

```
import java.util.*;
public class Crc
{
    public static int n;
    public static void main(String[] args)
    {
        Scanner input = new Scanner(System.in);
        Crc ob = new Crc();
        String code, copy, rec, zero = "000000000000000000";
        System.out.println("Enter message");
        code = input.nextLine();
        n = code.length();
        copy = code;
        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 is " + copy);
        System.out.println("Enter received data");
        rec = input.nextLine();
        if (zero.equals(ob.divide(rec).substring(n)))
            System.out.println("Correct bits received");
        else
            System.out.println("Received frame contains error");
    }
}
```



```
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;
```

```
}
```

```
}
```

Teacher's Signature : _____