

Diyala University
College of education for pure Science
Department of computer Science
Lecturer of Web Design

Lecturer (1)

What is the website?

A website, also written as web site, or simply site, is a set of related web pages typically served from a single web domain. A website is hosted on at least one web server, accessible via a network such as the Internet or a private local area network through an Internet address known as a Uniform resource locator. All publicly accessible websites collectively constitute the World Wide Web.

What is the Web page?

A webpage is a document, typically written in plain text interspersed with formatting instructions of Hypertext Markup Language (HTML, XHTML). A webpage may incorporate elements from other websites with suitable markup anchors.

Webpages are accessed and transported with the Hypertext Transfer Protocol (HTTP), which may optionally employ encryption (HTTP Secure, HTTPS) to provide security and privacy for the user of the webpage content. The user's application, often a web browser, renders the page content according to its HTML markup instructions onto a display terminal.

The pages of a website can usually be accessed from a simple Uniform Resource Locator (URL) called the web address. The URLs of the pages organize them into a hierarchy, although hyperlinking between them conveys the reader's perceived site structure and guides the reader's navigation of the site which generally includes a home page with most of the links to the site's web content, and a supplementary about, contact and link page.

Some websites require a subscription to access some or all of their content. Examples of subscription websites include many business sites, parts of news websites, academic journal websites, gaming websites, file-sharing websites, message boards, web-based email, social networking websites, websites providing real-time stock market data, and websites providing various other services (e.g., websites offering storing and/or sharing of images, files and so forth).

Web site functions:-

Websites have many functions and can be used in various fashions; a website can be a personal website, a commercial website, a government website or a non-profit organization website. Websites can be the work of an individual, a business or other organization, and are typically dedicated to a particular topic or purpose. Any website can contain a hyperlink to any other website, so the distinction between individual sites, as perceived by the user, can be blurred.

What is the WWW?

The term WWW refers to the World Wide Web or simply the Web. The World Wide Web consists of all the public Web sites connected to the Internet worldwide, including the client devices (such as computers and cell phones) that access Web content. The WWW is just one of many applications of the Internet and computer networks.

Web design process:-

When building a website there is a process that most designers use. This process covers all the steps from deciding on a website to building it and putting them live.

While all of the steps are important, the amount of time you spend on them is up to you. Some designers prefer to plan a lot before building while others spend little or no time on marketing. But if you know what the steps are you can decide which ones you don't need.

Definition - What does Web-Based Application mean?

A Web-based application refers to any program that is accessed over a network connection using HTTP, rather than existing within a device's memory. Web-based applications often run inside a Web browser. However, Web-based applications also may be client-based, where a small part of the program is downloaded to a user's desktop, but processing is done over the Internet on an external server. Web-based applications are also known as Web apps.

Lecturer (2)

Types of Web-Based Application

However, from the aspect of you the user, you really only care about what the web application does, and how it will help you. So, it is easier to talk about types of web applications based on use:

- social networking websites (Facebook, MySpace, hi5.com, Xanga, Classmates.com).
- Image websites (Snapfish, Flickr, Photobucket, Shutterfly)
- Online calendars (Google Calendar, O2 Calendar, Yahoo! Calendar)
- Chat sites (chat-avenue, omgpop, czateria, Meebo)
- Online shopping websites (just about ANY store -- the grandfather of online shopping is Amazon)
- Online telephone directories (Yellow.com, White Pages, AnyWho)
- Blog pages (Blogger, Word Press, Tumbir)
- Online news publishers (Press Smart, The Drudge Report, Open Publish)
- Online dictionaries (ExamplesThe American Heritage Dictionary, Dictionary.com)
- Webmail services (Gmail, Yahoo Mail, HotMail)
- Map servers (Google Maps, MapQuest)
- Internet search engines (Google, Bing, Yahoo)
- Alternatives to desktop software applications (Google Docs, Slide Rocket, Avairy, Mint)

What is the HTTP?

is short for *Hyper Text Transfer Protocol*. HTTP is the underlying protocol used by the World Wide Web and this protocol defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands.

For example, when you enter a URL in your browser, this actually sends an HTTP command to the Web server directing it to fetch and transmit the requested Web page. The

other main standard that controls how the World Wide Web works is HTML, which covers how Web pages are formatted and displayed.

What is the URL?

URL is the abbreviation of Uniform Resource Locator. URL is the global address of documents and other resources on the World Wide Web.

Parts of a URL

The first part of the URL is called a protocol identifier and it indicates what protocol to use, and the second part is called a resource name and it specifies the IP address or the domain name where the resource is located. The protocol identifier and the resource name are separated by a colon and two forward slashes.

For example, the two URLs below point to two different files at the domain webopedia.com. The first specifies an executable file that should be fetched using the FTP protocol; the second specifies a Web page that should be fetched using the HTTP protocol.

What is the website?

A Web site is a related collection of World Wide Web (WWW) files that includes a beginning file called a home page. A company or an individual tells you how to get to their Web site by giving you the address of their home page. From the home page, you can get to all the other pages on their site. For example, the Web site for IBM has the home page address of <http://www.ibm.com>.

What is a Client?

A client is a piece of computer hardware or software that accesses a service made available by a server. The server is often (but not always) on another computer system, in which case the client accesses the service by way of a network.

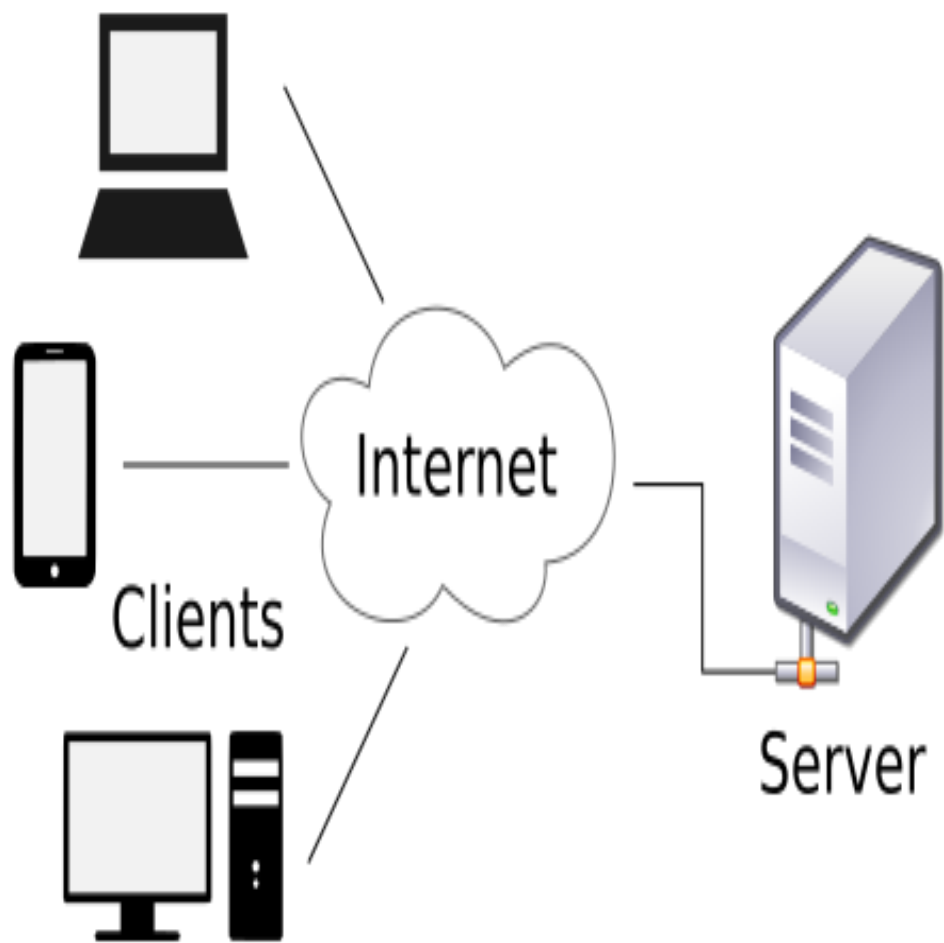


Figure Client

Lecturer (3)

What are the benefits of website?

- **#1 Online Presence 24/7**

Having a website means customers are always able to find you – everyday, 24/7. Meaning even at weekends and evenings your business is still accessible. It offers the customer convenience as they are able to access the information they need in the comfort of their own home, with no added pressure to buy. In general, it is much easier to click a few buttons online than to make the trip to a physical store to hunt someone down for information. It also prevents little annoyances such as waiting in queues.

- **#2 Credibility**

In this day and age it is much more credible for a business to have an online presence. People would likely be distrusting to any business that didn't have a telephone number or a physical address, and that soon could be said for having a website and e-mail. They are useful tools to help share further information about your business with customers answering all the 'What's?' and 'Whys?' that people may have. And too, if your website is of a high standard then it is likely to receive positive feedback with customers spreading positive word-of-mouth about your business.

- **#3 It Cuts Costs**

Your business will save money in a number of ways from spending less on printing costs (letters, catalogues etc.), to wages, as a website may mean you no longer need that extra pair of hands, due to automated processes. A website is a much more long term form of advertising and more than likely will produce better results. You can also use your website as ways of collecting cheap market research by setting up visitor polls and online surveys, helping you to find out what customers like best and how they feel.

- **#4 Market Expansion**

As the internet is accessible to anyone all over the world the ability to break through geographical barriers has become a lot easier. Anyone from any country will be able to access you and therefore be a potential customer.

- **#5 Potential Customers Already Out There**

As the internet itself is widely popular, millions of users are already online, meaning that out there already are millions of potential customers. Without a website, you are losing out on this opportunity. Some people often will just use the internet to research items but seeing as they have an exact product in mind they are more likely to go through with a purchase. Online shopping is certainly on the rise. Selling products and services online gives your business a major competitive advantage and is a very cost efficient way of doing business.

- **#6 Information Exchange**

A website provides easy ways of communication between buyers and sellers and allows customers to give quick and easy feedback on any aspect of the business.

- **#7 Ability to Change Information Whenever**

Having a website means a business can change information instantly, from pricing changes to location changes. By having most of your information on printed out documents there is a high chance they'll become out of date, fast. It is much more cost efficient to change information on a website than to reprint updated information which will likely be old news before they even arrive.

- **#8 Customer Service Online**

Websites provide an easier way to handle customer service, providing answers to regularly asked questions in a FAQ (Frequently Asked Questions) section you can reduce customer service costs and save yourself time and money, as well as providing much more information.

- **#9 Competitors Online**

It is more than likely that your competitors will already be set up online and will be attracting the exact same customers as you. So to get ahead it is definitely the way forward, and may even help you as a business become more competitive.

- **#10 Growth Opportunity**

Websites in general are great ways to in providing a place that potential investors can be referred too. It shows what your company is about, what it has achieved and what it can achieve in future.

Web – Basic Concepts

- **What is the Internet?**

The Internet is a global network connecting millions of computers. More than 190 countries are linked into exchanges of data, news and opinions.

Is Web and Internet the Same?

The Internet is not synonymous with World Wide Web. The Internet is a massive network of networks, a networking infrastructure. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer as long as they are both connected to the Internet. The World Wide Web, or simply Web, is a way of accessing information over the medium of the Internet. It is an information-sharing model that is built on top of the Internet.

Internet based services

1- World Wide Web (WWW)

The World Wide Web is commonly known as *web*. It is a network of web servers that stores web pages. The web pages are connected to each other using hyperlinks. The user can jump from one page to another by clicking the hyperlinks. The web web pages are accessed using web browsers. The HTTP (Hyper Text Transfer Protocol) protocol is used for communication between browser and web servers.

2- E-Mail

E-mail stands for electronic email. It is the most popular service provided by the Internet. It provides the fast and efficient way to send and receive messages through Internet. One

message can be sent to many persons with a single e-mail. Different types of files can also be sent through e-mail.

3- Telnet

Telnet is an abbreviation for Terminal Network. It is a software. It is used to connect to a remote or host computer for accessing information. Through this service, the user can also access information on the Internet.

4- File Transfer Protocol (FTP)

FTP stands for File Transfer Protocol. It is a way for transferring files from one computer to another. The process of transferring a file from a server (or remote computer) to local computer is called downloading. Similarly, the process for transferring a file from local computer to the server on the Internet is called *uploading*.

5- Gopher

A gopher is a menu-based information retrieval system. It is used for retrieving files and programs on the Internet. Gopher allows access to files found on FTP servers and web servers.

6- Chat Groups

Internet provides the facility to Internet users to chat (talk) with people online all over the world. Different programs like MSN Messenger, Yahoo Messenger, AOL online etc. are available for chatting on the Internet. Chat rooms allow the users to participate in a chat on the Internet. Chat rooms are locations on the web that provide facilities to the users to chat with each other online over the Internet.

Lecturer (4)

What is the Web Server?

A Web server is a program that uses HTTP (Hypertext Transfer Protocol) to serve the files that form Web pages to users, in response to their requests, which are forwarded by their computers' HTTP clients. Dedicated computers and appliances may be referred to as Web servers as well.

On the other words, Web servers are computers that deliver (serves up) Web pages. Every Web server has an IP address and possibly a domain name. For example, if you enter the URL.

What is the web browser?

Short for Web browser, a browser is a software application used to locate, retrieve and display content on the World Wide Web, including Web pages, images, video and other files.

On the other words, Web Browsers are software installed on your PC. To access the Web, you need a web browser, such as Netscape Navigator, Microsoft Internet Explorer or Mozilla Firefox.



Figure shows types of web browser

What is the hyperlink?

A hyperlink is an element in an electronic document that links to another place in the same document or to an entirely different document. Typically, you click on the hyperlink to follow the link. Hyperlinks are the most essential ingredient of all hypertext systems, including the World Wide Web.

What is the W3C?

Short for *World Wide Web Consortium*, an international consortium of companies involved with the Internet and the Web. The W3C was founded in 1994 by Tim Berners-Lee, the original architect of the World Wide Web. The organization's purpose is to develop open standards so that the Web evolves in a single direction rather than being splintered among competing factions.

What is the DNS?

DNS is a short for *Domain Name System* (or *Service* or *Server*), an Internet service that translates *domain names* into IP addresses. Because domain names are alphabetic, they're easier to remember. The Internet however, is really based on IP addresses. Every time you use a domain name, therefore, a DNS service must translate the name into the corresponding IP address. For example, the domain name *www.example.com* might translate to *198.105.232.4*.

What is the HTML?

HTML (Hypertext Markup Language) is the set of markup symbols or codes inserted in a file intended for display on a World Wide Web browser page. The markup tells the Web browser how to display a Web page's words and images for the user. Each individual markup code is referred to as an element (but many people also refer to it as a tag). Some elements come in pairs that indicate when some display effect is to begin and when it is to end.

The purpose of building the website

Whether your website is for business or personal interest, there are a number of things you have to consider before you start actually building your site. The first step should be deciding on the purpose of the website.

Purpose of Website - Why are you building this website?

Ask yourself, "**Why am I building this website?**"

- Are you building this site to make money from your website?
- To share information?
- or for your friends and family to keep in touch?

The purpose of the website will influence the [style](#), the [website technologies](#) required, [hosting costs](#) and [budget](#) required for your website.

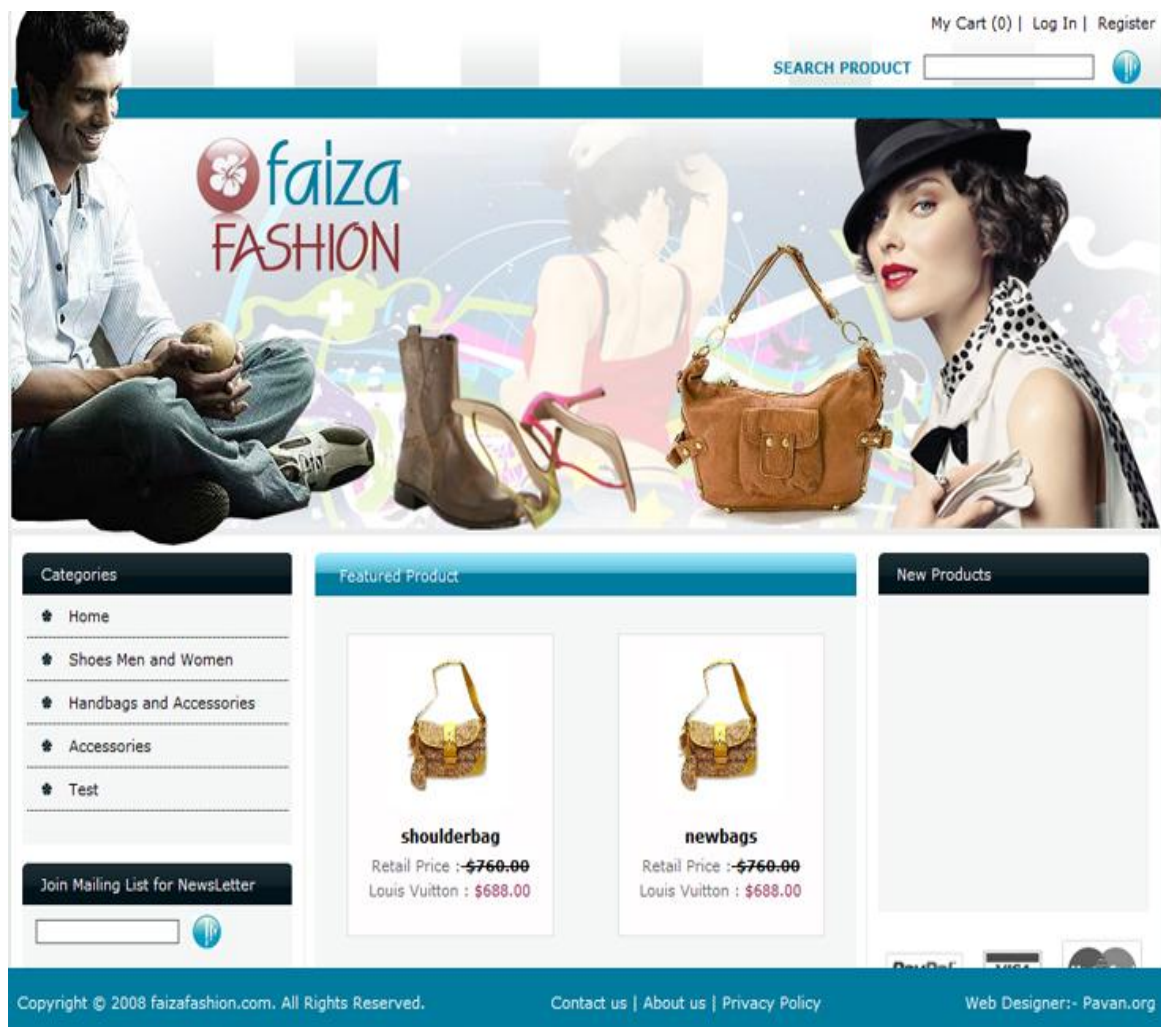
Lecturer (5)

Types of websites

1. Make Money with Website

A site built to make money from your website will require things like a way for the visitor to pay for the items, a shopping cart if you have a lot of things for them to purchase and security features to protect the purchaser's information. To give a good impression of your business your site needs to give a professional appearance.

- **Electronic commerce**, commonly written as **e-commerce** or **eCommerce**, is the trading or facilitation of trading in products or services using computer networks, such as the Internet or online social networks.^[1] Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI).



2. Websites Built to Share Information

A website to share information may not require as many features as a site that sells something. One thing you have to consider is if you are going to allow visitors to add comments or additional resources to your site. This would require additional features from your website hosting.

The screenshot displays the homepage of the 'ROOM for moms' website. The header features the site's logo, 'ROOM for moms', with the tagline 'a place to connect with moms like you'. To the right of the logo are input fields for 'username' and 'password', a 'log in' button, and a 'register' link. Below the header is a navigation bar with four tabs: 'FAMILY HEALTH', 'PARENTING & FAMILY LIFE', 'IN YOUR NEIGHBORHOOD', and 'CONNECT WITH MOMS'. A search bar with a 'go' button is located to the right of the navigation bar.

The main content area is divided into several sections. On the left, there is a 'WISDOM CORNER' section with a text snippet about feeling guilty for things done in the past, followed by a 'Preferred Trait for your Child?' section with a list of traits (good looks, intelligence, kindness, positive outlook, determination) and a 'Vote' button. The central part of the page features a large banner with the text 'To get started, just click on the mom that's most like you.' Below this banner are four profiles of women, each with a photo and a brief description: Kiyana (Starting a family), Sarah (Having my first baby), Jackie (Having another one), and Christina (Not pregnant, with kids). A link to 'register here' is provided. Below the profiles, there is a link to 'skip to registration to get started.' and a 'Printer-friendly version' link.

On the right side of the page, there are several featured content boxes. The first box features 'Dr. Traver on Stress During Pregnancy' with a photo of the doctor and a 'watch video' button. The second box is titled 'Recipes and grocery lists' with a 'go >>' link. The third box is titled 'nutrition' with a 'go >>' link. The fourth box is titled 'Baby Expo at the Qwest' with a 'go >>' link. The fifth box is titled 'Week 21' with a 'Visit the forum >>' link. The sixth box is titled 'Breastfeeding vs. bottle-fed' with a 'Check out the blog >>' link. The seventh box is titled 'featured blog' with a 'go >>' link.

The footer of the page includes a 'home' link and a list of links: 'about', 'contact us', 'privacy', 'terms', 'site map', 'search', and 'alegent.com'. The Alegent Health logo is also present in the footer.

Websites Built for Family and Friends

Family and friends websites would have a less formal feel. For this type of site you would also have to consider if your family and friends will be permitted to automatically add to the content of your website. Again, this would require additional features from your website hosting.

