Lecture 6

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Types of Software:

a) System Software
- Collection of programs written to service other programs.
- Heavy interaction with computer hardware.
- Heavy usage by multiple users.
- Concurrent operation that requires scheduling, resource sharing and sophisticated process management.
- Ex: Compilers, operating systems

b) Real Time Software
- Monitors | analyzes | controls real world events as they occur
- Real time response ranging from 1 millisecond to 1 second is maintained.

c) Business Software

Management Information System (MIS) software that accesses one or more large ~~databases~~ databases

- Management Information System (MIS) software that accesses one or more large databases containing business information.
- Restructure existing data in a way that facilitates business operations
- Encompass interactive computing

d) Engineering and Scientific Software
- Characterized by "number crunching" algorithms.
- Ranges from astronomy to automated manufacturing, CAD, system simulation, etc.
- Need higher precision than that of 64 bits

e) Embedded Software

- Resides in read-only memory and is used to control products and systems for the consumer and industrial markets.
- Can perform limit and esoteric functions or provide significant function and control capability
- Example: used in microwave oven, washing machines, IOT

f) PC based software

- Word processing, spreadsheets, computer graphics, multimedia, entertainment, database management, personal business and financial applications are the examples of PC based software.

g) Web-based software

- Software that incorporates executable instructions (eg, HTML, Perl, Java) and data (eg, hypertext, audio).
- Have substantial security concerns.
- Have specific protocols in the network.

h) AI based software (Our professor's favourite)

- Software that makes use of nonnumerical algorithms to solve complex problems that are not amenable to computation or straightforward analysis.
- Knowledge-based systems, pattern recognition are used along with data like speech, image, etc.
- Systems learn from their mistakes and have a feedback model.