# Software engineering Assignment

## Module: 1

## SE-overview of IT industry

### Q1:: What is software? What is software engineering?

ANS::The parts of computer that we can't see or touch are called **SOFTWARE.**

Software is a collection of data or set of instruction.

That is used to operate hardware and execute specific task.

**Software engineering ::**

Software engineering is a technique through which we can developed or created software for computer systems and any other electronic devices.

In other words, software engineering is a process in which user needs are analyzed and software is design based on there needs.

# Q-2 Explain types of software

There are 3 types of software.

      1 System software

      2 Application software

      3 Utility software

1. **System Software::**

   System s/w is a software designed to provide a plateform to other software.

   System software control and manage the operations of computer hardware.

   EX :: Operating System (Windows, Android)

2. **Application Software::**
   The software that helps you to do a specific type of work is called application software.
   EX::  MS word , Excel

3. **Utility Software::**

   This software helps to manage, maintain and control computer resources EX:: Antivirus, Backup software.

# Q 3 :: What is SDLC? Explain each phases of SDLC

SDLC stands for **Software development life cycle** model. It describes the sequence of phases or steps to develop any software.

In simple word "entire lifetime of s/w from beginning to ending".

**Phases of SDLC ::**

| | |
|---|---|
| 1 | requirements |
| 2 | analysis |
| 3 | design |
| 4 | implementation |
| 5 | Testing |
| 6 | Maintenance |

## 1 Requirement :

- Establish customer Needs
- Although requirements may be documented in written form, they may be incomplete, or even incorrect requirements will change.

## 2  Analysis :

- The analysis phase defines the requirements of the system, independent of how these requirements will be accomplished.
- Prepare list of requirements & prioritize requirements.
- This analysis represents the "WHAT" & " HOW" phase.

## 3 Design :

- The design team can now expand upon the information established in the requirement document.
- UI Designing, Database, Table etc..

## 4 Implementation :

- The implementation phase deals with issue of quality, performance baselines, libraries, and debugging.
- A system can be implemented after tested.

## 5  Testing :

- The testing phase is a separate phase which is performed by a different team after the implementation is complete.
- Simply stated, quality is very important. Many companies have not learned that quality is important and deliver more claimed functionality but a lower quality level.

## 6 Maintenance :

- It is the process of changing a system after it has been deployed.

**Corrective maintenance** : Identifying and repairing defects.

**Adaptive maintenance** : adapting the existing solution to the new plateform.

**Perfective maintenance** : implementing the new requirements.s

## Q 4::What is DFD? Create a DFD Diagram on Flipkart.

DFD stands for "Data flow diagram " .

- It is also known as " BubbleChart ".
-  Through which we can represent the flow of data graphically in an information system.
- By using DFD we can easily understand the overall functionality of system because diagram represents the incoming data flow, outgoing data flow and stored data flow in a graphical mode.

## Q5::What is Flowchart? Create a flowchart to make addition of two numbers.

Flowchart diagram showing the extract sequence of logical steps.

- They use geometrical shapes and arrows to show processes, relationships and data/process flow.
- Flowchart is a graphical representation of an algorithm.
- Programmers often use it is a program planning tool to solve a problem.

## Basic Symbols used in flowchart Design.

**1** The OVAL symbol indicates START and STOP of the program.
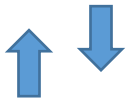
**2** A parallelogram represent INPUT/OUTOUT type.

**3** A BOX represents arithmetic instruction .This symbol mostly use a represent of process.

4 DIAMOND SYMBOL represent a decision point.

5 Whenever flowchart becomes complex or spreads over more than one page, CIRCLE symbol usefull to use connector to avoid any confusions.

6 Arrows represents the direction to flow of control and relationship.

## FLOWCHART OF 2 ADDTION NUMBER::

start

Num1 , num2 and sum

Read num1 and num2

Sum a+b

Display sum

stop