

Software Engineering Fundamentals

Software Engineering · Answer Key · 8 Questions

1. What is the primary purpose of a Software Requirements Specification (SRS) document?

- A) To provide a detailed plan for testing the software.
- B) To outline the functionalities and constraints of the software to be developed.**
- C) To document the source code and its internal structure.
- D) To create a user manual for end-users of the software.

2. Which software development model follows a linear, sequential approach, where each phase must be completed before the next begins?

- A) Agile Model
- B) Spiral Model
- C) Waterfall Model**
- D) Iterative Model

3. What is 'debugging' in the context of software engineering?

- A) Designing the user interface of an application.
- B) Identifying and removing errors (bugs) in computer code.**
- C) Writing documentation for the software.
- D) Planning the project schedule and resources.

4. In object-oriented programming, what does the term 'encapsulation' refer to?

- A) The ability of an object to take on many forms.
- B) Bundling data (attributes) and methods (functions) that operate on the data within a single unit (class).**
- C) Creating new classes based on existing classes.
- D) Hiding the internal implementation details of an object from the outside world.

5. What is the main goal of 'version control' systems like Git?

- A) To automatically generate software documentation.
- B) To manage and track changes to source code over time, facilitating collaboration.**
- C) To perform automated testing of software modules.
- D) To optimize the performance of running applications.

6. What is the purpose of 'unit testing' in software development?

- A) To test the integration of multiple software modules.
- B) To verify that individual components or units of code function correctly in isolation.**
- C) To test the overall system performance under heavy load.
- D) To conduct user acceptance testing with the end-users.

7. Which phase of the software development lifecycle (SDLC) involves creating the actual code based on design specifications?

- A) Requirements Gathering
- B) Design
- C) Implementation (Coding)**
- D) Testing

8. What does the acronym 'API' stand for in software development?

- A) Advanced Programming Interface
- B) Application Programming Interface**
- C) Automated Process Integration
- D) Algorithmic Program Input