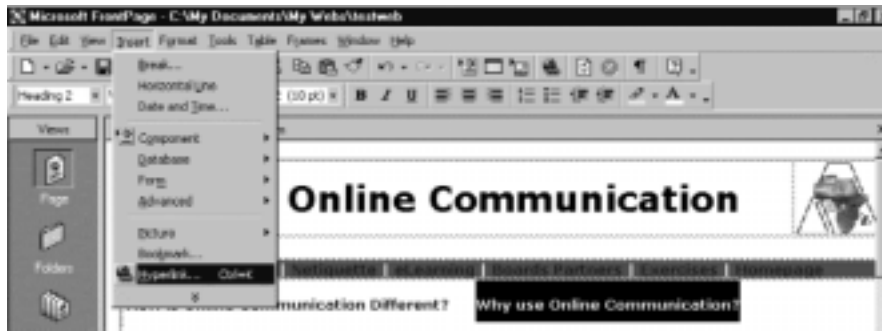


94. Click **OK**.

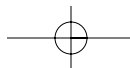
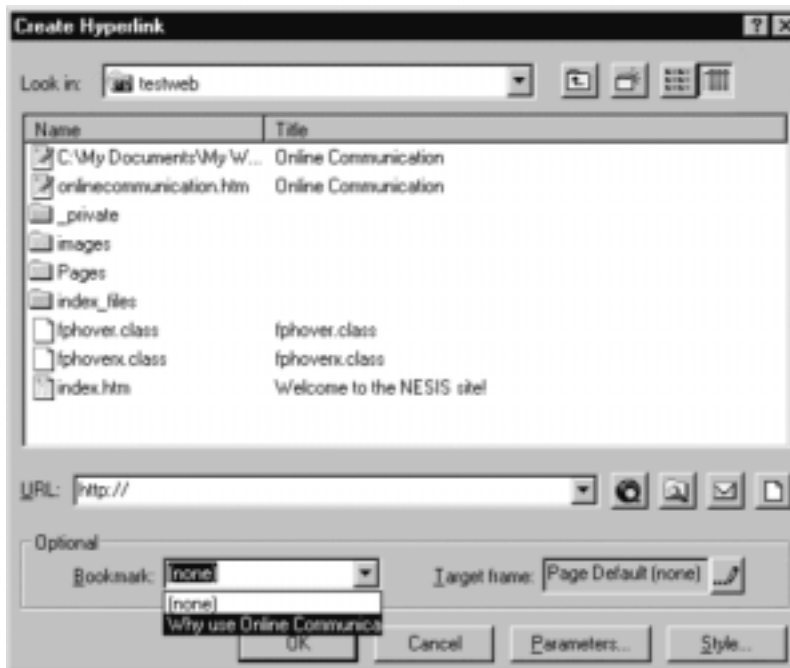


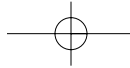


95. Scroll to the top of the page, and select the text **Why Use Online Communication?** As shown. Use **Insert > Hyperlink**.



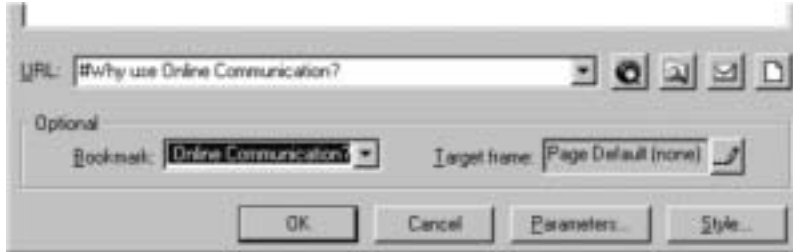
96. In the **Create Hyperlink** dialogue box, select **Why Use Online Communication?** as shown.



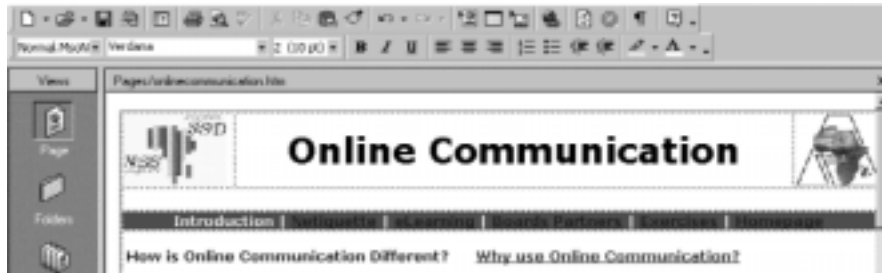


Website Development & Hosting

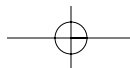
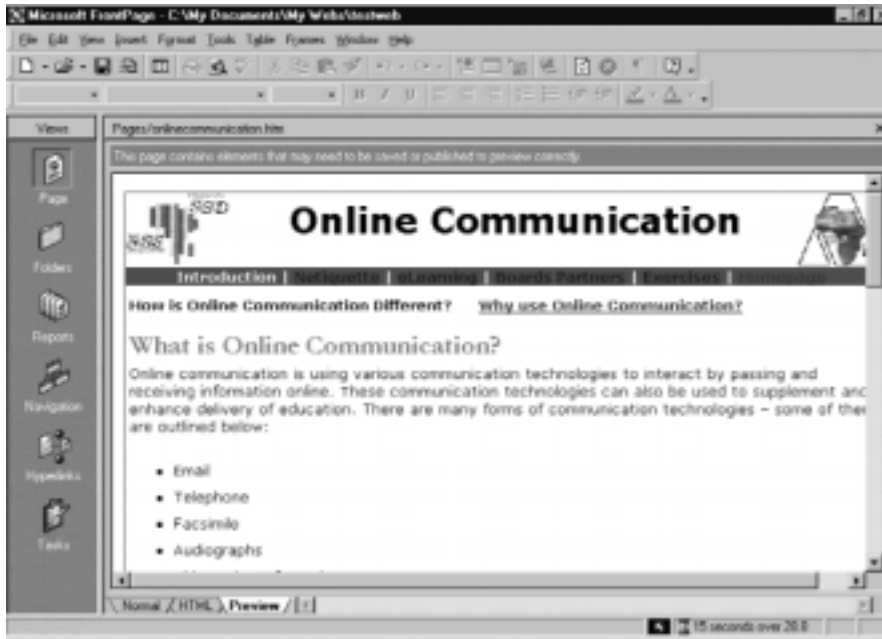
97. The URL portion is automatically updated as shown.

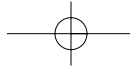


98. Click **OK** to create a bookmark at the top of the page, shown by the blue text below.

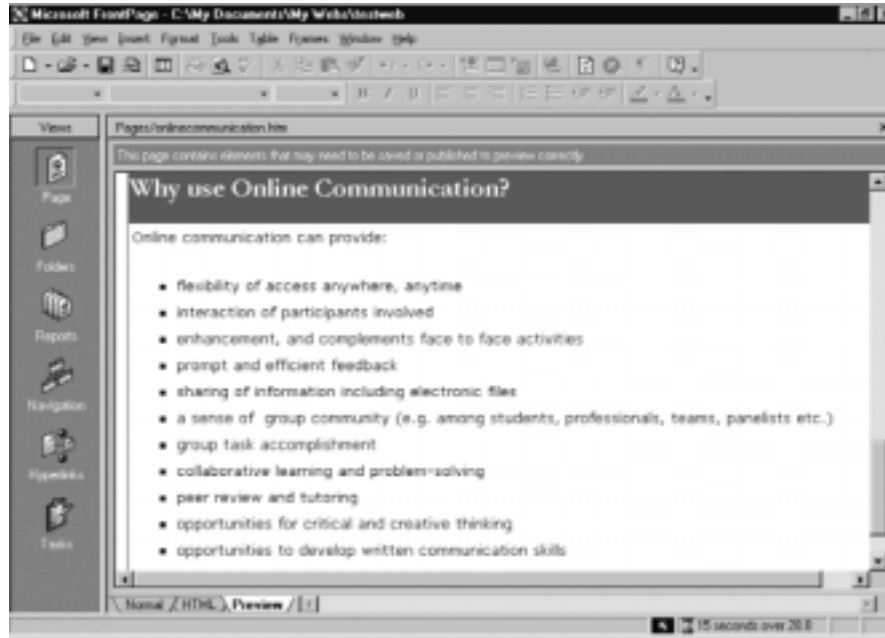


99. Click the **Preview** tab to test the effect of the bookmark you have created.

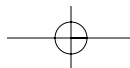
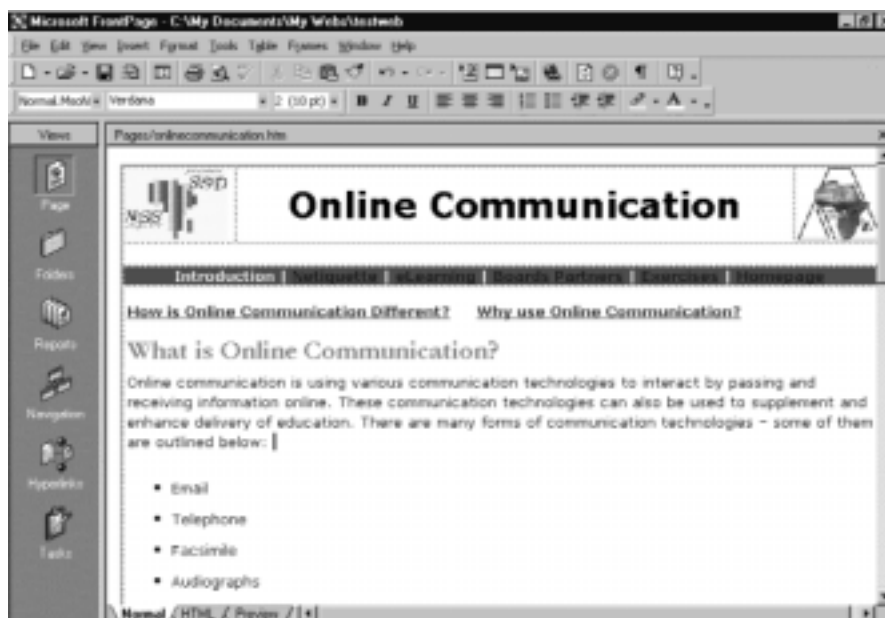


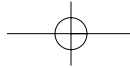


100. Click on the bookmark at the top right and notice the effect below – the page jumps to the appropriate section.



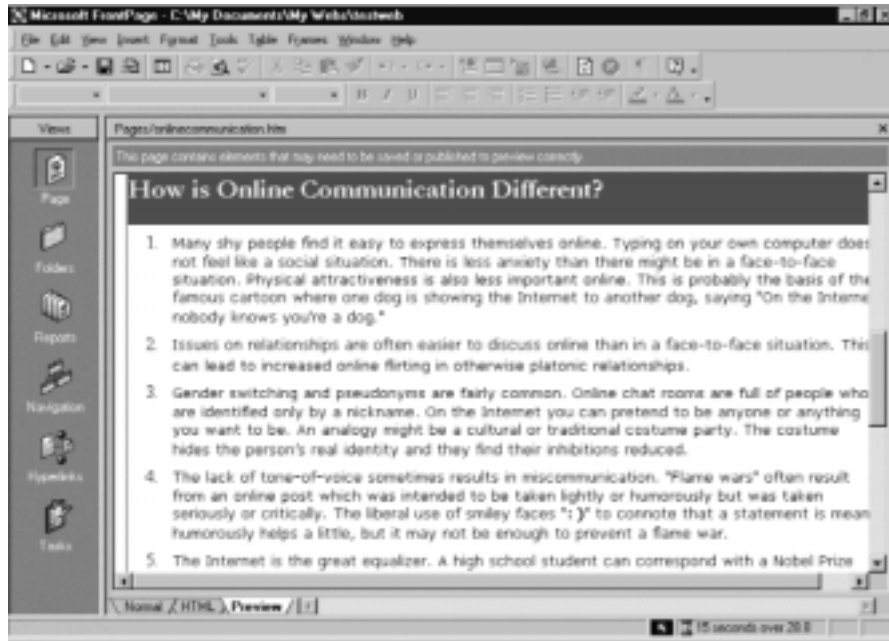
101. Click the **Normal** tab. Using the same book-marking procedure above, create the second bookmark, as shown below:



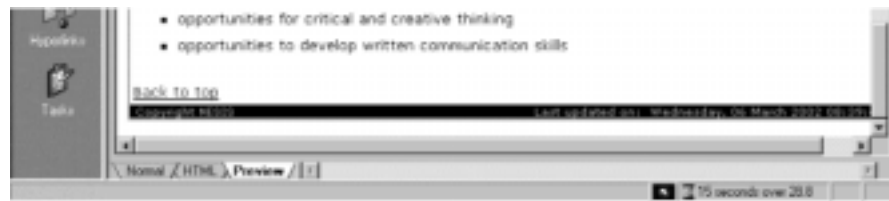


Website Development & Hosting

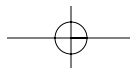
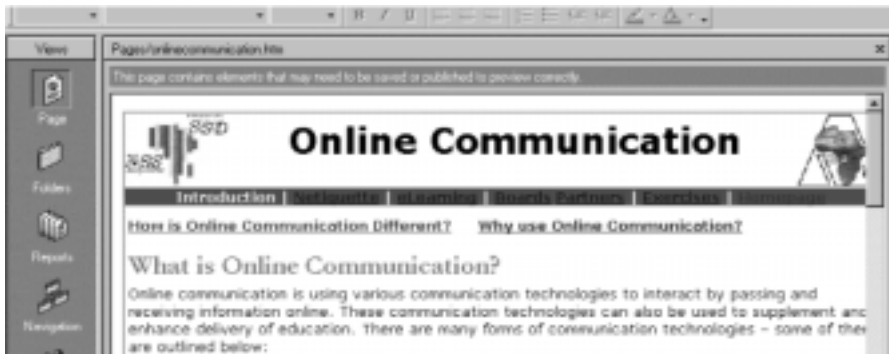
102. Use the preview function to test the bookmark you have created.



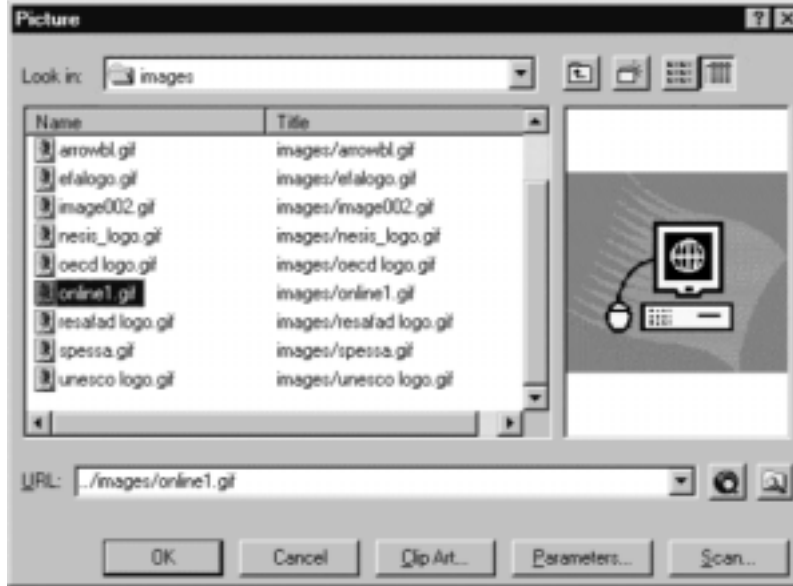
103. Still on preview page, scroll down to the bottom and click the **Back to top** link.



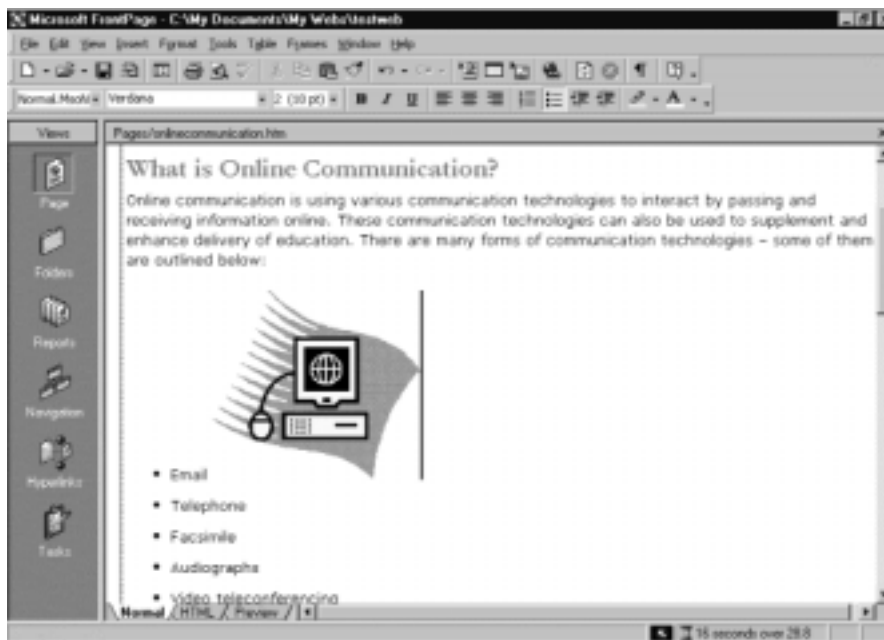
104. You should see the top portion of the page, as shown below:

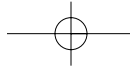


105. With the cursor at the end of the first bulleted text (i.e. email), and using **Insert > Picture > From File**, select the image **online.gif**.



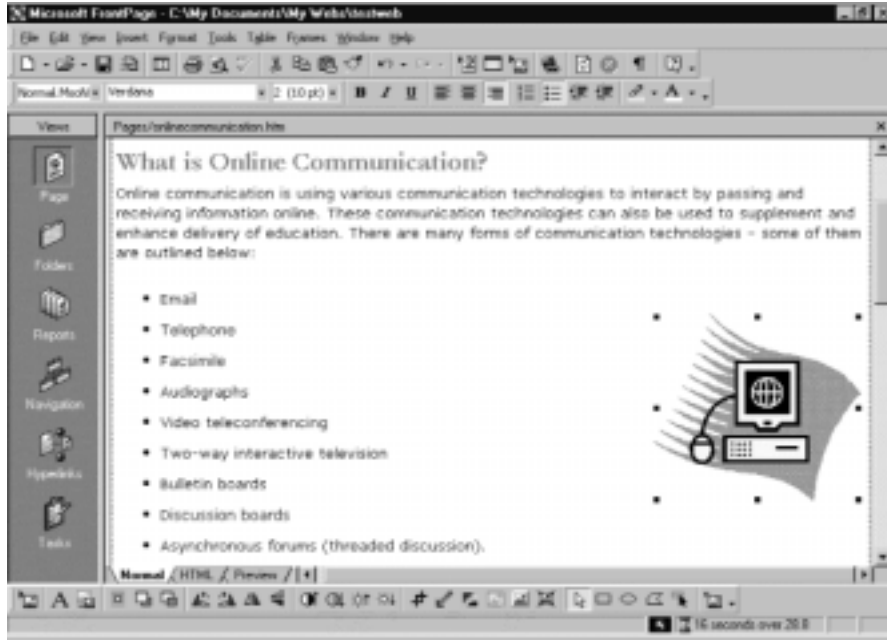
106. Click **OK** to insert it into the onlinecommunication.htm page.



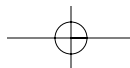
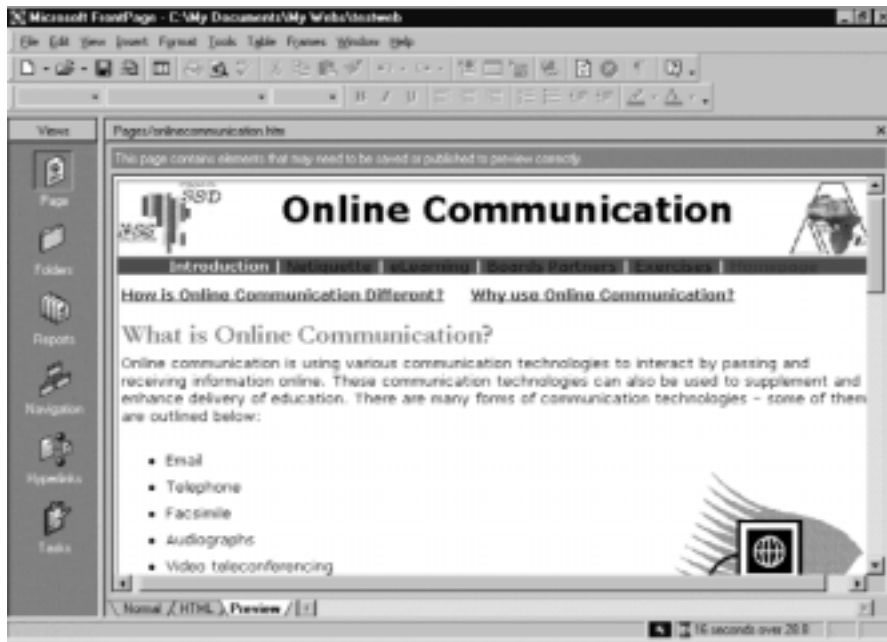


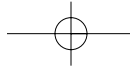
Website Development & Hosting

107. Select the inserted image and right-justify it as shown below:

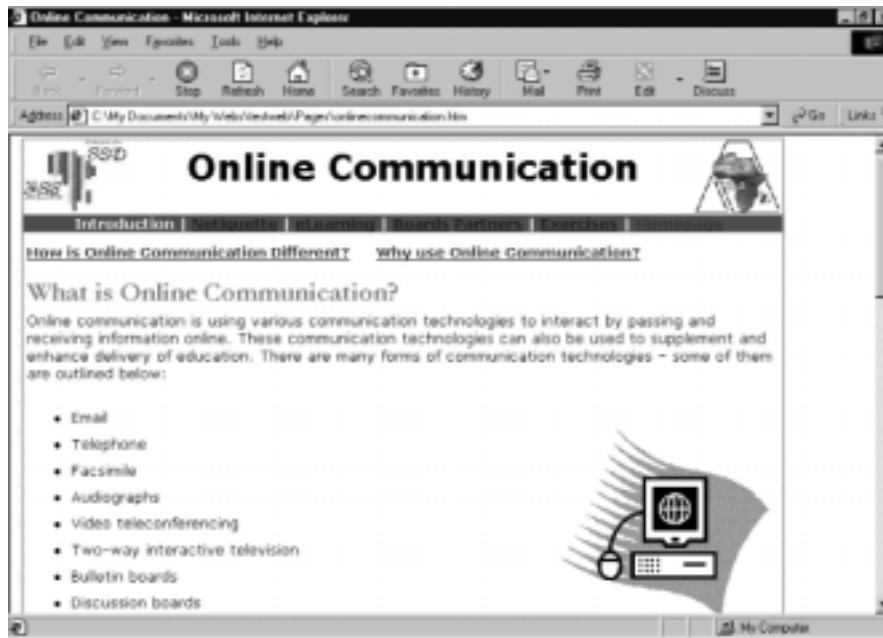


108. Use the **Preview** tab to see how the inserted page will look in a web browser, with the image added.

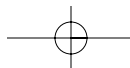
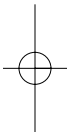
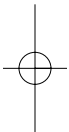
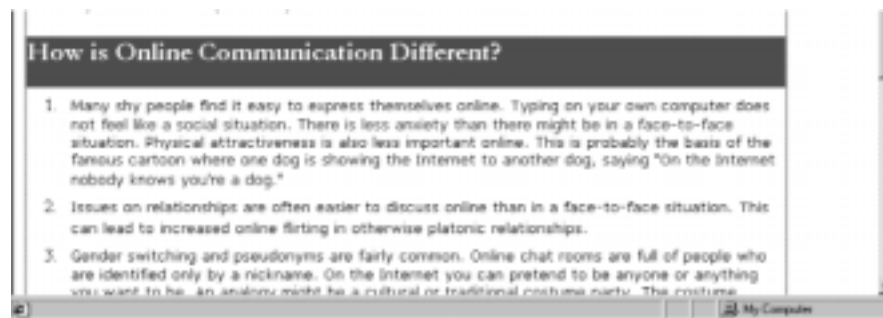


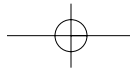


- 109. Use the **Preview in Browser** icon to preview the entire page using your current web browser.

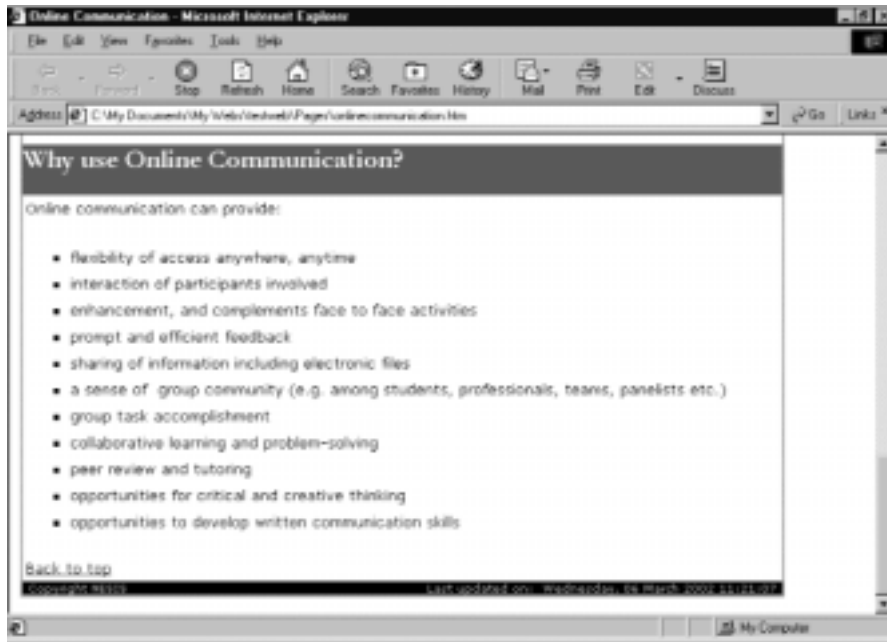


- 110. Scroll down to view the entire page.

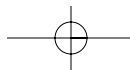


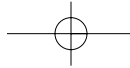


Website Development & Hosting

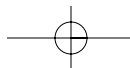
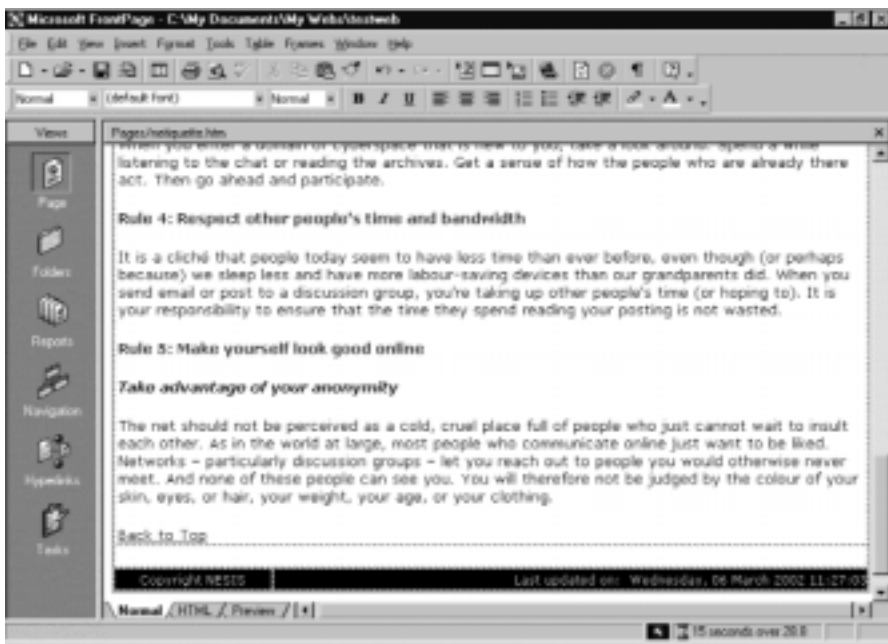
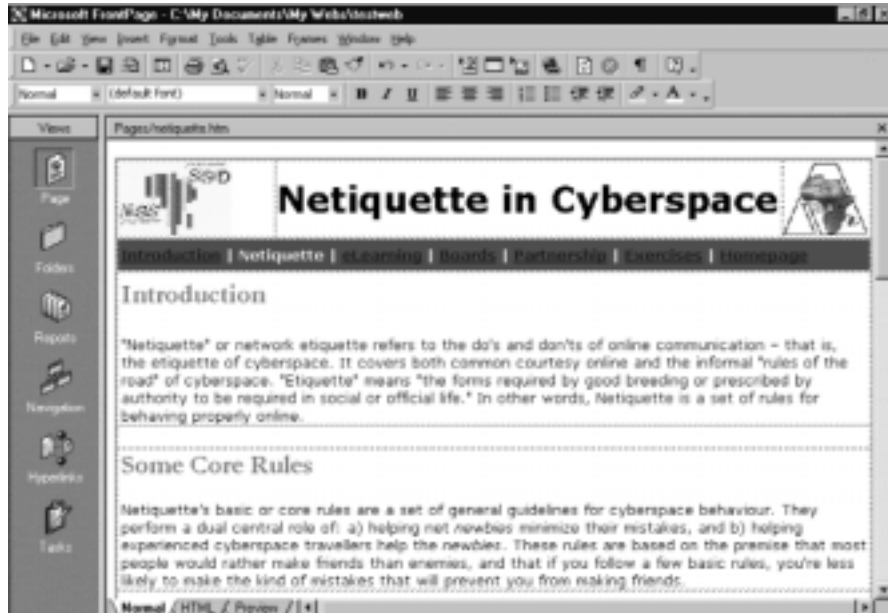


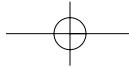
111. Use the steps above (which showed how to copy contents to the Online Communication page) to develop and transfer contents for the remaining pages of your web, as shown by the following FrontPage and Browser screen dumps.





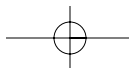
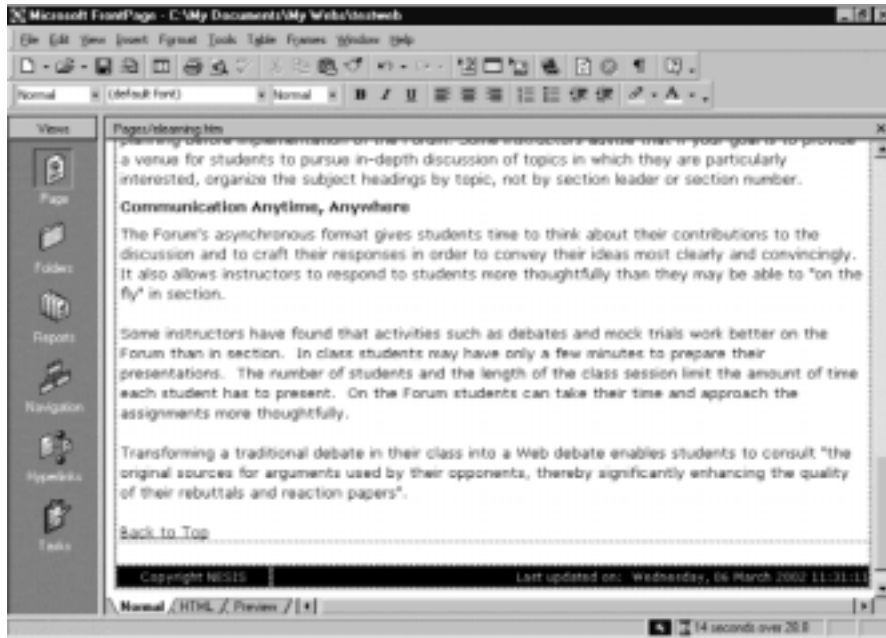
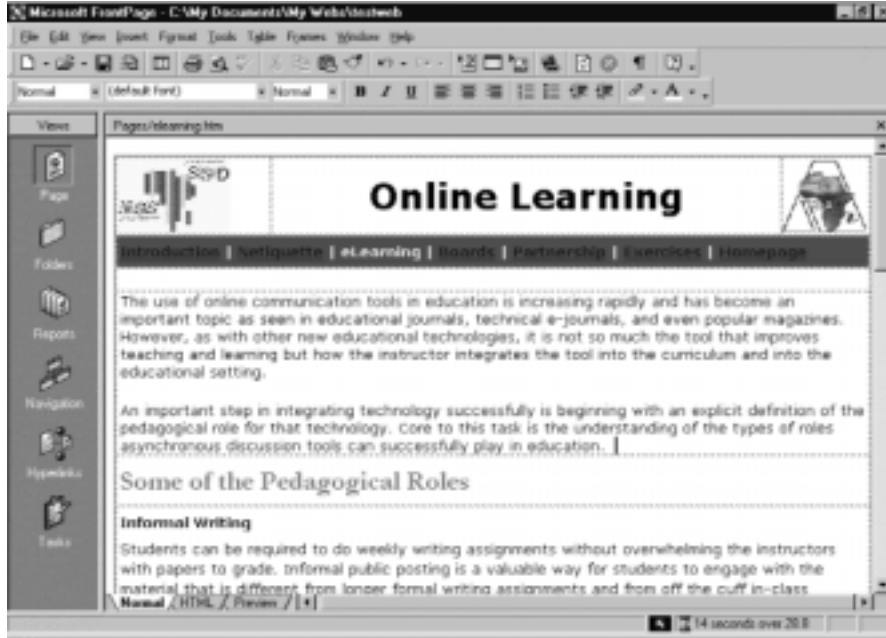
netiquette.htm page

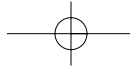




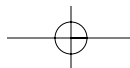
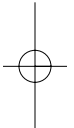
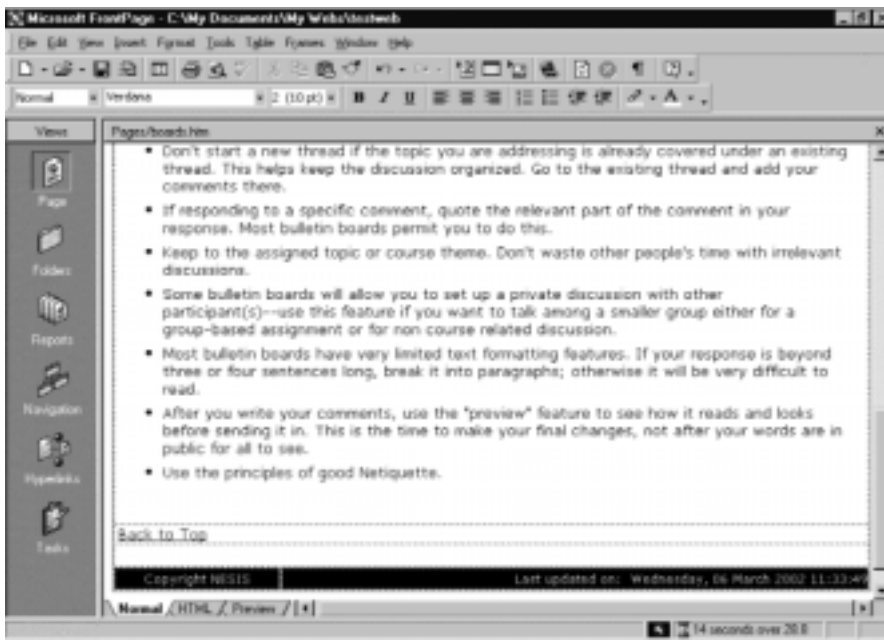
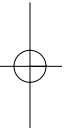
Website Development & Hosting

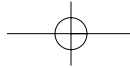
elearning.htm page





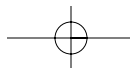
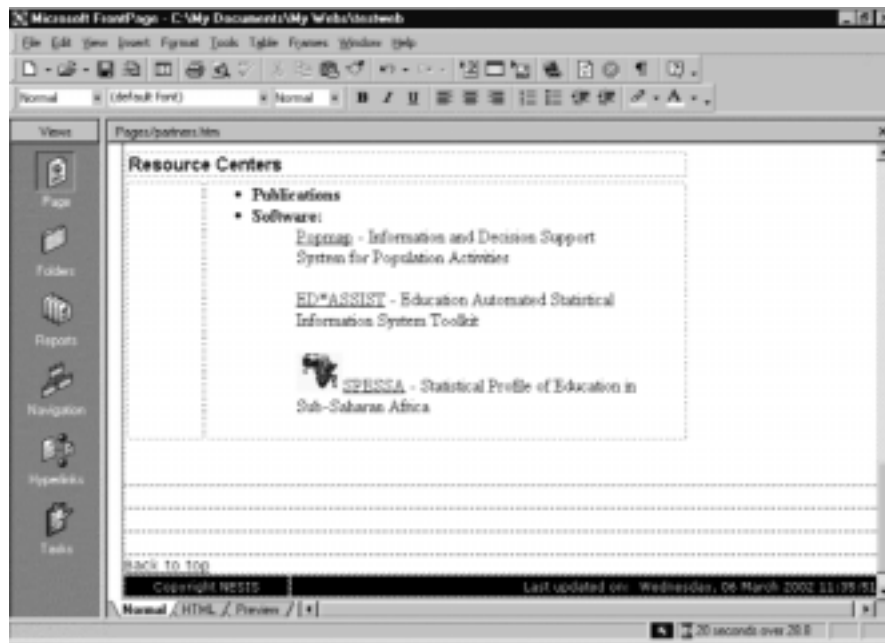
boards.htm page



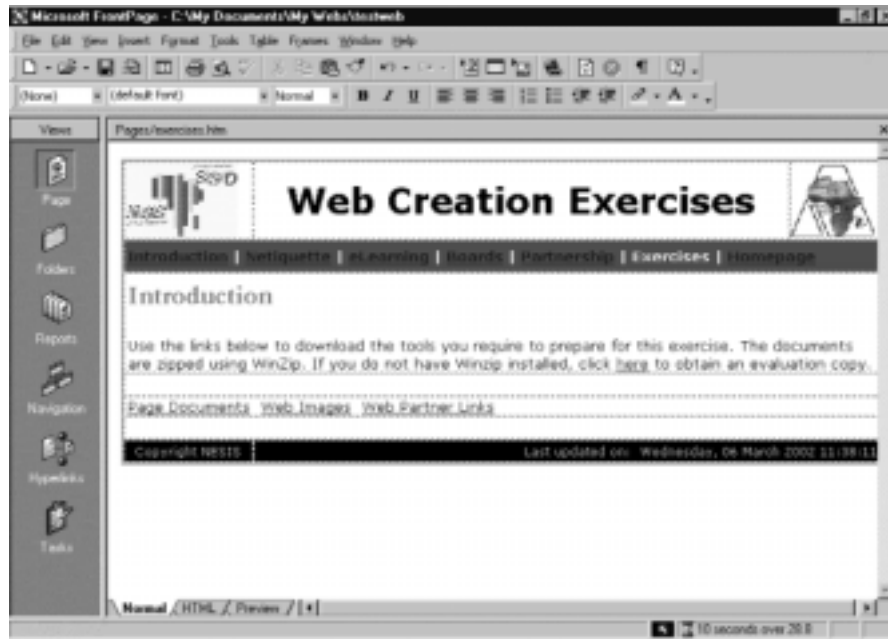


Website Development & Hosting

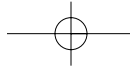
partners.htm page (the cells shown here are already in the file and hence do not need to be created)



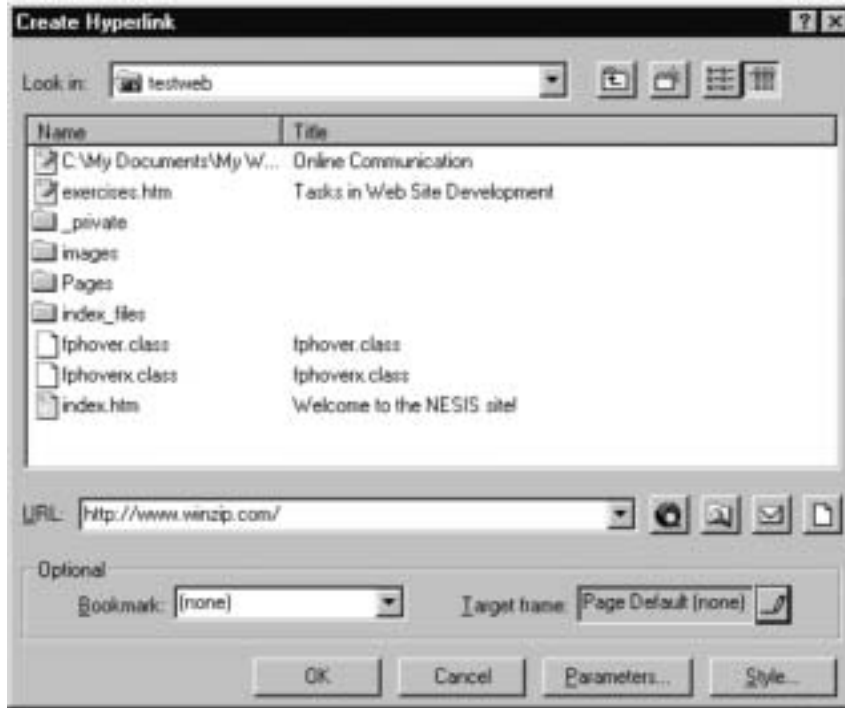
J. Creating an External Hyperlink



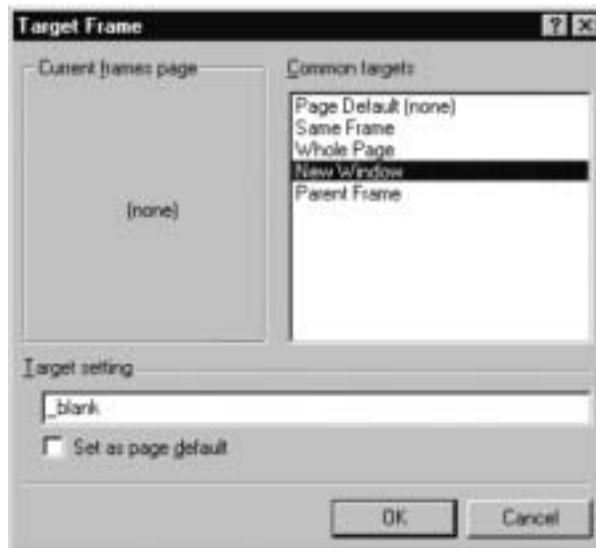
112. To create an external hyperlink, such as for obtaining an evaluation of the WinZip programme, shown above by the blue and underlined [here](#), select the text **here**. Click on the **Hyperlink icon**. In the **Create Hyperlink** dialogue window, type www.winzip.com at the URL point (which already has http://).



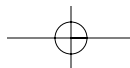
Website Development & Hosting

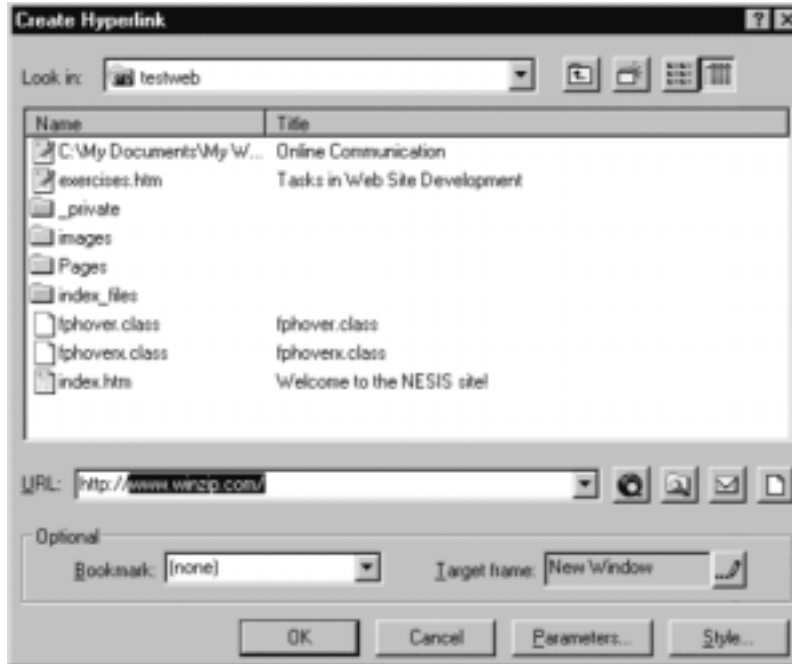


113. Click on the “pencil tab” next to the **Target frame**. The **Target Frame** dialogue box below pops up. Select **New Window**.



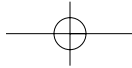
114. Click **OK**. Notice that the Target frame has changed from **Page Default (none)** to **New Window**.





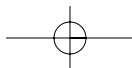
115. Click **OK** to obtain the page shown. Notice that the text **here** is now an external link to <http://www.winzip.com>. The “new window” target frame ensures that, using a web browser, when “here” is clicked, the **WinZip website** opens in new window (**test this to be sure it works**).

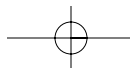
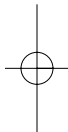
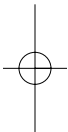
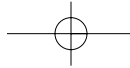


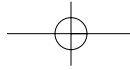


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116. The remaining web pages, as seen using a web browser.







Website Development & Hosting



117. Close the browser window, the newly created web **testweb**, and exit FrontPage.
118. **To view your web at any time using a web browser**, navigate to **.../My Webs/testweb** and double-click on **index.htm**.

