

Name:-Rudra.Gore

Roll.no:-219

Practical No:3

Aim: Design a program to accept the string that ends with 101.

Code:

```
import java.util.Scanner;
public class Design {
    String str;
    char br;
    int len;
    int comp=0;
    void initial()
    {
        System.out.println("Input Strings of 1 and 0\n");
        Scanner obj = new Scanner(System.in);
        str = obj.nextLine();
        len=str.length();
        if(len>0)
        {
            for(int i=0;i<str.length();i++){
                char b1=str.charAt(i);
                if(b1=='1' || b1=='0'){

                }
                else
                {
                    System.out.println("Please provide valid string");
                    System.exit(0);
                }
            }
            first();
        }
    }
    void first()
    {
        if(comp<len)
        {
            char a1=str.charAt(comp);
```

```

    if(a1=='1')
    {
        comp++;
        second();
    }
    else
    {
        comp++;
        first();
    }
}
else
{
    System.out.println("not a valid string");
}
}
void second()
{
    if(comp<len)
    {
        char a1=str.charAt(comp);
        if(a1=='0')
        {
            comp++;
            third();
        }
        else
        {
            comp++;
            second();
        }
    }
    else{
        System.out.println("Not a valid String");
    }
}
void third()
{
    if(comp<len)
    {
        char a1=str.charAt(comp);

```

```

        if(a1=='1')
        {
            comp++;
            last();
        }
        else{
            comp++;
            first();
        }
    }
    else{
        System.out.println("Not a valid string");
    }
}
void last()
{
    if (comp<len) {
        char a1=str.charAt(comp);
        if(a1=='1')
        {
            comp++;
            second();
        }
        else{
            comp++;
            third();
        }
    }
    else{
        System.out.println("String will be accepted");
        System.exit(0);
    }
}
public static void main(String[] args) {
    Design d1 = new Design();
    d1.initial();
}
}

```

Output:

Input Strings of 1 and 0

1100110011001

Not a valid String