Project 2

For project 2, you will use abstract factory pattern to implement different sorting algorithms on the Drinks you have created. Your sorting algorithms will be done by the Barista class. Within the Barista class, there are two types of Baristas: CoolBarista and NewbieBarista. CoolBaristas will sort the drinks and deliver them by person. For each person, the order of delivering the drinks does not matter. NewbieBaristas will sort the drinks and deliver them by size of drink. For each size, the order of delivery does not matter as long as all the drinks of one size are given before that of another size. For the Baristas to deliver the drinks, they must take an input which is a database of all the drinks in one order. You must implement the order list for each type of drink. See the below sample main.cpp and output for more information.

Requirements:

1. You must use abstract factory pattern to design your program.
2. Your Barista should be able to accommodate any new sorting algorithm without any change in the existing classes.
3. Your Barista should be able to accommodate any type of order list without any change in the existing classes.
4. All attributes of a class must be private.
5. Any repetitions should be avoided.
6. Your program must compile, run, and produce output similar to sample output.
7. You can use any drawing tool to draw your UML diagram. UML diagram should be in jpg, png, or pdf format.
8. Please avoid multiple submission.

Deliverables:

1. In **one zip file** named lastname1_firstname1_lastname2_firstname2_proj2.zip
    1. A UML class diagram of your project clearly mentioning the attributes and methods of each class.
    2. All of your program files (*.h, *.cpp) along with Makefile.
    3. A text file named team.txt clearly explaining the individual responsibilities of each member of the team and the expected functionality of the program (everything works, only some parts work, etc).

Deadline:

This project is due via "handin"(http://secure.cse.msu.edu/handin/) by **11:59pm on Feb 16, 2014**.

Sample Output

Cool Barista: Order's up!
I have 1 drinks for Bob

Bob ordered a medium drink of orange juice with pulp

I have 1 drinks for Charzard
Charzard ordered a large drink of orange juice with pulp

I have 2 drinks for Pikachu
Pikachu ordered a medium drink of orange juice with pulp
Pikachu ordered a small drink of orange juice with pulp

I have 1 drinks for Tommy
Tommy ordered a large drink of orange juice with no pulp

Newbie Barista: Order's up!
I have 1 drinks of size 1
Pikachu ordered a small drink of orange juice with pulp

I have 2 drinks of size 2
Bob ordered a medium drink of orange juice with pulp
Pikachu ordered a medium drink of orange juice with pulp

I have 2 drinks of size 3
Tommy ordered a large drink of orange juice with no pulp
Charzard ordered a large drink of orange juice with pulp

Cool Barista: Order's up!
I have 1 drinks for Anonymous Guy
Anonymous Guy ordered a medium drink of bubble tea with small bubbles

I have 1 drinks for Ash
Ash ordered a small drink of bubble tea with medium bubbles

I have 2 drinks for Billy
Billy ordered a large drink of bubble tea with large bubbles
Billy ordered a small drink of bubble tea with medium bubbles

I have 2 drinks for Cyborg
Cyborg ordered a large drink of bubble tea with small bubbles
Cyborg ordered a medium drink of bubble tea with large bubbles

I have 1 drinks for Tommy
Tommy ordered a medium drink of bubble tea with large bubbles

Newbie Barista: Order's up!
I have 2 drinks of size 1
Billy ordered a small drink of bubble tea with medium bubbles
Ash ordered a small drink of bubble tea with medium bubbles

I have 3 drinks of size 2
Tommy ordered a medium drink of bubble tea with large bubbles
Cyborg ordered a medium drink of bubble tea with large bubbles
Anonymous Guy ordered a medium drink of bubble tea with small bubbles

I have 2 drinks of size 3
Cyborg ordered a large drink of bubble tea with small bubbles
Billy ordered a large drink of bubble tea with large bubbles