

## CS 150 Lab 3

### Mathematical Operators and Formatting Output

The main objective of today's lab is to use arithmetic operators to solve a complex problem.

#### Lab 3.1

For this lab you will receive a partially written solution and will need to implement the missing parts of the code as described by the comments. When the program is built, it will display the following table to the screen. Be sure to read the comments in the source code carefully when implementing this lab.

PRICE	QUANTITY
1.95	8
10.89	9

To retrieve the partially written solution, do the following:

- 1) You will need to copy the projects to your folder before opening them in Visual Studio. Go to the 'CS150-02 Public' folder on Turing. You will find the folder '03Table' in the '03Lab' folder. Copy the folder '03Table' to the desktop.
- 2) Rename the folder on your Desktop from '03Table' to '03TableXXXXXXXX' where the XXXXXXXX is your PUNet ID. For example, mine would be called '03TableXXXXXXXX'.
- 3) To open your project, start up Visual Studio like you did last week. Click on 'File' from the menu, then 'Open' and 'Project/Solution'.
- 4) Click on the drop down box and select 'Desktop'. Double click on the folder '03TableXXXXXXXX'

You will see a list of files.

- 5) Select the Microsoft Visual Studio Solution file called '03Table'. It's the one with this icon.



Click 'Open'.

This will open the project. Complete the project.

## **Submitting your finished project:**

Once you have completed your lab projects, you will need to submit it for grading. You will submit your projects to the 'CS150-02Lab' folder on Turing. You may only submit your projects once, so make sure that they are in their final form. Also, make sure that you submit the correct project. Be sure to close Visual Studio before copying and moving your folder.

To submit the project, copy (do not move) the folder you created on the Desktop, '03TableXXXXXXXX', to the directory Turing\Students\CS150-02 Lab.

To save a copy of your project for yourself, move the folder you created on the Desktop to Turing\Students\XXXXXXXX, where XXXXXXXX is your PUNet ID.

## **Lab 3.2**

For this lab you will create a new Visual Studio Project that will contain your source code. You should save this project as '03LaundryXXXXXXXX', where XXXXXXXX is your PUNet ID. The goal of this program is to solve the following problem:

After years of doing laundry at a laundromat, you have finally purchased your own washer and dryer. Congratulations on achieving one of life's sweetest goals! The only unfortunate consequence of this wonderful purchase is that you now have jars and jars of quarters that will take you years to spend. So, you've decided to start selling those quarters to all of your poor friends who are still visiting the laundromat. You want to write a nice program that will calculate how many quarters to give your friends when they start bringing you money to change.

Your output should look exactly as follows:

```
*****
*           Quarters to Dollars and Change           *
*                   Converter                       *
*****
Please enter the amount of money you would like to change
into quarters: 3.40
The amount will be changed into 13 quarters with 15 cents
left over.
```

Be sure to add comments to your code to detail how each variable is used and the purpose of each calculation.

**Submitting your finished project:**

Submit this assignment by copying the folder '03LaundryXXXXXXXX' to Turing\CS150-02 Lab.

Be sure to close Visual Studio before attempting to copy this folder.