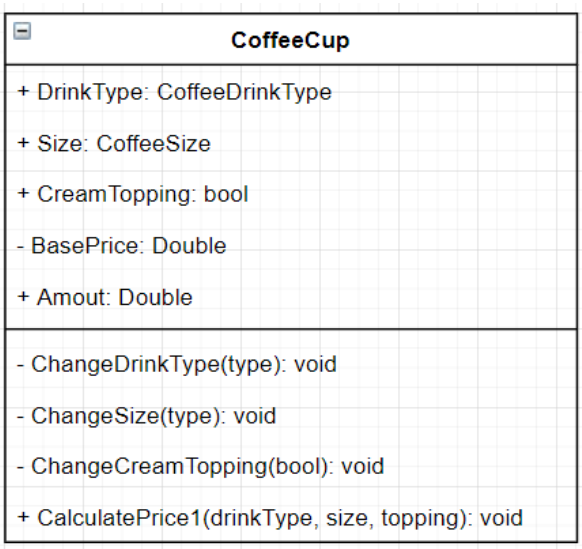
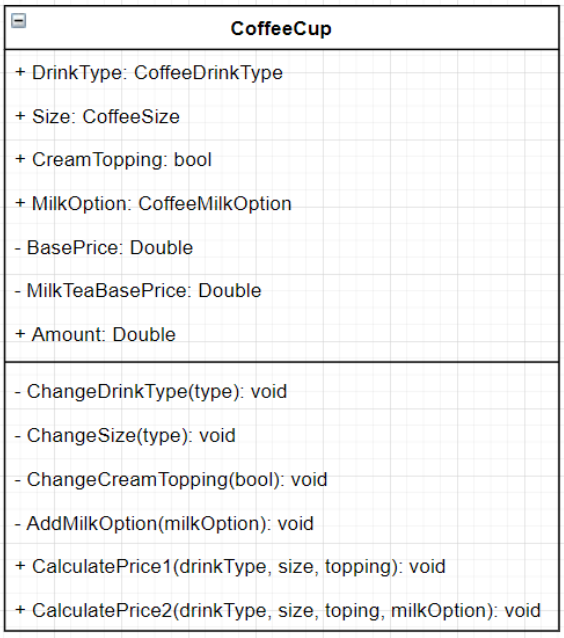
Session 1.1 – Pricing (draff design)

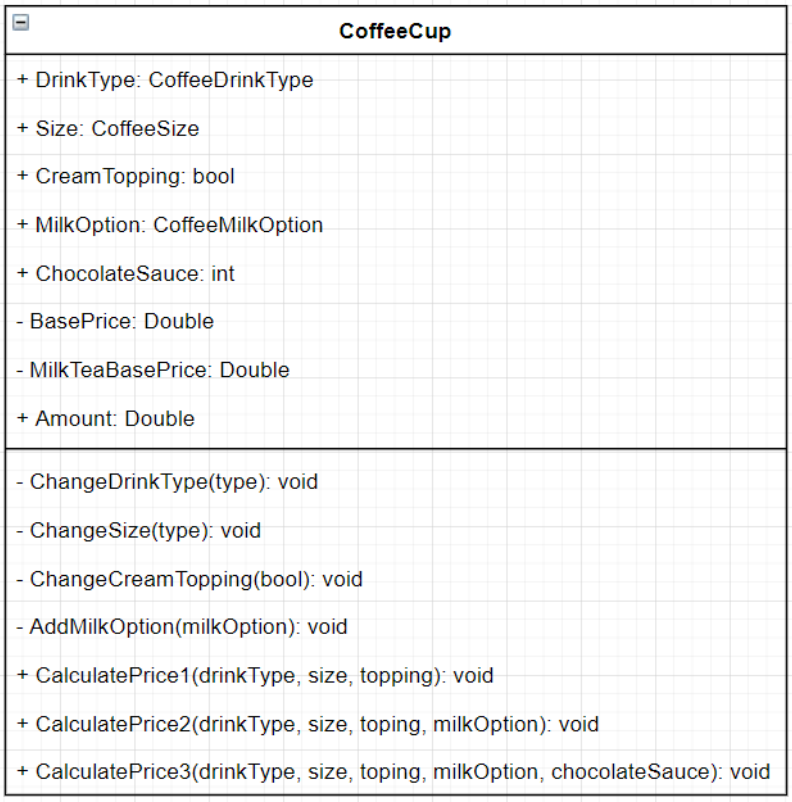
- Requirement #1
  - In requirement #1, we see an object “coffee cup”. So, we will create a class named CoffeeCup to present coffee cup. A coffee cup has some fields: drink type, size, topping or not, base price, so we design CoffeeCup class with those fields. A coffee cup can be changed drink type, size, topping or not, then we design some methods to change fields or coffee cup. Requirement #1 require calculate price of coffee cup, so we add method CalculatePrice1 to calculate price and Amount field to store the result. Class diagram present the design below:



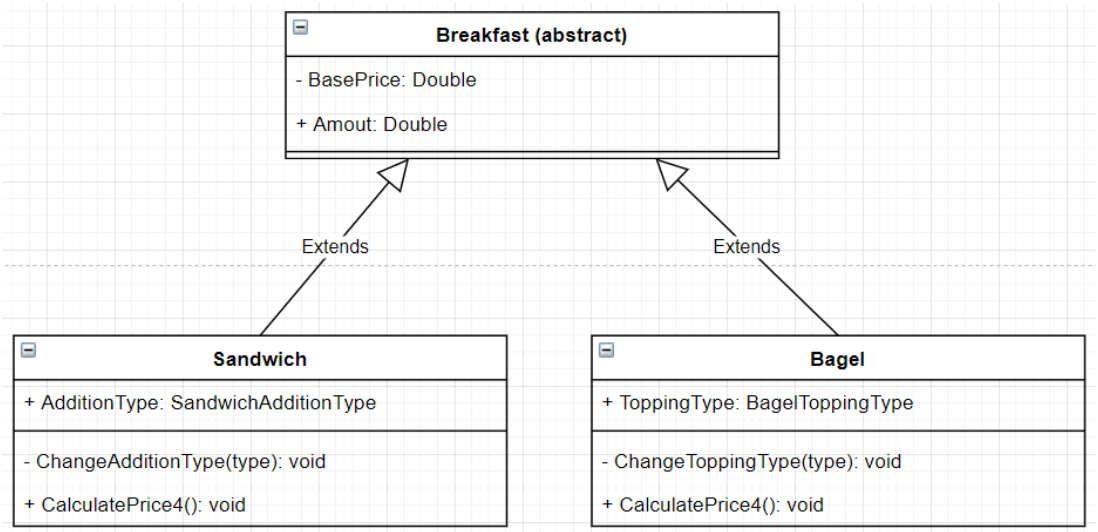
- Requirement #2:
  - Requirement #2 add size XL and milk tea drink type, so we only add more type to CoffeeDrinkType and CoffeeSize enum. Milk tea drink type has base price is $2.25, so we add _milkTeaBasePrice field to CoffeeCup class. And finally, we add method AddMilkOption and MilkOption field



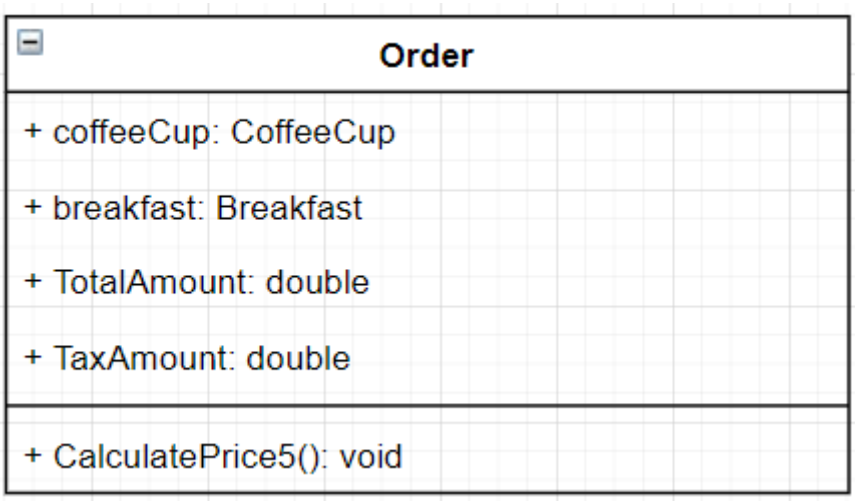
- Requirement #3
  - Design same the requirement #2, we add *ChocolateSauce* field, *AddChocolateSauce and CalculatePrice3* method follow the requirement.



- Requirement #4
  - In requirement #4, we have two objects: sandwich and bagel. Both have base price is $3 and have Amount after calculation. But, sandwich can add egg or turkey and bagel can add butter or cream cheese. So, we design a class named Breakfast as a parent class and Sandwich, Bagel class extend from Breakfast class



- Requirement #5
  - In requirement #5, we have to calculate list of items, so we need a class to contains items named *Order* . Order class includes:
    - *coffeeCup* field present information about a coffee cup
    - *breakfast* field present information about a breakfast
    - *TotalAmount* field store total amount of all items
    - *TaxAmount* field store amount of tax
    - *CalculatePrice5* method to calculate amount of all items
      Price break down foreach item can be access from *coffeeCup.Amount and breakfast.Amount* field


Order
+ coffeeCup: CoffeeCup
+ breakfast: Breakfast
+ TotalAmount: double
+ TaxAmount: double
+ CalculatePrice5(): void