Fundamentals of Software Engineering

Software Engineering · Answer Key · 25 Questions

1. What does the acronym SDLC stand for in software engineering?

A) Standard Development Lifecycle
B) Software Development Lifecycle
C) System Design and Logic Control
D) Software Data Life Cycle

2. Which phase of the software development lifecycle focuses on gathering requirements from the client?

A) Testing
B) Deployment
C) Planning and Requirement Analysis
D) Maintenance

3. Which software development model is characterized by sequential phases where progress flows downwards like a waterfall?

A) Agile
B) Waterfall
C) Spiral
D) Scrum

4. What is the primary purpose of version control systems like Git?

A) To translate code into machine language
B) To track changes in source code over time
C) To host websites on a server
D) To design user interfaces

5. In software engineering, what is 'debugging'?

A) Creating new features
B) Writing documentation
C) Identifying and fixing errors in code
D) Deploying software to a cloud server

6. Which term describes the process of writing the actual code for a software application?

A) Compilation
B) Implementation
C) Requirement Analysis
D) Testing

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7. What is a 'compiler' in the context of programming?

A) A type of hardware
B) A program that converts source code into machine code
C) A tool for designing database schemas
D) A manual for developers

8. Which of these is a popular programming language commonly used for web development?

A) JavaScript
B) SQL
C) HTML
D) CSS

9. What is the function of a software 'compiler's' error message?

A) To suggest new features
B) To indicate a syntax or semantic issue in the code
C) To describe the history of the project
D) To delete the source file

10. What is the 'user interface' (UI) of a software application?

A) The underlying server architecture
B) The part of the software the user interacts with
C) The database management system
D) The compiled binary code

11. Which document describes how a software system should be built and how it should behave?

A) Software Requirement Specification (SRS)
B) Budget Report
C) Marketing Flyer
D) User Manual

12. What is an 'API' in software engineering?

A) Application Programming Interface
B) Automated Processing Integration
C) Advanced Program Implementation
D) Applied Protocol Instruction

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13. Which testing level focuses on individual components or functions of a software application?

A) System testing
B) Unit testing
C) Integration testing
D) Acceptance testing

14. What does 'open source' software mean?

A) Software that is free to use and has publicly accessible source code
B) Software that is only available for purchase
C) Software that is built by robots
D) Software that cannot be modified

15. Which role is primarily responsible for ensuring software quality through the execution of tests?

A) Project Manager
B) Software Architect
C) Quality Assurance Engineer
D) Database Administrator

16. What is a 'repository' in the context of version control?

A) A storage location for project files and their history
B) A library of pre-written code
C) A server used for hosting websites
D) A meeting room for developers

17. What is the main goal of software maintenance?

A) To rewrite the entire code from scratch
B) To modify software after delivery to correct faults or improve performance
C) To sell the software to new customers
D) To create marketing materials

18. Which language is widely used for managing and querying relational databases?

A) SQL
B) HTML
C) CSS
D) Java

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19. What is a 'bug' in software engineering?

A) A feature requested by a user
B) A security lock
C) An unintended error or flaw in software
D) A type of hardware failure

20. Which of the following is an example of an Operating System?

A) Microsoft Windows
B) Visual Studio
C) Chrome Browser
D) Git

21. What is 'refactoring' in software development?

A) Adding new functionality
B) Restructuring existing code without changing its external behavior
C) Deleting all code
D) Updating the project documentation

22. What does 'IDE' stand for in software development?

A) Integrated Development Environment
B) Internal Data Engine
C) Intelligent Design Editor
D) Input Data Entry

23. Which of these is a non-functional requirement?

A) The system must allow users to login
B) The system must respond within 2 seconds
C) The system must display the user's profile
D) The system must process payments

24. What is the main purpose of documentation in software engineering?

A) To increase the file size
B) To provide information on how to use or maintain the software
C) To hide the code from unauthorized users
D) To replace the need for testing

25. What does 'deployment' refer to in the software lifecycle?

A) Moving the software to a production environment for user access
B) Designing the database schema
C) Writing the initial code
D) Creating a project plan

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