

Question 1: Black Box Testing

You are testing a login page for a web application. Design test cases using the equivalence partitioning technique to validate the login functionality. Assume the login form has three fields: username, password, and submit button.

Answer Template:

Test Case ID:

Test Objective:

Input:

Expected Output:

Test Steps:

Test Result:

Question 2: White Box Testing

Given the following code snippet for a function that calculates the factorial of a positive integer:

def factorial(n):

 if n == 0:

 return 1

 else:

 return n * factorial(n-1)

- a) Identify boundary test cases for the factorial function.
- b) Design test cases to achieve 100% statement coverage for the factorial function.

Answer Template:

Boundary Test Cases:

- 1.
- 2.
- 3.

Test Cases for 100% Statement Coverage:

Test Case ID:

Test Objective:

Input:

Expected Output:

Test Steps:

Test Result:

Question 3: Code Reading Comprehensive

You are given the following code snippet for a sorting algorithm:

```
public static void bubbleSort(int[] arr) {  
    int n = arr.length;  
    for (int i = 0; i < n-1; i++)  
        for (int j = 0; j < n-i-1; j++)  
            if (arr[j] > arr[j+1]) {  
                // Swap arr[j] and arr[j+1]  
                int temp = arr[j];  
                arr[j] = arr[j+1];  
                arr[j+1] = temp;  
            }  
}
```

```
}
```

- a) Explain the purpose of the bubbleSort function.
- b) Identify any potential bugs or issues in the code.

Answer Template:

a) Purpose of the bubbleSort function:

b) Potential Bugs or Issues:

Question 4: Find Bug and Detect

You are testing a mobile application for a calendar feature. During testing, you notice that events scheduled for the current date are not displaying correctly. Identify the potential bug in the calendar feature and suggest steps to reproduce and diagnose the issue.

Answer Template:

Bug Description:

Steps to Reproduce:

- 1.
- 2.
- 3.

Diagnosis Steps:

- 1.
- 2.
- 3.

Question 5: Test Level

Explain the differences between unit testing and system testing. Provide examples of scenarios suitable for each test level.

Answer Template:

Differences between Unit Testing and System Testing:

- 1.
- 2.
- 3.

Examples of Scenarios:

Unit Testing:

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System Testing:

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