

Tutorial-1

Study the complete Software Development Life Cycle (SDLC) and analyze various activities conducted as a part of various phases. For each SDLC phase, **identify** the objectives and **summaries** outcomes.

SDLC Model Stages....

Stage 1:- Gathering and Requirements Analysis:-

Stage 2:- Software design:-

Stage 3:- Coding and Implementation:-

Stage 4:- Testing:-

Stage 5:- Deployment Maintenance/Post Deployment:-

Software Development Life Cycle



1. Gathering and Requirements Analysis:-

Objective:

The objective of this phase is to develop a project charter (for above threshold projects), project management plan, and a project budget plan, where appropriate, that will lead to a successful project.

The objective of this phase is to define in more detail the system inputs, processes, outputs and interfaces. At the end of this phase the system's processes will be defined at the functional level, meaning the functions to be performed will be known, but not necessarily how they will be performed. Unless specifically constrained by the Project Charter, Requirements Analysis should not consider the computer programs, files and data streams.

Requirements Analysis will identify and consider the risks related to how the technology will be integrated into the standard operating procedures. Requirements Analysis will collect the functional and system requirements of the business process, the user requirements and the operational requirements (e.g., when operational what is necessary to keep the system up and running).

Activity:

1. Capture all the requirements.
2. Do brainstorming and walkthrough to understand the requirements.
3. Do the requirements feasibility test to ensure that the requirements are testable or not.

Summary:

Planning and Requirement Analysis:- RUD (Requirements Understanding Document).

2. Software design:-

Objective:

The objective of this phase is to transform business **requirements** identified during previous phases, into a **detailed** system architecture which is **feasible**, **robust** and brings **value** to the **organization**.

Activity:

1. As per the requirements, create the design
2. Capture the hardware / software requirements.
3. Document the designs

Summary:

Designing the product architecture:-HLD(High Level Design document) LLD(Low level design document).

3. Coding and Implementation:-

Objective:

The objective of the Implementation Phase is: first to install the system in the production environment and to bring it into operation; and second, to ensure that the system, as developed:

Satisfies the functional requirements, Satisfies the business needs; Adheres to all mandates, physical constraints and service level agreements; and Operates as described in the User and Operator Manuals.

Activity:

1. As per the design create the programs /code.
2. Integrate the codes for the next phase.
3. Unit testing of the code.

Summary:

Building or Developing the Product:- Programs Unit test cases and results.

4. Testing:-

Objective:

The objective of this phase is to perform system integration testing of the developed system. The systems integration test function is to ensure that the developed systems meet all the technical requirements with the components and subsystems integrated. The system test may require any number of additional tests depending on the scope and complexity of the requirements; examples include: security, conformance, accessibility, performance, stress, compatibility, and regression tests.

Activity:

1. Integrate the unit tested code and test it to make sure if it works as expected.
2. Perform all the testing activities (Functional and non functional) to make sure that the system meets the Requirements.
3. In case of any anomaly, report it.
4. Track your progress on testing through tools like traceability metrics, ALM
5. Report your testing activities.

Summary:

Testing the Product:- Test cases, Test reports, Defect reports, Updated matrices.

5. Deployment Maintenance/Post Deployment:-

Objective:

Class:-FOT-TC-1
Bansi M. Malaviya

Enrollment No:-150973107010

Once the software has been fully tested and no high priority issues remain in the software, it is time to deploy to production where customers can use the system.

Once a version of the software is released to production, there is usually a maintenance team that look after any post-production issues.

If an issue is encountered in the production the development team is informed and depending on how severe the issue is, it might either require a hot-fix which is created and shipped in a short period of time or if not very severe, it can wait until the next version of the software.

Activity:

1. Make sure that the environment is up
2. Make sure that there are no 1 defects open.
3. Make sure that the test exit criteria are met.
4. Deploy the application in the respective environment.
5. Perform a sanity check in the environment after the application is deployed to ensure the application does not break.

System Maintenance:-

1. Make sure that the application is up and running in the respective environment.
2. In case user encounters and defect, make sure to note and fix the issues faced.
3. In case any issue is fixed; the updated code is deployed in the environment.
4. The application is always enhanced to incorporate more features, update the environment with the latest Features.

Summary:

Deployment in the Market and Maintenance:- User Manual ,List of production tickets, List of new features implemented.