Module 2 {Installation and Maintenance of Hardware and Its components}

Topic: User Management

• Assignment Level Basic

1. What is user management?

Ans User management, in its simplest form, is the method by which you create, remove and  
maintain your user store. Any solution designed to serve multiple users must have some type of a user management system, such as Active Directory/LDAP, or another identity provider.

1. Why is user management needed?

Ans it’s important to understand two things: 1. your integration and management needs, and 2. the ability of your cloud services to communicate through an API.

• Assignment level intermediate:

1. Where can we access the user management?

Ans This article delves deep into the fundamentals of user access management (UAM), its differences from identity management (IDM), its types, how to set up effective user access management, and the everyday challenges that come with it.

1. What are the features of user management?

Ans implementing user management features in your app is crucial to creating a secure and personalized experience for your users.

• Assignment level Advance:

1.Do a practical to create a user from user management.

Ans done

2.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  let’s talk about permissions in Windows. Every file and every folder in Windows has its own set of permissions into **Access Control Lists** with users and their corresponding rights  with the user list at the top and the rights at the bottom:

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

Ans I was talking about individual criteria that you need to meet. Those criteria are user authority or power. If you are an admin user, you can almost change anything in Windows.  you are limited to changing[files that only belong to you](https://www.thewindowsclub.com/troubleshoot-file-and-folder-permission-issues-in-windows-7). In this post, we will discuss the following

• Assignment level Intermediate:

1. wirte down the steps to give a folder read only permission.

Ans  Right-click on the folder and select Sharing and Security from the pop-up context menu. Choose to share the folder, and give it a name. Click the Permissions button.

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

Ans   You must have admin user rights to change file permissions. User files: You must either have admin rights, or you must have access to the user’s wn account. TrustedInstaller owned files: Again, you will need admin user rights to make changes to a file or folder that is owned by TrustedInstaller.

• 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 (in calculating dates) Old Style.
* 2.open-source.
* 3.operating system.
* 4.Ordinary Seaman.
* 5.(in the UK) Ordnance Survey.
* 6.(as a size of clothing) outsize.
* 7.out of stock.
* 8.overseas.

1. What are the types of OS?

Ans Following are the popular types of OS (Operating System):

* Batch Operating System
* Multitasking/Time Sharing OS
* Multiprocessing OS
* Real Time OS
* Distributed OS
* Network OS
* Mobile OS

• 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 Apple hasn’t shipped macOS updates via CDs/DVDs since a long time. It’s very easy to update to the latest macOS version thanks to the App Store. But if you wish to install the latest OS update using a USB pen drive or memory card, you will need to create a bootable macOS Mojave installer.

• 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  The alternative to a clean install is an [upgrade](https://searchmobilecomputing.techtarget.com/definition/upgrade), in which elements of a previous version remain. The terms are often heard in reference to operating systems ([OS](https://www.techtarget.com/whatis/definition/operating-system-OS)es) and software applications. With a clean install, the [hard disk](https://www.techtarget.com/searchstorage/definition/hard-disk-drive) contains only the new OS.

• Assignment Level Intermediate

1. What is the process for clean install?

Ans ***The only exception where this applies is dependent on the license you upgraded from. If you change your motherboard and originally you upgraded from a Windows 7 OEM or Windows 8 OEM license, then your Digital Entitlement will be invalidated. You will need to purchase a new full version license.***

1. what are the benefits of clean install?

Ans A clean install allows you to start over and removes any bloatware and trial software that might have been pre-installed on your system. Further, a clean Windows Registry is available.  Additionally, since you only need to install programs you want, you will regain control over your apps.

• Assignment level Advance:

1. Do a clean installation of windows XP

ans Create a backup, boot from the Windows XP CD, press **Enter**, accept the terms, opt to install a fresh copy, and delete the current partition. after formatting, setup will copy the install files to the new partition, and XP will start installing.

1. Do a clean installation of windows 8

Ans The most important thing to consider before starting is that every bit of information on the drive you're going to install/reinstall Windows 8 on will be erased.

Topic: Upgrade installation

• Assignment level basic

1.What is upgrade installation?

Ans In an upgrade installation, a work system is installed as a second-level guest of the system or member that you want to upgrade. The new level of code from the work system is then moved to the system that is being upgraded.

2.What is the benefit of upgrade installation?

Ans Windows Update, a service offered by Microsoft, provides updates for Windows components. Let's have a look at what type of updates Microsoft releases and how they benefit the users.

• Assignment level intermediate:

1.Write down the steps of upgrade installation.

Ans The Windows Setup program starts and restarts the computer, gathers information, copies files, and creates or adjusts configuration settings. The following table shows the overall process for Windows Setup:

• 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 Hard disks, USB drives, SD cards -- anything with storage space must be partitioned. An unpartitioned drive can't be used until it contains at least one partition, but a drive can contain multiple partitions.

1. What is partition?

Ans A disk partition can be thought of as a division or "part" of a real [hard disk drive](https://www.lifewire.com/what-is-a-hard-disk-drive-2618152). Really, it's only a logical separation from the whole drive, but it appears as though the division creates multiple physical drives.  they usually mean a partition with a drive letter assigned.

1. What is format?

Ans **Format** or **document format** is the overall layout of a [document](https://www.computerhope.com/jargon/d/document.htm) or [spreadsheet](https://www.computerhope.com/jargon/s/spreadsheet.htm). For example, the **formatting** of text on many English documents is [aligned](https://www.computerhope.com/jargon/a/alignment.htm) to the left of a page. With [text](https://www.computerhope.com/jargon/t/text.htm), a user could change its format to [bold](https://www.computerhope.com/jargon/b/bold.htm) to help emphasize text.

• 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 Unified Extensible Firmware Interface (UEFI). One advantage of GPT disks is that you can have more than four partitions on each disk. GPT is also required for disks larger than 2 terabytes (TB). You can change a disk from MBR to GPT partition format as long as the disk contains no partitions or volumes.

1. Format a partition using cmd.

Ans Formatting one of the [best hard drive](https://www.tomshardware.com/best-picks/best-hard-drives)s or [SSDs](https://www.tomshardware.com/reviews/best-ssds,3891.html) is the same as buying a new hard drive since the process erases all the data in one fell swoop. When you format your hard drive,  we explain how you can format a [hard drive](https://www.tomshardware.com/best-picks/best-hard-drives) using the command prompt

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. It enables sharing, transferring or transmitting a file or a logical data object between different users and/or computers both locally and remotely

1. What are the ways of transferring files?

Ans One of the first online file-sharing platforms was Usenet, an electronic bulletin board that allowed community members to post news items. The functionality enabled users to share data files with others in the newsgroup.

• Assignment level Intermediate:

1. How do we transfer files from one system to another?

Ans When you buy a new computer, you'll want to transfer most of your existing files from the old one. Whether you want to take all your data or only the essentials, there are quick and simple ways to transfer files from PC to PC

1. Types of file transferring media.

Ans In data communication terminology, a transmission medium is a physical path between the transmitter and the receiver i.e. it is the channel through which data is sent from one place to another. Transmission Media is broadly classified into the following types:

• 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

• Assignment Level Basic

1. WWhat are administrative tools?

* Ans Windows Administrative tools are a set of several advanced tools used commonly by System administrators. Windows Administrative tools are available on Windows 10, Windows 8, Windows 7, Windows Vista, Windows XP, and Windows Server Operating system. How do I access Windows Administrative tools?

1. What is the use of administrative tools?

Ans The programs can be used to schedule a test of your computer's [memory](https://www.lifewire.com/what-is-random-access-memory-ram-2618159), manage advanced aspects of users and groups, format [hard drives](https://www.lifewire.com/what-is-a-hard-disk-drive-2618152), configure Windows [services](https://www.lifewire.com/what-is-a-service-4107276), change how the operating system starts, and much, much more.

• Assignment level Intermediate:

* 1. List out the administrative tools.
* Ans Administrative Tools is the collective name for several advanced tools in Windows that are used mainly by system administrators. It's available in Windows 10, Windows 8, Windows 7, Windows Vista, Windows XP, and Windows Server operating system. Windows 11 calls these tools Windows Tools.
  1. What is disk management tools
* Ans It's used to manage the drives installed in a computer—like hard disk drives (internal and external ), optical disk drives, and flash drives. It can be used to partition and format drives, assign drive letters, and much more. Disk Management is sometimes spelling incorrectly as Disc Management.

• 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. Do a practical to create user with administrative tool.

Ans DONE

Topic: Windows Feature.

• Assignment Level Base

* + 1. What is windows features?

Ans Windows 11 features to explore 5-minute read Virtually every aspect of Windows 11 has been tailored to make your life easier in today’s world. From the calm, open design that helps you be more creative and productive to the balanced desktop experience and improved communication and connection tools.

• Assignment level Intermediate

* 1. List out the windows features.
* Ans Microsoft Windows includes a wide array of features, tools, and applications to help get the most out of Windows and your computer. To learn more about the features included in Microsoft Windows, click a link below. The Control Panel is a collection of tools to help you configure and manage the resources on your computer.
  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. What is an IIS server used for?

• 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 In essence, any data that you desire to keep can be saved as backup data. The main goal of backup is to generate a copy of the data that can be recovered if the primary data fails. Failure can be – hardware or software failures, data corruption, or a human-initiated event such as an attack (virus or malware) or data deletion by an accident.
  1. What is Restore?
* Ans System Restore takes a "snapshot" of the some system files and the Windows registry and saves them as Restore Points. When an install failure or data corruption occurs, System Restore can return a system to working condition without you having to reinstall the operating system.
  1. What is the need of backup
* Ans Data loss can happen to anyone. A strong backup strategy can make a big difference in your digital life and give you peace of mind. If you happen to lose your data due to a hardware defect or ransomware attack, having a backup could be the respite you’re looking for. Have you ever lost a lot of critical data?

• Assignment level Intermediate.

* + 1. What are the tools of backup?
* Ans The purpose is to use the Hard Disk file in Microsoft Virtual PC, though other virtualization software may also be used, such as VMware Workstation . The great thing about this tool is that you can back up the primary hard drive you're using as you use it.
  + 1. How do we restore?

Ans  Windows creates a system restore point every 7 days, and every time a new Windows update is installed. Windows can roll back to previous settings without affecting any files you have edited or created since then.

* 1. How to create a restore point?

Ans Search Control Panel for Recovery, and select Recovery > Open System Restore > Next . Choose the restore point related to the problematic app, driver, or update, and then select Next > Finish. Learn how to create a restore point. Need more help?

• 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: 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. up-to-date, and compliant with organizational policies, with the goal of protecting the corporate network and data from unauthorized access.

* + 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.

3.What are the benefits of Device management?

* Ans Device management solutions have the following features and benefits: The toolset to manage devices, including the ability to deploy and update software, configure settings, enforce policies, and monitor with data and reports The ability to administer and manage virtual and physical devices, regardless of their physical location

• Assignment level Intermediate:

* 1. Where can we access device management?
* Ans Quickly access Device Manager by searching for it in the Start Menu or using the "Power User" menu with Windows+X or right-clicking the Start button. You can also open Device Manager through Control Panel or by using a Run Command in the "Run" window.
  1. List out the devices connected to the device management.

Ans Devices listed may include your monitor, speakers, headphones, keyboard, mouse, and more. Devices shared through your homegroup or network also appear here. You are unlikely to need the Add a Device button because most devices are added automagically (that's a word nerds like to use).

• 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 Physical security is the technologies and systems in place to protect your workplace. Physical security should take into account your personnel, data and intellectual property and physical assets. Visitor management systems and access control are core elements of effective physical security.

2. what is physical security?

Ans Physical security is the protection of personnel, hardware, software, networks and data from physical actions and events that could cause serious loss or damage to an enterprise, agency or institution. This includes protection from fire, flood, natural disasters, burglary, theft, vandalism and terrorism

• Assignment Level Intermediate

* 1. list out the ways of physical security.

Ans When it comes to Physical Security, the same principles apply here: Identify and classify your assets and resources. Identify plausible threats. Identify probable vulnerabilities that threats may exploit. Identify the expected cost in case if an attack occurs. How many workplaces, buildings or sites are there in an organization?

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

Ans Your systems and peripherals are constantly at risk of sustaining electrical damage, whether the culprit is improper site wiring, fluctuations in a system's electrical supply, overtaxed...

Topic: Firewall settings

• Assignment level basic:

* 1. What is firewall?
* Ans a wall or partition designed to inhibit or prevent the spread of fire.
* ▪a part of a computer system or network which is designed to block unauthorized access while permitting outward communication.
* ▪another term for Chinese wall
  1. Why is firewall needed?
* Ans In a single home network, a firewall can filter traffic and alert the user to intrusions. They're especially useful for always-on connections, such as Digital Subscriber Line or cable modems, because those connection types use static IP addresses. A firewall ensures that only intended and nondestructive content from the internet passes through.

• Assignment level Intermediate:

* 1. What are the features of firewall?
* Ans Below is a list of firewall features to help you determine which solution best suits your business: Bandwidth control and monitoring: Every firewall should have this feature, which is sometimes called traffic shaping. It allows you to control the available bandwidth of your network for sites, applications, and users.

* 1. Describe types of firewall

Ans Besides, there are many other types of firewalls depending on their features and the level of security they provide. The following are types of firewall techniques that can be implemented as software or hardware:

* Packet-filtering Firewalls
* Circuit-level Gateways
* Application-level Gateways (Proxy Firewalls)
* Stateful Multi-layer Inspection (SMLI) Firewalls
* Next-generation Firewalls (NGFW)
* Threat-focused NGFW
* Network Address Translation (NAT) Firewalls
* Cloud Firewalls
* Unified Threat Management (UTM) Firewalls

• Assignment level advance:

1. Do a practical to allow anydesk through firewall.

Ans DONE

2. 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