DEVOPS

UNIT-I

Software Development Life Cycle: It is a process used by the software industry to design develop and testy high quality software’s. The SDLC aims to produce a high quality software that meets or exceeds customer expectations, reaches completion within times and cost estimate.

It is also called as software Development process.

Without using an exact life cycle model, the development of software product would not be in a systematic and disciplined manner. When a team is developing a software product, there must be a clear understanding about what to do and when to do. Otherwise it would point to project failure. A software life cycle model describes entry and exit criteria for each phase so without a software life cycle model the entry and cut criteria for a stage cannot be recognized without software life cycle models it becomes tough for software project managers to monitor the progress of the project.

SDLC CYCLE:

SDLC cycle represents the process of developing software Sdlc framework includes the following steps:

Requirements gathering and analysis

Maintenance design

Deployment coding

Testing

Requirements gathering and analysis: Requirement Analysis is the most important and necessary stage in SDLC.

The senior members of the team perform it with inputs from all the stakeholders and domain experts or SMEs in the industry.

Planning for the quality assurance requirements and identifications of the risks associated with the projects is also done at this stage.

Business analyst and Project organizer set up a meeting with the client to gather all the data like what the customer wants to build, who will be the end user, what is the objective of the product. Before creating a product, a core understanding or knowledge of the product is very necessary.

**For Example**, A client wants to have an application which concerns money transactions. In this method, the requirement has to be precise like what kind of operations will be done, how it will be done, in which currency it will be done, etc.

Once the required function is done, an analysis is complete with auditing the feasibility of the growth of a product. In case of any ambiguity, a signal is set up for further discussion.

Once the requirement is understood, the SRS (Software Requirement Specification) document is created. The developers should thoroughly follow this document and also should be reviewed by the customer for future reference.

**Designing the Software**

The next phase is about to bring down all the knowledge of requirements, analysis, and design of the software project. This phase is the product of the last two, like inputs from the customer and requirement gathering.

**Stage5: Testing**

After the code is generated, it is tested against the requirements to make sure that the products are solving the needs addressed and gathered during the requirements stage.

During this stage, unit testing, integration testing, system testing, acceptance testing are done.

**Stage6: Deployment**

Once the software is certified, and no bugs or errors are stated, then it is deployed.

Then based on the assessment, the software may be released as it is or with suggested enhancement in the object segment. After the software is deployed, then its maintenance begins.

**Stage7: Maintenance**

Once when the client starts using the developed systems, then the real issues come up and requirements to be solved from time to time.

This procedure where the care is taken for the developed product is known as maintenance.