

CSC 1300 LAB 4 PURPLE

ABOUT GOLD & PURPLE LABS

Gold labs are designed to give you more freedom and flexibility over what program you write for your lab assignment. They are best for students who may already have programming experience or for students who want to be more creative.

Purple labs are designed to give you an exact program you need to write. They are best suited for students who may be new to programming and/or who like to have exact directions on what to do.

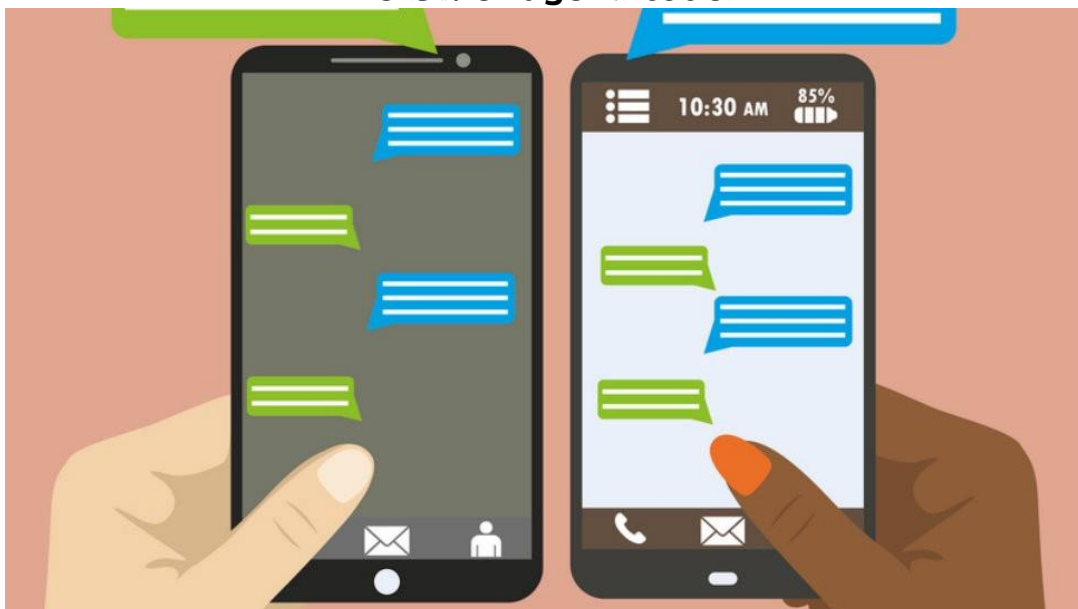
You may either select Gold or Purple lab no matter which lecture section or group you are in, but **do not do both!**

You may complete this assignment by yourself, or you may choose to write this program with one partner and practice paired programming. If you do, both students must agree to either Gold or Purple lab, must write both names in the comment block at the top, and must name the zip file with both usernames. Note that you may not share your code with anyone other than the one partner you select.

CONCEPTS

- Relational expressions & logical operators
- While loop for input validation
- Do-While loop for running program again
- String functions
- Character conversion functions

Text Message Encoder



DIRECTIONS

- Create a **LAB4Purple_yourTTUusername** folder and inside that folder, create a source file named **lab4.cpp**.
- Get a line of text from the user.
- Output that line.
- Output the line again, this time expanding common text message abbreviations. You will need to use C++ String library functions **find()** and **replace()** as well as branching to accomplish this!
 - You must support the following abbreviations:
 - BFF – best friend forever
 - IDK – I don't know
 - JK – just kidding
 - TMI – too much information
 - TTYL – talk to you later
 - YMMD – you made my Day
 - W8 – wait
 - QT – cutie
 - AYTMTB – and you're telling me this because
 - Also support one more abbreviation of your own choice
 - You do not have to support the lowercase versions of these abbreviations
- Each time your program converts an abbreviation, increment a counter. Print out the number of times an abbreviation was converted after the expanded message was printed.
- Allow the user to convert as many messages as they want and keep track of how many abbreviations have been converted over the entire duration of running the program. Whenever the user answers 'y' that they want to convert another message, use the **tolower()** function from the **cctype** library to make sure that your program also allows uppercase 'Y' in addition to the expected lowercase 'y'.
- Before the program ends, print the final total of the number of abbreviations that were converted.

You should test your program multiple times, making sure each abbreviation is expanded into the correct words. Below are possible tests:

- W8 you said JK you're my BFF AYTMTB you want my help on prog 1. TTYL BFF
- IDK how that happened. TTYL
- W8 that was TMI
- AYTMTB you think IDK you haven't started on your program?
- Hey QT YMMD
- CWS you should start your programs early
(Note: you don't have to have the CWS abbreviation in your program; this was my custom one of my own choice)

SAMPLE OUTPUT

Below are the screen captures of sample output from the six tests mentioned above with user input highlighted in yellow.

```
Enter text: W8 you said JK you're my BFF AYTMTB you want my help on prog 1. TTYL BFF.
You entered: W8 you said JK you're my BFF AYTMTB you want my help on prog 1. TTYL BFF.
Expanded: wait you said just kidding you're my best friend forever and you're telling me this
because you want my help on prog 1. talk to you later best friend forever.
```

```
Number of abbreviations expanded: 6
Do you want to encode another message? (y or n): y
```

```
Enter text: IDK how that happened. TTYL
You entered: IDK how that happened. TTYL
Expanded: I don't know how that happened. talk to you later
```

```
Number of abbreviations expanded: 2
Do you want to encode another message? (y or n): y
```

```
Enter text: W8 that was TMI
You entered: W8 that was TMI
Expanded: wait that was too much information
```

```
Number of abbreviations expanded: 2
Do you want to encode another message? (y or n): y
```

```
Enter text: AYTMTB you think IDK you haven't started on your program?
You entered: AYTMTB you think IDK you haven't started on your program?
Expanded: and you're telling me this because you think I don't know you haven't started on your
program?
```

```
Number of abbreviations expanded: 2
Do you want to encode another message? (y or n): y
```

```
Enter text: Hey QT YMMD
You entered: Hey QT YMMD
Expanded: Hey cutie you made my day
```

```
Number of abbreviations expanded: 2
Do you want to encode another message? (y or n): y
```

```
Enter text: CWS you should start your programs early
You entered: CWS you should start your programs early
Expanded: Crockett wisely says you should start your programs early
```

```
Number of abbreviations expanded: 1
Do you want to encode another message? (y or n): n
```

```
*****
I expanded 15 abbreviations during running this program.
*****
```

WHAT TO TURN IN

Compress/zip the **Lab4Purple_yourTTUusername** folder and upload it to the ilearn assignment folder named **Lab 4**.