**Module 2 {Installation and Maintenance of**

# Hardware and Its components}

## Topic: User Management

### Assignment Level Basic

1. What is User Management

ANS- The administration and control of user accounts, rights, and access inside a system or application is known as user management.

1. Why User Management is Needed

ANS- To guarantee safe and well-organized control over user access and permissions, user management is required.,

* Assignment level intermediate:
  1. Where can we use user management?.

ANS- User management is used in software and networks to control user access and authentication in order to maintain secure and orderly user interactions.

* 1. What are the features of user management?

ANS- User authentication, access control, and the ability to administer user accounts securely and effectively are examples of user management features.

* 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- Access rights are defined by file and folder permissions, which control how individuals and groups can interact with particular files and directories within a computer system.

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

ANS- By regulating user and group interactions with specific files and directories, file and folder permissions ensure controlled access and security.

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

ANS- Use the Unix/Linux read-only permission command, or in Windows, right-click on the folder, select "Properties," and change the permissions to "Read-only."

* 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 (OS) is a piece of software that controls the hardware in computers and offers a way for users to run and communicate with them.

1. What are the types of OS?

ANS-Real-time, single-user, and multi-user operating systems are among the types that cater to different computing needs.

### Assig-nment 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-Real-time, single-user, and multi-user operating systems cater to various computing needs.

### Assignment Level Intermediate

1. What is the process for clean install?

ANS- Booting from installation media and formatting the target drive are steps in the clean install procedure.

Assignment level Advance:

1. Do a clean installation of windows XP

ANS -. Booting from the installation CD and following the on-screen instructions to finish the setup and configuration process are necessary for a clean installation of Windows XP.

## Topic: Upgrade installation

### Assignment level basic

1. What is upgrade installation?

ANS- upgrade installation is replacing or upgrading an existing operating system with a newer version, along with any installed applications.

1. What is the benefit of upgrade installation?

ANS-Preserving user data during an upgrade installation allows for a more seamless transition to a newer operating system without requiring a total reinstallation.

* Assignment level intermediate:

1.Write down the steps of upgrade installation.

ANS- Launch the newer OS installer, follow the prompts on the screen to save files and settings, and finish the installation to carry out an upgrade installation.

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* 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- The process of partitioning involves separating a computer's storage capacity into discrete volumes or sections, each of which is handled as a separate unit.

1. What is partition?

ANS-Within a computer system, a partition is a designated area of a storage device used for particular data management and storage functions

1. What is format?

ANS- Formatting entails specifying a storage device's file system, removing any existing content, and establishing a blank organizational structure in order to get it ready for data.

* 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- Make use of diskpartin CMD. Choose the desired disk and turn it into a GPT format.

* 1. Format a partition using cmd.

## Topic: Transferring Files

### Assignment level Basic

1. What is transferring Files?

ANS- Moving or copying data from one place, device, or system to another is referred to as "transferring files," which enables data interchange between various computing environments or storage media.

1. What are the ways of transferring files?

ANS- direct cable connection, cloud storage services, removable storage media like USB drives, network file transfer protocols (like FTP, SFTP), and email attachments.

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

ANS- Files can be moved between systems via direct cable connections, cloud-based file-sharing services, or network file transfer protocols (like FTP and SCP).

* 1. Types of file transferring media.

ANS- File transferring media include methods like wired connections (USB cables, Ethernet cables), wireless technologies (Wi-Fi, Bluetooth), and network protocols (FTP, SFTP) for transferring files between devices

* Assignment level Advanced:
  1. Do a practical to transfer files from one system to another via network.

ANS- Done

* 1. DO a practical to transfer data from one hard disk to another.

ANS- Done

## Topic: Administrative tools

### Assignment Level Basic

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1. What are administrative tools?

ANS- Administrative tools are programs or utilities that offer sophisticated system configuration and management features. They make it easier to perform tasks like security configuration, and general system administration on a computer or network

1. What is the use of administrative tools?

ANS- Various aspects of a computer or network system, such as system monitoring, troubleshooting, security settings, user account management, and other administrative tasks, can be managed and configured with the help of administrative tools.

Assignment level Intermediate:

1. List out the administrative tools.

ANS- Windows comes with a number of administrative tools that are useful for different aspects of system management, such as Device Manager, Computer Management, Group Policy Editor, Windows Firewall with Advanced Security, Performance Monitor, Event Viewer, Disk Management, Services, Task Scheduler, and Control Panel.

1. What is disk management tools.

ANS- Disk Management is a Windows administrative tool that allows users to view, create, format, and manage disk partitions and volumes on a computer system.

### 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

ANS-Done

1. 3. Do a practical to create user with administrative tool.

ANS- Done

**Topic: Windows Feature.**

Assignment Level Base

1. What is windows features?

ANS- Disk Management is an administrative tool for Windows that lets users create, format, manage, and view disk volumes and partitions on a computer system.

### Assignment level Intermediate

1. List out the windows features.

ANS- Offering a variety of functionalities for users, Windows features include BitLocker, Windows Subsystem for Linux (WSL), Windows Defender, File Explorer, Microsoft Edge, Windows Update, Taskbar, Start Menu, Action Center, Cortana, Snipping Tool, Remote Desktop, Task Manager, Microsoft Store, Windows Ink Workspace, and more.

1. What is the use of IIS?

ANS- A feature of the Windows operating system called Internet Information Services (IIS) serves as a web server, supplying the necessary infrastructure for hosting and controlling websites, web applications, and services.

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- Making duplicate copies of data is known as backup, and it helps prevent data loss by allowing information to be restored in the event of hardware failures, deletions by accident, or corruption.

* 1. What is Restore?

ANS- Restore enables users to recover lost or corrupted files, applications, or system configurations by moving data from a backup back to its original location.

* 1. What is the need of backup ?

ANS- The purpose of backups is to safeguard data by offering a way to restore it in the event of system failure, unexpected disasters, or data loss.

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

ANS- Acronis True Image, Dropbox, Google Drive, macOS Time Machine, Windows Backup and Restore, and other third-party software are examples of backup tools that provide different ways to protect and recover data.

* 1. How do we restore?

ANS- To restore, choose the desired backup and start the restore process using backup tools or commands such as Windows Backup and Restore. This will allow you to recover files, programs, or system configurations from a backup that was previously saved

* 1. How to create a restore point?

ANS- In order to record the current system state for possible future restoration, open System Properties, select the drive, go to the "System Protection" tab, click "Create," and enter a description.

* 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- A Windows tool called Disk Management enables users to see, create, format, and control disk volumes and partitions on a computer system.

* 1. What is the use of disk management?

ANS - On a Windows computer, disk management is used to manage and configure disk drives and partitions. It makes tasks like creating, resizing, formatting, and allocating drive letters to storage volumes easier.

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

ANS - Benefits of the disk management tool include simple drive letter assignments, formatting, volume resizing, and disk partitioning. It also offers an intuitive user interface for effective storage resource management on Windows systems.

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

ANS By right-clicking the "Start" button, choosing "Disk Management" from the menu, or typing into the Run dialog box and hitting Enter, users of the Windows operating system can access the Disk Management tool.

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

ANS a Windows system by enabling them to carry out tasks like extending or shrinking partitions, marking partitions as active or inactive, formatting volumes, changing drive letters, and creating and deleting partitions

* Assignment level Advance:

* 1. Do a practical to create a new partition with disk management tool.

ANS- Done

* 1. 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 involves monitoring, configuring, and controlling hardware devices connected to a computer to ensure their proper functionality and interaction with the operating system.

* 1. What is the need of device management?

ANS- Device management is necessary to guarantee the effective use, setup, and observation of hardware devices, enabling the best possible performance, compatibility, and troubleshooting of a computer system.

* 1. What are the benefits of Device management?

ANS - Device management contributes to overall computer hardware management efficiency through its advantages, which include simplified troubleshooting, enhanced system stability, optimized resource utilization, and streamlined device configuration.

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

ANS - Device Manager is a centralized interface for managing and configuring hardware devices on a computer. In Windows, it can be accessed by right-clicking the "Start" button and choosing "Device Manager" from the menu.

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

ANS - Device Manager shows an extensive list of all connected devices, such as processors, storage controllers, network adapters, display adapters, audio and video devices, and input devices like keyboards and mice.

* 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.

ANS-Done

## Topic: Physical security

### Assignment Level Basic

1. Why physical security needed?

ANS - In order to protect people, property, and data from theft, unauthorized access, and physical resource damage, physical security is required.

1. what is physical security?

ANS - Physical security refers to the procedures and policies put in place to guard against unwanted access, harm, and damage to people, infrastructure, and physical assets.

### Assignment Level Intermediate

1. list out the ways of physical security.

ANS - To protect physical assets and spaces, physical security measures include perimeter barriers, access control systems, surveillance cameras, security guards, and environmental controls.

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

ANS - Utilize voltage regulators, surge protectors, and uninterruptible power supplies (UPS) to provide a steady and regulated power supply while shielding systems from electrical fluctuations.

## Topic: Firewall settings

* Assignment level basic:
  1. What is firewall?

ANS - A firewall is a type of network security system that stands between an untrusted external network and a trusted internal network by monitoring and regulating incoming and outgoing network traffic in accordance with pre-established security rules

* 1. Why is firewall needed?

ANS - In order to protect a computer network's integrity and confidentiality, a firewall is required to improve network security by limiting unauthorized access, managing data flow, and reducing potential cyber threats.

Assignment level Intermediate:

1.What are the features of firewall?

ANS -A firewall guards against cyberattacks and prevents unauthorized access by keeping an eye on and managing incoming and outgoing traffic according to pre-established rules

2.Describe types of firewall?

ANS - Based on how they filter and secure network traffic, firewalls can be further divided into hardware- or software-based, packet-filtering, stateful inspection, proxy, and next-generation firewalls.

* 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