



World Wide Web



SNAP RECAP

1. What is the World Wide Web?
2. What is meant by the terms Hypertext and Hyperlinks?
3. Define URL.

LEARNING OBJECTIVES

You will learn about:

- the World Wide Web and its protocols
- components of the web
- how the web works
- web hosting
- uses of the web



Introduction

a collection of web pages found on the internet

The World Wide Web (WWW) is a system of interconnected internet servers that contain interlinked hypertext documents. These hypertext documents are specially designed using HTML, that is, Hypertext Markup Language. These HTML documents contain links to graphics, audio, video and other documents. You can jump to view these other multimedia files and documents by clicking on the hyperlinks. The World Wide Web is often abbreviated as the web or www.

There are several applications called web browsers that make it easy to access the World Wide Web. For example, Mozilla Firefox, Microsoft Internet Explorer, Google Chrome, Microsoft Edge, Torch, etc.

World Wide Web is often mistakenly used as a synonym for the internet itself, but the web is a service that operates over the internet just like an email.

ACTIVITY



Match the following protocols with their functions.

1. To exchange files between computers on the internet	a. SMTP
2. To transfer files on the internet	b. TCP
3. To send emails	c. IP
4. To verify correct delivery of data	d. FTP
5. To divide the data into small packets at the source machine	e. HTTP

Components of the Web

The components (parts) of the web are given below:

- 1) **Web client:** This can be a laptop or a personal computer at home or at the office.
- 2) **Web server:** This is the host computer in a network that contains data in the form of a web page. There are many web servers interconnected to form a vast internet. Its main job is to deliver web pages and associated content to the client machine.
- 3) **Web browser:** This is a software application in a laptop or a PC which is used to access information on the web.
- 4) **Internet Service Provider (ISP):** A company that offers its customers access to the internet. The ISP connects to its customers using a data transmission technology, which is appropriate for delivering data such as dial-up, DSL, cable modem, wireless or dedicated high-speed interconnects.



Web client

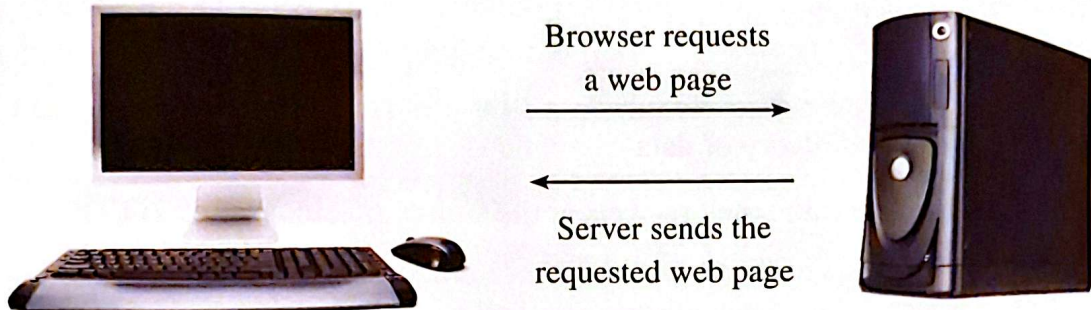
How the web works

Have you ever wondered how a web page gets to your computer screen? How are the pictures of your friends received on your computer? The steps below explain the process of displaying information from the web.

1. Web pages are stored on web servers which are interconnected around the globe.

the address of a website

2. Entering the URL (Uniform Resource Locator) of the web page in the Address Bar of the web browser will send a request from the client machine to the server machine.
3. The server transmits the web page data to the computer and the web browser displays it on the screen.



How the web works

Web Hosting

Web hosting is a facility that allows individuals and organisations to make their own websites. The website is then accessible to anyone through the World Wide Web. Web hosts are companies that provide space on a server they own or lease for use by their clients.

You can upload a web page or files using File Transfer Protocol (FTP) or a web interface. A file is usually delivered to the web as it is or with little processing. Many ISPs offer this service free to their subscribers. Web page hosting is also available from alternative service providers.

Uses of the web

The internet has become a part of our lives. There are millions of applications available on the internet, and the web helps us explore them and do many activities online. Let us now study some of the basic uses of the web.

① E-Commerce Example: Amazon, Shein, Temu

E-commerce or electronic commerce is online trading or exchanging of goods, services and information.

There are many websites where you can buy and sell products. These products can be anything from a pen to a laptop, professional solutions and even services. You can pay your utility bills such as mobile, landline, electricity, etc. online.



E-commerce

Anybody can advertise their business by posting information about their products or services, opening and closing hours, location, phone numbers and email ID. You can sell and buy the products using credit cards, debit cards, etc. Payment for the products can also sometimes be made on delivery.

For example, to buy a movie ticket online you can log in and select from the available options. After doing so, you submit a form online with your payment mode and details.

FACT FILE

M-commerce or mobile commerce refers to the buying and selling of goods and services, or their promotions and advertisements, using wireless handheld devices such as mobile phones to access the internet.

M-commerce enables users to buy and sell products and services on the internet using wireless technology.



2) Education

The web plays a major role in education, including:

Online tutorials

Web publishing

Online forums

Easy navigation from source to source

There are many web sites which provide open access to educational resources free of charge. You may also register for online courses which can help to develop your skills. Many institutions conduct online entrance exams; educational boards and institutions often post their results online. There are education forums available where you can participate in discussions. Online books are available to download free of charge or to buy.

The web helps to make education available to everyone in society. It makes education accessible for non-traditional students such as full-time workers, military personnel or individuals in remote regions who are unable to attend classroom lectures.



Online tutorials

3) Entertainment

The web hosts millions of websites offering all types of content for entertainment. You can download songs, games, movies, etc., from the web. These can be downloaded to a PC, laptop, phone, tablet or other device.



Entertainment online

④ E-governance

Information and communication technologies available on the web are used by governments. LAN, internet telephony (see page 176), a centralised access to important data and information are some of the services used by local and central government. This increases speed, efficiency and accuracy of work. Resources are shared between the different departments of government and other sectors, allowing better coordination of work. It also improves interaction and transparency between citizens and government.

⑤ Blog

A blog is a discussion or an informational site where articles called **posts** are published. The posts can include text, pictures, audio, video, etc. The articles are posted in reverse chronological order, that is, starting from the most recent.

A blog can be written by an individual based on personal experiences or areas of interest. Celebrities and well-known figures maintain blogs which can be followed by others for updates on their work, life, experiences, views, etc. The people who follow a blog can use it to express their own views and opinions on what has been posted. The practice of posting articles on a blog is called **blogging**.

⑥ Web feeds

Web feeds are updates from websites when they have new content. It is a document that includes web links to the source where the content can be found. Some websites allow users to subscribe and in return send the user updates on any new content posted. This facility is available on job portals, blogs, news sites, etc. It allows the user to get updates from the subscribed websites in one place and avoids having to visit all the sources individually.

⑦ Newsgroups

A newsgroup is similar to a forum on the internet. Here the members can express their opinions and discuss issues of interest. The messages are posted on a platform accessible to each member. However, unlike chat rooms it does not involve instant messaging but allows the user to respond when they wish.

⑧ Social networking

Social networking enables people to communicate with others online based on their background, interests, activities, opinions and real-life relationships. Each user is represented by their social profile on a social networking site and can interact with

other people. They can share content, pictures, audio and video. Some social networking websites have groups or communities, activities, games where users can participate. Some of the most popular social networking sites include Facebook, Instagram and Twitter.

FACT FILE

Six Degrees was the first social networking site developed in 1997.



9) Internet telephony : Example : Messenger, Facetime, Instagram

Online telephony or internet telephony is a technology that allows the internet to be used as a medium for telephone calls. A user can pay for an internet connection and then use this service to make domestic and international phone calls using software on their computer with speakers and a microphone. The internet call rates are much cheaper as compared to standard phone calls. Skype is an example of a website where computer-to-computer calls are free and computer-to-telephone calls are also relatively cheap.

10) Online games

Online gaming is playing video games on a computer. Games can be installed on a computer and then played on the internet with players from anywhere in the world. Online gaming requires a high speed internet connection, the latest version of Flash Player, a joystick and other control devices.

11) Online greetings

It is possible to send greeting cards over the internet just like an email. These are called e-greetings. Animated and other greetings for different occasions can be chosen from the available list of cards.

12) Online sharing

Online sharing is the facility for storing data on a cloud or a remote server. The data can include text, pictures, audio and video files. This data can then be made available to other people on the internet.

YouTube is a website where you can watch and upload videos. It has one of the largest collections of audios and videos on the internet. Many companies use this website as a medium to advertise their services and products.

FACT FILE

Every minute, 24 hours of video is uploaded on YouTube.

