

Define Software. Categories of software:

Software is a set of programs, which is designed to perform a well-defined function. A program is a sequence of instructions written to solve a particular problem.

There are two types of software –

- System Software
- Application Software

System Software

The system software is a collection of programs designed to operate, control, and extend the processing capabilities of the computer itself. System software is generally prepared by the computer manufacturers. These software products comprise of programs written in low-level languages, which interact with the hardware at a very basic level. System software serves as the interface between the hardware and the end users.

Some examples of system software are Operating System, Compilers, Interpreter, Assemblers, etc.

The computer programs used to start and run computer systems and networks. System software contrasts with application software, programming tools and malware. System software includes

Operating systems

Device drivers

Middleware

Utility software

Shells and windowing systems

An operating system (OS) is system software that manages computer hardware, software resources, and provides common services for computer programs.

Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor time, mass storage, printing, and other resources.

Device drivers

In computing, a device driver is a computer program that operates or controls a particular type of device that is attached to a computer or automaton. A driver provides a software interface to hardware devices, enabling operating systems and other computer programs to access hardware functions without needing to know precise details about the hardware being used.

Middleware

Middleware is a type of computer software that provides services to software applications beyond those available from the operating system. It can be described as "software glue".

Middleware makes it easier for software developers to implement communication and input/output, so they can focus on the specific purpose of their application. It gained popularity in the 1980s as a solution to the problem of how to link newer applications to older legacy systems, although the term had been in use since 1968.

Utility software

Utility software is software designed to help to analyze, configure, optimize or maintain a computer. It is used to support the computer infrastructure - in contrast to application software, which is aimed at directly performing tasks that benefit ordinary users. However, utilities often form part of the application systems. For example, a batch job may run user-written code to update a database and may then include a step that runs a utility to back up the database, or a job may run a utility to compress a disk before copying files.

Shell and windowing system:

In computing, a shell is a computer program which exposes an operating system's services to a human user or other program. In general, operating system shells use either a command-line interface (CLI) or graphical user interface (GUI), depending on a computer's role and particular operation. It is named a shell because it is the outermost layer around the operating system.

In computing, a windowing system (or window system) is software that manages separately different parts of display screens. It is a type of graphical user interface (GUI) which implements the WIMP (windows, icons, menus, pointer) paradigm for a user interface.

Application Software

Here is a list of some of the most prominent features of a system software –

Close to the system

Fast in speed

Difficult to design

Difficult to understand

Less interactive

Smaller in size

Difficult to manipulate

Generally written in low-level language

Application Software

Application software products are designed to satisfy a particular need of a particular environment. All software applications prepared in the computer lab can come under the category of Application software.

Application software may consist of a single program, such as Microsoft's notepad for writing and editing a simple text. It may also consist of a collection of programs, often called a software package, which work together to accomplish a task, such as a spreadsheet package.

Examples of Application software are the following –

- Payroll Software
- Student Record Software
- Inventory Management Software
- Income Tax Software
- Railways Reservation Software
- Microsoft Office Suite Software
- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint
- Application Software

Features of application software are as follows –

- Close to the user
- Easy to design
- More interactive
- Slow in speed
- Generally written in high-level language
- Easy to understand
- Easy to manipulate and use
- Bigger in size and requires large storage space