Long Questions

Q.1 Describe Software and
(a) System Software (b) Application Software

Ans: Software

Software is a single or collection of programs that performs particular tasks. A computer is useless without software and vice versa. There are two types of software on the basis of functionally which are system software and application software.

Application software:

The application software is a program created to perform a specific task for a user.

Examples: To create spreadsheets, we can use Excel or Lotus 123.

Properties of Application Software:

- Application Soft wares are designed especially for solving the problems of the users of the computer.
- These softwares are for specific purposes.
- Traditionally, application packages were limited to the general-purpose functions such as inventory control, and payroll.

System Software:

The software that used to control, monitor or facilitate the use of the computer is called system software. It provides the interface to the computer and controls basic operations like saving data on the disk, printing a document.

Examples: The system software includes the operating system, the language translators, the linkers, loaders and other utility programs.

Properties of System Software:

(i) System software are designed to control the operations of computer system.

(ii) These software also provide an interface to the user of the computer to communicate with it.

(iii) These software directly interact with hardware of the computer and indirectly with the user of the computer.

(iv) These software are designed by manufacturer of the computer and by highly professional computer programmers.

Q.2 What is a language translator? Describe its type briefly.

Ans: Language Translator:

Language translators are the program that translate high or low level language program to machine code. Language translators are developed by language designer.

This program at first analyzed the program code, checks for program errors, optimized code and then converts into machine language.

Language translator has three type:

1) **Assembler**
2) **Compiler**
3) **Interpreter**

Assembler:

An assembler is a program that translate assembly language program into a machine code.

Assembly allowed the symbolic code for machine code. These symbolic code is called **mnemonics**(Ne-Monics). Writing program in assembly language is easier than machine code.

Compiler:

Compiler is program that translates a source program written in high level language into machine code as a whole. It means it first read whole program then convert into machine code.

Source code: The high level program is called source code.

Object Code: The translated program in the form machine code is called Object code.

Interpreter: Interpreter is program that translate a source program written in high level language into machine code line by line.

An interpreter looks at each line of source program, decide what that line means, check its possible errors and then execute that line.

Q.3 What are Wild card and Switches? Discuss their uses in DOS with examples?

Ans: WILDCARD:

When we want to list or search certain files based on some known property of the file name we use wild card characters (***&?**)

- *** is denoted by any number of characters.**
- **? is denoted exactly any missing characters.**

Example 1: DIR B*.EXE

(Display files that start from B have extension exe)

Example 2: DIR ????.*

(Display name of files having four characters)

Example 3: DIR CE*.DAT

(Display a list of files starting with CE and having extension DAT)

Example 4: **DIR *CE*.*A***

(Display all starting with any character followed by any CE and then dot (.) followed by any character A followed by any character) .

SWITCHES:

When we want to list or search a files on the basis of certain criteria we use switches such as /P is use for page wise listing, -D is used for By date, earliest first

Example 1: DIR *.* /P

It displays the list of files page wise.

Example 2: DIR C:\TEMP /AH

It display list all hidden files in the directory C:\TEMP.

Example 3: DIR C:\TEMP /AH

It display list all hidden files in the directory C:\TEMP.

Example 4: DIR C:\ /S/W/O/P

It display list of root directory, the name of sub directories of root directory and names of files in the root directories.

Q.4 Describe Operating System with functions, types and interface?

Ans: Operating System:

An operating system is a set of programs running on a computer system and provide an environment in which other programs can be executed and the computer system can be used effectively.

For Example: MS Windows, Linux

Explanation:

The operating system provides the most common and difficult functions needed by any user such as

- Read data from the input devices
- Show result on output devices,
- Perform memory management
- Organize data on storage devices.

In this way Operating system wraps around the computer hardware and saves its users from the difficult details of hardware.

Functions

Following are the main functions performed by the most operating systems.

(i) Manage hardware resources
(ii) Load and execute programs
(iii) Memory management
(iv) Secondary memory store management
(v) Providing interface to the users.

Type of Operating System:

Depending upon the working, the operating systems are divided into the following main types.

(i) Batch processing operating systems
(ii) Real time operating systems
(iii) Single user operating systems
(iv) Multi user time sharing operating systems
(v) Network operating systems

Interface of Operating system:

Interface mean way of communication. Operating has two basic types of Interface.

1) Command line Interface (CLI)
2) Graphical user Interface (GUI)

Command line Interface (CLI)

In such interface the users communicate with the operating system by typing commands by using a keyboard.

Example: MS-DOS.

Graphical user Interface (GUI)

The graphical user interface (GUI) consists of windows, menus, icons and pointers. In this interface users communicates with the operating system by selecting commands menus, icons, button and pointer with the help of mouse.

Example: Microsoft windows