

In class Activity-CSE 464: The ISO 25010 Quality Model

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In this activity, you will apply the ISO 25010 software quality model to real-world applications. Your group will choose quality characteristics and design test case ideas.

Consider the following Online Banking App Scenario given

Online Banking App Scenario

Imagine your team is testing a modern **Online Banking Application** used by thousands of customers every day. The app allows users to manage their bank accounts from their smartphones and web browsers. Customers can log in securely, check balances, transfer funds, pay bills, and view transaction histories. In addition, the app supports features such as two-factor authentication, biometric login (fingerprint/face recognition), and instant notifications for transactions.

The system must handle a large number of users at the same time, especially during peak hours like salary deposit days. It integrates with external services such as payment gateways and third-party billers. Because customers trust the bank with sensitive financial information, security and reliability are critical. For example, the app must protect against unauthorized access, prevent data loss, and ensure transactions are processed accurately and on time.

Finally, the app must be able to add new features such as digital wallets or currency exchange easily and quickly without introducing errors. Your task is to select three ISO 25010 quality characteristics and design test cases that ensure this Online Banking App meets user expectations for quality and safety.

- A) Select 5 quality characteristics from the ISO 25010 model (e.g., Security, Reliability, Usability) that is most applicable to the above scenario.
- B) How do you quantify your selected quality characteristics (select only 3 from (A) above) so that software can be tested (Check the Online shopping store example discussed in the class)

A] 1] Security: Protecting against unauthorized access, login prevention data loss & features like biometric

2] Reliability: System must be consistently available like during peak hours.

- 3] Usability: The app should be easy to use & navigate for customers.
- 4] Maintainability: Ability to add new features easily and quickly without causing errors.
- 5] Performance Efficiency: The system must be able to handle large no. of users at the same time.

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- B] 1] Security: Confidentiality can be tested by measuring no. of unauthorized data breaches or successful hacking attempts.
 - 2] Reliability: Availability can be quantified by calculating system uptime as a percentage over a specified time.
 - 3] Performance Efficiency: Response time can be measured by the avg. time it takes for a common user to complete a action.