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Error detecting code using CRC-CRIT (16-bit)

```
import java.util.*;  
public class Gic  
{  
    public static int n;  
    public static void main (String[], args)  
    {  
        Scanner in = new Scanner (System.in);  
        Crc ob = new Crc();  
        String code, copy, crc, 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 = " + code.substring(n));  
        System.out.println ("Transmitted frame is " + copy);  
        System.out.println ("Enter received data");  
        crc = in.nextLine();  
        if (zero.equals (ob.divide (crc).substring(n)))  
            System.out.println ("correct bits received");  
        else  
            System.out.println ("Received frame contains one  
or 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;
}
}

```