LAB EXPERIMENT – 2

Aim : Perform Boundary Value testing testing.

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Aim: To determine the nature of roots of quadratic equations. Its input is triple of +ve integers (say a, b, c) and values may be from the interval [1,100].
The program output may have one of the following:-
[Not a Quadratic equation, Real roots, Imaginary roots, Equal roots]
Generate the test case using Boundary value Analysis
Ans.

1) Boundary value analysis :

Total number of input variables : 3 (A,B,C)
Total Test cases : 4*3 + 1 = 13
Input Domain for A = [1,100] B = [1,100] C = [1,100]
The boundary value for A = {1,2,50,99,100}
The boundary value for B = {1,2,50,99,100}
The boundary value for C = {1,2,50,99,100}

Test No.	Input			Expected Output	Actual Output	Result
	A	B	C			
1.	1	50	50	REAL	REAL	TRUE
2.	2	50	50	REAL	REAL	TRUE
3.	99	50	50	IMAGINARY	IMAGINARY	TRUE
4.	100	50	50	IMAGINARY	IMAGINARY	TRUE
5.	50	50	50	IMAGINARY	IMAGINARY	TRUE
6.	50	1	50	REAL	REAL	TRUE
7.	50	2	50	REAL	REAL	TRUE
8.	50	99	50	IMAGINARY	IMAGINARY	TRUE
9.	50	100	50	IMAGINARY	IMAGINARY	TRUE
10.	50	50	100	IMAGINARY	IMAGINARY	TRUE
11.	50	50	99	IMAGINARY	IMAGINARY	TRUE
12.	50	50	2	REAL	REAL	TRUE
13.	50	50	1	REAL	REAL	TRUE

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Aim: To determine the type of triangle. Its input is triple of +ve integers (say a, b, c) and the values may be from interval [1,100]. The program output may be one of the following:

[Scalene, Isosceles, Equilateral, Not a Triangle]
Generate the test case using Boundary value Analysis.

Ans.

1) Boundary value analysis :

Total number of input variables : 3 (A,B,C)
Total Test cases : 4*3 + 1 = 13
Input Domain for A = [1,100] B = [1,100] C = [1,100]
The boundary value for A = {1,2,50,99,100}
The boundary value for B = {1,2,50,99,100}
The boundary value for C = {1,2,50,99,100}

Test No.	Input			Expected Output	Actual Output	Result
	A	B	C			
1.	1	50	50	ISOCELES	ISOCELES	TRUE
2.	2	50	50	ISOCELES	ISOCELES	TRUE
3.	99	50	50	ISOCELES	ISOCELES	TRUE
4.	100	50	50	ISOCELES	ISOCELES	TRUE
5.	50	50	50	EQUILATERAL	EQUILATERAL	TRUE
6.	50	1	50	ISOCELES	ISOCELES	TRUE
7.	50	2	50	ISOCELES	ISOCELES	TRUE
8.	50	99	50	ISOCELES	ISOCELES	TRUE
9.	50	100	50	ISOCELES	ISOCELES	TRUE
10.	50	50	100	ISOCELES	ISOCELES	TRUE
11.	50	50	99	ISOCELES	ISOCELES	TRUE
12.	50	50	2	ISOCELES	ISOCELES	TRUE
13.	50	50	1	ISOCELES	ISOCELES	TRUE

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