4

```java
import java.util.*;

public class CRC
{
        void div(int a[],int k)
        {
         int gp[]={1,0,0,0,1,0,0,0,0,0,0,1,0,0,0,0,1};
         int count=0;
         for(int i=0;i<k;i++)
         {
          if(a[i]==gp[0])
          {
           for(int j=i;j<17+i;j++)
           {
            a[j]=a[j]^gp[count++];
           }
           count=0;
          }
         }
        }


        public static void main(String[] args)
        {
         int a[]=new int[100];
         int b[]=new int[100];
         int len,k;
         CRC ob=new CRC();
         System.out.println("Enter the length of Data Frame:");
         Scanner sc=new Scanner(System.in);
         len=sc.nextInt();
         int flag=0;
         System.out.println("Enter the Message:");
         for(int i=0;i<len;i++)
         {
          a[i]=sc.nextInt();
```

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}
for(int i=0;i<16;i++)
{
 a[len++]=0;
}
k=len-16;
for(int i=0;i<len;i++)
{
 b[i]=a[i];
}
ob.div(a,k);
for(int i=0;i<len;i++)
a[i]=a[i]^b[i];
System.out.println("Data to be transmitted: ");
for(int i=0;i<len;i++)
{
 System.out.print(a[i]+" ");
}
System.out.println();
System.out.println("Enter the Received Data: ");
for(int i=0;i<len;i++)
{
 a[i]=sc.nextInt();
}
ob.div(a, k);
for(int i=0;i<len;i++)
{
 if(a[i]!=0)
 {
  flag=1;
  break;
 }
}
if(flag==1)
 System.out.println("error in data");
```

```java
    else
        System.out.println("no error");
    }
}
```