

```
1 package mk;
2 import java.util.*;
3 public class CRC {
4     public static void main(String args[]){
5         Scanner sc=new Scanner(System.in);
6         System.out.println("Enter data length");
7         int d_l=sc.nextInt();
8         int data[]=new int[d_l];
9         System.out.println("Enter the data");
10        for(int i=0;i<d_l;i++) {
11            data[i]=sc.nextInt();
12        }
13
14        System.out.println("Enter divisor length");
15        int divisor_l=sc.nextInt();
16        int divisor[]=new int[divisor_l];
17        System.out.println("Enter the divisor");
18        for(int i=0;i<divisor_l;i++) {
19            divisor[i]=sc.nextInt();
20        }
21        int total_length=divisor_l+d_l-1;
22        int div[]=new int[total_length];
23        int rem[]=new int[total_length];
24        int crc[]=new int[total_length];
25
26        for(int i=0;i<d_l;i++) {
27            div[i]=data[i];
28        }
29        System.out.println("Data after appending
0's");
30        for(int i=0;i<div.length;i++) {
31            System.out.println(div[i]);
32        }
33        for(int i=0;i<div.length;i++) {
34            rem[i]=div[i];
35        }
36        rem=divide(div,divisor,rem);
37        for(int i=0;i<div.length;i++) {
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38         crc[i]=rem[i]^div[i];
39     }
40     System.out.println("CRC created");
41     for(int i=0;i<total_length;i++) {
42         System.out.println(crc[i]);
43     }
44
45     System.out.println("Error Detection");
46     System.out.println("Enter your crc code");
47     for(int i=0;i<total_length;i++) {
48         crc[i]=sc.nextInt();
49     }
50     for(int i=0;i<total_length;i++) {
51         rem[i]=crc[i];
52     }
53     rem=divide(crc,divisor,rem);
54     for(int i=0;i<rem.length;i++) {
55         if(rem[i]!=0) {
56             System.out.println("Error");
57             break;
58         }
59         if(i==rem.length-1) {
60             System.out.println("No Error ");
61         }
62     }
63 }
64 static int[] divide(int div[],int divisor[],int
rem[]) {
65     int cur=0;
66     while(true) {
67         for(int i=0;i<divisor.length;i++) {
68             rem[cur+i]=rem[cur+i]^divisor[i];
69         }
70         while(rem[cur]==0 && cur!=rem.length-1) {
71             cur++;
72         }
73         if(rem.length-cur<div.length) {
74             break;
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75         }
76     }
77     return rem;
78 }
79
80 }
81
```