


PUNE INSTITUTE OF COMPUTER TECHNOLOGY, PUNE - 411043	
	DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGG. ACADEMIC YEAR: 2022-23 SEM: 2
CLASS: T. E. E&TC	SUBJECT: NS LAB
EXPT. NO.: 03	Roll No.: DATE:

Experiment 3: Write a program for encryption and decryption.
(For Substitution Cipher-Caesar Cipher)

Code:

```
//Milan Kumar Parida T.E.7 L7 32320
#include <iostream>
#include <fstream>
using namespace std;

class encdec {
    int key;

    string file = "filename.txt";
    char c;

public:
    void encrypt();
    void decrypt();
};

void encdec::encrypt()
{
    // Key to be used for encryption
    cout << "key: ";
    cin >> key;

    // Input stream
    fstream fin, fout;
```

```

    // Open input file
    // ios::binary- reading file
    // character by character
    fin.open(file, fstream::in);
    fout.open("Encrypt.txt", fstream::out);

    // Reading original file till
    // end of file
    while (fin >> noskipws >> c) {
        int temp = (c + key);

        // Write temp as char in
        // output file
        fout << (char)temp;
    }
    fin.close();
    fout.close();
}

void encdec::decrypt()
{
    cout << "key: ";
    cin >> key;
    fstream fin;
    fstream fout;
    fin.open("Encrypt.txt", fstream::in);
    fout.open("Decrypt.txt", fstream::out);

    while (fin >> noskipws >> c) {

        // Remove the key from the
        // character
        int temp = (c - key);
        fout << (char)temp;
    }

    fin.close();
    fout.close();
}

int main() {
    // Create and open a text file
    ofstream MyFile("filename.txt");

    // Write to the file
    string str;
    cout<<"Enter text to file"<<endl;

```

```

getline(cin, str);
MyFile << str;

// Close the file
MyFile.close();

encdec enc;
char c;
cout << "\n";
cout << "Enter Your Choice :\n";
cout << "1. Encryption \n";
cout << "2. Decryption \n";
cin >> c;
cin.ignore();

switch (c) {
case '1': {
    enc.encrypt();
    break;
}
case '2': {
    enc.decrypt();
    break;
}
}
}

```

Output:

1. Encryption

PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL

```

PS D:\VSCodes\C++> cd "d:\VSCodes\C++\" ; if ($?) { g++ EncDec.cpp -o EncDec } ; if ($?) { .\EncDec }
Enter text to file
Network Security

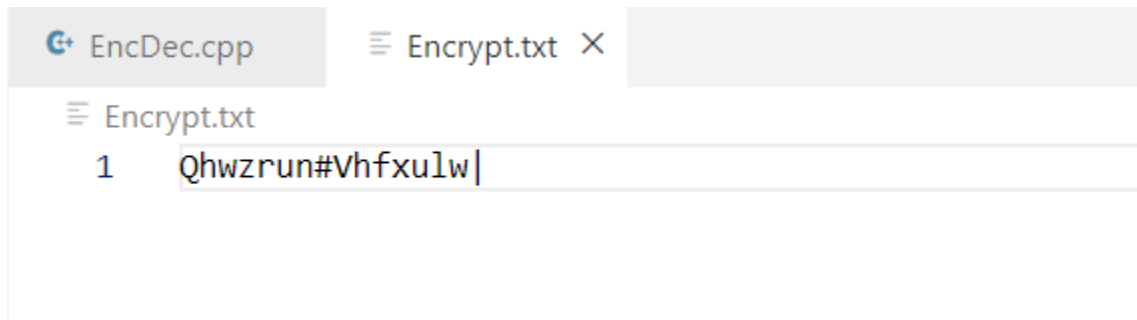
```

```

Enter Your Choice :
1. Encryption
2. Decryption
1
key: 3

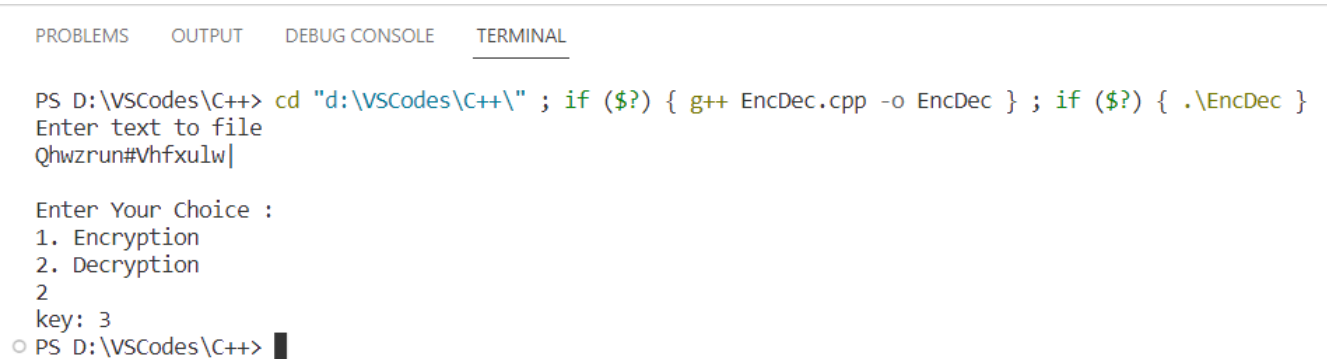
```

PS D:\VSCodes\C++> █



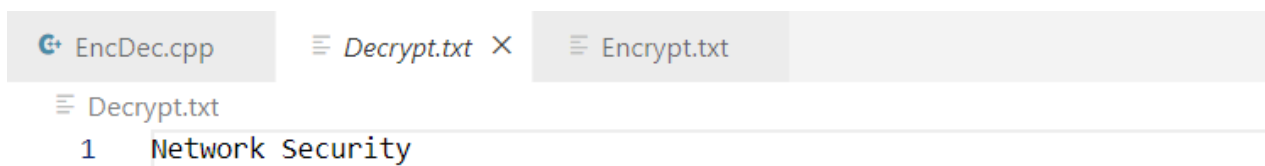
```
EncDec.cpp  Encrypt.txt X
Encrypt.txt
1 Qhwzrun#Vhfxulw|
```

2. Decryption



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL
PS D:\VSCodes\C++> cd "d:\VSCodes\C++\" ; if ($?) { g++ EncDec.cpp -o EncDec } ; if ($?) { .\EncDec }
Enter text to file
Qhwzrun#Vhfxulw|

Enter Your Choice :
1. Encryption
2. Decryption
2
key: 3
PS D:\VSCodes\C++> █
```



```
EncDec.cpp  Decrypt.txt X  Encrypt.txt
Decrypt.txt
1 Network Security
```