



# Topic :- Software Testing Life Cycle

# ➤ Agenda

- ① STLC Introduction
- ② Requirement Analysis/Review
- ③ Test Planning
- ④ Test Designing
- ⑤ Test Environment Setup
- ⑥ Test Execution
- ⑦ Test Closure

## ◎ STLC - Software Testing Life Cycle

- “Software Testing Life Cycle(STLC) is the testing process which is executed in systematic and planned manner. In STLC process, different activities are carried out to improve the quality of the product.”
- Software Testing Life Cycle refers to a testing process which has specific steps to be executed in a definite sequence to ensure that the quality goals have been met.
- In STLC process, each activity is carried out in a planned and systematic way. Each Phase has different goals .

# 1. Requirement Analysis/Review

- ⦿ This is a very important phase in STLC.
- ⦿ In this phase the QA interacts with the Business Analyst, System Analyst, Development Manager/Team Lead, etc. or if required the QA may also interact with Client to completely understand the requirements of the system.
- ⦿ During this phase the QA takes many important decisions like what are the testing types & techniques to be performed, feasibility for automation testing implementation, etc.

## ➤ Activities:-

- ⦿ Identify types of tests to be performed.
- ⦿ Gather details about testing priorities and focus.
- ⦿ Prepare RTM (Requirement Traceability Matrix)
- ⦿ Automation feasibility analysis .

## 2. Test Planning

- In this phase the QA/QA Lead/QA Manager plans for the complete testing process.
- This Phase is also called Test Strategy phase. Typically in this stage , a Senior QA manager will determine effort and cost estimates for the project and would prepare and finalize the Test Plan.
- This phase is very important as any small mistake in this phase can result in major issues in the project regarding time, money, efforts, etc.

## ➤ Activities:-

- ◎ Preparation of test plan
- ◎ Test tool selection
- ◎ Test effort estimation
- ◎ Resource planning and determining roles and responsibilities.
- ◎ Training requirement.



### 3. Test Designing

- Creation, Review & Update of Test Cases as well as Test Scripts are done in this phase. The test cases prepared by the QA team are reviewed and approved.
- Test data may also be created in this phase by the QA team if test environment is available to them.
- Activities:-
  - Create test cases , automation scripts
  - Review & baseline test cases

## 4. Test Environment Setup

- Test Environment is the actual system/environment/setup where the testing team will be testing the application. Test environment is prepared by understanding the required system architecture, software & hardware requirements, etc.
- Activities:-
  - Understand the required architecture , environment set-up and prepare hardware & software requirement list for Test Environment.
  - Setup test Environment and test data.

## 5. Test Execution

- The test cases which were prepared earlier are executed in this phase. In this phase, the testers test the websites. Different testing techniques as well as methods are implemented and executed on the software/application to break the system and find bugs.
- Bugs are reported to the development team. The development team resolves the bugs and the system is retested to ensure that it is bug free and ready to go live.

## ➤ Activities:-

- ⦿ Execute tests as per plan.
- ⦿ Document test results , and log defects for failed cases.
- ⦿ Map defects to test cases in RTM
- ⦿ Retest the defect fixes
- ⦿ Track the defects to closure

## 6. Test Closure

- ⦿ When the testing team is confident that all the reported bugs are resolved and the system is ready according to the client's requirements, the software testing life cycle enters the last stage i.e.. Test Closure stage.
- ⦿ In this stage, evaluation is done for the complete testing cycle, test closure reports are prepared, proper analysis and documentation is done for the major or critical bugs so that such situations can be handled efficiently and effectively in future projects, etc.

# Activities:-

- ④ Submitting STR (Software Test Result)
- ④ Submitting Test Summary report , Test Plan Document , Test Cases/Scripts etc.
- ④ Sharing experiences with the team.

A white rectangular card is placed on top of a red envelope. The card has the words "Thank you..." written in a black, cursive script. The envelope is partially open, showing its red interior. The entire scene is set against a light gray background.

Thank you...