Software Engineering
Lab8

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Question: Write a set of test cases – specific sets of data – to properly test a relatively Simple program. Create a set of test data for the program - data the program must handle correctly to be considered a successful program.

Code:

```
final int EQUILATERAL = 0;
final int ISOSCELES = 1;
final int SCALENE = 2;
final int INVALID = 3;
int triangle(int a, int b, int c)
{
   if (a >= b+c || b >= a+c || c >= a+b)
        return(INVALID);
   if (a == b && b == c)
        return(EQUILATERAL);
   if (a == b || a == c || b == c)
        return(ISOSCELES);
   return(SCALENE);
}
```

Tester Action	Input Data			Code Output	Result
	a	b	c		
Invalid	-2	-4	-2	Invalid	TRUE
Invalid	5	0	5	Invalid	TRUE
Invalid	5	5	-2	Invalid	TRUE
Invalid	0	0	0	Invalid	TRUE
Invalid	2	-1	2	Invalid	TRUE
Equilateral	5	5	5	Equilateral	TRUE
Equilateral	1	1	1	Equilateral	TRUE
Equilateral	2	2	2	Equilateral	TRUE
Equilateral	4	4	4	Equilateral	TRUE
Equilateral	2147485555	2147485555	2147485555	Invalid	FALSE
Isosceles	5	5	2	Isosceles	TRUE
Isosceles	1	2	2	Isosceles	TRUE
Isosceles	1	1	2	Isosceles	TRUE
Isosceles	10	10	15	Isosceles	TRUE
Isosceles	3347483647	3347483647	1	Invalid	FALSE
Scalene	1	2	3	Scalene	TRUE
Scalene	2	3	4	Scalene	TRUE
Scalene	10	11	12	Scalene	TRUE
Scalene	50	60	70	Scalene	TRUE
Scalene	7865383647	7865383646	7865383645	Invalid	FALSE