**Software Engineering Assignment**

**MODULE: 1 (SDLC)**

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**COURSE : FULL STACK**

**Q1 :- What is software? What is software engineering?**

**Ans:- Software :-**

**→** It is a part of the computer that we can not touch physically called software.

**→** It is a data or program that we can use using an electronic device to complete a specific task .

**Software engineering :-**

**→** Software engineering is a branch of computer science that deals with the design , development, testing and maintenance of software applications.

**Q2**  **:-** **Explain types of application software**

**Ans :-** Types of Application Software **:-**

There are 5 types of Application Software.

**1.**  Application Software

**2.** System Software

**3.** Driver Software

**4.** Middleware Software

**5.** Programming Software

**1. Application Software :-**

→ This is the most common type of software , Application software is a computer software package that performs a specific function for a user ,or in some cases for another application.

**2. System Software :-**

**→**These software program are designed to run a computer's application program and hardware

→ This type of software is already installed in computer systems or we can say it's installed software.

**3. Driver Software :-**

**→** Also known as device drivers, this software is often considered a type of system software.

→ This type of software that is being used for media players.

**4. Middleware Software :-**

**→** The term middleware describes software that mediates between application and system software or between two different kinds of application software.

**→** We can say it's a one type of database application or database software.

**5. Programming Software :-**

**→** Computer programmers use programming software to write the code.

**→** Programming software and programming tools enable developers to develop, write, test and debug other software programs.

**Q3:- What is SDLC? Explain each phase of SDLC**

**Ans:- SDLC :-**

**→** Full form of SDLC is Software Development Life Cycle.

**→** The Software Development Life Cycle (SDLC) is a methodology that defines the process to develop software.

**Phase of SDLC :-**

There are 6 phases of SDLC :-

1. Requirement Gathering

2. Analysis

3. Designing

4. Implementation or Coding

5. Testing

6.Maintenance

**1. Requirement Gathering :-**

→Interacting with stakeholders and users to collect and document project requirements.

→ This is a fundamental phase of SDLC where user requirements or business requirements are gathered.

**2. Analysis :-**

→ In this phase we have to analyse or study the requirement that we are being collected.

→ Analysis represents what are the actual requirements and how are requirements accomplished independently.

**3. Designing**

**→** In this phase , the software design is created or we can say that we will design the template of the software.

→ This phase will include the overall architecture of the software, data structures and interfaces.

**4. Implementation or Coding**

**→** In this phase we will implement the design into the code or we can say we will develop the program of software.

→ This phase will also be known as development.

**5. Testing**

**→** In this phase, the software is tested by the testing team.

→ The software is thoroughly tested to ensure that it meets the requirement and works correctly.

**6. Maintenance**

→ In this phase include ongoing support , bug fixes and updates to the software.

→ We have to update the software and make different changes in the layout of our software.