

# CSCI-101 Programming 1

## Lab 13

### INSTRUCTIONS

Create a directory inside your **labs** directory named **lab13**. Put all files for this lab in this new directory.

#### Part I

Write a class named **MenuItem** that models a restaurant menu item. Include the following:

1. Fields for the menu item's name (String), number of calories (int), and price (double).
2. A constructor that sets all 3 fields using data passed into the constructor.
3. Getters and setters for each of the fields.
4. Override the **toString()** method and return a string containing the name, number of calories, and price, all separated by commas.
5. Override the **equals()** method. Two menu items are considered equal if they have the same name.

#### Part II

Create a file named **menu.txt** that contains data similar (*but not necessarily identical*) to the data shown below. The first line of the file contains an integer that indicates how many menu items are described in the file. Each subsequent line contains the name, number of calories, and price of a menu item - separated by commas.

```
3
Cheese Cake,560,6.95
16 oz. Prime Rib,900,21.95
Lobster Bisque,600,5.75
```

#### Part III

Write a class named **Lab13** that satisfies the following:

- The class has a method named **printMenu** that has two parameters. The first parameter is a **String** named **fileName**. The second parameter is an array that holds references to instances of the **MenuItem** class. The method prints on the first line of the file whose name is in **fileName**, the length of the array. The method then prints to the file the names, number of calories, and price (separated by commas) of each menu item in the array, one on each line.
- The class has a **main** method that when run:
  - Reads the data in **menu.txt**, and for each menu item in the file creates an instance of the **MenuItem** class and stores the reference to the instance in an array named **menuItems**.
  - Prints to the screen the *name, a dash (-), and the price* of each menu items in the array named **menuItems** that costs more than 5.00 dollars, with each items on a separate line.
  - Calls **printMenu**, passing to the method the String "**menu.bkup**" and the array named **menuItems**.