**Module 2 {Installation and Maintenance of**

# Hardware and Its components}

## Topic: User Management

### Assignment Level Basic

1. What is user management?

Ans User management describes the ability for someone, usually an IT professional, to manage employees' digital identities, including keeping them up to date and provisioning, monitoring, changing, and revoking their access to different resources.

1. Why is user management needed?

Ans User management is essential for controlling access, maintaining security, and organizing permissions within a system or application.

Assignment level intermediate:

* 1. Where can we access the user management?

Ans In the Settings window, click Accounts, and then click Family & other users.

* 1. What are the features of user management?

Ans- allows administrators to manage resources and organize users according to their needs and roles while maintaining the security of IT systems.

* Assignment level Advance:
  1. Do a practical to create a user from user management.

Ans- done

* 1. Do a practical to change the password of the administrator from the user management tool.

Ans- done

## Topic: File and Folder Permission

Assignment Level Basic:

* 1. What is file folder permission?

Ans- When you set permissions, you specify what users are allowed to do within that folder, such as save and delete files or create a new folder. You are not limited to choosing one of the standard permissions settings Full Control, Modify, Read & Execute, List Folder Contents, Read, or Write

* 1. What is the use of file and folder permission?

Ans- you specify what users are allowed to do within that folder, such as save and delete files or create a new folder.

* Assignment level Intermediate:
  1. wirte down the steps to give a folder read only permission.

Ans- Open the folder's property menu. ...

Select read-only. ...

Copy as path. ...

Open your command prompt. ...

Change folder attributes via command line. ...

Remember your settings. ...

Communicate with other users. ...

Don't change system folders or files.

* 1. Write a step to give a file only admin permission.

Ans- Access the Properties dialog box.

Select the Security tab. ...

Click Edit.

In the Group or user name section, select the user(s) you wish to set permissions for.

In the Permissions section, use the checkboxes to select the appropriate permission level.

Click Apply.

Click Okay.

* Assignment level Advance:
  1. Do a practical to give the folder permission of read only in network.

Ans- done

* 1. Do a practical to change the ownership of the folder and the sub folders in it.

Ans-done

## Topic: Install OS

### Assignment Level Basic

1. What is OS?

Ans- An operating system is the most important software that runs on a computer. It manages the computer's memory and processes, as well as all of its software and hardware. It also allows you to communicate with the computer without knowing how to speak the computer's language.

1. What are the types of OS?

Ans- Batch Operating System.

Multi-Programming System.

Multi-Processing System.

Multi-Tasking Operating System.

Time-Sharing Operating System.

Distributed Operating System.

Network Operating System.

Real-Time Operating System.

### Assignment Level Intermediate

1. Do a practical to create bootable pendrive for kali Linux

Ans done

1. Do a practical to create a bootable pendrive for windows 7

Ans done

1. Do pendrive for creating a pendrive for mac os Mojave with unibeast.

Ans done

Assignment level Advance:

1. Do a practical to install Kali Linux

Ans – done

1. Do a practical to install windows 10

Ans – done

1. Do a practical to install Mac os X

Ans - done

## Topic: Clean Install

Assignment Level Basic

1. What is clean install?

Ans - A clean install is an installation of an operating system on a computer where the hard drive is formatted and completely erased. With a clean install, you can start over with a new Windows OS.

Assignment Level Intermediate

1. What is the process for clean install?

Ans - A clean install is an installation of an operating system on a computer where the hard drive is formatted and completely erased. With a clean install, you can start over with a new Windows OS.

1. what are the benefits of clean install?

Ans - A clean install enables users to regain control over the system by eliminating programs and files that have not been used for a long time, if ever. It paves the way for a fresh start with a clean Windows registry and a decluttered system that includes only has the apps the user needs.

Assignment level Advance:

1. Do a clean installation of windows XP

Ans – done

1. Do a clean installation of windows 8

Ans – done

## Topic: Upgrade installation

### Assignment level basic

1. What is upgrade installation?

Ans - An upgrade installation is a process of installing a newer version of the Windows operating system to replace the existing version. This process involves uninstalling the existing version and then installing the new version in its place, while preserving some of the user's existing files and settings.

1. What is the benefit of upgrade installation?

Ans One of the main reasons for installing the latest update is to stay protected from security threats. Older versions of software may not provide the same level of security, potentially leaving your practice data at risk.

* Assignment level intermediate:

1.Write down the steps of upgrade installation.

Ans - Under Windows Update, click Check for updates. It may take a moment for Windows to search for updates. Once it does, if there are any updates available it will prompt you to install them. It may take a while to install all the updates.

* Assignment level advance.

1. Do a practical to upgrade from windows 8 to windows 10.

Ans - done

## Topic: Partition & Formatting

### Assignment level Basic

1. What is partitioning?

Ans - Partitioning is a way of splitting numbers into smaller parts to make them easier to work with. Partitioning links closely to place value: a child will be taught to recognise that the number 54 represents 5 tens and 4 ones, which shows how the number can be partitioned into 50 and 4.

1. What is partition?

Ans - to divide into parts or shares. to divide a place, such as a country into two or more territorial units having separate political status. to separate or divide by a partition

1. What is format?

Ans - A format is a standard way that information is encoded for storage in a computer file. It specifies how bits are used to encode information in a digital storage medium. File formats may be either proprietary or free.

* Assignment level Intermediate:
  1. Do a Practical of mbr partition.

Ans – done

* 1. Do a Practical of gpt partition

Ans – done

* Assignment level Advance:
  1. Do a practical using cmd.

Ans – done

* 1. covert a partition to gpt by cmd.

Ans – done

* 1. Format a partition using cmd.

Ans - done

## Topic: Transferring Files

### Assignment level Basic

1. What is transferring Files?

Ans - File transfer refers to the exchange of data files between computer systems. According to Techopedia: “File transfer is the process of copying or moving a file from one computer to another over a network or internet connection

1. What are the ways of transferring files?

Ans - Cloud storage or web data transfers. ...

SSD and HDD drives via SATA cables. ...

Basic cable transfer. ...

Use software to speed up your data transfer. ...

Transfer your data over WiFi or LAN. ...

Using an external storage device or flash drives.

* Assignment level Intermediate:
  1. How do we transfer files from one system to another?

Ans - Cloud storage or web data transfers. ...

SSD and HDD drives via SATA cables. ...

Basic cable transfer. ...

Use software to speed up your data transfer. ...

Transfer your data over WiFi or LAN. ...

Using an external storage device or flash drives.

* 1. Types of file transferring media.

Ans -FTP and SFTP

* Assignment level Advanced:
  1. Do a practical to transfer files from one system to another via network.
  2. Ans – done
  3. DO a practical to transfer data from one hard disk to another.

Ans – done

## Topic: Administrative tools

### Assignment Level Basic

1. What are administrative tools?

Ans - Administrative Tools is a folder in the Windows 10 Control Panel. These folders contain tools for system administrators and advanced users.

1. What is the use of administrative tools?

Ans - The programs can be used to schedule a test of your computer's memory, manage advanced aspects of users and groups, format hard drives, configure Windows services, change how the operating system starts, and much, much more.

Assignment level Intermediate:

1. List out the administrative tools.

Ans - Component Services.

Computer Management.

Defragment and Optimize Drives.

Disk Cleanup.

Event Viewer.

iSCSI Initiator.

Local Security Policy.

ODBC Data Sources.

1. What is disk management tools.

Ans - Disk management tools are utility software that is used to manage data on disk by performing various functions on it. Moreover, they perform functions like partitioning devices, manage drives, disk checking, disk formatting, etc.

### Assignment Level Advanced

1. Do a practical to delete a driver and reinstall it from administrative tools.

Ans – done

1. Do a practical to delete a partition and again create it with administrative tool 3. Do a practical to create user with administrative tool.

Ans – done

**Topic: Windows Feature.**

Assignment Level Base

1. What is windows features?

Ans. start menu

Task manager

taskbar

Cortana

File explorer

MS Paint

Browser

Control panel

### Assignment level Intermediate

1. List out the windows features.

Ans - Provides an efficient speed.

Allows disk access as well as file systems.

Program execution is done in a smooth way.

Protected and supervisor mode is always there.

Memory Management is supported to allow multiprogramming.

Provides regular updates to ease the usage.

1. What is the use of IIS?

Ans - Internet Information Services, also known as IIS, is a Microsoft web server that runs on Windows operating system and is used to exchange static and dynamic web content with internet users. IIS can be used to host, deploy, and manage web applications using technologies such as ASP.NET and PHP.

Assignment level Advance:

1. Do a practical to re install IIS with windows feature.

Ans – done

1. Do a practical to install dotnet framework 3.5 with Windows feature

.

Ans – done

1. Do a practical to disable internet explorer in windows feature.

Ans – done

## Topic: Backup & Restore

* Assignment level Basic:
  1. What is backup?

Ans - Backup refers to the copying of physical or virtual files or databases to a secondary location for preservation in case of equipment failure or catastrophe. The process of backing up data is pivotal to a successful disaster recovery plan.

* 1. What is Restore?

Ans - to bring back to or put back into an earlier or original state. restore an old house

* 1. What is the need of backup ?

Ans - The purpose of the backup is to create a copy of data that can be recovered in the event of a primary data failure. Primary data failures can be the result of hardware or software failure, data corruption, or a human-caused event, such as a malicious attack (virus or malware), or accidental deletion of data.

* Assignment level Intermediate.
  1. What are the tools of backup?

Ans Examples of backup tools include rsync, tar, zip, dd, Bacula, Amanda, Duplicity, Time Machine, Windows Backup and Restore as well as cloud-based services like Google Drive, Dropbox and OneDrive.

* 1. How do we restore?

Ans - In the Control Panel search box, type recovery. Select Recovery Open System Restore. In the Restore system files and setting box, select Next. Select the restore point that you want to use in the list of results, and then select Scan for affected programs

* 1. How to create a restore point?

Ans - In the search box on the taskbar, type Create a restore point, and select it from the list of results.

On the System Protection tab in System Properties, select Create.

Type a description for the restore point, and then select Create > OK.

* Assignment level Advance:
  1. Do a practical to create restore point.

Ans – done

* 1. Do a practical to restore from restore point.

Ans – done

* 1. Do a practical to take backup from another system.

Ans – done

* 1. Do a practical to take backup backup with a recuva backup tool.

Ans – done

## Topic: Disk Management

* Assignment level Basic:
  1. What is Disk management?

Ans - Disk Management is a tool in an operating system that helps users to manage and organize the hard disk and other storage devices. It allows users to create, delete, format, and resize partitions, as well as view and modify the attributes of disks, volumes, and partitions.

* 1. What is the use of disk management?

Ans - Disk Management is an important functionality provided by the Operating System which can be used to create, delete, format disk partitions, and much more. It enables users to manage and view the different disks and functions like viewing, creating, deleting, and shrinking the partitions associated with the disk drives.

* 1. What are the merits of Disk management tool?

Ans. Improved organization and management of data.

Efficient use of available storage space.

Improved data integrity and security.

Improved performance through techniques such as defragmentation.

* Assignment level Intermediate:
  1. Where can we find the disk management tool?

Ans - open Disk Management, right-click (or long-press) the Start button and select Disk Management. If you need help freeing up space on your PC, see Disk cleanup in Windows or Free up drive space in Windows.

* 1. List out the operations we can do with disk management tool

Ans - Set up a new drive. ...

Extend a volume into space that's not already part of a volume on the same drive. ...

Shrink a partition, such as to enable extending into a neighboring partition. ...

Change a drive letter or assign a new drive letter.

* Assignment level Advance:
  1. Do a practical to create a new partition with disk management tool.

Ans – done

2 Do a practical to convert from MBR to gpt from disk management tool

Ans – done

* 1. Do a practical to create new partition from existing partition.

Ans – done

## Topic: Device Management

* Assignment level Basic:

* 1. What is Device Management?

Ans - Device management enables organizations to administer and maintain devices, including virtual machines, physical computers, mobile devices, and IoT devices. Device management is a critical component of any organization's security strategy.

* 1. What is the need of device management?

Ans - Device management enables organizations to administer and maintain devices, including virtual machines, physical computers, mobile devices, and IoT devices. Device management is a critical component of any organization's security strategy.

* 1. What are the benefits of Device management?

Ans - MDM can help decrease downtime by enabling IT teams to manage and remotely monitor mobile devices in real time. Data collection of device logs and events can help detect and resolve issues before they become major problems and prevent device failures or malfunctions.

* Assignment level Intermediate:
  1. Where can we access device management?

Ans - Right-click the Start button or press the Windows Logo + X key combination on the keyboard and, from the list, click Control Panel. In the Control Panel window, click Device Manager.

* 1. List out the devices connected to the device management.

Ans - Device management enables organizations to administer and maintain devices, including virtual machines, physical computers, mobile devices, and IoT devices.

* Assignment level Advance:
  1. Do a practical to add a device with device management tool.

Ans – done

* 1. Do a practical to delete a driver from the device management tool.
  2. Ans – done

## Topic: Physical security

### Assignment Level Basic

1. Why physical security needed?

Ans - There are a variety of threats to your network, and physical attacks are among the most serious potential challenges you can face (EC-Council, 2022).

1. what is physical security?

Ans - Physical security refers to the protection of building sites and equipment and all information and software contained therein from theft, vandalism, natural disaster, manmade catastrophes, and accidental damage

### Assignment Level Intermediate

1. list out the ways of physical security.

Ans - Protect the Perimeter. ...

Control Access to the Facility. ...

Monitor the Entire Site. ...

Provide Security at the Cabinet Level.

1. How to protect system from malfunctioning due to electrical fluctuation?

Ans - Voltage stabilizers are devices that can help regulate the voltage in your home, thus preventing power surges from occurring. These devices work by stabilizing the voltage fluctuations in your home's electrical system, ensuring that your electronic devices are not exposed to sudden surges.

## Topic: Firewall settings

* Assignment level basic:
  1. What is firewall?

Ans - A firewall is a network security device that monitors incoming and outgoing network traffic and decides whether to allow or block specific traffic based on a defined set of security rules.

* 1. Why is firewall needed?

Ans - The primary purpose of a firewall is to check if traffic or an incoming connection meets a predefined set of security standards, which is critical for internet security. A good firewall tool can help you adjust the firewall's settings to your needs.

* Assignment level Intermediate:
  1. What are the features of firewall?

Ans - A computer firewall is a security system, which can be either hardware or software-based. It monitors and controls incoming and outgoing network traffic. Its purpose is to safeguard the computer or network against unauthorized access and potential cyber threats.

* 1. Describe types of firewall?

Ans - Types of Firewalls. A firewall can either be software or hardware. Software firewalls are programs installed on each computer, and they regulate network traffic through applications and port numbers. Meanwhile, hardware firewalls are the equipment established between the gateway and your network.

* Assignment level advance:
  1. Do a practical to allow anydesk through firewall.

Ans – done

* 1. do a practical to turn off the services of firewall.

Ans – done

* 1. Do a practical to block ip messenger to access the network.

Ans - done