Lab Report

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# Observations and Analysis

## Q1:

### Structure Breakdown:

The given method func(int a, int b) consists of conditional branches:

1. First Condition: if (b > a)
   * Executes lines 3 and 4.
2. Second Condition: else if (a > b)
   * Executes lines 6 and 7.
3. Else Case: (when a == b)
   * Executes line 9.

### Test Case Analysis:

Calculate statement coverage and branch coverage using the given test cases:

1. Test Case 1: a = 2, b = 3
   * Executes line 2, and First Condition is true.
   * Lines 3 and 4 are executed.
2. Test Case 2: a = 3, b = 2
   * Skips Line 2.
   * Line 5, and Second Condition is true.
   * Line 6 and 7 are executed.

### Statement Coverage

Lines Executed: 1, 2, 3, 4, 5, 6, 7

Missing Lines: 8, 9

= (7/9) \* 100 = 77.78%

### Branch Coverage

Branches Executed: Conditions 1 and 2

Missing Branches: Else Case

= (2/3) \* 100 = 66.67%

### Missing Case

Test Case 3: a=2, b=2

* Executes Line 8, and Else Case is true.
* Line 9 executes

### New Statement & Branch Coverage

= (9/9) \* 100 = 100%

= (3/3) \* 100 = 100%

## Q2:

## Q3:

## Q4:

## Q5:

## Q6:

## Q7:

# Appendix:

## Q2:

## Q3:

## Q4:

## Q5:

## Q6:

## Q7: