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1BM18CS079

CN-Lab

CRC-CCITT (16bits)

Code:

```
import java.util.*;

public class CCITT {

        public static int n;
        public static void main(String[] args) {

         Scanner s = new Scanner(System.in);
         S obj = new CCITT();
         String code, copy, rec, zero = "0000000000000000";

         System.out.println("Enter code:");
         code = s.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);
print("CRC = ");
print(code.substring(n));
print("Frame = " + copy);
print("Received data = ");
rec = s.nextline();
if (zero.equals(obj.divide(rec).substring(n))){
print("correct bits received");
else
  print("Received frame contais 1or more erros");
  s.close();
}
public String divide(String s){
    int i, j;
   char x;
   String div = "10001000000010001";
  for(i=0; i<n; i++){
      x = s.charAt(i);
```

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```
for (j = 0; j<17; j++) {
    if(x == '1') {
        if (s.charAt(i+j) != dn.charAt(j))
            s = s.substring(0, i+j) + "1" + substring
                (i+j+1);
        else
            s = s.substring(0, i+j) + "0" + s.substring(i+j+1);
    }}
    return s;
}
}
```