

Practical - 3

Aim: Write a program to check whether the given code is uniquely decodable or not.

PROGRAM :

```
package new_package;

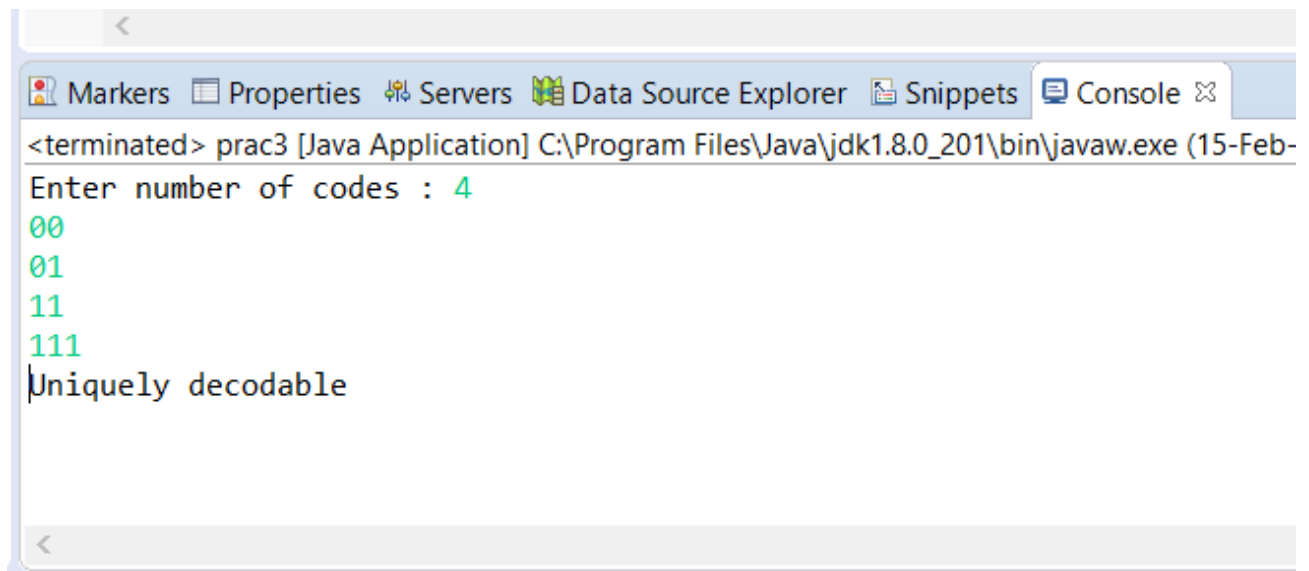
import java.util.*;

public class prac3{

    public static void main(String args[]){

        Scanner sc=new Scanner(System.in);
        String arrset[]=new String[10];
        int arrlen[]=new int[10];
        int i,flag=0;
        System.out.print("Enter number of codes : ");
        int n=sc.nextInt();
        String[][] ans=new String[100][100];
        for(i=0;i<=n;i++){
            arrset[i]=sc.nextLine();
        }
        for(i=1;i<=n;i++){
            arrlen[i]=arrset[i].length();
        }
        String dang;
        for(i=1;i<=n;i++){
            for(int j=i;j<n;j++){
                int le=arrlen[i];
                ans[i][j]=arrset[j+1].substring(0,le);
                if(ans[i][j].equals(arrset[i])){
                    dang=arrset[j+1].substring(le);
                    for(int k=0;k<=n;k++){
                        if(dang.equals(arrset[k])){
                            flag=1;
                        }
                    }
                }
            }
        }
    }
}
```

```
        }  
    }  
}  
if(flag==1)  
    System.out.println("Not uniquely decodable");  
else  
    System.out.println("Uniquely decodable");  
}  
}
```

OUTPUT :

```
<terminated> prac3 [Java Application] C:\Program Files\Java\jdk1.8.0_201\bin\javaw.exe (15-Feb-2016)  
Enter number of codes : 4  
00  
01  
11  
111  
Uniquely decodable
```