

```

import java.util.*;
public class CRC;
{
    public static int n;
    public static void main (String[] args)
    {
        Scanner in = new Scanner(System.in);
        CRC obj = new CRC();
        String code, copy, rec, zero = "0000000000000000";
        System.out.println("Enter message");
        code = in.nextLine();
        n = code.length();
        copy = code;
        code = code + zero;
        code = obj.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  
is " + copy);
        System.out.println("Enter received data");
        rec = in.nextLine();
        if (zero.equals(obj.divide(rec).substring(n)))
        {
            System.out.println("Correct Bits  
received");
        }
        else
        {
            System.out.println("Received frame  
contains one/more errors");
        }
        in.close();
    }
}

```

```
public String divide (String s) {
```

```
{
```

```
    int i, j;
```

```
    char X;
```

```
    String div = "10001000000100001";
```

```
    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;
```

```
}
```

```
}
```