Rajan Gautam

19BCP101

Div. II, CE 19

SOT, PDPU

Pandit Deendayal Energy University

School of Technology

Design Pattern and Thinking (20CP210P)

B. Tech - Computer Science & Engineering (Sem-IV)

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Lab 4 Assignment: Singleton Design Pattern for Car

AIM: **To write a Java Program to implement Singleton Design Pattern for Car**

CODE:

Rajan_Singleton.java

```
1.  package Singleton_19BCP101_Rajan;
2.
3.  public class Rajan_Singleton {
4.      public static Rajan_Singleton rajanInstance = new Rajan_Singleton();
5.      public int i;
6.      private Rajan_Singleton()
7.      {
8.      System.out.println("Car Created...");
9.      }
10.
11.     public static Rajan_Singleton getInstance()
12.     {
13.         return rajanInstance;
14.     }
15.
16.     public int getI()
17.     {
18.         return i;
19.     }
20.
21.     public static void setRajanInstance(Rajan_Singleton rajanInstance)
22.     {
23.         Rajan_Singleton.rajanInstance = rajanInstance;
24.     }
25.
26.     public void setI(int i)
27.     {
28.         this.i = i;
29.     }
30. }
```

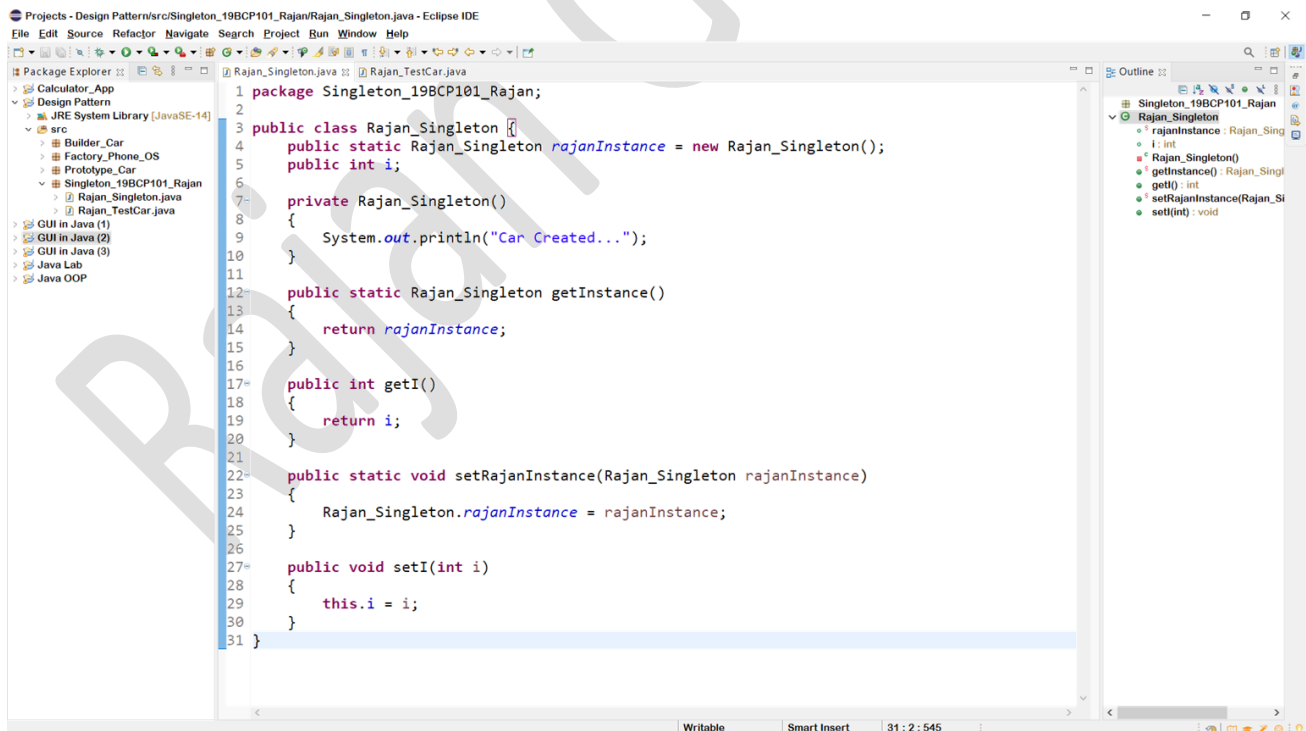### Rajan_TestCar.java

```
1.  package Singleton_19BCP101_Rajan;
2.
3.  public class Rajan_TestCar {
4.      public static void main (String args[])
5.      {
6.          Rajan_Singleton rajan_car1 = Rajan_Singleton.getInstance();
7.          Rajan_Singleton rajan_car2 = Rajan_Singleton.getInstance();
```
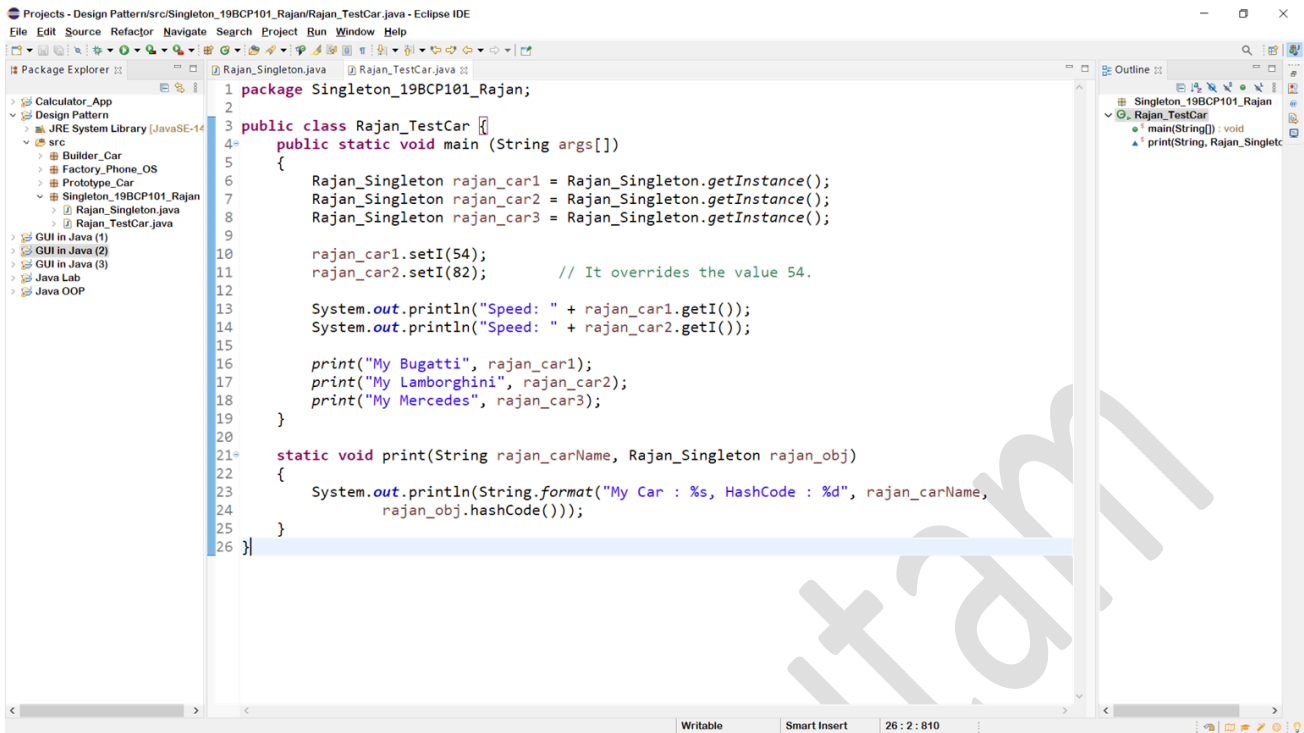
```
8.             Rajan_Singleton rajan_car3 = Rajan_Singleton.getInstance();
9.
10.            rajan_car1.setI(54);
11.            rajan_car2.setI(82);           // It overrides the value 54.
12.
13.            System.out.println("Speed: " + rajan_car1.getI());
14.            System.out.println("Speed: " + rajan_car2.getI());
15.
16.            print("My Bugatti", rajan_car1);
17.            print("My Lamborghini", rajan_car2);
18.            print("My Mercedes", rajan_car3);
19.        }
20.
21.      static void print(String rajan_carName, Rajan_Singleton rajan_obj)
22.        {
23.            System.out.println(String.format("My Car : %s, HashCode : %d",
    rajan_carName, rajan_obj.hashCode()));
24.        }
25.  }
```

SCREENSHOT OF IDE:

SCREENSHOT OF OUTPUT:


```
Car Created...
Speed: 82
Speed: 82
My Car : My Bugatti, HashCode : 798154996
My Car : My Lamborghini, HashCode : 798154996
My Car : My Mercedes, HashCode : 798154996
```

GitHub Link: https://github.com/rgautam320/Design-Pattern-Lab/tree/main/Singleton_Car