

Computer, Internet & Internet Technologies

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Computer

- Computer is an electronic device that takes data as input, processes it and gives information as output that can be stored and shared. Computer is comprised of hardware and software.

Hardware & Software

- Physical components of computer are called hardware. E.g. Keyboard, Mouse, Monitor, Scanner, Printer
- Software is a set a of instructions that are given to perform different task on computer.

Different types of hardware

- Input Devices
- Output Devices
- Processing Devices
- Storage Devices
- Networking Devices

Input devices

- Input devices are those devices that are used to give input to computer (enter data into computer). E.g. Keyboard, Mouse, Mic, Scanner etc.

Output devices

- Output devices are those devices that are used to display (give) result of processing to the user. E.g. Monitor, Printer, Speaker

Processing devices

- Processing devices are those devices that are used to process (transform) data into information. These devices perform arithmetic and logical operations on data and controls follow of data. E.g. Central Processing Unit (CPU)

Storage Devices

- Storage devices are those devices that are used to store data (permanently or temporary). E.g. Hard disk, USB, CD, DVD, RAM, ROM etc.

Networking devices

- Networking devices are those devices that are used to share data from one computer to another computer. E.g. Network Interface Card (NIC), Router, Gateway, Modem etc.

Application Software

- Application Software is a set of instructions to perform specific tasks on computer. E.g. Microsoft Word, Calculation, VLC Player, Internet Explorer etc.

System software

- System software basically runs and controls all applications as well as hardware components of computer.

Components of system software

- Operating system
- Utility Programs
- Drivers

Operating system

- A part of system software that provides user interface to run and control all hardware and software activities on computer. It also includes features like multitasking, multiprocessing, time scheduling etc. E.g. Microsoft Window, UNIX, LINUX, DOS

Utility program

- Utility program used for maintenance of computer hardware and software. E.g. Disk Defragment, Disk scan, Antivirus

Hardware Driver

- Hardware drivers are used to identify and run hardware computer on computer.

Internet

- Internet is network of networks (a global computer network) that connects computer worldwide (globally).
- Internet is a global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols.

How can we use internet?

- Searching contents (pdf (Portable Document File), doc (Document), ppt (PowerPoint), xls (Excel), Access (accs), html, webpages)
- Job searching/online job (Job Hunting Websites,
- Communicate data to any one (E-mails, Websites, blogs, Wikis)
- Online shopping (E-Commerce)
- Online Banking (E-banking)
- Online learning (distance or virtual education)
- Online Social Networking (Facebook, Twitter, WhatsApp, Instagram) Online Forum

- Entertainment and fun (Movies, songs, games, Music, Naat, Tilawat, Documentaries, Drama)
- Online News Channels (Newspapers) including electronic media (Radio, TV) and print media (Newspapers, magazines) both.
- Educational usage (educational videos, educational audios files)
- Downloading E-Contents (e-books, e-articles, e-journals, e-notes)
- Uploading and sharing e-contents (material)
- Advertisement / E-Marketing
- Online storage
- Video and Audio Chatting and Conferencing

Some Internet Technologies

- Web server
- Mail Server
- Computer/Network Server
- Node/Terminal
- Website
- Webpage
- Domain Name
- Hyperlink
- Web Address
- Web Browser
- World Wide Web (WWW)
- (Network) Protocols
- Internet Protocols (IP)
- Transport Control Protocol (TCP)
- Hyper Text Transfer Protocol (HTTP)
- File Transfer Protocol (FTP)
- E-mail
- Web Conferencing
- Uploading
- Downloading
- Main Page
- Search Engine

Web server

- It provides the facility to download or upload data. It basically stores websites and website data. It has very excessive storage.

Mail Server

- It provides facility to send and receive E-mails and it also provides E-mail management services like Gmail, Yahoo, Hotmail, MSN etc.

Network Server

- It is used in networking environment. It is more powerful computer that provides networking facilities to the other computers in the network.

Node/Terminal

- Computer connected in a network is called a node.

Network Topology

- It is the layout or arrangement of computers connected in a network.

Website

- Collection of webpages that are hyperlinked together. Million of website are present on internet.

Webpage

- A web document that contains data including text, pictures, shapes, drawings, audio, video.

Hyperlink

- Interconnection of two or more web documents. One web page may be interconnected to one or many other webpages or websites.

Web Address

- Address of any website like www.uos.edu.pk (website of University of Sargodha), www.google.com etc.

WWW (World Wide Web)

- It is consortium of all websites of the world. It was established in 1991.

Protocols

- Set of rules that govern over internet. For proper communication, entities in different systems **must speak the same language**
 - there must be mutually acceptable conventions and rules about the content, timing and underlying mechanisms
- Those conventions and associated rules are referred as “PROTOCOLS”. Examples HTTP and FTP

Hyper Text Transfer Protocol

- HTTP is used to access and download websites from internet.

File Transfer Protocol

- FTP is used to upload data and websites to internet.

Domain Name

- It shows the type of website. It is included at end of name of website (website address) like .com, .edu., info., org, gov etc.

Web Address

- Address of any website like www.uos.edu.pk (website of University of Sargodha), www.google.com etc.

Hyperlink

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Contemporary Internet Technologies

“It's amazing in many ways that in just a few short years, we have gone from a Web that was primarily “*read only*” to one where creating content is almost as easy as consuming it”.

“One where writing and publishing in the forms of blogs, wikis and podcasts and many other such tools is available to everyone. One where we can connect not just to content but to people, ideas and conversations as well”.

“The good news for all of us is that today, anyone can become a *lifelong learner*. These technologies are user friendly in a way that technologies have not been in the past”

Blogs and Blogging

- What is a Blog (*or Weblog*)?
- A frequently updated website, automatically archived.
- Easily updated using any web browser connected to the Internet.
- An online journal or newsletter, consisting of personal thoughts & commentary
- Blogs include links to articles and websites.
- Most blogs allow readers to leave comments on posts.
- Blogs can be authored by an individual or by multiple authors.

Blogs

- Updated Website
- Automatically Archived
- Accessed by any web browser
- Personal thoughts and commentary
- Links Articles/Websites
- Leave comments

Wiki

- "A wiki is a web application that allows users to add content, as on an Internet forum, but also allows anyone to edit the content. Wiki also refers to the collaborative software used to create such a website" [Wikipedia](#)

Wiki

- Online
- Users can add content
- Anyone can edit information if you choose
- Add images and links
- Set preferences
- Invite people to join

Podcasting

Podcasting, made from Apple's "iPod" and "broadcasting", is a method of publishing files to the Internet, allowing users to subscribe to a feed and receive new files automatically by subscription, usually at no cost. It first became popular in late 2004, used largely for audio files."

Wikipedia

Podcasting- Continued

- Podcasting does not actually require an iPod. One can access podcasts via the web with almost any audio software and/or with most portable digital music players. Creating podcasts can be done using free software. Podcast files can be hosted using various, free online services.
- Mainly Audio >Subscribe to updates
- Usually free >Create using free software i.e. Audacity

Example



www.podomatic.com

The Web Address for HFC podcasts is:

<http://hfc.podomatic.com/> – [Click Here](#)

Online Social Networks

- "A social network is a map of the relationships between individuals, indicating the ways in which they are connected through various social familiarities ranging from casual acquaintance to close familial bonds." [Wikipedia](#)

Online Social Networks

- ❑ Social networking sites typically let users develop a list of friends.
- ❑ You can explore your friends' buddy lists and find people with similar interests.
- ❑ You can perform a number of online activities: blogging, media-sharing, commenting, testimonials.
- ❑ You can personalize your 'space' easily using themes and widgets to make it look different from other people's.

Examples of Social Networks



Photo Sharing

There are many places where you can post pictures and photos. You can share them with others and search for pictures posted by other people. There are privacy options available.



<http://educationalsoftware.wikispaces.com/Picture+Sharing>


Video Sharing

Just as you can add images up to the web you can also add video clips. There are a range of different sites to host video such as:



Embedding Video

You can embed videos into your blog, wiki or website from sites such as YouTube and Google Video. All you need is the html code from the website that hosts your video which you then add to your blog, wiki or website.

Added **January 18, 2007** 
From [linquiry](#) to inquiry
Kim Franklin, PhD student in the Inte... [\(more\)](#)
Category [Howto & DIY](#)
Tags [insects](#) [metamorphosis](#) [scientist](#) [interview](#)
[\(more\)](#)
URL <http://www.youtube.com/watch?v=M-azMiYq5>
Embed `<object width="425" height="350"> <param na`

Slide Shows

If students or teachers have worked hard on a PowerPoint presentation in class, there are places where these can be uploaded so that you can share them with a wider audience.



RSS Feed

"It is an alternative means of accessing the vast amount of information that now exists on the world wide web. Instead of the user browsing websites for information of interest, the information is sent directly to the user."

RSS stands for Really Simple Syndication. It refers to files easily read by a computer called XML files that automatically update information. **seen these symbols?**

If you have, it means that you can subscribe to an information source provided on that page. That way, whenever there is an update to that page (*new information, new blog post, new photos, etc*), you will receive an update in your RSS reader.

