

# Rajalakshmi Engineering College

Name: SHREYA AMUDHU.N.R  
Email: 240701505@rajalakshmi.edu.in  
Roll no: 2116240701505  
Phone: 9042904845  
Branch: REC  
Department: CSE - Section 9  
Batch: 2028  
Degree: B.E - CSE

Scan to verify results



## 2024\_28\_III\_OOPS Using Java Lab

### 2028\_REC\_OOPS using Java\_Week 10\_Q1

Attempt : 1  
Total Mark : 10  
Marks Obtained : 10

#### Section 1 : COD

##### 1. Problem Statement

A city traffic management system needs to track vehicles entering a toll booth. Each vehicle is uniquely identified by its registration number. The system should allow adding vehicles to a record, ensuring that no duplicate registration numbers exist. The vehicles should be stored in a HashSet, which does not guarantee any specific order.

Your task is to implement a program using a HashSet that allows adding vehicle details and displaying the records.

##### ***Input Format***

The first line of input contains an integer N - the number of vehicles.

The next N lines contain details of each vehicle in the format: "RegNumber

OwnerName VehicleType"

1. RegNumber (String) - A unique registration number (Alphanumeric).
2. OwnerName (String) - The name of the vehicle owner.
3. VehicleType (String, Car, Bike, or Truck) - The type of vehicle.

If a vehicle with the same registration number is already present, ignore the duplicate entry.

### ***Output Format***

The output prints the unique vehicle records in any order (since HashSet does not maintain order).

Output format: "RegNumber OwnerName VehicleType"

Refer to the sample output for formatting specifications.

### ***Sample Test Case***

Input: 5

KA01AB1234 John Car  
MH02CD5678 Alice Bike  
DL03EF9012 Bob Truck  
TN04GH3456 Mike Car  
KA01AB1234 John Car

Output: TN04GH3456 Mike Car

KA01AB1234 John Car  
MH02CD5678 Alice Bike  
DL03EF9012 Bob Truck

### ***Answer***

```
// You are using Java
import java.util.*;
```

```
class Vehicle {
    String reg;
    String name;
    String vehicleType;

    Vehicle(String reg, String name, String vehicleType) {
```

```

        this.reg = reg;
        this.name = name;
        this.vehicleType = vehicleType;
    }

    public boolean equals(Object obj) {
        if (this == obj) return true;
        if (!(obj instanceof Vehicle)) return false;
        Vehicle v = (Vehicle) obj;
        return reg.equals(v.reg);
    }

    public int hashCode() {
        return reg.hashCode();
    }

    public String toString() {
        return reg + " " + name + " " + vehicleType;
    }
}

class VehicleRecord {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = Integer.parseInt(sc.nextLine());
        HashSet<Vehicle> vehicles = new HashSet<>();

        for (int i = 0; i < n; i++) {
            String[] data = sc.nextLine().split(" ");
            Vehicle v = new Vehicle(data[0], data[1], data[2]);
            vehicles.add(v);
        }

        for (Vehicle v : vehicles)
            System.out.println(v);
    }
}

```

**Status :** Correct

**Marks :** 10/10