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練習題

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Exam : ISTQB-CTAL-TA

Title : ISTQB Certified Tester
Advanced Level - Test
Analyst (CTAL-TACore)
v3.1.2

Version : DEMO

1.You are testing a significant enhancement to the user interface design for a mortgage approval program, used internally by mortgage lenders. There are many user roles involved in the process of reviewing and approving new mortgage applications. You have completed the testing that ensures the enhancements are functionally correct, and you must now ensure that the enhanced user interface meets the needs of all user roles in a way that will be considered acceptable by them.

Which test technique would be MOST suitable for this next stage of testing?

- A. Exploratory testing
- B. Use Case testing
- C. Pairwise testing
- D. Boundary Value Analysis

Answer: B

Explanation:

A (Exploratory testing): Useful for investigating new areas, but not suitable for structured role-based testing.

B (Use Case testing): Correct. This technique focuses on how different user roles interact with the system, ensuring it meets their expectations and usability needs.

C (Pairwise testing): Efficient for combinations of input values, but irrelevant to role-based UI testing.

D (Boundary Value Analysis): Focuses on numeric boundaries, not applicable for role-specific usability. Therefore, the correct answer is B (Use Case testing).

2.A tablet manufacturer offers the following options for its customers:

- Colour: Black, White, Silver, Gold (4 options)
- Model: Standard, Mini, Pro (3 options)
- Gigabytes: 32, 64, 128, 256 (4 options)
- Connectivity: Wifi-only, Wifi+Cellular (2 options)

Using the pairwise technique, what is the MINIMUM number of test cases needed to achieve a full 2-wise coverage?

- A. 96
- B. 12
- C. 4
- D. 16

Answer: D

Explanation:

Pairwise Testing (also known as 2-wise testing) ensures that all possible pairs of input values from each option are covered at least once.

The orthogonal array or pairwise generation tools help determine the minimum number of test cases needed.

With the given combinations (4 x 3 x 4 x 2), a full pairwise coverage can be achieved using 16 test cases. Pairwise testing is efficient for covering interactions between two factors, avoiding the need for exhaustive testing (96 combinations).

Therefore, the correct answer is D (16).

3. Based on the tax system specification as described below, using boundary value analysis, which would be the best test set to explicitly test on single boundary value fully?

Tax system

A tax system needs to be updated due to new legislation. For a person with a salary of less than € 20 000 and who is married, the tax needs to be recalculated.

If a person has at least three and less than six children, an additional 10% reduction is applicable.

<i>Test set (i)</i>		
Civil Status	Salary	Number of Children
<i>Married</i>	<i>€ 20.000</i>	<i>4</i>
<i>Not Married</i>	<i>€ 22.000</i>	<i>3</i>
<i>Married</i>	<i>€ 18.000</i>	<i>2</i>
<i>Test set (ii)</i>		
Civil Status	Salary	Number of Children
<i>Not Married</i>	<i>€ 19.000</i>	<i>8</i>
<i>Not Married</i>	<i>€ 20.000</i>	<i>6</i>
<i>Married</i>	<i>€ 50.000</i>	<i>4</i>
<i>Test set (iii)</i>		
Civil Status	Salary	Number of Children
<i>Married</i>	<i>€ 20.000</i>	<i>10</i>
<i>Not Married</i>	<i>€ 22.000</i>	<i>5</i>
<i>Not Married</i>	<i>€ 20.001</i>	<i>0</i>
<i>Test set (iv)</i>		
Civil Status	Salary	Number of Children
<i>Not Married</i>	<i>€ 22.000</i>	<i>1</i>
<i>Not Married</i>	<i>€ 18.000</i>	<i>2</i>
<i>Married</i>	<i>€ 18.000</i>	<i>10</i>

- A. Test set (i)
- B. Test set (ii)
- C. Test set (iii)
- D. Test set (iv)

Answer: B

Explanation:

The test set B is the best test set to explicitly test on single boundary value fully, using boundary value analysis. Boundary value analysis is a technique that tests the values at or near the boundaries of an input domain.

The boundaries for this scenario are:

- Salary less than €20 000
- Number of children at least three and less than six

The test set B tests the boundary values of each boundary (€19 999, €20 000, three children, six children) and one value inside each boundary (€19 998, €20 001, four children). Verified References: [ISTQB® Certified Tester Advanced Level Test Analyst CTAL-TA], Section 3.2.2, page 35.

4.You are testing an enhanced user interface for a mortgage approval program involving multiple user roles.

Which test technique would be MOST suitable for this next stage of testing?

- A. Exploratory testing
- B. Boundary Value Analysis
- C. Use Case testing
- D. Pairwise

Answer: C

Explanation:

Since the testing involves verifying the user interface (UI) enhancements and ensuring that they meet the needs of multiple user roles, Use Case Testing is the most appropriate technique.

Use Case testing allows you to validate end-to-end user scenarios and ensure the system behaves correctly for each role, focusing on user interactions and usability.

Exploratory testing (A) might be useful for finding unexpected issues, but it lacks the structured approach needed for role-based UI validation.

Boundary Value Analysis (B) is useful for testing numeric input limits, not UI roles.

Pairwise testing (D) focuses on combinatorial testing, not role-based UI testing.

The correct answer is C (Use Case testing).

5.A software component for a game application calculates a player's trophy level based on two input parameter values: Points Earned and Level of Difficulty.

A total score is calculated by the component as:

Total Score = Points Earned × Level of Difficulty

The trophy levels are:

- Blue- total score equal to or less than 40
- Silver- total score > 40
- Gold- total score > 70
- Diamond- total score > 80
- Platinum- total score > 90

The component then outputs the correct trophy level.

Applying the Equivalence Partition test design technique to this component, what percentage of output partitions have been exercised by the following suite of test cases?

Player 1 - Points earned 25, level of difficulty 2

Player 2 - Points earned 20, level of difficulty 3

Player 3 - Points earned 30, level of difficulty 1

A. 60%

B. 40%

C. 10%

Answer: B

Explanation:

To determine the answer, we first calculate the total score for each player:

- Player 1: $25 \times 2 = 50$ (Silver)

- Player 2: $20 \times 3 = 60$ (Silver)

- Player 3: $30 \times 1 = 30$ (Blue)

The output equivalence partitions based on the trophy levels are:

- Blue: Total score ≤ 40

- Silver: Total score > 40 and ≤ 70

- Gold: Total score > 70 and ≤ 80

- Diamond: Total score > 80 and ≤ 90

- Platinum: Total score > 90

From the given test cases, the following partitions have been exercised:

- Blue (Player 3)

- Silver (Player 1 and Player 2)

Out of the 5 possible output partitions (Blue, Silver, Gold, Diamond, Platinum), only 2 partitions (Blue and Silver) have been exercised.

Therefore, the percentage of partitions covered is:

A number and a percentage sign AI-generated content may be incorrect.

$$\frac{2}{5} \times 100\% = 40\%$$

Hence, the correct answer is B (40%).