Aim-13

13. Write a program for error detecting code using CRCCCITT (16-bits). Code:

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18/08/23
  That is a dimple, test baded retico
1. Write a program for evor detedi-
 -ng code using CRC- CCITT (16-bits)
Code:
impart. java. vtil. *;
Public class cac !
  Public static int n;
 Public Static Void main (String [ ) augs) {
   Jeanner in = new Scanner (Systemin);
   ac obenew acci;
   System. out. print ("Enter poly: ");
   code = in. nertline (1;
  System. out println ("Crenciating Polynomial:
                        10001000000100001");
   n = code . length ();
   Copy = code;
```

```
code + = Zero;
Jystem. out. println ("Modified poly: "+ code);
code = ob · divide ( code);
Jyston out println ("cheekSum: "+ code. Su
botting (n1);

copy = copy . Substring (0, n) + code. Substring(n);
Justen. out. println ("Final Codewoord: "+ copy);
Jystem. out. println ("Jest Eura détection o
(Yes) 1(nol?: ");
 int choice = in nest Inty;
 if choice = = ot { ililable de
 Jyston. out. print (" 6 nter position on even: ");
 int eneulos = in. neut Int(); }
  (copy charAT (enoiPos) == 1 h)
   Copy = copy: Substring (0, enarlos) + "o" + copy
               Substring (evarPost1);
  Copy = copy. Jubsting (0, enoulos) + "1"+ copy.
                     substring ( evenposti);
  System. out. Println ("Evancous data: "+ copy);
```

System. out. println ("Ever detected"); System.out. println ("No evar detected"); Public String divide (String s) { String div: "loovlooooolooool"; for (i=o; ikn; i++) [dat dramai 2=3, charAtli); }to== sials (feu (j=0; j27; j++) {) tring . too mot if (2== 11'){ (1) to I don ni = 20 from if (s. chartat (i+j)! = div. charat(j)) 3=1. Substring (0, ++1)+"1"+ 5. Substri Substang (enaclost 1); J=S. Jubsting (0, i+j)+"0"+ J. Dubsting

```
enter poly: 1000100010001000
 heck Sun = 100000 | 010110001
 final Codeward: 1000/000/000/000/0000/01011
 jet Eura detection 0 (yes) 1 (NO)? : 0
 inter position on ever : 0
 juaneous data: 0000/000/000/000/0000/0/0/
quar detected.
pat 2!
 Men poly: 0101010101010101
rui-luvating polynomial: 1000 | 000000 | 0000 |
 hecksum: 1111101100011010
ing inal codeword: 010101010101010111101100011010
 ext France detection olyes) 1[no]? : 100
 ntu position on evan: $ 15
```

Euronous data: 0101010101010101011111011 enor deteted; sool: Laimonplag pridouses. 1000110101000001 = muly, 1 ind (clessond: 1000 1000 1000 1000 0000 01000 1011 o: (1011): (040) o noitetale sous tos Maris bilestab von Los polos : plop sol needing solynomial: local@become pritoson 0101100011011111: mulder al code cond: 01010101010101011011000110001101 It Evan destection olyest 1(no)); in

Output:

Fig: Output 1 (poly 1)

Fig: Output 2 (poly 2)