

**SE (Software Engineering)**

**Assignment # 1**

**Semester**: 3ndSemester

**Section**: C

**Submitted To:**

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**a. Differentiate between Project, Process and Product?**

* A project in software engineering is a temporary endeavor undertaken to create a unique product or service. It involves steps for making a product before it is available to the market.
* A process is a set of sequence steps that have to be followed to create a project. It’s a set of activities that guide the project to achieve a convenient product.
* A product is the final outcome of the project. In the context of software engineering, it includes any software manufactured based on the customer’s request.

**b. Define stakeholders?**

* Stakeholders are individuals, groups, or organizations that are actively involved in a software project, can influence it due to their position, and whose interests may be affected by the success or failure of the project. They can be internal (like project managers and team members) or external (like customers and investors).

**c. What is a Software Requirements Specification? Why we need it. Discuss in detail.**

* An SRS is a document that describes what the software will do and how it will be expected to perform. It includes information about all the functional and non-functional requirements for a given piece of software.
* The SRS is important because it brings everyone involved to the same shared understanding about the project’s purpose and scope. It helps avoid misalignment between development teams so everyone understands the software’s function, how it should behave and for what users it is intended.

**d. How many types of Software Requirements are there? Describe and state examples.**

* There are three main types of software requirements:
  + **Functional Requirements:** These are the requirements that the end user specifically demands as basic facilities that the system should offer. For example, in a hospital management system, a doctor should be able to retrieve the information of his patients.
  + **Non-functional Requirements:** These are basically the quality constraints that the system must satisfy according to the project contract. For example, security, portability, reliability, reusability, etc.
  + **Domain Requirements:** These are the requirements that arise from the application domain of the system rather than from the needs of system end-users.

**e. Describe the software development process briefly.**

**The Software Development Life Cycle (SDLC**) is a process used by software development organizations to plan, design, develop, test, deploy, and maintain software applications. It typically involves dividing software development work into smaller, parallel, or sequential steps or sub-processes to improve design and/or product management. The main stages include requirement

* **analysis**
* **resource planning**
* **design**
* **prototyping**
* **define the complete workflow**
* **software development**
* **software testing**
* **software deployment**
* **maintaining and updating a software.**