

26-11-20

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Date

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CN lab writeup CRC - CCITT (16 bit)

```
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 = "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 ("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 errors");  
        in.close ();  
    }  
}
```

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```
public String divide (String s) {  
    int i, j;  
    char x;  
    String div = "1000100000001000001"  
    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))  
if (s.charAt  
                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;  
}
```