Exercise P2a

Due Apr 26 by 11:59pm   **Points** 15   **Submitting** a file upload
File Types txt and cpp   **Available** Apr 22 at 8:45pm - May 3 at 11:59pm 11 days

---

1. email1-algorithm.txt
Input: prompt for both the input and output file names, allowing blank for the "default" name.
Output: output to the console the input and output file names selected, converting any blanks to their corresponding default names. There is NO file input or output in this version.

Here's a general algorithm for defaulted console input:

iFileName is the input file name
dFileName is the default file name
oFileName is the output file name

The default filename is selected by the user pressing only the enter key as input for a filename.
enterKey is the user input to the prompt "Press ENTER key to continue"

```
dFileName = "fileContainingEmails.txt"
 output a prompt to the console using dFileName
 input iFileName
 if iFileName is not valid, output feedback re-input
 if length of iFileName is 0, then iFileName = dFileName and dFileName = "copyPasteMyEmails.txt",
else dFileName = iFileName
 output a prompt to the console using dFileName
 input oFileName
 if oFileName is not valid, output feedback and re-input
 if length of oFilename is 0, then oFileName = dFilename
 output label for the input file name, and iFileName
 output label for the output file name, and oFileName
 output a prompt to press ENTER key to continue
 input enterKey
```

See examples below and write the complete algorithm.

2. email1.cpp
The program should prompt the user for the input and output filenames, and output the user's choices, and that's all.

The prompts should include the default names for the files, per the term project writeup. A prompt should look something like this: "Enter input filename [default: fileContainingEmails.txt]: ". Remember that if the user selects the default for the input filename, then the default for the output filename is "copyPasteMyEmails.txt". Otherwise, if the user types something for the input filename, and does not accept the default, then the default for the output filename is the same as what the user entered for the input filename.

Do NOT type fileContainingEmails.txt or copyPasteMyEmails.txt more than once in your code. It is bad programming practice to repeat values in code. Instead, store otherwise repeated values in variables, and refer to those variables instead.

Here are some guidelines:

If you name the program's source file somthing other than what is specified, you are not doing this right.
If you spell or case the default filenames wrong, you are not doing this right.
If the user does not see exactly two prompts every time, you are not doing this right.
If the character sequence "fileContainingEmails.txt" is in your code more than once, you are not doing this right.
If the character sequence "copyPasteMyEmails.txt" in your code more than once, you are not doing this right.
If your prompts do not include the names of the defaults, you are not doing this right.
Do not open the input or output files.
Program should work like this:

Output a prompt for the input filename, that also shows the default name, fileContainingEmails.txt. If user simply presses ENTER key, then the input filename should be set by your program to the default name, fileContainingEmails.txt.
Whether user types a filename and press ENTER key in response to the prompt, or types nothing and press ENTER key, user should get another prompt -- one for the output filename. User should ALWAYS get exactly 2 prompts.
If user typed a name for the input filename, then whatever user typed also becomes the default for the output filename, instead of copyPasteMyEmails.txt. Otherwise, if user just pressed ENTER key for the input filename, the default for the output filename is to be copyPasteMyEmails.txt.
If user typed something and press ENTER key for the output filename, then what user typed should become the output filename. Otherwise, if user just pressed ENTER key, the output filename should be set by your program to the default, which will either be copyPasteMyEmails.txt or what user typed for the input filename.
Make sure that you understand what is meant by a "default". If an input value has a default value, then (1) the prompt should say what is the default value, and (2) if the user presses ENTER key

without typing anything first, then the default value should be substituted for the blank that got input. That means the programmer (you) has to test the input value with an if-statement. If the input value is blank, then replace it with the default value. If the user types anything before pressing the enter key at either prompt, then you must do input validation to ensure what they enter is a minimum of 5 characters ending in ".txt".

Example. Your program's console I/O should look something like this, with user input in blue (excluding your identifying information):

Test Case #1:

Enter input filename [default: fileContainingEmails.txt]:
Enter output filename [default: copyPasteMyEmails.txt]:
Input file: fileContainingEmails.txt
Output file: copyPasteMyEmails.txt

press ENTER key to continue:

...or... Test Case #2:

Enter input filename [default: fileContainingEmails.txt]: x.txt
Enter output filename [default: x.txt]:
Input file: x.txt
Output file: x.txt

press ENTER key to continue:

...or... Test Case #3:

Enter input filename [default: fileContainingEmails.txt]:
Enter output filename [default: copyPasteMyEmails.txt]: y.txt
Input file: fileContainingEmails.txt
Output file: y.txt

press ENTER key to continue:

...or... Test Case #4

Enter input filename [default: fileContainingEmails.txt]: x.txt
Enter output filename [default: x.txt]: y.txt
Input file: x.txt
Output file: y.txt

press ENTER key to continue:

What are other test cases? Don't forget filename input validation: Think of ways to determine if a user specified filename is valid minimum of 5 characters and ends in ".txt". If not, then provide feedback that the filename they entered is invalid and re-output the prompt until the user selects the default

Because this program is NOT doing anything with either file, there is no way to have a run time execution error. Must do filename input validation BEFORE filenames are output for confirmation.

write a value returning function that is called TWICE to input a filename whether that filename is the input or output filename and does the input validation. There will be 2 input parameter(s) and the function returns a valid filename.

3. Please submit the following files:
email1-algorithm.txt
email1.cpp