

```

1 package javaassessment;
2 import java.util.Scanner;
3
4 public class Main1 {
5     static class AutonomousCar {
6         private int carId;
7         private String brand;
8         private int noOfTestsConducted;
9         private int noOfTestsPassed;
10        private String environment;
11        private String grade;
12
13        public AutonomousCar(int carId, String brand, int noOfTestsConducted, int noOfTestsPassed, String environment) {
14            this.carId = carId;
15            this.brand = brand;
16            this.noOfTestsConducted = noOfTestsConducted;
17            this.noOfTestsPassed = noOfTestsPassed;
18            this.environment = environment;
19        }
20
21        public int getCarId() {
22            return carId;
23        }
24
25        public String getBrand() {
26            return brand;
27        }
28
29        public void setBrand(String brand) {
30            this.brand = brand;
31        }
32
33        public int getNoOfTestsConducted() {
34            return noOfTestsConducted;
35        }
36
37        public void setNoOfTestsConducted(int noOfTestsConducted) {
38            this.noOfTestsConducted = noOfTestsConducted;
39        }
40
41        public int getNoOfTestsPassed() {
42            return noOfTestsPassed;
43        }
44
45        public void setNoOfTestsPassed(int noOfTestsPassed) {
46            this.noOfTestsPassed = noOfTestsPassed;
47        }
48
49        public String getEnvironment() {
50            return environment;
51        }
52
53        public void setEnvironment(String environment) {
54            this.environment = environment;
55        }
56
57        public String getGrade() {

```

```
48
49 public String getEnvironment() {
50     return environment;
51 }
52
53 public void setEnvironment(String environment) {
54     this.environment = environment;
55 }
56
57 public String getGrade() {
58     return grade;
59 }
60
61 public void setGrade(String grade) {
62     this.grade = grade;
63 }
64 }
```

```

public static int findTestPassedByEnv(AutonomousCar[] cars, String environment) {
    int totalTestsPassed = 0;
    for (AutonomousCar car : cars) {
        if (car.getEnvironment().equalsIgnoreCase(environment)) {
            totalTestsPassed += car.getNoOfTestsPassed();
        }
    }
    return totalTestsPassed;
}

public static AutonomousCar updateCarGrade(String brand, AutonomousCar[] cars) {
    for (AutonomousCar car : cars) {
        if (car.getBrand().equalsIgnoreCase(brand)) {
            double rating = (double) car.getNoOfTestsPassed() * 100 / car.getNoOfTestsConducted();
            car.setGrade(rating >= 80 ? "A1" : "B2");
            return car;
        }
    }
    return null;
}

public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);
    AutonomousCar[] cars = new AutonomousCar[4];

    for (int i = 0; i < 4; i++) {
        cars[i] = new AutonomousCar(scanner.nextInt(), scanner.next(), scanner.nextInt(),
            scanner.nextInt(), scanner.next());
    }

    String searchEnvironment = scanner.next();
    String searchBrand = scanner.next();

    int totalTestsPassed = findTestPassedByEnv(cars, searchEnvironment);
    System.out.println(totalTestsPassed > 0 ? totalTestsPassed :
        "There are no tests passed in this particular environment");

    AutonomousCar carToUpdate = updateCarGrade(searchBrand, cars);
    System.out.println(carToUpdate != null ?
        carToUpdate.getBrand() + " :: " + carToUpdate.getGrade() :
        "No Car is available with the specified brand");

    scanner.close();
}

```

100

Tesla

1000

500

Hills

200

Ford

2000

1500

Desert

300

Royce

3000

1700

Hills

400

Mercedes

1000

400

Desert

Desert

Mercedes

1900

Mercedes::B2