

UNIT - 1

Software Engineering

- Software - Software is more than just a program code. A program is an executable code which serves some computational purpose.

Software is considered to be collection of executable programming code associated with libraries and documentation. Software well ^{made} for a specific requirement is called software product.

- Engineering - Engineering on the other hand is all about developing products using well define scientific principles and methods.

1. Recruitment
2. System analysis
3. System design
4. Development
5. Testing
6. Maintenance
7. Updates
8. Code design

- Software Engineering - Software engineering is an engineering branch associated with development of software products using well define scientific principles, methods and procedures. The outcome of software engineering is an efficient and reliable software products.

* Generic view of Software Engineering - The process of a software development has 3 generic views which are -

1.) Definition phase - It is the base of ^{development} definition phase. The expert gets knowledge about what?

- a) Information needed for processing.
- b) Which functions are required.
- c) Expectation about the capacity.
- d) Interface which is establish.
- e) Area of the validation.

This phase define all the exceptions depending on the standard of software engineering. It contains 3 steps -

- 1- Analysis of system
- 2- Planning of project
- 3- Requirement analysis

2.) Development phase — Focus point of development phase is how after the explanation of work it turn how various type of questions arise in developer's mind, that how to design the data structure and architecture of software, procedural details how to implement and how design convert in a programming language and testing of software how to perform. Three special steps always taken in this phase which are —

- (i) Designing of software
- (ii) Coding
- (iii) Testing of software systems.

3.) Maintenance phase — The main focus of maintenance phase is change which cause correction of errors, adapting of new idea according to the needs of software after change in customer's mood.