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

Topic: User Management

- ### Assignment Level Basic

  1. What is user management?
     User management is a core part to any identity and access management solution in particular directory services tools.
  2. Why is user management needed?

     Advanced User and Group Management Although the Control Panel | User Accounts console is friendly and easy to manage users with, it has many limitations.

- ### Assignment level intermediate:

  1. Where can we access the user management?
     User management describes the ability for administrators to manage user access to various IT resources like systems, devices, applications, storage systems, networks, SaaS services, and more.
  2. What are the features of user management?

     User Management Like most Windows versions since XP, Windows 10 allows you to log in to different user accounts when using your computer. Like we discussed earlier, you can choose which account you want to log in to after turning on the computer.

- ### Assignment level Advance:

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

     Yes
  2. Do a practical to change the password of the administrator from the user management tool.
     Yes

Topic: File and Folder Permission

- ### Assignment Level Basic:

  1. What is file folder permission?

you will need to change the permissions that a certain group or individual user has to a file or folder. Like : Full Control Modify Read & Execute List Folder Contents Read.

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

   you don't have to worry about permissions in Windows because that's already taken care of by the operating system. Each user has their own profile and their own set of permissions, which prevents unauthorized access to files and folders.

• Assignment level Intermediate:

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

   In Windows Explorer, right-click the file or folder you want to work with. From the pop-up menu, select Properties, and then in the Properties dialog box click the read only option and apply.

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

   In Windows Explorer, right-click the file or folder you want to work with. From the pop-up menu, select Properties, and then click on run as administer.

• Assignment level Advance:

1. Do a practical to give the folder permission of read only in network.

   Yes

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

   Yes

Topic: Install OS

- ### Assignment Level Basic

  1. What is OS?

     The OS is a software he work like a mediator. A OS comminute on User and Computer.
  2. What are the types of OS?

     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

     Yes
  2. Do a practical to create a bootable pendrive for windows 7

     Yes
  3. Do pendrive for creating a pendrive for mac os Mojave with unibeast.

     Yes

- ### Assignment level Advance:

  1. Do a practical to install Kali Linux

     yes
  2. Do a practical to install windows 10

     yes
  3. Do a practical to install Mac os X

     Yes

Topic: Clean Install

- ### Assignment Level Basic

  1. What is clean install?

- ## Assignment Level Intermediate

    1. What is the process for clean install?

       Yes

    2. what are the benefits of clean install?

       Yes

- ## Assignment level Advance:

    1. Do a clean installation of windows XP

       Yes
    2. Do a clean installation of windows 8
       Yes

Topic: Upgrade installation

- ## Assignment level basic

    1. What is upgrade installation?

       A upgrade installation allows you to keep intact the files, settings, and programs from your current version of Vista SP1 or SP2. This will show you how to do a upgrade installation with a Upgrade version of Windows 7 from Vista.
    2. What is the benefit of upgrade installation?
       Security updates: system remains safe against the known security threats.
       New features updates: These features improve the functionality of these web technology and add value to it.
       Operating system updates: Operating system performance and hardware acceleration improve the overall speed of the system.
       Optional updates: Improves your overall software/application level experience.

- ## Assignment level intermediate:

1.Write down the steps of upgrade installation.

Open the CMOS setup.

Change the computer's boot order.

Save the settings change and exit BIOS.

Place the Windows disc in the USB thumb drive into the back of the computer.

Turn on or restart the computer.

After the Windows install begins, there are several prompts that you need to answer. Select either Yes or the appropriate option to install Windows.

When asked which partition to install Windows onto, select the main partition, which is usually the C: drive or one labeled "Unallocated partition". If upgrading Windows, select the existing installation of Windows on the hard drive.

You may be asked if you want to erase all contents on the hard drive, then install Windows. We recommend you choose this option, as it also formats the hard drive to allow the Windows operating system to be installed.

The computer may need to restart several times during the Windows install process. The restarts are normal and if prompted to restart, select the Yes option.

When the install process is nearly complete, the Windows configuration option screens are shown. On these screens, you may be asked to select the time zone you live in, your preferred language, and the name of the account you use to access Windows. Select the appropriate options and enter the appropriate information on each configuration screen.

- ## Assignment level advance.

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

Yes

Topic: Partition & Formatting

- ## Assignment level Basic

1. What is partitioning?

   The create my separate disk in one hard disk that is partitioning.
2. What is partition?
   The partition is crating two disk in one pandrive.
3. What is format?
   The format is cline complete data on your disk erase every things.

- ## Assignment level Intermediate:

  1. Do a Practical of mbr partition.

      Yes
  2. Do a Practical of gpt partition
      Yes

- ## Assignment level Advance:

  1. Do a practical using cmd.

      Yes
  2. covert a partition to gpt by cmd.
      Step 1. Click Start, type "cmd", and right click it, select "Run as Administrator", or press "WIN+R", type "cmd" and press Enter to open command prompt. Then, enter "diskpart" to run the utility.
      Step 2. Type "list volume" to find out if there are any partitions or volumes on the MBR disk you want to convert to GPT. If there are, you need to use diskpart delete partition first. Then, type "list disk", and press Enter, it will show you all the disks on your computer. Make note of the disk number that you want to convert to a GPT disk. Here we will take disk 1 as our example.
      Step 3. Type "select disk 1", press "Enter", it will remind you that the disk 1 is selected.
      Step 4. Type "clean" and press "Enter" to remove all the partitions and volumes on the selected disk.
      Step 5. Type "convert gpt", press "Enter" to begin the operation. After a few moments, you will find that Command Prompt says DiskPart successfully converted the selected disk to the GPT format. Please have a look at the below screenshot.
  3. Format a partition using cmd.
  1) you can click Start, type "cmd", right click it and select "Run as Administrator", or you can press "WIN+X" and select Command Prompt (Admin)to open the command prompt.
  2) Type diskpart to open the diskpart command prompt.
  3) Type list volume, press Enter, all the volume will be list.
  4) Type select volume n, press Enter, the volume you want to format will be selected.
  5) Then, type "format fs=ntfs quick label=test" and press Enter. Then, the DiskPart format quick, like the screen shot shows.

Topic: Transferring Files

- ## Assignment level Basic

  1. What is transferring Files?
      The file transferring is transfer files on one path to another parth.

2. What are the ways of transferring files?
   The files transferring ways is copy past, cut past and direct by command.

● Assignment level Intermediate:

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

   Using an Ethernet Cable This is one of the fastest method of transferring files between your computers. Connect the two PC's to a network switch or use a crossover Ethernet cable and assign a private IP address to the two PC's from the same subnet. Share the folders using the share wizard provided by Windows.

2. Types of file transferring media.

   The file transferring media is File Fisher, TeraCopy, Fast Copy, ExtremeCopy, Unstoppable Copier and so maneys.

● Assignment level Advanced:

1. Do a practical to transfer files from one system to another via network.

   yes

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

   yes

Topic: Administrative tools

● Assignment Level Basic

1. What are administrative tools?

   Administrative Tools is a folder in Control Panel that contains tools for system administrators and advanced users. The tools in the folder might vary depending on which edition of Windows you are using. These tools were included in previous versions of Windows.

2. What is the use of administrative tools?

   The use of administrative is control all computer system and all programs.

● Assignment level Intermediate:

1. List out the administrative tools.

   Component Services

   Computer Management

Defragment and Optimize Drives

Disk Cleanup

Event Viewer

iSCSI Initiator

Local Security Policy

ODBC Data Sources (32-bit) & ODBC Data Sources (64-bit)

Performance Monitor

Print Management

Resource Monitor

Services

System Configuration

System Information

Task Scheduler

Windows Firewall with Advanced Security

Windows Memory Diagnostic

Windows PowerShell (x86)

Windows PowerShell ISE (x86) & Windows PowerShell ISE

2. What is disk management tools.

Disk Management is an extension of the Microsoft Management Console that allows full management of the disk-based hardware recognized by Windows. 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.

- ## Assignment Level Advanced

1. Do a practical to delete a driver and reinstall it from administrative tools.
   Yes
2. Do a practical to delete a partition and again create it with administrative tool
   Yes
3. Do a practical to create user with administrative tool.
   yes

Topic: Windows Feature.

- ## Assignment Level Base

1. What is windows features?

- ## Assignment level Intermediate

  1. List out the windows features.

      1. Start Menu Returns

      2. Cortana on Desktop

      3. Xbox App

      4. Project Spartan Browser

      5. Improved Multitasking

      6. Universal Apps

      7. Office Apps Get Touch Support

      8. Continuum

      9. Action Center

      10. Unified Settings / Control Panel

  2. What is the use of IIS?

      IIS is a web server software package designed for Windows Server. It is used for hosting websites and other content on the Web. Microsoft's Internet Information Services provides a graphical user interface (GUI) for managing websites and the associated users.

- ## Assignment level Advance:

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

      Yes

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

      yes

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

      Yes

Topic: Backup & Restore

- ## Assignment level Basic:

  1. What is backup?

      The backup is a second storage he help of recover data at any time.

  2. What is Restore?

      The restore is received all old data on your system.

3. What is the need of backup?

The backup is need to restore all deleted data.

- ## Assignment level Intermediate.

    1. What are the tools of backup?

    IIS is a web server software package designed for Windows Server. It is used for hosting websites and other content on the Web.

    2. How do we restore?

    In the search box on the taskbar, type restore files, and then select Restore your files with File History.

    Look for the file you need, then use the arrows to see all its versions. When you find the version you want, select Restore to save it in its original location.

    To save it in a different place, right-click Restore, select Restore to, and then choose a new location.

    3. How to create a restore point?

    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.

    yes

    2. Do a practical to restore from restore point.

    Yes

    3. Do a practical to take backup from another system.

    Yes

    4. Do a practical to take backup backup with a recuva backup tool.

    yes

Topic: Disk Management

- ## Assignment level Basic:

    1. What is Disk management?

    To setup a new drive, see Initializing a new drive. To extend a volume into space that's not already part of a volume on the same drive, see Extend a basic volume.

    To shrink a partition, usually so that you can extend a neighboring partition, see Shrink

a basic volume.

To change a drive letter or assign a new drive letter, see Change a drive letter.

To free up disk space, see Free up drive space in Windows 10.

To defragment your drives, see Defragment your Windows 10 PC.

To take multiple hard drives and pool them together, similar to a RAID, see Storage Spaces

2. What is the use of disk management?
    The disk management use to manage disk and create disk partition.
3. What are the merits of Disk management tool?

- ## Assignment level Intermediate:

    1. Where can we find the disk management tool?
        Windows + R
        Write control panel
        Click on disk management tool
        Than inter

    2. List out the operations we can do with disk management tool
        i.See information about your drives and partitions
        ii.Create partitions on your drives
        iii.Format partitions found on your drives
        iv.Resize the partitions found on your drives
        v.Delete partitions from your drives
        vi.Change the drive letters of your partitions
        vii.Change the drive labels of your partitions

- ## Assignment level Advance:

    1. Do a practical to create a new partition with disk management tool.
        Yes
    2. Do a practical to convert from MBR to gpt from disk management tool.
        Yes
    3. Do a practical to create new partition from existing partition.
        Yes

Topic: Device Management

- ## Assignment level Basic:

    1. What is Device Management?

       A key task of any Administrator is to protect and secure an organization's resources and data on user devices in their organization. This task is device management.

    2. What is the need of device management?

    3. What are the benefits of Device management?

       Works as a centralized utility from which all the hardware on a system can be configured.

       Provides a central and organized view of all hardware- Microsoft Windows-recognized hardware- installed on a system.

       Helps manage all hardware devices installed on a system; this includes keyboards, hard disk drives, US devices etc.

       Helps change hardware configuration options, manage drivers, enable or disable hardware, identify conflicts between hardware devices etc.

- ## Assignment level Intermediate:

    1. Where can we access device management?

       Device Manager can be accessed in several different ways in all versions of Windows, most commonly from the Control Panel, the Command Prompt, or Computer Management. However, a few of the newer operating systems support some unique ways for opening Device Manager.

    2. List out the devices connected to the device management.

- ## Assignment level Advance:

    1. Do a practical to add a device with device management tool.

       yes

    2. Do a practical to delete a driver from the device management tool.

       yes

Topic: Physical security

- ## Assignment Level Basic

  1. Why physical security needed?

      The physical security needed because on this physical security protect your hardware and maintain work speed.

  2. what is physical security?

      The physical security is carrying of pc and protect the harmful products.

- ## Assignment Level Intermediate

  1. list out the ways of physical security.

      1: Lock up the server room

      2: Set up surveillance

      3: Make sure the most vulnerable devices are in that locked room

      4: Use rack mount servers

      5: Don't forget the workstations

      6: Keep intruders from opening the case

      7: Protect the portables

      8: Pack up the backups

      9: Disable the drives

      10: Protect your printers

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

Topic: Firewall settings

- ## Assignment level basic:

  1. What is firewall?

      In computing, a firewall is a network security system that monitors and controls incoming and outgoing network traffic based on predetermined security rules.[1] A firewall typically establishes a barrier between a trusted network and an untrusted network, such as the Internet.

  2. Why is firewall needed?

      Why You Need a Firewall Firewalls are the first line of a network's cyber defense. This significantly decreases the threat surface of the network by blocking numerous ways in which a hacker can infiltrate the network. Once a firewall is selected and configured, monitoring is essential.

- **Assignment level Intermediate:**

  1. What are the features of firewall?

     1 Firewall Features You Can't Live Without.

     2. Web filtering. You can think of a web filter firewall as a content filtering firewall. A web filter firewall is defined as a software program that .

     3. Logging.

     4. Internet aggregation and SD WAN.

     5. Sandboxing.

  2. Describe types of firewall

     The 5 different types of firewalls explained.

     1. Packet filtering firewall. Packet filtering firewalls operate inline at junction points where devices such as routers and switches do their work.

     2. Circuit-level gateway.

     3. Application-level gateway.

     4. Stateful inspection firewall.

     5. Next-generation firewall.

- **Assignment level advance:**

  1. Do a practical to allow anydesk through firewall.

     yes

  2. do a practical to turn off the services of firewall.

     Yes

  3. Do a practical to block ip messenger to access the network.

     Yes