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Cse – 6

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***(Q1) Explain Software and its types.***

Ans--- Software is a set of instructions or commands given to the computer which tells it to accomplish / complete a certain task in a desired manner and in a given period of time . The instructions are given based upon the user commands and the type of task he wants to execute. These set of instructions/ data / computer programs are used to run these machines in general. There is no hardware component present in which we can feel or know what is happening and everything that happens is going on inside the computer.

There are basically two types of software which are present in the computer. These are ‘*System based’* software and ‘*Application based software’* generally known as apps.

The main difference between the both is that in the system based one provides the basic functionality to the users as well as to the other software to operate smoothly. System software basically controls the system computer’s internal functioning and also controls hardware devices such as monitors, printers, and storage devices.

While in the application software part we have those apps which we use in our day to day life and are used to accomplish some task by the user. It is in a more interactive and in a more user friendly format which makes it easy to use..

Software types and written in the low level languages and it is depends upon the application software for it to run. software is a collection of program that will enable the system to perform the specific task. Application software are coded heavily in high level languages which make it depended upon the system software to run.

(Q2***)***Discuss about Operating Systems and differentiate CLI and GUI.

Ans— Operating systems are a key component of the todays world of tech as it is the hub that manages hardware resources and provides essential services, and acts as a way of communication between users and the computer network. It is basically the nervous system of the device as it helps in control and coordination throughout various software’s inside the device. It is used for memory management and file system management as well as facilitating communication between hardware and software.

The major difference between the CLI(Command Line Interface) and GUI(Graphical User Interface) is

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| --- | --- |
| CLI | GUI |
| 1)It gives the user an option to code and write down a series of custom instruction to execute a program | 1)Enables a user to easily observe and operate various things at once and does not allow custom commands. |
| 2) Users use terminal or console window to interact with an operating system. | 2) users use Graphical user interface where menus are provided such as windows, scrollbars, buttons |
| 3)In CLI we can obtain a high precision as it consumes low memory | 3) In GUI low level precision is obtained as it consumes more memory, on the other side it is easy to use |

(Q3)  What are various features of the OS.

Ans –

1. **Process Management—** It has the ability to multitask inside a specific computer by managing cpu scheduling. It also has the ability to put the apps which are not being used for the certain time being on sleep.
2. **Memory Management—**Extends physical memory by using disk space to simulate additional RAM while ensuring one process cannot interfere with the memory space of another, enhancing system stability.
3. **Network and user interface--** Supports networking capabilities, allowing the system to connect to and communicate over networks while staying upon a single system

(Q4)  What is your favorite operating system and why? Discuss the specific features or qualities you appreciate most about it, and how it enhances your computing experience.

Ans— I have used 2 operating system in the last 7 years which are the Windows OS and the Mac 0S. currently I am using the Mac operating system and it has to be my current favourite due to it being easy to use as well as comparatively faster than the windows os. The silicon con chips require less hardware as well as smooth process which enables it to smoothly run highly coded apps like photoshop and Xcode which helps user to code new apps on a ground level base

Windows os though having its benefits which is cross connection compatibility lacks in the user smooth across android and apple deviecs.

MacOS Sonoma is the latest os on the mac pro which is faster than its earlier intel based interface due to the development of the silicon chips.

Windows also does not have the control to limit the usage of apps for a certain given amount of time while mac has optimized to stop and put heavy apps on sleep for days without making them download updated from the internet. Also the ecosystem inside the sonama is capable of offline tracking as well as remote access of the computer even when it is shut down which is not in windows.

The only addition I would like to make is the linkage of it with apps such as ms office and ms excel as we have to download it from the net as well as have anew key in it. The transfer of files from one operating system to another is also lacks a bit as the format of the file has to be changed.

One more thing the windows excels in would be the ability to open more than one app side by side which is not there in the macos.

(Q5)If you had to choose a different Operating system, which one would it be and why.

ANS – I would chose the latest version of the mac os with is available with the m3 silicon chips variant as it excels it previous mac versions with interms of benchmarks and user interface.