



SOFTWARE TESTING

Assignment 2

Section 2

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1 INTRODUCTION:

Taking 3 int values as input calculating the average of values.

1.1 Brief Description

In this project we are calculating the average by giving 3 different evaluation criteria's that are midterm marks, assignment marks and finals marks. In our project we have 1 function taking marks

with 3 parameters. Our 1st decision statement { if ((ass > 5 && mid == 10) && finals >= 20)} with 3 conditions and calculating average now 2nd decision statement { if ((avg > 0 || mid == 10) || finals >= 20) } having 3 conditions. It increments 2 in average if all condition are fulfill.

With above description we have generated our test cases with worst BVA and strong robust equivalence class. Mentioned below

2 Identified Test Cases and Decision Statements:

2.1 Test case 01

static public double percent(int ass, int mid, int finals) {code on GitHub}

In this function it will take 3 parameters that is ass, mid, finals which will be taken from test cases (ass, mid, finals) and creating a variable avg=0.

2.2 Decision statement 01

if ((ass > 5 || mid == 10) && finals >= 20) code on GitHub}

In this decision statement it has 3 condition statements and calculate the avg.

2.3 Decision statement 02

if ((avg > 5 || mid == 10) && finals >= 20) { code on GitHub}

In this decision statement it has 3 condition statements and incrementing the avg by 2.

3 Modified Condition Decision Coverage: Test Cases

Test case	Input 1	Input 2	Input 3	Output
1	6	10	20	14.0
2	6	10	19	11.6
3	6	9	20	13.0
4	6	9	19	13.3
5	4	10	20	13.3
6	4	10	19	11.0
7	4	9	20	13.0
8	4	10	19	10.6

4 Test Oracle:

```
1. (static public double percent (int ass, int mid, int finals) {  
2.   Int avg=0  
3.   if ((ass > 5 || mid==10) && finals>=20)  
4.     {  
5.       Avg= (ass+ mid+ finals)/3  
6.     }  
7.   if ((avg>5 || mid==10) && finals>=20)  
8.     {  
9.       Avg=avg+2  
10.    }  
11.    Return avg  
12.  };
```

Input:6,10,20

Path:1,2,3,4,5,6,7,8,9,10,11

Expected output: 14.0

5 Path Prediction Expression:

Input 1: 4,9,20 Path 1:1,2,3,11,12

Input 2:6,10,20 Path 2:1,2,3,4,5,6,7,8,9,10,11,12