CN LAB-8

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1BM18CS087

WAP for error detecting code using CRC-CCITT (16 bits)

```
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("transmitted frame y" + copy);
    System.out.println("Enter recieved data");
      rec = in.nextline();
    if (zero.equals(ob.divide(rec).substring(n)))
    System.out.println("correct bits recieved");
    else
    System.out.println("Recieved frame contains one or more
                        error");
```

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```
    Cr.close();
    }
public string divide(string s)
{
 int i, j; char x;
 String div = "10001000000100001";
 for(i=0; i<n; i++)
  {
   i = 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;
 }
}
```

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