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SOFTWARE TESTING

Assignment 4,5

Section 2

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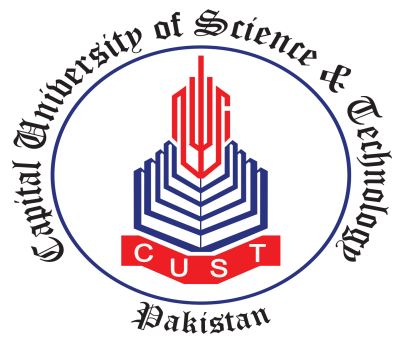
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**1 INTRODUCTION:**

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.

1. **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 |

1. **Test Oracle:**

|  |  |
| --- | --- |
| 1. (static public double percent (int ass, int mid, int finals) {      1. Int avg=0      1. if ((ass > 5 || mid==10) && finals>=20)   { 4.   1. Avg= (ass+ mid+ finals)/3 2. } 3. if ((avg>5 || mid==10) && finals>=20)  |  | | --- | | Input:6,10,20  Path:1,2,3,4,5,6,7,8,9,10,11  Expected output: 14.0 |  1. { 2. Avg=avg+2 3. } 4. Return avg 5. }; |

1. **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