Overview of Software Engineering: Practice Assignment

Your grade: 80%

Your latest: **80%** • Your highest: **80%** • To pass you need at least 70%. We keep your highest score.

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1. Which of the following best describes the primary responsibilities of a software engineer?   **1 / 1 point**

   ● Designing, building, and maintaining software systems

   > Correct. Software engineers are responsible for designing, building, and maintaining software systems.

   ○ Designing the user experience

   ○ Writing documentation

   ○ Writing test cases based on requirements

2. Which of the following best describes a key advantage for a business to follow the SDLC?   **1 / 1 point**

   ● The SDLC offers an overview of the process, so stakeholders know where they fit into that process.

   > Correct! The SDLC does offer an overview of the process, so stakeholders know where they fit into that process.

   ○ It tells the QA team what test cases to write.

   ○ It defines the roles of the development team.

   ○ It allows for creativity because of its adhoc approach to software development.

3. Which of the following best describes an activity that happens in the planning phase of the software development lifecycle (SDLC)?   **1 / 1 point**

   ○ Bugs are identified.

   ○ The coding process begins.

   ○ Software architecture is designed.

   ● User requirements are written.

   > Correct! User requirements are written during the planning phase of the SDLC.

4. Which of the following best describes an alpha release?   **1 / 1 point**

   ○ It is intended for all users.

   ○ It is the most stable release.

   ○ It meets all functional requirements.

   ● It is the first functioning version of a system released to a select group of stakeholders.

   > Correct! The alpha release is the first functioning version of a system released to a select group of stakeholders.

5. Which statement best describes the User Requirements Specification (URS)?   **1 point**

   ○ It primarily contains use cases.

   ○ It can be combined with the Software Requirements Specification to form the System Requirements Specification (SysRS).

   ● It contains functional, external interface, and non-functional requirements.

   > Incorrect. This describes the Software Requirements Specification (SRS).

   ○ It contains policy and regulation requirements.

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The Software Building Process and Associated Roles

Your grade: 100%

Your latest: **100%** • Your highest: **100%** • To pass you need at least 70%. We keep your highest score.

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1. Which of the following best describes the Waterfall approach to the software development lifecycle (SDLC)?   1 / 1 point

   ○ The last stage is called the "feedback stage" rather than the "maintenance stage."

   ○ Tests are written during the validation phase.

   ◉ It is a sequential approach to the SDLC.

   > Correct! Waterfall is a sequential approach to the SDLC.

   ○ It is an iterative approach to the SDLC.

2. In semantic numbering, what does the 9 in the version number 9.1.33.6 represent?   1 / 1 point

   ○ The "9" position indicates changes that are less significant than a patch.

   ○ The "9" position indicates that minor changes were made to a piece of software.

   ◉ The "9" position indicates major changes to the software such as a new release.

   > Correct! The 9 in version 9.1.33.6 represents a major change such as a new software release.

   ○ The "9" position indicates patches or minor bug fixes.

3. Which of the following best describes non-functional testing?   1 / 1 point

   ○ It consists of black-box testing rather than white-box testing.

   ◉ It tests application attributes like performance and security.

   > Correct! Non-functional testing tests attributes like performance, security, scalability, and availability.

   ○ It is only concerned with inputs and corresponding outputs of the system under test.

   ○ The goal of non-functional testing is to make sure the application is usable and accessible.

4. Which role is primarily responsible for facilitating communication among team members and stakeholders?   1 / 1 point

   ◉ Scrum-master

   > Correct! The scrum-master is primarily responsible for facilitating communication among the team and stakeholders.

   ○ Product manager

   ○ Information developer

   ○ Software architect

5. Which of the following describes a difference between process documentation compared to product documentation?   1 point

   ○ Process documentation provides technical documentation to the developers whereas product documentation explains how to execute business processes.

   ○ Process documentation is intended for the quality assurance team whereas product documentation is intended for the system administrators.

   ○ Process documentation is in a written format whereas product documentation is in video format.

   ◉ Process documentation explains how to execute procedures whereas product documentation explains how to use the software.

Graded Quiz: The Software Development Lifecycle

1. Your company is looking to hire a new software engineer. During the interview process, you ask candidates to define software engineering. Which of the following is the most accurate description?   `1 point`

   ○ The complete collection of activities involved in software development

   ⦿ The use of scientific methods to design and build software

   ○ The application of structured principles to arrange the components of a software system

   ○ Any task involved in software development

2. A software development company wants to reduce its development risks and ensure that the project is complete within the timeline with efficiency. Which of the following is best suited in this scenario to achieve the desired goal?   `1 point`

   ○ Assign particular responsibilities to each team member.

   ⦿ Use software development lifecycle (SDLC) to provide a structured process.

   ○ Allow the team to develop software in an ad-hoc, creative manner.

   ○ Engage technical writers to develop detailed documentation.

3. While using a fully operational banking application, a customer noticed discrepancies in transaction details not appearing on the mobile devices. Which of the following actions should a software developer take in this scenario to resolve such issues?   `1 point`

   ⦿ Test codes thoroughly

   ○ Create new system requirements

   ○ Develop coding process from scratch

   ○ Fixing minor user interface issues

4. During the final testing of a new e-commerce system, the team wants to confirm that the software performs as defined in the specifications. Which of the following activities should they perform in the testing phase in this scenario?   `1 point`

   ⦿ Checking software against requirements

   ○ Launch internal alpha for testing

   ○ Define system components and behaviors

   ○ Create support guides for users

5. A project manager is collecting input from the stakeholders about the new inventory system requirements. Which document should they develop to properly capture the system's capabilities and constraints?   `1 point`

   ⦿ User requirements specification (URS) document

   ○ System requirements specifications (SysRS) document

   ○ Interface control document (ICD)

   ○ Software requirements specification (SRS) document

6. An organization is planning its software development approach with a strict step-by-step development process in which one phase must be completed before starting a new phase. Which software development lifecycle (SDLC) model does this scenario describe?   `1 point`

   ○ Agile

   ○ Verification

   ○ V-shape

   ⦿ Waterfall

7. What is the primary objective of software validation that focuses on user experience?   `1 point`

   ○ Monitoring infrastructure performance metrics

   ○ Measuring system resource consumption

   ○ Tracking system modification consequences

   ⦿ Making sure the application is usable and accessible

8. As a software developer, you want to write clear, efficient, and easy-to-maintain code by following certain best practices. Which software development lifecycle phase supports this phase? **1 point**

- ○ Software documentation
- ○ Code quality
- ○ Software testing
- ◉ Software design

9. A product development team is discussing prioritizing features for their next release based on customer requirements. Which of the following roles makes decisions for feature priority? **1 point**

- ○ Software architect
- ○ UX designer
- ○ Stakeholder
- ◉ Product Owner

10. In the early planning stages of a complex enterprise software project, the team reviews documentation requirements. Which type of documentation details the software system's expected features and functionality? **1 point**

- ◉ Requirements documentation
- ○ User documentation
- ○ Software documentation
- ○ Technical documentation