NIS LAB-1

ROII NO.: CE146

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* AIM: - Write a Program to implement

1) additive / shift / caesar cipher

2) mono-alphabetic substitution cipher.

1) additive / shift / caesar cipher

CHARLE SOURCE COde : NEW 19 18 DOG STORIES

include < iostream >

include < strung >

Using mames pace std;

int modylo (int a , int n) ?

int modyloN = el % n;

if (modyloN <0)

modyloN += n;

return modulon

3

String Encrypt Cint key, string plain Text)

string cipherText;

int lengthOfText = plainText, length().

```
FOR Cint i=0; i < length of Text; itt)
         if (isupper ( PlainTeat [i]))
              text Map = praintext [i] - A';
              e15e
        textmap = Plain Text [i] - 'a';
      cipher Text += mody 10 (textmap+key, 26)
     Knishidadue sited parturated A'";(s
        RETURN CIPHERTEXTS
       3 reading of sign / coosing City
        String Decry Pt Eint Key, string ciphertext)
       5
           string Plain Text; 1 1000 5 1
           int lengthof cipher = cipher Text length ()
           text map is the
           For Cint i=0; i < lengthof Ciphers itt)
       text map = reipher Text [i] - A';
              PlainText + = modulo (textmap-key.
              1026) + 'e';
            y be because when it is
           retylen Picin Text;
to strategy of professor and a series despite I make the
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Con Com Jojak

LAN STE

int main () string pain Text; cout << " Enter. Plain Text:" << endl; cin >> PlainText : int Key;
cout << "Enter Key;"; en >> Key; string energypt Teact = Energypt (Key, Plaintext); cout << " Fricing Pt Teact: " << energy Pt Teat << end? cout << " Deckypt Text : " << Deckypt (Key, encky Pt Text) << endl << endl; GIED IN CETE 11 Exyptandiysis using brute Porce. cout << " Enter cipher Text; "; String eigher Text; ein >> cipher Text , FOR ("nt 1=1; 1626; "++) CON+ << " Key: " << i << " " << . Decimple (i, ripher Text) << end; र्रेट्स् रेग 0;

Enter Plain Text: Caesar Eipher. Input: Enter. Key: 5 Enery Pt Text: HEJX FWHNUMJW output: DECRYPT TEXT: CUESAR EIPHER Input: Enter CiPher Text: HFIXFWHNUMJW OUTPUT: Key: 1 geiwev gmtiv Key 127 FAdhydapiskhy POTO 19 POTO > Key: 3) I PEC 34Cte KRya to 12 100 > Key: 40 MidbFebsdjqiFs Key: 5 caesazei Phez Key: 6 bzd?z9bhogd9 Key: 7 ey cay pagn FCP Ciara forma i arriva of the free control of the Key: 25 igky 5 ociovnkx

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(3)
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2) monoalphabetic substitution cipher.
   -> soyrce code?
    # include < bits/stdc++; h>
     ysing namespace sta;
      vector (inity generate key () >
    vector kinty key;
       int n = 26, 1;
          FOR (1=0; icn 3 i++)
Key, Puch _ back Ci);
for (i= m-1; i>0.; i--)
          5
            SECINA ( (4nsigned int)-time (NULL));
          int i = (and () % oi;
               int temp = Key [i];
            Key [i] = Key [j]
              Key [j] = temp;
           coyt << " In map ; ";
           for < i=0; i<n; i++)
           cout << char ci+ A') << "
           for (1=0 3 1<m; i++)
          COUT ( Char ( Key [i] + A') << ""
           cout << " 1711m";
           retyrn key;
```

```
String monogiphabetic Cipher Cothing Plaintext)
              vector (int > Key = Jenerate Key ();
               String encrypt Text;
               FOR ( int i=0) ix Plain Text length (); it)
                   if Cisypper (Plain Text [i]) &
            intel= Plain Texat [i] - 'A';
                  energet teach += Key[a]+ 'A';
                 4 1 1 00 mm
             CHIEREISE 20 17 19
             int q= plain Text (i] - 'q';
           encry peterce += Key [4] + A';
(Class) side (in the single were ) promite
      RELYKY ENKRYPT TEXT !
         4 1 to pain the party that
         int main ()
               string picin Text; encrypt Text;
              cout << " Enter plain teset ; ";
              cin >> Plain Text 3
              encryptText = monogipha betic (ipher (picimtext);
           cout << "Entrypt Text: " <<
                        encayet Text ;
               retyrn o;
```

* Test Case -1:

Input: Enter Plain Text:

Monocuphy betic Cipher

output:

Melp: ABGDEFQHIJKLMNOPQRSTU Key: BDPEHQINJMLWSOKFRTYXK

> V W X Y Z U Z · V C A

ENERYPT Text: SCIOCIBNENBOHXIPPIENHT

* Test (ase-2;

INPUT: Enter plain Text:
Shybham shingald

Map: A B C D E F & H I J K L M N Key: & A E J H Z M P Y C D K T F

Map: 0 P Q R S T V V W X Y Z Key; Q W B X L U N I V O R S

Encly Pt. Text: LPNAPGTLPY FMGKG