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Section: 6-B

Program Code

```
package projj;

public class CarInsurance {
	public int CarInsurance(int age, char gender, boolean married, int points)
	{
		int Premium = 500;
	if( (age<25) && (gender =='M') && (!married))
	{
		Premium += 1500;
} else {
	if ( married || gender == 'F')
	{
		Premium -= 200;
		}
	if ( (age>45) && (age<65) )
	{
		Premium -= 100;
		}
	}
	if (points> 5)
	{
		points = 5;
		}
	Premium = Premium + points *20;
 return Premium;
 }
	}
```

Testing Code

```
package projj;



import org.junit.jupiter.api.Assertions;

import org.junit.jupiter.params.ParameterizedTest;
import org.junit.jupiter.params.provider.CsvFileSource;

class test {


	@ParameterizedTest
	@CsvFileSource(files = "F:\\test.csv")
	void testfn(int PersonAge, char PersonGender, Boolean maritalStatus, int
points, int expectedOutput)
	{
		CarInsurance fst = new CarInsurance();
```

```
            int result = fst.CarInsurance(PersonAge, PersonGender, maritalStatus,
points);
       Assertions.assertEquals(result, expectedOutput);
       }
}
```

Cyclomatic Complexity

V(G) = Edges - Nodes + 2

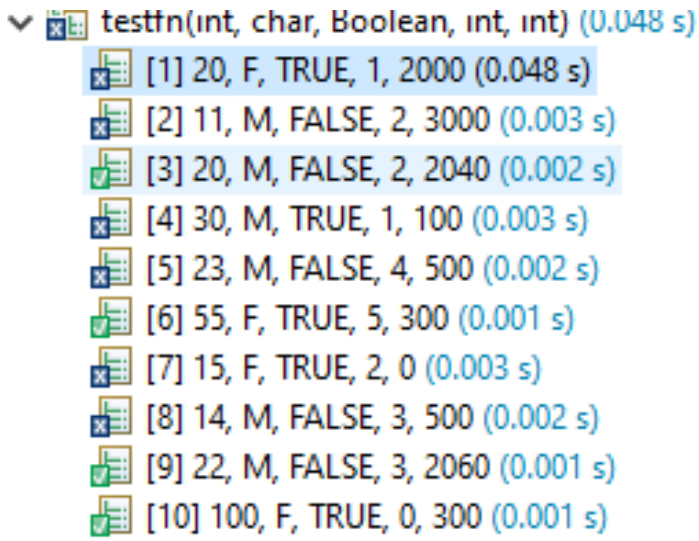
V(G) = 16 - 13 +2

V(G) = 5

Test Cases

20	F	TRUE	1	2000
11	M	FALSE	2	3000
20	M	FALSE	2	2040
30	M	TRUE	1	100
23	M	FALSE	4	500
55	F	TRUE	5	300
15	F	TRUE	2	0
14	M	FALSE	3	500
22	M	FALSE	3	2060
100	F	TRUE	0	300

Results



The green ticks mean the test cases have passed and the blue crosses mean the test cases have failed. The test cases get failed only int the domain of **points.**

All the other values tend to pass either way but the factor on which the test case passes or fails depends upon the value of points.