I used Pycharm to code the hill cipher.

Before running the program, make sure there is numpy module downloaded in Pycharm.

This program does encryption as well as decryption.

For encryption:

Step 1: The program reads the key.txt file to fetch the key.

STEP 2: The program converts the key into a matrix.

STEP 3: The program then reads the message.txt file to fetch the plain text.

STEP 4: The program creates the plain text into a matrix.

STEP 5: The program then performs encryption and write the encrypted text onto the temp.txt file.

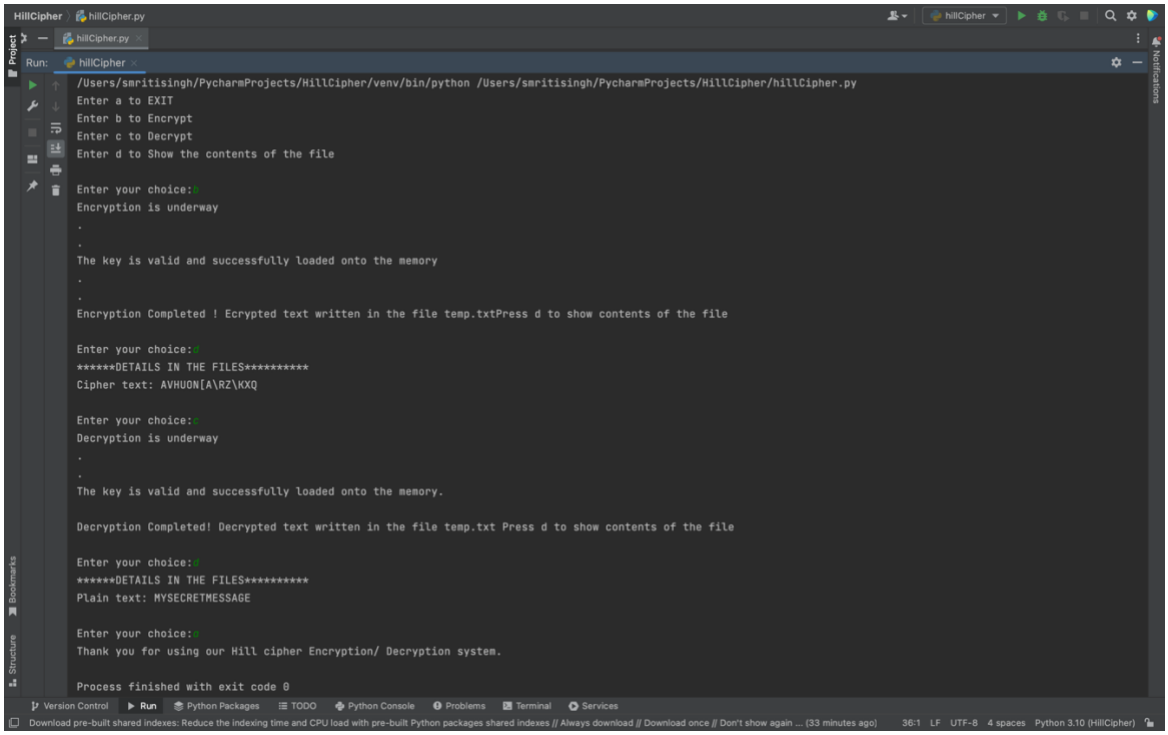
For decryption:

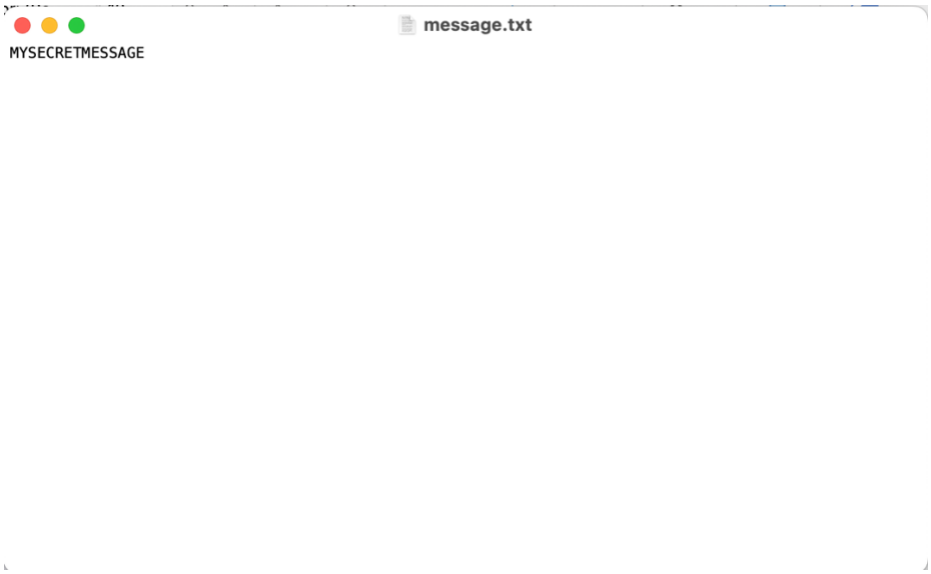
Step 1: The program first creates an inverse of the key matrix used for encryption.

STEP 2: The program then reads the cipher.txt file to fetch the cipher text.

STEP 3: The program creates the cipher text into a matrix.

STEP 4: The program then performs decryption and write the decrypted text onto the temp.txt file.


HillCipher
hillCipher.py
Run:
/Users/smritisingh/PycharmProjects/HillCipher/venv/bin/python /Users/smritisingh/PycharmProjects/HillCipher/hillCipher.py
Enter a to EXIT
Enter b to Encrypt
Enter c to Decrypt
Enter d to Show the contents of the file
Enter your choice:b
Encryption is underway
.
.
The key is valid and successfully loaded onto the memory
.
.
Encryption Completed ! Ecrypted text written in the file temp.txtPress d to show contents of the file
Enter your choice:d
******DETAILS IN THE FILES**********
Cipher text: AVHUON[A\RZ\KXQ
Enter your choice:c
Decryption is underway
.
.
The key is valid and successfully loaded onto the memory.
Decryption Completed! Decrypted text written in the file temp.txt Press d to show contents of the file
Enter your choice:d
******DETAILS IN THE FILES**********
Plain text: MYSECRETMESSAGE
Enter your choice:e
Thank you for using our Hill cipher Encryption/ Decryption system.
Process finished with exit code 0
Version Control
Run
Python Packages
TODO
Python Console
Problems
Terminal
Services
Python 3.10 (HillCipher)


message.txt
MYSECRETMESSAGE

cipher.txt

```
AVHUON[A\RZ\KXQ
```

tempFile.txt

```
Plain text: MYSECRETMESSAGE
```