Points: 100/100 Due Date: Oct. 31, 2022

Description:

The Caesar cipher is a substitution cipher where each letter in the plaintext is replaced with a letter that is with distance n from the original letter in the alphabet. The distance n is the key to the cipher.

For the English language, the encryption using the Caesar cipher for some letter x using a key n is expressed as:

```
y = E(x)= (x + n) mod 26
```

For the English language, to decrypt a Caesar cipher with a key n, for each letter y in the ciphertext find the following:

```
x = D(y)= (y - n) mod 26
```

The Vigenère cipher is a modified version of the Caesar cipher by using the letters of a repeated keyword to encrypt the plain text.

Task:

In this project, you are asked to use the frequency analysis code and the decryption codes posted to find the key used to encrypt the plaintext and getting the ciphertext.txt file. The submitted report that contains the result should show details of all the steps in performing the cryptanalysis.