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FACULTY OF EGINEERING

SOFTWARE ENGINEERING
LECTURE-01

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OUTLINE

- Software Engineering
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Software Engineering

oftware Engineering Tutorial delivers basic and advanced concepts of Software Engineering. Software Engineering Tutorial is designed to help beginners and professionals both.

Software Engineering provides a standard procedure to design and develop a software.

Our Software Engineering Tutorial contains all the topics of Software Engineering like Software Engineering Models, Software Development Life Cycle, Requirement Engineering, Software Design tools, Software Design Strategies, Software Design levels, Software Project Management, Software Management activities, Software Management Tools, Software Testing levels, Software Testing approaches, Quality Assurance Vs. Quality control, Manual Testing, Software Maintenance, Software Re-engineering and Software Development Tool such as CASE Tool.

What is Software Engineering?

•The term software engineering is the product of two words, software, and engineering.

•The software is a collection of integrated programs.

•Software subsists of carefully-organized instructions and code written by developers on any of various particular computer languages.

•Computer programs and related documentation such as requirements, design models and user manuals.

•Engineering is the application of scientific and practical knowledge to invent, design, build, maintain, and improve frameworks, processes, etc

•**Software Engineering** is an engineering branch related to the evolution of software product using well-defined scientific principles, techniques, and procedures. The result of software engineering is an effective and reliable software product..

What is Software Engineering?

Why is Software Engineering required?

Software Engineering is required due to the following reasons:

- To manage Large software
- For more Scalability
- Cost Management
- To manage the dynamic nature of software
- For better quality Management

Need of Software Engineering

The necessity of software engineering appears because of a higher rate of progress in user requirements and the environment on which the program is working.

Huge Programming: It is simpler to manufacture a wall than to a house or building, similarly, as the measure of programming become extensive engineering has to step to give it a scientific process.

Adaptability: If the software procedure were not based on scientific and engineering ideas, it would be simpler to re-create new software than to scale an existing one.

Cost: As the hardware industry has demonstrated its skills and huge manufacturing has let down the cost of computer and electronic hardware. But the cost of programming remains high if the proper process is not adapted.

Dynamic Nature: The continually growing and adapting nature of programming hugely depends upon the environment in which the client works. If the quality of the software is continually changing, new upgrades need to be done in the existing one.

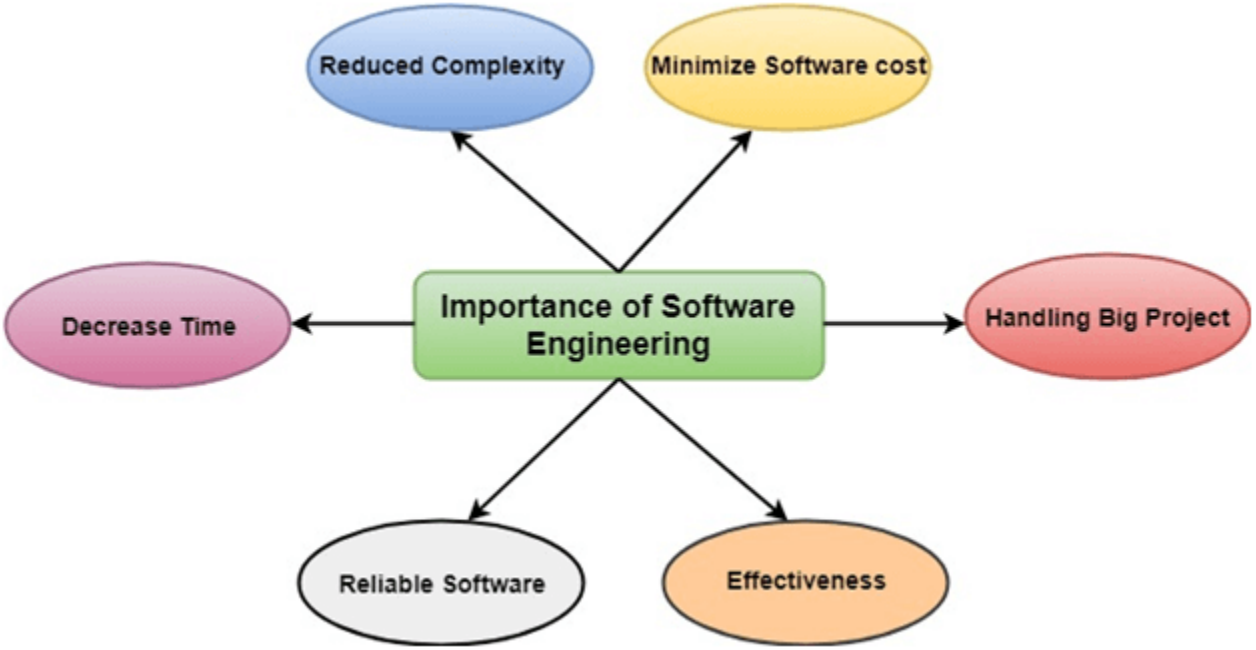
Quality Management: Better procedure of software development provides a better and quality software product.

Characteristics of a good software engineer

The features that good software engineers should possess are as follows:

- Exposure to systematic methods, i.e., familiarity with software engineering principles.
- Good technical knowledge of the project range (Domain knowledge).
- Good programming abilities.
- Good communication skills. These skills comprise of oral, written, and interpersonal skills.
- High motivation.
- Sound knowledge of fundamentals of computer science.
- Intelligence.
- Ability to work in a team
- Discipline, etc.

Importance of Software Engineering



MCQ

What is Software ?

A). Set of computer programs, procedures and possibly is a collection of instructions that enable the user to interact with a computer

B). A set of compiler instructions

C). A mathematical formula

D). Things which we can touch

2. A Software consists of _____ .

A). Programs + hardware manuals

B). Set of instructions + operating procedures

C). Set of programs

D). Programs + documentation + operating procedures

3. Which of the following is not the characteristic of a software?

A). Software does not wear out

B). Software is not manufactured

C). Software is always correct

D). Software is flexible

MCQ

4. A system can be defined as:

A). A collection of people, machines, and methods organized to accomplish a set of functions

B). An integrated whole that is composed of diverse, interacting specialized structures and sub-functions

C). A group of subsystems united by some interaction or interdependence performing many duties but functioning as a single unit

D). All of the above

7. A person who writes a program for running the hardware of a computer is called?

A). System designer

B). Data processor

C). Programmer

D). System analyst

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