Top 50 SDLC (Software Development Life Cycle) Questions and Answers

## 1. What is SDLC?

SDLC stands for Software Development Life Cycle. It is a process used to design, develop, test, and deploy software systems.

## 2. What are the phases of SDLC?

The main phases are: Requirement Gathering, Design, Development, Testing, Deployment, and Maintenance.

## 3. Why is SDLC important?

It ensures a systematic approach to software development, improving quality, efficiency, and predictability.

## 4. What is the Requirement Gathering phase?

It involves understanding what the users need from the system.

## 5. What happens in the Design phase?

Architectural and detailed design specifications are created.

## 6. What is the Development phase?

The actual code is written during this phase.

## 7. What is the Testing phase?

The developed system is tested to find and fix bugs.

## 8. What is the Deployment phase?

The software is released to the users.

## 9. What is Maintenance in SDLC?

It includes fixing issues, making improvements, and updating the system.

## 10. What is a software prototype?

A working model of the system used to gather user feedback.

## 11. What is the Waterfall model?

A sequential SDLC model where each phase must be completed before the next.

## 12. What is the Agile model?

An iterative and incremental approach to software development.

## 13. What is the Spiral model?

Combines iterative development with systematic risk analysis.

## 14. What is the V-Model?

An extension of the waterfall model with testing at every stage.

## 15. What is the Incremental model?

Software is built and delivered in small pieces.

## 16. What is the difference between Agile and Waterfall?

Agile is iterative and flexible, while Waterfall is sequential and rigid.

## 17. What is DevOps in SDLC?

A culture that combines development and operations for continuous delivery.

## 18. What is RAD model?

Rapid Application Development – focuses on quick development using prototypes.

## 19. What is Big Bang model?

A model with no specific process, used for small projects with undefined requirements.

## 20. What is the Iterative model?

The software is built in iterations with feedback at each cycle.

## 21. What is SRS?

Software Requirements Specification – a document detailing software requirements.

## 22. What is a feasibility study?

Assessment of the project’s viability, cost, and time.

## 23. What is a project plan?

A document outlining tasks, timelines, resources, and milestones.

## 24. What is risk management in SDLC?

Identifying, assessing, and mitigating project risks.

## 25. What are functional requirements?

Define what the system should do.

## 26. What are non-functional requirements?

Define system qualities like performance, security, usability.

## 27. What is a use case?

A description of how users interact with the system.

## 28. What is change management?

Process of handling changes to project scope or requirements.

## 29. What is scope creep?

Uncontrolled changes or growth in a project’s scope.

## 30. What is version control?

A system that tracks changes in code and documents.

## 31. What is quality assurance (QA)?

Process-oriented activities to ensure quality.

## 32. What is quality control (QC)?

Product-oriented activities like testing.

## 33. What is verification in SDLC?

Checking if the product meets design specifications.

## 34. What is validation in SDLC?

Checking if the product meets user requirements.

## 35. What are test cases?

A set of conditions used to test a system.

## 36. What is regression testing?

Testing existing functionality after changes.

## 37. What is unit testing?

Testing individual components.

## 38. What is integration testing?

Testing combined modules.

## 39. What is system testing?

Testing the complete and integrated software.

## 40. What is user acceptance testing (UAT)?

Testing by the end-users to verify system functionality.

## 41. Who are stakeholders?

Individuals or groups with interest in the project.

## 42. What is the role of a Business Analyst?

Gathers and documents requirements.

## 43. What is the role of a Project Manager?

Plans, executes, and monitors project progress.

## 44. What is the role of a QA Engineer?

Ensures the product meets quality standards.

## 45. What is the role of a Developer?

Writes and maintains the software code.

## 46. What is the role of a Product Owner?

Defines product features and prioritizes them.

## 47. What is requirement traceability?

Tracking requirements throughout the project.

## 48. What are software metrics?

Quantitative measures used to assess software quality.

## 49. What is configuration management?

System for tracking and controlling software changes.

## 50. What tools are used in SDLC?

Examples include JIRA, Git, Jenkins, Selenium, and Trello.