

# Rajalakshmi Engineering College

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## 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.*;
public class Main
{
    public static void main(String[] args)
    {
        Scanner in=new Scanner(System.in);
        int n=in.nextInt();
        in.nextLine();
```

```
HashSet<String>regnumbers=new HashSet<>();
ArrayList<String>records=new ArrayList<>();
for(int i=0;i<n;i++)
{
    String regnum=in.next();
    String name=in.next();
    String vehicle=in.next();
    if(!regnumbers.contains(regnum))
    {
        regnumbers.add(regnum);
        records.add(regnum+" "+name+" "+vehicle);
    }
}
for(String record:records)
{
    System.out.println(record);
}
```

**Status :** Correct

**Marks :** 10/10