

# Input/Output File

- 1.) The process begins by requesting input of the data intended for preservation. Following this, the system will prompt for a designated key. This key serves a dual purpose: both as an encryption and decryption tool. Once the key is provided, the system will exhibit the encrypted text, thereby finalizing the procedure. The process ensures secure storage and retrieval of the specified data.



```
C:\Users\jasha\Desktop\codir > .\code.exe
Welcome user, This is a code for Encryption and Decryption using a Symmetric key
--> symmetric key means , same key is used for both encryption and decryption

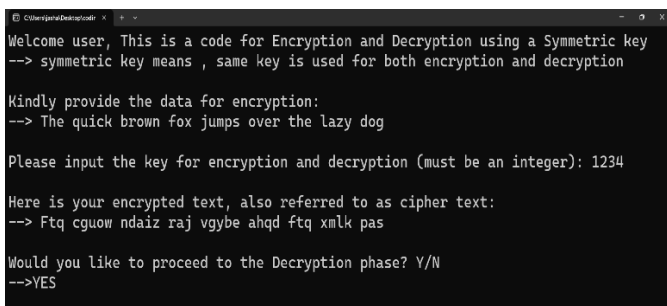
Kindly provide the data for encryption:
--> The quick brown fox jumps over the lazy dog

Please input the key for encryption and decryption (must be an integer): 1234

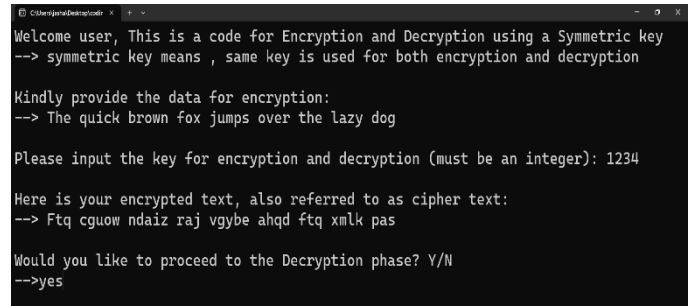
Here is your encrypted text, also referred to as cipher text:
--> Ftq cguow ndaiz raj vgybe ahqd ftq xmlk pas

Would you like to proceed to the Decryption phase? Y/N
-->
```

- 2.) Subsequently, the program will prompt the user to indicate their preference regarding continuation. Should the user's input include variations of "yes" (such as y, Y, Yes, YES, yes, etc.), the code will progress to the subsequent stage. In the event that the user provides variations of "no" (such as n, N, No, NO, no, etc.), the code will cease its operation. For any responses not conforming to these specified options, the code will terminate its execution. This design ensures user engagement in a streamlined and intuitive manner.

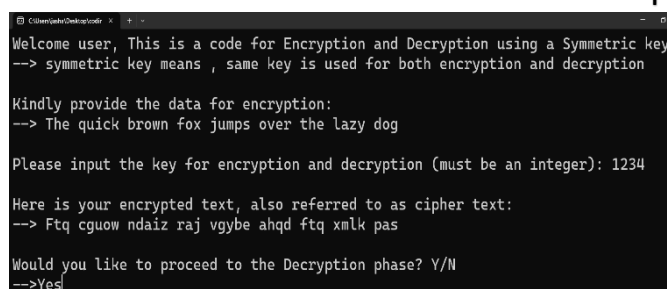


```
Would you like to proceed to the Decryption phase? Y/N
-->YES
```

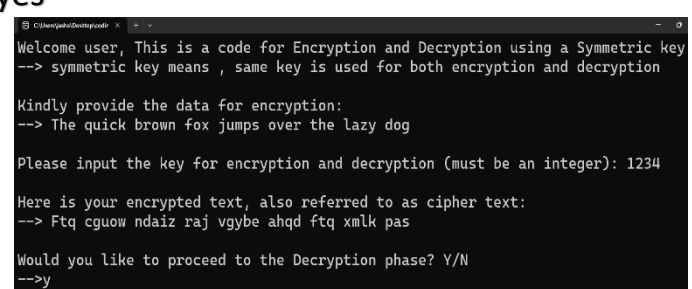


```
Would you like to proceed to the Decryption phase? Y/N
-->yes
```

For yes



```
Would you like to proceed to the Decryption phase? Y/N
-->Yes
```



```
Would you like to proceed to the Decryption phase? Y/N
-->y
```

```

Welcome user, This is a code for Encryption and Decryption using a Symmetric key
--> symmetric key means , same key is used for both encryption and decryption

Kindly provide the data for encryption:
--> The quick brown fox jumps over the lazy dog

Please input the key for encryption and decryption (must be an integer): 1234

Here is your encrypted text, also referred to as cipher text:
--> Ftq cguow ndaiz raj vgybe ahqd ftq xmlk pas

Would you like to proceed to the Decryption phase? Y/N
-->n
ok , as you wish, we will stop the code here. (press any key to quit)

```

```

Welcome user, This is a code for Encryption and Decryption using a Symmetric key
--> symmetric key means , same key is used for both encryption and decryption

Kindly provide the data for encryption:
--> The quick brown fox jumps over the lazy dog

Please input the key for encryption and decryption (must be an integer): 1234

Here is your encrypted text, also referred to as cipher text:
--> Ftq cguow ndaiz raj vgybe ahqd ftq xmlk pas

Would you like to proceed to the Decryption phase? Y/N
-->N
ok , as you wish, we will stop the code here. (press any key to quit)

```

For No

```

Welcome user, This is a code for Encryption and Decryption using a Symmetric key
--> symmetric key means , same key is used for both encryption and decryption

Kindly provide the data for encryption:
--> The quick brown fox jumps over the lazy dog

Please input the key for encryption and decryption (must be an integer): 1234

Here is your encrypted text, also referred to as cipher text:
--> Ftq cguow ndaiz raj vgybe ahqd ftq xmlk pas

Would you like to proceed to the Decryption phase? Y/N
-->no
ok , as you wish, we will stop the code here. (press any key to quit)

```

```

Welcome user, This is a code for Encryption and Decryption using a Symmetric key
--> symmetric key means , same key is used for both encryption and decryption

Kindly provide the data for encryption:
--> The quick brown fox jumps over the lazy dog

Please input the key for encryption and decryption (must be an integer): 1234

Here is your encrypted text, also referred to as cipher text:
--> Ftq cguow ndaiz raj vgybe ahqd ftq xmlk pas

Would you like to proceed to the Decryption phase? Y/N
-->No
ok , as you wish, we will stop the code here. (press any key to quit)

```

For Invalid input

```

C:\Users\jasha\Desktop\codir x + v
Welcome user, This is a code for Encryption and Decryption using a Symmetric key
--> symmetric key means , same key is used for both encryption and decryption

Kindly provide the data for encryption:
--> The quick brown fox jumps over the lazy dog

Please input the key for encryption and decryption (must be an integer): 1234

Here is your encrypted text, also referred to as cipher text:
--> Ftq cguow ndaiz raj vgybe ahqd ftq xmlk pas

Would you like to proceed to the Decryption phase? Y/N
-->hwdish
invalid respond , we will consider this as NO. (press any key to quit)|

```

3.) Given the scenario where you opt to proceed with the code, the system will grant you three opportunities to input the accurate key. Should you successfully provide the correct key within these attempts, the decrypted text will be revealed. Conversely, if all three attempts yield incorrect keys, the data will persist in its encrypted state. This approach safeguards the data's confidentiality while allowing a limited number of attempts for key retrieval.

```
C:\Users\jasha\Desktop\codir x + v
The Encrypted Text is , LET's see you can decrypt it!!!
-->Ftq cguow ndaiz raj vgybe ahqd ftq xmlk pas

Please Enter the Correct Key, you will only get 3 attempts

Please Enter the key --> 12
Decryption attempt 1 unsuccessful. You have 2 remaining chances.

Please Enter the key --> 76
Decryption attempt 2 unsuccessful. You have 1 remaining chances.

THIS IS THE LAST CHANCE, DO || DIE
Please Enter the key --> 56
Decryption attempt 3 unsuccessful. You have 0 remaining chances.

Since all attempts have been exhausted, data decryption is not possible.(press any key to quit)
```

For Uncorrect Key

For Correct Key

```
C:\Users\jasha\Desktop\codir x + v
The Encrypted Text is , LET's see you can decrypt it!!!
-->Ftq cguow ndaiz raj vgybe ahqd ftq xmlk pas

Please Enter the Correct Key, you will only get 3 attempts

Please Enter the key --> 76
Decryption attempt 1 unsuccessful. You have 2 remaining chances.

Please Enter the key --> 87
Decryption attempt 2 unsuccessful. You have 1 remaining chances.

THIS IS THE LAST CHANCE, DO || DIE
Please Enter the key --> 1234

Authentication successful.
The Decrypted Data is as follows:
--> The quick brown fox jumps over the lazy dog

We extend our gratitude to you. We trust that our code has been of service. (press any key to quit)
```

Time complexity :  $O(n)$

Space complexity:  $O(n)$