Homework 4

Due: Wednesday November 23rd -- 11:59 PM

We debated calling this homework: "Nightmares aren't Meant to End so Easy" or "Homework 4: Return of Homework 3." All jest aside, it really isn't too hard.

This homework will build off the last one. Wasn't it a pain to type in all the test cases every time? We will be adding some automated testing to the encryption program. You will need to make your program accept a **file** as input, encode/decode the contents of that file, then check the new text for correctness against another file. You must save the results to an output file so correctness checking is easier for you.

Your program will receive a file in the following format:
- The first line will say "encode" or "decode" where encode means Char to Number. Note, you should accept both upper and lowercase forms.
- All lines below that line should be encoded (or decoded).

In your new and improved version of the program:
- You are required to use several functions or subprocedures. Make sure each procedure does only one thing. For example, one to read from the file, one to write to the file, one to encode, and one to decode. If your code is written logically you should be able to easily refactor (move/reorganize) your code. Don't rewrite your whole program, this should be as easy as copy-pasting then making a function call.
- You will offer 3 buttons: Load File, Save File, and Check File.
- Display the resulting text to an output textbox inside the program as you did in the last homework.
- Prompt the user to save the new message to a file in the location of their choosing.
- Have a button that checks whether the output file matches the expected output.

Files

Create 2 sets of files. One are the files to encode, the others are the encoded versions of those files. See the diagram below.

Start of program

Given these files

Unencoded file

encode
ABC

Click load file

Inside program

decode
065066067

Click save file

Newly created

decode
065066067

Click check

Encrypted file

decode
065066067

True, yes, these files are the same.
Do something to say yes
(MessageBox, green vs red color,
etc.)