

CHAPTER-01

WEB APPLICATION

LECTURE-1

WORKING WITH ACCESSIBILITY OPTIONS

- Computer Accessibility refers to the user friendliness of a computer system for all, regardless of their disability.
- This is mainly a software issue. However, when a combination of hardware and software, it enables a person with a disability or impairment to use a computer. It is known as Assistive Technology.
- In this session, you will learn about the basic accessibility options available on your computer
- Accessibility Options in Control Panel are used to customize the way your keyboard, display, or mouse function. Many of these features are useful for people with disabilities as discussed earlier.
- In this session, you will learn to use accessibility options in Windows XP. Launching accessibility options
- • To launch accessibility options in Windows XP, Click Start > Control Panel > Accessibility Options.
- The Accessibility Options window appears. Keyboard Tab StickyKeys
- *StickyKeys is an accessibility feature to help computer users with physical disabilities, but it is also used by others as a means to reduce repetitive strain.*
- StickyKeys allows the user to press and release a modifier key, such as Shift, Ctrl, Alt, or the Windows key, and have it remain active until any other key is pressed.

FilterKeys

FilterKeys is a feature of Microsoft Windows. It is an accessibility function that tells the keyboard to ignore brief or repeated keystrokes, making typing easier for people with hand tremors.

- To enable FilterKeys, check Use FilterKeys.
- Click Settings under FilterKeys and check “Ignore Repeated Keystrokes”.
- Click Apply. • Click OK

ToggleKeys

- ToggleKeys is also a feature of Microsoft Windows. It is an accessibility function which is designed for people who have vision impairment or cognitive disabilities.
- When ToggleKeys is turned on, computer emits sound cues when the locking keys (Caps Lock, Num Lock, or Scroll Lock) are pressed. A high sound is emitted when the keys are switched on and a low sound is emitted when they are switched off.
 - To enable ToggleKeys, Check Use ToggleKeys.
 - Click Settings under ToggleKeys.
 - Click Apply.
 - Click OK.
- Having enabled ToggleKeys, you can see its effect by any one of the following keys NUM LOCK, CAPS LOCK or SCROLL LOCK. Notice that on doing so, you hear a beep.
- To disable ToggleKeys, uncheck Use ToggleKeys and then click on Apply > OK.

SoundSentry

- SoundSentry is designed to help users with auditory impairments. SoundSentry generates visual warnings, such as a blinking title bar or a flashing border, whenever the computer generates a sound.
- To enable SoundSentry, Check Use SoundSentry under Sound Tab. Doing so activates a drop down list wherefrom you can choose the type of visual warning desired.
 - Click Apply. • Click OK. For understanding SoundSentry, you need to create an error! • Click Start> Run.
- Type note instead of notepad and press Enter.
 - Type some repeated characters in the notepad. Notice that the desktop will flash for a fraction of second along with visual error sound code.

- To disable SoundSentry, uncheck Use SoundSentry and then click on Apply > OK.
ShowSounds ShowSounds instructs applications that convey information by sound, to also provide information visually, through text captions or informative icons.
 - To enable ShowSounds, Check Use ShowSounds under Sound Tab. • Click Apply. • Click OK.

MouseKeys

- MouseKeys is an accessibility feature that assists people who have difficulty using a mouse. This option uses the keyboard (especially numeric keypad) as a pointing device instead of a mouse.
- Select the Mouse Tab, a window to configure accessibility options for mouse will be displayed.
 - To enable MouseKeys, Check Use MouseKeys. • Click Apply. • Click OK.
- Notice the MouseKey icon in the System Tray (figure 7). Use number pad keys for moving mouse pointer instead of using mouse after enabling “Use MouseKeys”. Use number key 4 to move left, 6 to move right, 2 to move down and 8 to move up.
- To disable MouseKeys, uncheck Use MouseKeys and then click on Apply > OK.

Home Assignment

Fill in the blanks

1. The option in Microsoft Windows XP used for helping users with physical disabilities and to reduce repetitive strain is _____.
2. Sound Sentry is designed to help users with _____ impairments.
3. The High Contrast option in Microsoft Windows XP is designed to assist people with _____ impairments.
4. _____ is designed to assist people that have difficulty using a keyboard or a mouse.

LECTURE-2

- *A computer network is a collection of computers and other hardware components interconnected by communication channels (cables or satellites) that allow sharing of resources and information.*

Networks are designed using the following architecture:

- **Peer-to-peer (P2P) Architecture:**

Networks in which all computers have an equal status are called peer to peer networks. Generally in such a network each terminal has an equally competent CPU.

- **Client-Server Architecture:**

Networks in which certain computers have special dedicated tasks, providing services to other computers (in the network) are called client server networks.

The computer(s) which provide services are called servers and the ones that use these services are called clients.

Types of networks

There are two major types of network Local Area Network (LAN) and Wide Area Network (WAN).

Local Area Network

A local area network (LAN) is one which connects computers and devices in a limited geographical area such as home, school, computer laboratory, office building, or closely positioned group of buildings.

Wide Area Network

A wide area network (WAN) is one which covers a broad area (i.e., any network that links across metropolitan, regional, or national boundaries).

The Internet is the most popular WAN, and is used by businesses, governments, non-profit organizations, individual consumers, artists, entertainers, and many others.

Internet

The Internet is a global system of interconnected computer networks that use the standard Internet protocol suite to serve billions of users worldwide.

It is a network of networks that consists of millions of private, public, academic, business, and government networks.

- World Wide Web (abbreviated as WWW or W3, commonly known as the Web), is a system of interlinked hypertext documents accessed via the Internet.
- With a web browser, one can view web pages that may contain text, images, videos, and other multimedia, and navigate between them via hyperlinks.
- Some of the advantages associated with networking are:
 - • Data Sharing: One of the most important uses of networking is to allow the sharing of data. Users can send text files, spread sheets, documents, presentations, audio files, video files, etc. to other users.
 - • Hardware Sharing: Hardware components such as printers, scanners, etc. can also be shared. For example, instead of purchasing 10 printers for each user, one printer can be purchased and shared among multiple users thus saving cost.
 - • Internet Access Sharing: You can purchase a single Internet connection and share it among other computers in a network instead of purchasing multiple Internet connection for each computer. This is very commonly found in Internet café (browsing centres), schools, colleges, companies, etc.
 - • Usage of network based applications: Such as web browsers, email clients, chat application, audio & video calling, etc is another advantage.
- To use the Internet, you need an Internet connection. Internet connections are provided by Internet Service Providers such as Bharat Sanchar Nigam Limited (BSNL), Airtel, MTS, Vodafone, Tata Docomo, etc.
- **Internet Service Provider**
- An Internet service provider (ISP) is an organization which provides you with access to the Internet via a dial-up (using modem) or direct (hard wired) or wireless connection.
- **Modem**
- A modem is a device that converts digital computer signals into a form (analog signals) that can travel over phone lines. It also re-converts the analog signals back into digital signals. The word modem is derived from its function Modulator/DEModulator.

- Some of the commonly used Internet connectivity are:
- 3G, short for 3rd Generation is a set of standards used for mobile devices and mobile telecommunication services and networks. High-Speed Downlink Packet Access (HSDPA) is 3G mobile telephony communications protocol that allows higher data transfer speeds and capacity.
- WiMAX: WiMAX (Worldwide Interoperability for Microwave Access) is a wireless communications standard designed to provide mobile broadband connectivity across cities and countries through Information Technology.

Data transfer on the Internet

- In very simple language, let's see what happens to a piece of data, say a Web page, when it is transferred over the Internet:
- The data is broken up into bits of same sized pieces called packets.
- A header is added to each packet explaining where the data has come from, where it should end up and where it fits in with the rest of the packets
- Each packet is sent from computer to computer until it finds its destination. Each computer on the way decides where next to send the packet. All packets may not take the same route.
- At the destination, the packets are examined. If any packets are missing or damaged, a message is sent asking for them to be re-sent. This continues until all packets have been received intact.
- The packets are now reassembled into their original form. All this done in seconds!

Home Assignment

- Fill in the blanks:

1. The acronym for LAN is _____.
2. Three types of Wired Internet Connectivity are _____, _____ & _____.
3. Three types of Wireless Internet Connectivity are _____, _____ & _____.

II. Answer the following:

1. What is the definition of networking
2. What are the advantages of networking?
3. What are the different types of networking?
4. Explain LAN and WAN.

LECTURE-3

INTRODUCTION TO INSTANT MESSAGING

- Instant messaging (IM) is a form of communication over the Internet that offers an instantaneous transmission of text-based messages from sender to receiver.
- Most instant messaging software include the option for performing file transfers, audio chat, video calling and conferencing, sharing desktops, etc
- Key Features of an instant messaging are as follows:
- Text Messages can be sent to one or more person (Similar to SMS)
- Audio calling and conferencing. • Video calling and conferencing.
- File transfers (Not limited to documents, spread sheets, audio files, video files, etc.)
- Message history (Save messages for future reference).

Instant Messaging Services

- There are two kinds of instant messaging software – application based and Web based.
- Application based instant messaging software is downloaded and installed on user's computer. Some of the popular instant messaging software are:
- Google Talk • Yahoo! Messenger • Skype • Windows Live Messenger • Rediff Bol, etc.
- Web based instant messaging software is accessed using browsers such as Internet Explorer, Mozilla Firefox, Google Chrome, etc.
- Some of the popular web based instant messaging software are: • Meebo • Yahoo! Messenger for the Web • MSN Web Messenger • IMO, etc.

There are some general rules and etiquettes to be followed while chatting.

They are almost the same as those that apply for emails.

- Messages should be short and to the point. • Always introduce yourself by name if your screen name doesn't reflect it.
- Always ask if the other person has time to chat first - regardless of how important you think what you have to say is, it's not going to be well received if the recipient is busy.
- In a business environment, know exactly what you want to discuss.
- Typing your messages in uppercase is extremely rude - it's considered shouting and very aggressive.
- Give people time to respond - Multiple questions sent to a recipient before they've had a chance to answer can seem more like an interrogation rather than a conversation.

CREATING AND PUBLISHING WEB PAGES – BLOG

- **A blog is a discussion style site used by non-technical (or technical users) users for creating personal web pages. Blogs are similar to an online personal diary and simple to use.**
- You can use a blog to convey messages about events, announcements, news, reviews, etc.
- There are hundreds of websites that offer blog service for free.
- Some of the popular blogs include:
 - www.WordPress.com
 - www.blogger.com
 - www.blog.com
 - www.weebly.com
 - www.blogsome.com

HOME ASSIGNMENT

1. What do you mean by instant messaging?
2. What are the key features of instant messaging?
3. What are the rules of chatting?
4. How to publish new websites , what do you mean by BLOG?
5. What are the sights to create websights?

LECTURE-4

Creating a Blog Account

- Before you start using a blog, a blog account is required. To create one, you need a web browser and an internet connection.
- Open the Web Browser.
- On the address bar type <https://signup.WordPress.com/signup/>. You should now get to a page with the fields Blog address, Username, Password, Email Address and Language.
- Blog Address: You must provide a unique address to your WordPress Blog. This is the address which others will use to view your blog.
- Username: You should choose a username for managing this blog.
- Password: Securing your WordPress blog account with a strong password is important.
- A combination of uppercase and lowercase letters with some digits along with symbols would be a strong enough password. You need to enter the password twice.
- Email Address: You must provide your Email Address here. An activation link will be send to you from WordPress after you click “Create Blog”.
- Language: You can choose your own language for blogging from the list given.
- Click Create Blog.

USING OFFLINE BLOG EDITORS

- If you do not have an active internet connection, you can create blogs using a blog application and publish the blog whenever internet connectivity is available.
- There are several free offline blog editors available that can be downloaded and installed on the local computer such as:
- Qumana

- Windows Live Writer
- Blogdesk

ONLINE TRANSACTIONS

- Online shopping is a form of electronic commerce where customers can buy or sell goods over the Internet.
- Online shopping could be useful in situations when:
 - A customer does not have sufficient time to visit stores.
 - Visiting a store is more expensive than purchasing a product online.
 - A product or service that is not available in the local market is available online. Some of the popular online transaction websites are:
 - IRCTC, an online portal for booking flight and train tickets.
 - Flipkart, an online shopping portal for buying consumer products.
 - EBay, an online portal for buying and selling goods.

HOME ASSIGNMENT

- Answer the following:

1. Explain the purpose of a blog.
2. List any 5 websites that provide blog service.
3. Difference between web page and website.
4. Explain the purpose of an offline blog editor.
5. List any five offline blog editors.
6. Explain the purpose of Online transactions.
7. List any five websites that allow online transactions.
8. List any three payment tools to use online transaction

LECTURE-5**INTERNET SECURITY**

- Internet security is a branch of computer security specifically related to the Internet, often involving browser security but also network security.
- Its objective is to establish rules and measures to use against attacks over the Internet.
- . The Internet represents an insecure channel for exchanging information leading to a high risk of intrusion or fraud, such as phishing.
- Online threats such as Phishing, email spoofing, chat spoofing, etc. can increase the chances of users getting compromised

Best Practices for Security

- **Use strong passwords**
- Following is a general guideline for managing strong passwords.
- Keep the length of the password at least 12-14 characters if permitted.
- Avoid keeping passwords based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, etc
- Including numbers, and symbols in passwords if allowed.
- Use capital and lower-case letters.
- Avoid using the same password for multiple sites or purposes.
- Avoid using something that the public or workmates know you strongly like or dislike.

Best Practices for Security

- Backup your data
- Use encryption software
- Keeping your username and password private:
- Registering with websites:
- Do not share personal information
- Secure transactions
- Use antivirus and antispyware software

- Do not immediately respond to mails from unknown users
- Do not immediately respond to mails from unknown users
- Install firewalls
- Never install software from unknown sources
- Remove unwanted or unknown software applications

CLEAR BROWSING HISTORY

- Mozilla Firefox can also store data such as cookies, visited websites or webpages data, browsing history, etc.
- To clear this stored data, click General tab > Option. The following window will be displayed
- Click Privacy Tab. The following window will be displayed:
- Under History section, click the drop down menu next to Firefox will:.
- Select Use custom settings for history from the drop down list. The following window will be displayed:
- Notice the preferences; Firefox is configured to remember browsing and downloading history search and form history and cookies.
- If you do not wish store the above mentioned data, select Never remember history from the drop down list.
- If you are in a public environment such as a cyber café, you may select the option Clear all current history.

HOME ASSIGNMENT

1. What do you mean by internet security?
2. How to clear the browsing history?
3. Why browsing history is required to clear?
4. What are the best practice for internet security?

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