CS& 141

Project 1: "Pizza Order"

Name:

Pizza tends to be the main food staple for programmers, so it is only natural to write a program to make ordering easier.

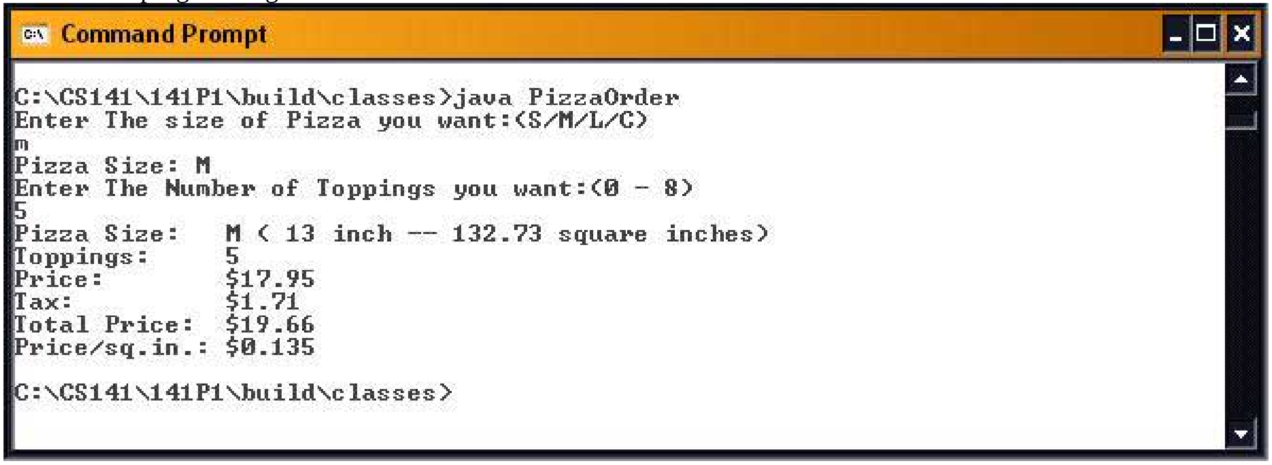
To do this, you will need to plan, write, document, and test your own java program that should:

- Ask the user to enter a Pizza size (**S/M/L/C** for Small*[9"]*/Medium*[13"]*/Large*[17"]*/Colossal*[26"]*)
- take in the input as a ***string***
- *trim* the string, take only it's first letter, convert it to upper case
- if the string is not equal to "***M***", "***L***" or "***C***" , set it to "***S***"
- print the size and ask the user to enter the number of toppings (*0-8*)
- input the number of toppings
- if the input is invalid or less than 0, set the number to 0
- if the input is greater than 8, set the number to 8
- determine
  - the diameter
  - the base price *(S: $10; M: $13; L: $16; C: $25)*
- calculate:
  - the number of square inches
  - the price *(add $.99 per topping)*
  - the tax *(9.5%)*
  - the Total Price, *including tax*
  - and the price *(not including tax) per* square inch (*to 1/10 cent*)
- Print out the results

Some things to remember:

- use ***javadoc*** headings and generate javadocs
- define and use constants instead of "Magic Numbers"
- initialize all primitive variables
- round off numbers to the nearest cent.
- print dollar amounts to two decimal places
- check for valid input
- include all inputs in your test plan

A run of the program might look like this:



```
C:\CS141\141P1\build\classes>java PizzaOrder
Enter The size of Pizza you want:(S/M/L/C)
m
Pizza Size: M
Enter The Number of Toppings you want:(0 - 8)
5
Pizza Size:   M ( 13 inch -- 132.73 square inches)
Toppings:     5
Price:        $17.95
Tax:          $1.71
Total Price:  $19.66
Price/sq.in.: $0.135

C:\CS141\141P1\build\classes>
```

DO NOT use Netbeans, Eclipse, or any other IDE to create or compile this project! Utilize ONLY a text/code editor, the command line window, and the commands ***javac***, ***javadoc*** and ***java***!

The program should be fully planned *in advance*. It should be well documented *(including a complete javadoc header block for each method)*, and work efficiently, correctly and to specifications.

Make sure to test your program with both valid and invalid inputs for both size and number of toppings--test using both ***numeric*** and ***non-numeric*** inputs, as well as just pressing *<Enter>*.

sample executable: PizzaOrder.class (*your program should work the same way*).

Deliverables:

Physical:

- *The project should be turned in inside a clear plastic Deluxe Locking Project File Folder DOCU Manager or equivalent. This folder should have a simple flap to hold paper in place--NO buttons, strings, velcro, etc. Pages should be in order, not stapled.*
- *Assignment Sheet (printed from the web), with your name written on it, as a cover sheet.*
- *Printed Source Code with Comments (including heading blocks. Describe parameters, no line wrapping)*
- *Sample Input and Output (printed)*
- *a simple test plan including explanations of any discrepancies and reasons for each test. Make sure to test non-numeric and out-of-bounds values. Show actual input and ALL values output as well as ALL expected output.*

Electronic:

- All ***.c, .exe****(Release Version)*, input and output files, ***zipped*** together. Do not use ***rar*** or any archive format other than ***zip***. Rename the file: "<YourName>_p1.zip".
- Submit this single *zip* file by going to **Blackboard**, select this class, select the **Course Material** button on the left, select the ***project***, by **attach file, browse** to find the file, and **Submit**.

Due: Monday, October 15, 2012, 11:30 a.m. *(beginning of class)*
Resubmittal due: Two weeks from the day the project is returned in class (*beginning of class*).