Lecture 4

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Types of Software

i) Scientific Software – Scientific and engineering software satisfies the needs of a scientific or engineering user to perform enterprise specific tasks. Such software is written for specific applications using principles, techniques and formulae specific to that field. Examples: MATLAB, AUTOCAD, etc.

(ii) Business Software – This category of software is used to support the business applications and is the most widely used category of software. Examples are software for inventory management, accounts, banking, hospitals, schools, stock markets etc.

More Types

(i) System Software

→ Programs that service other programs.
→ Programs that interact with hardware.
→ Necessary to manage the computer resources and support the execution of application programs.
→ Computer cannot function without the presence of these.
→ Example: a) Operating Systems are needed to link the machine dependent needs of a program with the capabilities of the machine on which it runs.
b) Compilers translate programs from high level to machine language.

(i) Real Time Software

→ Monitor / Analyzes / Controls real world events as they occur

→ Complex facilities like production plants, nuclear power plants require greater precision, speed and customization.

→ Such software comes with a scheduler that decides what activity should take place at a particular time and the execution of such scheduler is more advanced than normal schedulers

→ Few factors that determine whether software qualifies as Real Time Software

a) Worst case execution Time
b) Time taken to execute a task
c) Number of tasks on a hardware platform