Walchand College Of Engineering, Sangli

Department of Computer Science and Engineering

Subject: C&NS Lab

Batch: B4

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Assignment 1

Title: Implement the Ceasar cipher.

Introduction:

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. The method is apparently named after Julius Caesar

Algorithm:

- Traverse the given text one character at a time .
- For each character, transform the given character as per the rule, depending on whether we're encrypting or decrypting the text.
- Return the new string generated.

Encryption: (Plaintext + Key)mod 26

Decryption: (CipherText-Key)mod 26

Example:

Text : ABCDEFGHIJKLMNOPQRSTUVWXYZ

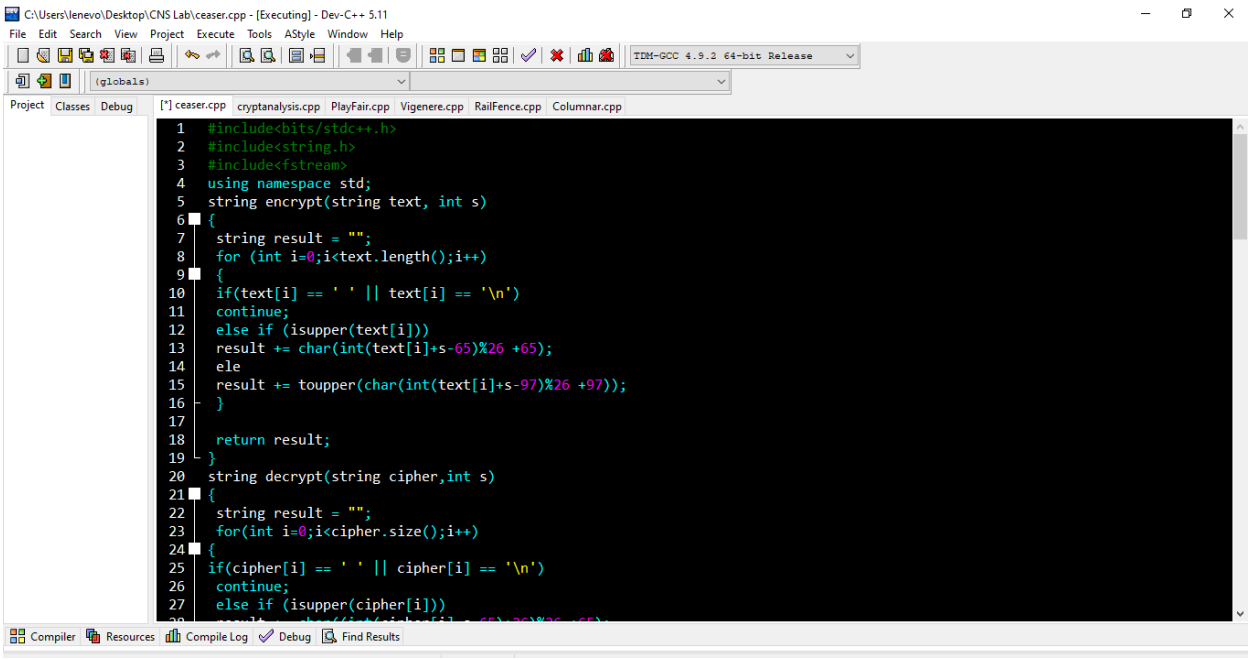
Key: 23

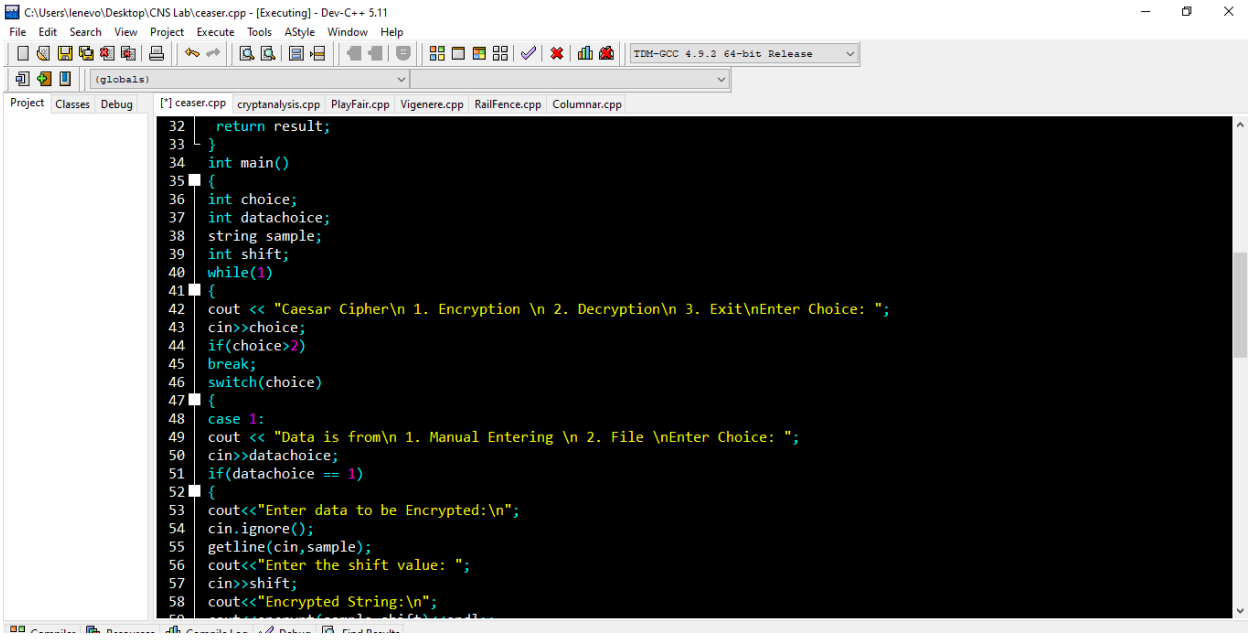
Cipher: XYZABCDEFGHIJKLMNOPQRSTUVW

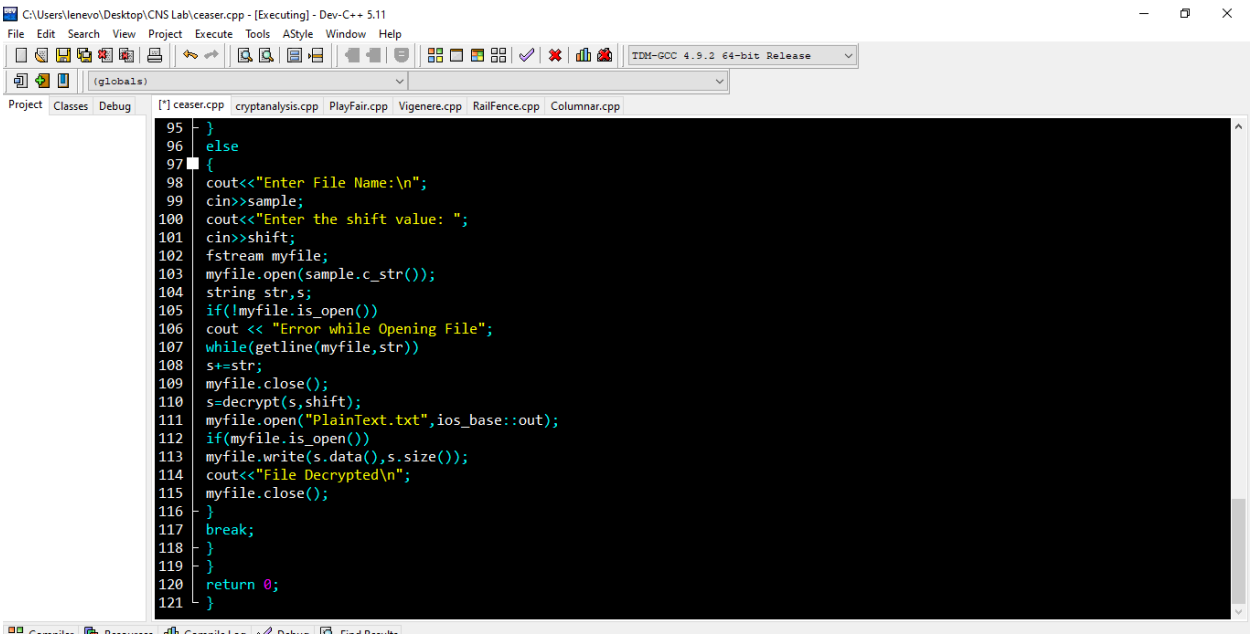
Code :

Link: https://github.com/gayatrig21/Cryptology-practicals/tree/Assignment-1

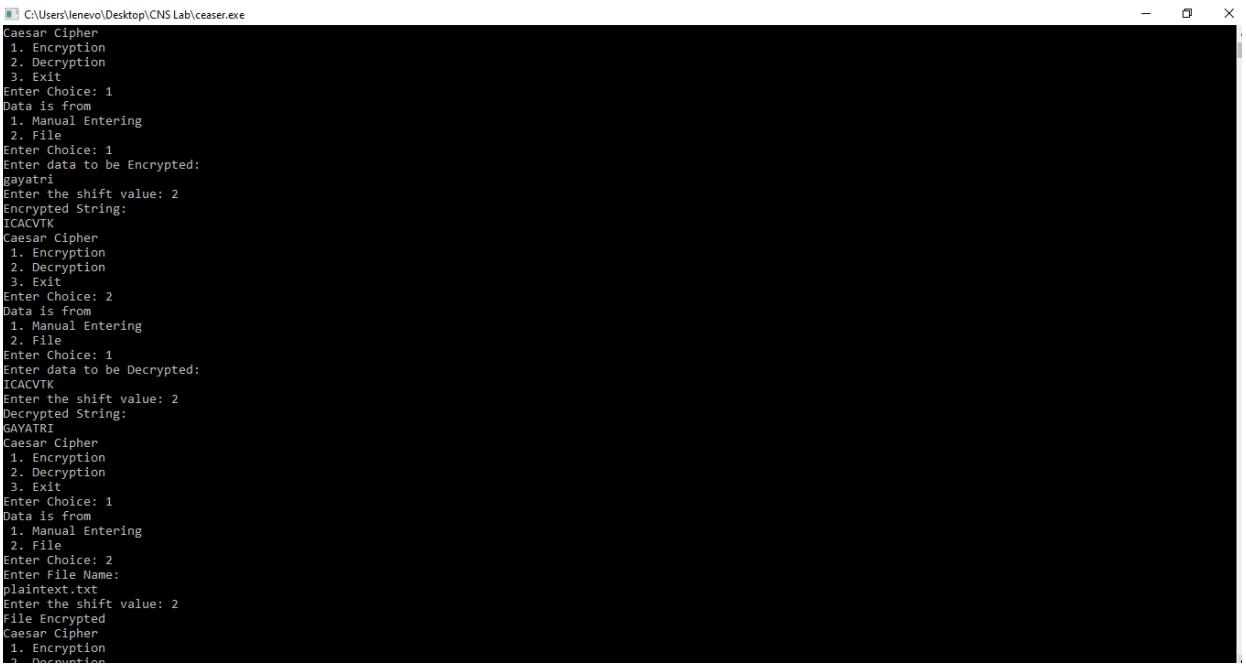
Screenshots:






C:\Users\lenevo\Desktop\CNS Lab\ceaser.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
[*] ceaser.cpp cryptanalysis.cpp PlayFair.cpp Vigenere.cpp RailFence.cpp Columnar.cpp
95 }
96 else
97 {
98 cout<<"Enter File Name:\n";
99 cin>>sample;
100 cout<<"Enter the shift value: ";
101 cin>>shift;
102 fstream myfile;
103 myfile.open(sample.c_str());
104 string str,s;
105 if(!myfile.is_open())
106 cout << "Error while Opening File";
107 while(getline(myfile,str))
108 s+=str;
109 myfile.close();
110 s=decrypt(s,shift);
111 myfile.open("PlainText.txt",ios_base::out);
112 if(myfile.is_open())
113 myfile.write(s.data(),s.size());
114 cout<<"File Decrypted\n";
115 myfile.close();
116 }
117 break;
118 }
119 }
120 return 0;
121 }

Output:


C:\Users\lenevo\Desktop\CNS Lab\ceaser.exe
Caesar Cipher
1. Encryption
2. Decryption
3. Exit
Enter Choice: 1
Data is from
1. Manual Entering
2. File
Enter Choice: 1
Enter data to be Encrypted:
gayatri
Enter the shift value: 2
Encrypted String:
ICACVTK
Caesar Cipher
1. Encryption
2. Decryption
3. Exit
Enter Choice: 2
Data is from
1. Manual Entering
2. File
Enter Choice: 1
Enter data to be Decrypted:
ICACVTK
Enter the shift value: 2
Decrypted String:
GAYATRI
Caesar Cipher
1. Encryption
2. Decryption
3. Exit
Enter Choice: 1
Data is from
1. Manual Entering
2. File
Enter Choice: 2
Enter File Name:
plaintext.txt
Enter the shift value: 2
File Encrypted
Caesar Cipher
1. Encryption