Final Year B. Tech. (CSE) – I: 2022-23

4CS451: Cryptography and Network Security Lab

Assignment No. 1

PRN: 2019BTECS00077 **Batch: B7**

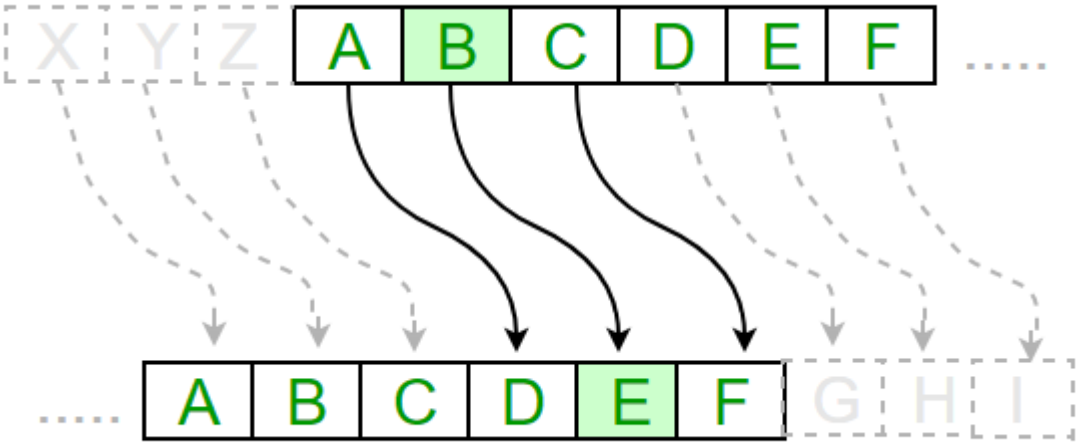
Full name: Biradar Avinash Vishnu

Title: Implementation of Caser Cipher algorithm.

Objective: write a program to encrypt the plain text and decrypt the cipher text using Caser cipher algorithm.

Introduction & Theory:

- The Caesar Cipher technique is one of the earliest and simplest methods of encryption technique.
- It's simply a type of substitution cipher, i.e., each letter of a given text is replaced by a letter with a fixed number of positions down the alphabet. For example, with a shift of 1, A would be replaced by B, B would become C, and so on..



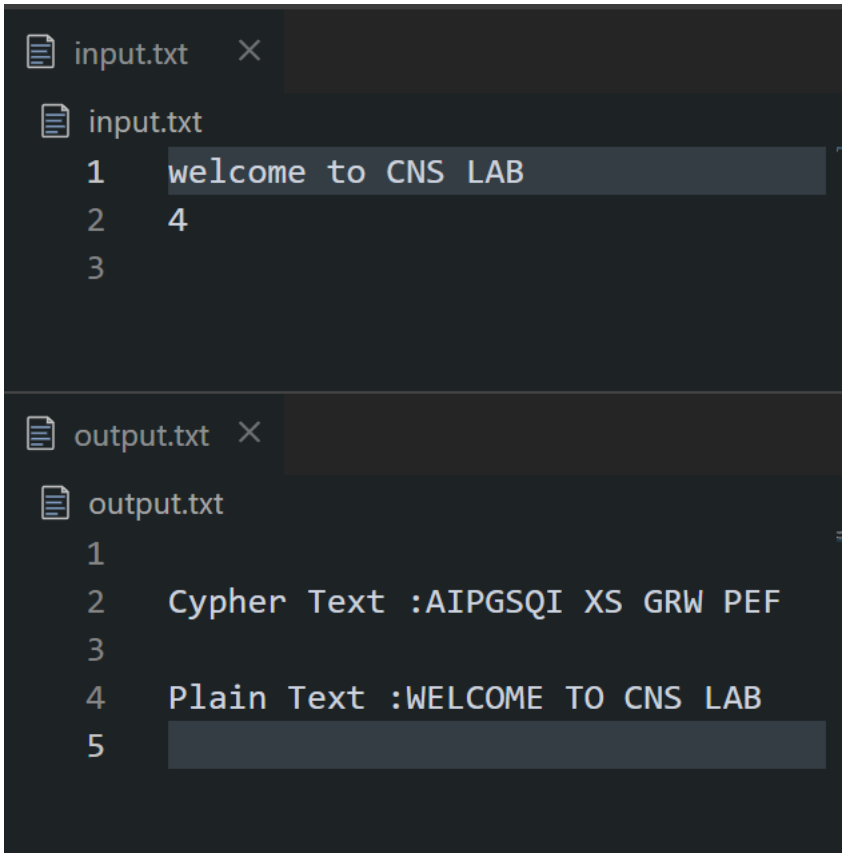
Code:

```
// Implementation of Ceasor Cypher
#include<iostream>
using namespace std;
```

```
string encrypt(string plainText,int pos){

   int n=plainText.size();
   for(int i=0;i<n;i++){
      if(plainText[i]==32)
        continue;
      if(plainText[i]>96 && plainText[i]<=122)
         plainText[i]-=32;
      plainText[i]=(plainText[i]-'A'+pos)%26+'A';
   }
   cout<<"\nCypher Text :"<<plainText<<endl;
   return plainText;
}

void decrypt(string cypherText,int pos){
   int n=cypherText.size();
   for(int i=0;i<n;i++){
      if(cypherText[i]==32)
        continue;
      cypherText[i]=(cypherText[i]-'A'-pos+26)%26+'A';
   }
   cout<<"\nPlain Text :"<<cypherText<<endl;
}

int main(){
   int pos;
   freopen("input.txt", "r", stdin);
   freopen("output.txt", "w", stdout);

   string plain_text;
   getline(cin,plain_text);

   // cout<<"Plain text:"<<plain_text<<endl;
   cin>>pos;

   string cypher_text=encrypt(plain_text,pos);
   decrypt(cypher_text,pos);
}
```

Result:

File input output:



Console input output:

```
PS E:\College\Final year\C&NS\practical> cd "e:\College\Final year\C&N
.\caesar }
plain text is encrypting using ceasor cipher algorithm
27

Cypher Text :QMBJO UFYU JT FODSZQUJOH VTJOH DFBTPS DJQIFS BMHPSJUIN

Plain Text :PLAIN TEXT IS ENCRYPTING USING CEASOR CIPHER ALGORITHM
```