CSC -1200 HW4:

Encryption and Decryption

In this lab you will write a menu-based program that will allow users to either read in a message from a file and encrypt it or read in an encrypted message from a file and decrypt it.

**Menu()**

The program will consist of a menu that will allow you to choose whether to encrypt or decrypt. This will call a getInput() function which will read from a file into a list. This list will be passed to a call to encrypt() or decrypt() depending on if the user select 1 or 2 respectively. If the user selects something else you should print that it is invalid. Regardless of the choice the newly encrypted or decrypted message should be written to a file using a wFile(L) function.

**Encrypt(L)**

A file emessage.txt was encrypted using Python’s built-in chr() and ord() methods. ord() takes an argument and returns that to its Unicode this is defined here: <https://en.wikipedia.org/wiki/Unicode>. The encryption takes the Unicode value adds five then use chr() to return it to character form. Encrypt has been provided Change the offset to your own value.



**Decrypt(L)**

You should write your own decryption function based off your encryption function. It must take in a list and return a newList with the decrypted information.

**getInput()**

getInput() should prompt the user for a file name and use a try/except block to try and read from a file. If successful it should read from the file to a list and return that list. Otherwise it should tell the user that was invalid.

**wFile(L)**

wFile(L) should be passed a list of the encrypted/decrypted information. It should print a warning to the user about overwriting their file and then prompt the user for a file name. You should then write that information to the file. Then close the file.

**Rubric**

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| 20 pts | The menu prompts the user. It then calls the getInput, encryption/decryption, and wFile functions properly. It also prints a message if the user’s choice is invalid. |
| 20 pts. | The decrypt function proper takes in a list and decrypts it based on the encryption function used. |
| 20 pts. | getInput properly uses a try except block to verify and then open a file specified by the user. The content is then read into and returned as a list. |
| 20 pts. | wFile warns the user that they are about to write to a file. It then takes a file name and writes to it. |
| 20 pts. | Encryption method is modified to user the student’s own offset value. Comments are correct and informative. Good programming style. |