/\*

Anudish Jinturkar

H-27

Subject: Network Security (Lab)

Lab2: Implementation of Vigenere Cipher for Alphanumeric input

\*/

#include <bits/stdc++.h>

#define gc getchar\_unlocked

using namespace std;

int main()

{

int x,y;

char mat[36][36];

char str[]="abcdefghijklmnopqrstuvwxyz0123456789";

string res="";

char s1[50],s2[50];

int k=0;

for (int i=0;i<36;++i)

{

k=i;

for (int j=0;j<36;j++)

{

mat[i][j]=str[k%36];

++k;

}

}

for(int i=0;i<36;++i)

{

for(int j=0;j<36;++j)

cout<<mat[i][j]<<" ";

cout<<"\n";

}

cout<<"\n"<<"Enter the alphanumeric text"<<endl;

cin>>s1;

cout<<"Enter the key:"<<endl;

cin>>s2;

k=0;

cout<<"\n"<<"Encrypted text is:"<<endl;

for(int i=0;i<strlen(s1);++i)

{

if(s1[i]>='a' && s1[i]<='z')

y=(s1[i]-'a');

else if(s1[i]>='0' && s1[i]<='9')

y=(s1[i]-'0')+26;

if(s2[k%strlen(s2)]>='a' && s2[k%strlen(s2)]<='z')

x=(s2[k%strlen(s2)]-'a');

else if(s2[k%strlen(s2)]>='0' && s2[k%strlen(s2)]<='9')

x=(s2[k%strlen(s2)]-'0')+26;

k++;

res+=mat[x][y];

}

cout<<res<<"\n";

cout<<"Original text is:"<<endl;

string decrypt="";

k=0;

for(int i=0;i<strlen(s1);++i)

{

if(s2[k%strlen(s2)]>='a' && s2[k%strlen(s2)]<='z')

x=(s2[k%strlen(s2)]-'a');

else if(s2[k%strlen(s2)]>='0' && s2[k%strlen(s2)]<='9')

x=(s2[k%strlen(s2)]-'0')+26;

for(int j=0;j<36;++j)

{

if(res[i]==mat[x][j])

{

if(j>=0 && j<=25)

decrypt+=('a'+j);

else

decrypt+=('0'+(j-26));

}

}

­­­ k++;

}

cout<<"Decrypted Text:(Original text)"<<"\n"<<decrypt<<endl;

return 0;

}

/\*

Output:

a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9

b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a

c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b

d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c

e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d

f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e

g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f

h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g

i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h

j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i

k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j

l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k

m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l

n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m

o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n

p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o

q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p

r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q

s t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r

t u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s

u v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t

v w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u

w x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v

x y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v w

y z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v w x

z 0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v w x y

0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v w x y z

1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v w x y z 0

2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1

3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2

4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3

5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4

6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5

7 8 9 a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6

8 9 a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7

9 a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8

Enter the alphanumeric text

anudish121183

Enter the key:

jinturkar

Encrypted text is:

jv7w29r1ja9lm

Original text is:

Decrypted Text:(Original text)

anudish121183