

ISM101 – Information Systems Management

Participation Exercise #6

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1. What is the purpose of a test plan in software development, and can you provide an example?

A: They specify what will be tested, how it will be tested, and what success criteria to use.

Using the example of previously exercises, a mobile ecommerce app could specify:

What will be tested: User login, product search, payment processing.

How it will be tested: Manual testing for user interface (UI) elements, automated tests for payment gateway functionality.

Success criteria: Login must authenticate users within 3 seconds; search results should match the query within 2 seconds; payment transactions must complete successfully without errors.

2. How do automated testing tools differ from manual testing, and when might you use them?

A: Automated testing tools and techniques involve using software to execute tests and compare the actual results with expected results. This helps in efficient and repeatable testing. I might use them when the tests need to be repeated frequently (e.g., regression tests, performance tests) or when dealing with large-scale projects

3. How can quality assurance ensure that requirement specifications are of high quality, and why is this important?

A: Quality Assurance involves verifying and validating that requirement specifications are accurate, complete, consistent, and meet stakeholder needs.

Suppose that our mobile ecommerce app has the following requirement:

Poor Requirement: "Users should be able to search for products easily."

High-Quality Requirement: "Users should be able to search for products by category, brand, price range, and rating, with search results displayed within 2 seconds."

QA Role: Ensures the requirement is specific, measurable, and testable.

4. What is the role of peer reviews in ensuring the quality of requirement documents?

A: Peer reviews involve having fellow team members or subject matter experts examine requirement documents to identify errors, ambiguities, or inconsistencies. Peer reviews ensure that requirement documents are error-free and make sense, ensuring the quality of requirement documents.

5. How can clear and concise language improve the quality of requirement documents?

A: Clear and concise language improves the quality of requirement documents once established guidelines and techniques for creating high-quality requirement documents. Taking the previous example, Poor Requirement was inconsistent and unclear while High-Quality Requirement was specific, measurable, and testable.

6. In what ways can automated testing tools and techniques enhance the efficiency and reliability of software testing processes? Provide a real-world scenario.

A: Automated testing tools enhance efficiency by quickly running repetitive tests, ensuring reliability by reducing human error, and enabling faster feedback on software quality

In our mobile ecommerce app, automated tests can quickly verify that the product search and checkout process work on multiple devices and browsers after every code change.

7. How might a lack of alignment between project goals and requirements impact the success of a software development project? Can you provide an example?

A: A lack of alignment between project goals and requirements can lead to misunderstandings, scope creep, delayed timelines, higher costs, and a product that doesn't meet user needs.

Project Goal: Launch an app that allows users to easily search and purchase smartphones while enhancing the user experience with personalized recommendations.

The team implemented an advanced product comparison tool that allows users to compare detailed specifications of smartphones (e.g., processor speed, battery life, pixel density). It may overwhelm users who are looking for a quick and easy shopping experience.