**Name: Muhammad Abeer | Najam Aqeel**

**Roll nos: 19P0061 | 19P0035**

**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**

Table

Description automatically generated

**Results**

Text

Description automatically generated

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.