Seneca College

Applied Arts & Technology

SCHOOL OF COMPUTER STUDIES

Workshop 2

Due Date: February 11, 2024

INSTRUCTIONS

- *This workshop must be completed individually without any outside collaboration. All work must be your own. Copying or reproducing the work done by others (in part or in full) or letting others to copy or reproduce your own work is subject to significant grade reduction or getting no grade at all and/or being treated as academic dishonesty under the College's Academic Dishonesty Policy.*

- *Your goal is to finish the design part during the lab time, unless otherwise specified by your instructor.*

- *The backend coding for your design can be submitted as a part of DIY.*

- *Your application must compile and run upon download to receive any mark.*

- *To submit the workshop, please follow the Submission Guideline provided at the end of this document.*

- *You must submit your workshop by the due date. Late submissions policy is specified in the Academic Procedures for Evaluations document available through the class plan on Blackboard.*

Description:

The second workshop lets the student practice about designing a bit more complicated JavaFx screen. Create a **Pizza Ordering Application** which helps you to practice different design layouts and model classes.

Note: For designing the front end you can see example in Week 2 lectures like grouping and container.

Task:

You are being hired by a company which design and deliver the ultimate software solutions to their clients. Your job is to design and deliver to one of their client who runs a pizza shop a desktop application which will help the client not only to manage the orders also to store them in a data structure.

(Consider I am your client, and you must show me your designs (Front end) by Friday lab February 2nd.)

Requirements:

- Following the MVC design pattern you are required to create model classes in this project which will deal with multiple model classes like Customer and Order at the minimum.
    a. Pizza Size (Fix the price for each Pizza size)
    (Idea: This can be a ChoiceBox or Radio Buttons)
        i Small - $7.00
        ii Medium - $10.00
        iii Large - $13.00
        iv Extra Large - $15.00
    b. Crust Type
    (Idea: This can be a ChoiceBox or Radio Buttons)
        i Normal
        ii Thin
        iii Deep Dish
    c. Toppings (Each topping is going to cost extra $1.10)
    (Idea: This can be a Check Boxes)
        i Pineapple
        ii Extra Cheese
        iii Dried Shrimps
        iv Mushrooms
        v Anchovies
        vi Sun Dried Tomatoes

vii Dacon
viii Spinach
ix Roasted Garlic
x Jalapeno

(Meat type toppings cost $2.15 Each)

xi Ground Beef
xii Shredded Chicken
xiii Grilled Chicken
xiv Pepperoni
xv Ham
xvi Bacon

- Text Field for customer name.
- Text Field for customer Phone number.
- Text Field for pizza quantities.
- You are allowed to discuss the design of the window during the lab times and discuss better options. (Design can be changed on the basis of ease of use of the application from clients perspective).
- You are required to choose the data structure of your choice to store the information of a client and order details. (ArrayList, Map, LinkedList etc…)
- Discuss during the lab days about the data structure you want to choose.
- You are required to follow the java naming conventions for classes and member variables. Your solution should be designed to follow the OO-design concepts using encapsulation, abstraction etc.

Event handlers:

- **Clear** button should clear all the fields and should not save the data.
- **Place Order** button should properly create the objects of class(es) and store them in the data structure(s).
- **Place Order** button should also display the summary of the order after placing the order.
- **Order confirmation** button (keep the work simple this our first GUI app)
- **Order summary** can be a text area. (For the simplicity of the work consider that the summary will be shown once Order Confirmation button is clicked.
- **Order Summary** should display the information as follows

  Customer Name:

  Customer Phone:

Pizza Type:

Pizza Size:

Quantity:

Total before tax:

Total to be paid: (should include tax if applicable)

We have discussed some of the design part in the last lab. Students must create their design window by Friday lab so we can discuss options during the lab and make changes.

Workshop Header

/***
Workshop #
Course:*<subject type> - Semester*
Last Name:*<student last name>*
First Name:*<student first name>*
ID:*<student ID>*
Section:*<section name>*
This assignment represents my own work in accordance with Seneca Academic Policy.
Signature
Date:*<submission date>*
***/

Code Submission Criteria:

Please note that you should have:

- Appropriate indentation.
- Proper file structure
- Follow java naming convention
- Do Not have any debug/ useless code and/ or files in the assignment

Deliverables and Important Notes:

All these deliverables are supposed to be uploaded on the blackboard once done.

- Design should be discussed/ created during the lab. 25%.
- Complete the code behind as the part of your DIY. 50%
- Submit a **reflect.txt** file with the submission. 10%
  Questions to be answered for the reflection:
  - Class Design
    - Why you have single class or multiple classes in your design.
  - Data structure
    - Why choosing your data structure (used in the solution).
    - Compare your chosen data structure with at least one more data structure.
      - Your comparison should be talking about performance.
- Video submission explaining core code pointers and showing the full working application (3 – 8 minutes max). 15%
- All submission goes to Black Board.
- Your submission should include

    - Video file with audio
    - Reflect.txt file
    - Complete zipped project.
- Late submissions would result in additional 10% penalties for each day or part of it.

Remember that you are encouraged to talk to each other, to the instructor, or to anyone else about any of the workshops, but the final solution may not be copied from any source.