Sardar Vallabhbhai Patel Institute of Technology, Vasad

Information Technology

Pre requisite of System Programming (2150708) (Semester 5)
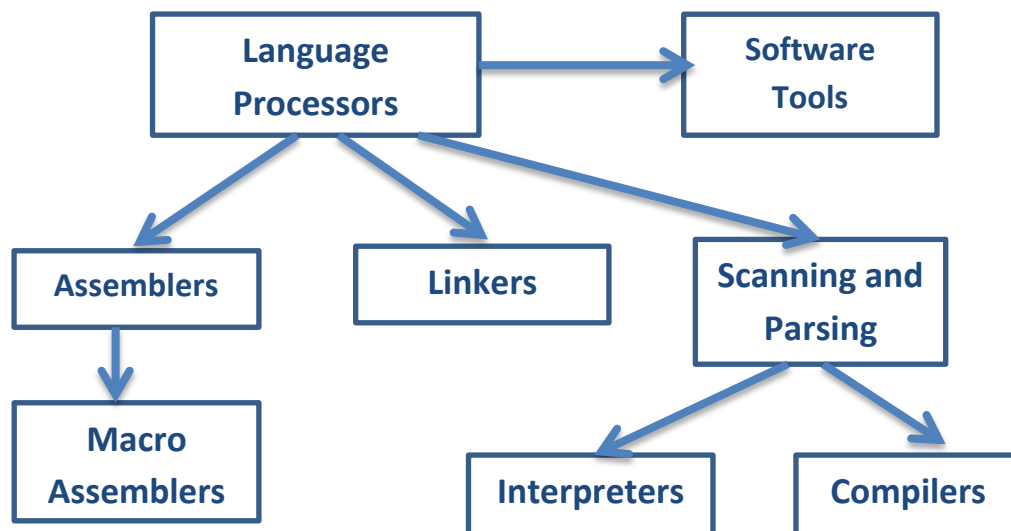
In very simple words, "*system software*" is an interface between hardware and user applications.

"*System software*" is a type of computer program which is designed to run a computer's hardware and application programs.

While an "*operating system*" (OS) is *system* software that manages computer hardware and software resources and provides common services for computer programs.

In previous semester you have studied one large and very important system software- Operating System.

There are many other system software, which are useful for development of new programs and applications. Examples of system software are Language processors, Assemblers, Macro processors, scanners, parsers, linker loader, compilers, Interpreters etc.

The focus of the subject is on

-Fundamental concepts of system programs

- Techniques used to design and implement system programs

To understand the theory part of the subject **System Programming** in proper way, students are required

➔ To have knowledge about hierarchical structure of computer hardware.
➔ To have little knowledge about machine language (instructions and codes) .Subject Computer Organization (CO) taught in previous semester covers topics related to machine instructions.
➔ To have knowledge of programming language (preferably C language).

For practical part of this subject students must have practice of programming in C language.

Execute the following programs before you attend the first lab of system programming.

- Write a program to print the string "This is the practical session of system programming."
- Write a program to print the paragraph.
- Write a program to implement following using user defined functions
  o Length of the string
  o Copy one string to another
  o Concate two strings
  o Compare two strings
  o Reverse the string
- Write a program to count characters and spaces from the given string.
- Write a program to read data from keyboard, write it to a file called STUDENT. Again read the data from the file STUDENT and display on the screen.

Prepared by

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