

ICS4U Programming Assignment – Data, Files & IO

Message Encoder

Write a program (FileEncoder.java) that will read multiple sentences (lines) from a text file and creates a coded version of the file input. The name of the file to input will be read using the appropriate JFileChooser class method.

The file input will be encoded based on the following rules:

1. The case of all letters in the alphabet will be swapped. Lower case letters become upper case letters and lower-case letters become upper case letters.
2. A user entered integer value (range -10 to 10) that will be added to the decimal integer ascii value of each character. This offset character will replace the original character.

This coded sentence will be then written to a user entered filename (through the console using Prompt class) text file and written to the console as output in string form.

For example, if the input file contained

Test Message
AbCd

with a user entered code offset of 1 would produce output of:

uFTU!nFTTBHF
bCdE

Requirements

Only data casting & wrapper classes can be used to perform the encoding process.

Use the appropriate Prompt class methods to read a valid integer value & open the output file.

The following main class static helper methods must be provided:

```
public static String encodeMsg(String message, int codeOffset)
    returns a string that is that contains the encoded message string created by, changing
    the letter case and adding the codeOffset to the ascii value of each character in the
    message string
```

```
public static Scanner getScanner(String prompt)
```

Uses to open a valid input file using JFileChooser. Remember to pass a null argument if the dialog is not attached to a JFrame.

All the code you are writing for this assignment should go in the FileEncoder.java file. This is where your main method will reside and all of the methods listed above.

From the FileEncoder class you will be using the functions you have already set up in your Prompt class as part of your solution. You should not have to add any code to Prompt for this assignment, just access methods that have been already added based on completing the related lessons Practice Programming activities.