Lab 8 WAP for error detecting code using CRC-CCITT (16 bits)

```
import java.util.*;
public class Crc
{
public static void
public static void main (String [] args)
{
Scanner in = new Scanner (System.in);
    Crc ob = new Crc();
    String code, copy,
rec, zero = "0000000000000000
System.out.println ("Enter message");
code = in.nextLine();
n = code.length();
    copy = code;
    code += zero;
    code = ob.divide (code);
System.out.println ("Message=" + copy);
copy = copy.substring (0,n) + code.substring(n);
System.out.println ("CRC=");
    System.out.println(code.substring(n));
    System.out.println ("transmitted frame=" 
                        + copy);
System.out.println ("Enter recieved data");
    rec = in.nextLine();
if (zero.equals (ob.divide(rec).substring(n))
    SOP ("correct bits recieved");
else
```

```
SOP ("Recieved frame contains one or more errors");
                in.close();
        }
public String divide (String s)
{
int i,j; char x;
String div = "1000100000010000";
for(i=0;i<n;i++)
{
    x=s.charAt(i);
    for(j=0;j<17;j++)
        if (x=='1')
{ if (s.charAt(i+j)!= div.charAt(j))
    s=s.substring(0,i+j) +
        "1" + s.substring
        (i+j+1);
else
    s=s.substring(0,i+j)+"0"
        s.substring(i+j+1);
}
}
return s;
}
```