

UECS2354 SOFTWARE TESTING EXERCISE

1. An Android application identifies and counts all purchases of a particular product from a shopping website. The application incorrectly counts purchase attempts by including both failed attempts, and also those where the purchase was terminated by the user before completion. Testing has identified that the problem was located in the 'purchase identification' module, where the first stage in the purchasing process was counted, rather than a successful confirmed purchase after payment by the customer. Which of the following statements correctly identifies what has happened?
 - A. A defect in the purchase identification module caused by a mistake in the module specification led to a defect in the overall application.
 - B. An error by the programmer led to a mistake in the purchase identification module and this caused a defect in the application.
 - C. The application failed because of a defect in the purchase identification module caused by a programmer mistake or an error in the specification.
 - D. A bug in the purchase identification module caused a fault in the application.
2. Explain what is mistake, defect and failure.
3. What are the general testing objectives?
4. What are the general testing principles?
5. Consider the following scenario:

A test team consistently finds between 90% and 95% of the defects present in the system under test. While the test manager understands that this is a good defect-detection percentage for her test team and industry, senior management and executives remain disappointed in the test group, saying that the test team misses too many bugs. Given that the users are generally happy with the system and that the failures which have occurred have generally been low impact, which of the following testing principles is most likely to help the test manager explain to these managers and executives why some defects are likely to be missed?
6. Consider the following test process activities:
 - i. analysis and design
 - ii. test closure activities
 - iii. evaluating exit criteria and reporting
 - iv. planning and control
 - v. implementation and execution

What is the correct logical sequence of the activities?
7. List the testing activities for the following test process:
 - a. Planning
 - b. Implementation
 - c. Execution
 - d. Evaluating exit criteria
8. What are the attributed of good tester?
9. What are the skills needed for a tester?

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10. It is important to promote and maintain good relations between testers and developers.
Explain how testers can have a good relationship with developers.
11. List 4 levels of independent testing.
12. What is the difference between confirmation testing and regression testing?
13. Specify the main objective for each of the following testing:
 - a. Unit testing
 - b. Integration testing
 - c. System testing
 - d. Acceptance testing
14. What is integration testing?
15. What are 3 reasons that trigger maintenance?
16. List all three (3) differences between static testing and dynamic testing
17. What can we analyse in static analysis?
18. What are the responsibilities of below roles in review process?
 - a. Moderator
 - b. Scribe
 - c. Reviewer/inspector
19. Review the following requirements for a portable inventory checking device. List all your findings (ambiguities).

1. The portable device is to be used by the staff in duty to perform inventory checking in a hypermarket.
 - 1.1 The staff will use the portable device to scan the code on a product and information about the product will be retrieved from database in server immediately.
 - 1.2 The device will alert user if
 - 1.2.1 the stock level falls below the reorder level.
 - 1.2.2 the product / a batch of product is going to be expired soon.
 - 1.2.3 the product / a batch of product has expired.
 - 1.2.4 the product / a batch of product is to be recalled.
 - 1.3 The staff can response to the alerts by performing the following actions:
 - 1.3.1 acknowledge purchase officer if the stock level falls below reorder level.
 - 1.3.2 acknowledge manager if the product / a batch of product is expired soon.
 - 1.3.3 acknowledge manager if the product / a batch of product has expired.
 - 1.3.4 acknowledge manager if the product / a batch of product is to be recalled.
2. All acknowledgements must include product code, name and id of staff in duty.

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20. A token exchange machine is to be designed according to the following requirements. Identify at least TEN (10) findings that are ambiguous or to be clarified.

The machine accepts notes only and dispense the tokens accordingly.

1.1 User must insert notes with minimum amount of RM5.

1.2 Once the user confirmed the amount, the machine will dispense the tokens based on the amount inserted by user.

1.3 Any change will be returned by the machine. The machine will also alert the user to get the change.

The machine is connected to a server for monitoring purposes.

2.1 Each transaction will be recorded and updated to the server.

2.2 An alert will be sent to server when the amount of token is at critical level.