

## Error detecting code

```
import java.util.*;
public class Crc
{
    public static int n;
    public static void main (String [] args)
    {
        Scanner in = new Scanner (System.in);
        Crc ob = new Crc ();
        String code, copy, rec, zero = "oooooooooooooooo00";
        System.out.println ("Enter message");
        code = in.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 = in.nextLine ();
        if (zero.equals (ob.divide (rec).substring (n)))
            System.out.println ("Correct bits received");
        else
            System.out.println ("Received frame contains  
one or more errors");
        in.close
        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);
```

```
            }
        }
```

```
        s = s.substring(0, i+j) + "0" + s.substring(i+j+1);
    }
```

```
}
```

```
}
```

```
}
```

```
    return s;
```

```
}
```

```
}
```