

# CS150 Assignment 2

## Texting Fees

**Date assigned:** Monday, September 18, 2017

**Program due:** Wednesday, September 27, 2017, 1:00pm (25 points)

Goals:

- Arithmetic operators
- If statements

You have a text message plan on your cell phone that charges you for each text you send and there is an extra charge for each picture you send in a text message.

You must write a C++ program that will ask the user for the number of texts sent and the number of pictures sent and then display to the user the total cost.

If you send 100 or fewer texts, each text costs \$0.02. If you send more than 100 texts, each text costs \$0.01. Each picture text always costs \$0.10 extra.

You must validate the input. A user cannot send fewer than zero texts or picture texts. A user also cannot send more pictures than texts. If any input is invalid, display the message "Invalid Input" and exit the program using `return EXIT_FAILURE;`

Sample Output:

```
*****
*Text Cost Calculator*
*****
How many text messages did you send last month? 151
How many text messages contained a picture? 7

You will be charged: $2.21

Press any key to continue . . .
```

```
*****
*Text Cost Calculator*
*****
How many text messages did you send last month? 25
How many text messages contained a picture? 100

Invalid Input

Press any key to continue . . .
```

## Notes

1. Your program is not to contain any magic constants.
2. You can only use a single-alternative if for decision making in your solution. You can use more than one if, but only single-alternative.
3. The total cost must be displayed to 2 decimal places.

**To complete this assignment you must submit the following:**

### **1. An electronic copy of your program on grace**

- a. Add a new project named 02\_TextCost to your previously created assignment solution called PUNetIDAssignments. It is *vital* that you name your project correctly!
- b. Type your program (fully documented/commented) into the project. The comment block at the top of the program needs to contain your name, the date the assignment is due, the class name, assignment number and name, and a brief description of the program.
- c. Pay attention to the example output! Your program's output must look **exactly** like the example output! The spacing and newlines in your output must match exactly.
- d. Your program must use if statements and constants.
- e. Make sure that your program compiles and runs correctly. If you get any errors (or warnings), double check that you typed everything correctly. Be aware that C++ is case-sensitive.
- f. Once you are sure that the program works correctly it is time to submit your program. You do this by logging on to grace and placing your complete solution folder in the **CS150-01 Drop** folder. This solution folder must contain two projects: 01\_Fraction and 02\_TextCost.
- g. The program must be in the drop folder by 1:00pm on the day that it is due. Anything submitted after that will be considered late.

### **2. A hard copy of your program**

- a. The hard copy must be placed on the instructor's desk by 1:00pm on the day that it is due.
- b. The hard copy must be printed in color, double-sided, and stapled in the upper-left corner if necessary. I do not bring a stapler to class.
- c. The hard copy must display line numbers, all tabs must be set to 2 spaces, and variable names must be meaningful and in lower camel case.

**Good luck! And remember, if you have any problems, come and see straight away. ☺**

**The printers in Marsh are slow. Do NOT expect to be able to print your code 10 minutes before class!**