

CSC 1300 LAB 5 PURPLE

**Spring 2023, February 20, 2023 through February 24, 2023**A picture containing building, scene, dining room

Description automatically generated

# Concepts

* Loops/Nested loops (While, do-while, for)
* Input validation
* Counters
* Menu-based programs

## Description

Hogwarts recently renovated their restaurant. They had to also renew their menu because the wizards are bored of the old menu items. You will write a program that ask for users’ names, shows menu and prices, ask the user for the quantity of selected item. At the end, calculate the total price of the receipt.

## DIRECTIONS

* Download lab5given.cpp.
* In your **CSC1300LAB** folder, create a **Lab5purple\_yourTTUusername** folder.
* Download **lab5\_purple\_given.cpp** from the LAB 5 assignment and place inside the folder you just created.
* Rename the source file to **lab5.cpp**.
* In the given source file, the text for the menus are given to you as well as the header/welcome information and the printed results.
* Then, ask the user for the number of people are included in their order. **Input validation: the user’s input should be 1, 2, or 3. Do not allow more than 3 people or a negative value. (use while loop)**
* For each person (use **for loop** to control this), you should ask the person’s name. Then, display the main menu of choices between appetizer, drinks, meal, or quit. **Input validation: use a while loop to validate the user entered a valid choice.**
* The user should be able to select from this menu as many times as they wish until they select 4, to quit. Use a **do-while loop** to execute this logic.
* Based on the option, there should be a sub-menu of three choices. For example, if they selected choice 1 from the main menu (appetizer), then they should be able to select from three different appetizers in the sub-menu (dumbledonuts, potterfries, and griffintoes) along with their prices. Refer to sample output. **Input validation: use a while loop to validate the user entered a valid choice.**
* Then, ask the user how many of the chosen appetizer they want.
* Throughout the program, you will keep a running total of how many of each menu item the user wants and then you will calculate their total bill.
* Once the user decides to quit ordering (choice 4 in main menu), then you should print out their “receipt”. This part is given to you.
* Make sure your output is easy to read like the sample output.
* Make sure to put a comment block at the top of your code with the filename, author (you), date, and purpose of the program. Also make sure to put in comments to identify major sections of your code.
* **You MAY NOT use functions other than the main function, arrays, pointers, structures, or classes. You MAY NOT use C++ libraries not covered in class.**

## Sample Output

User input is highlighted in **yellow**.

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**HOGWARTS RESTAURANT**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**How many people are included in your order? 9**

**Oops! Please select 1, 2, or 3.**

**How many people are included in your order? 2**

**Person 1, what is your name? Grindelwald**

**Hi, Grindelwald. What would you like to order?**

**1. Appetizer**

**2. Drinks**

**3. Meal**

**4. I'm done!**

**Enter 1-4: -4**

**Oops! That isn't a valid choice.**

**Enter 1-4: 2**

**Great, you have selected Drinks!**

**Choose from the following drinks:**

**1. Polyjuice Potion $5.99**

**2. Death Eater Negroni $6.99**

**3. Butter Beer $4.99**

**Choose 1-3: 2**

**How many Death Eater Negronis do you want? 3**

**Hi, Grindelwald. What would you like to order?**

**1. Appetizer**

**2. Drinks**

**3. Meal**

**4. I'm done!**

**Enter 1-4: 1**

**Great, you have selected Appetizer!**

**Choose from the following appetizers:**

**1. Dumbledonuts $2.99**

**2. Potterfries $5.99**

**3. Griffintoes $4.99**

**Choose 1-3: 6**

**Oops! That isn't a valid choice.**

**Choose 1-3: 2**

**How many Potterfries do you want? 5**

**Hi, Grindelwald. What would you like to order?**

**1. Appetizer**

**2. Drinks**

**3. Meal**

**4. I'm done!**

**Enter 1-4: 3**

**Great, you have selected Meal!**

**Choose from the following meals:**

**1. Griffinwings (10pcs) $10.99**

**2. Voldenose $14.99**

**3. Hufflemuffin $ 8.99**

**4. Ravenclaw Meat $19.99**

**Choose 1-4: 5**

**Oops! That isn't a valid choice.**

**Choose 1-4: 1**

**How many Griffinwings (10pcs) do you want? 1**

**Hi, Grindelwald. What would you like to order?**

**1. Appetizer**

**2. Drinks**

**3. Meal**

**4. I'm done!**

**Enter 1-4: 4**

**Person 2, what is your name? Hermione Granger**

**Hi, Hermione Granger. What would you like to order?**

**1. Appetizer**

**2. Drinks**

**3. Meal**

**4. I'm done!**

**Enter 1-4: 2**

**Great, you have selected Drinks!**

**Choose from the following drinks:**

**1. Polyjuice Potion $5.99**

**2. Death Eater Negroni $6.99**

**3. Butter Beer $4.99**

**Choose 1-3: 3**

**How many Butter Beers do you want? 1**

**Hi, Hermione Granger. What would you like to order?**

**1. Appetizer**

**2. Drinks**

**3. Meal**

**4. I'm done!**

**Enter 1-4: 1**

**Great, you have selected Appetizer!**

**Choose from the following appetizers:**

**1. Dumbledonuts $2.99**

**2. Potterfries $5.99**

**3. Griffintoes $4.99**

**Choose 1-3: 1**

**How many Dumbledonuts do you want? 3**

**Hi, Hermione Granger. What would you like to order?**

**1. Appetizer**

**2. Drinks**

**3. Meal**

**4. I'm done!**

**Enter 1-4: 3**

**Great, you have selected Meal!**

**Choose from the following meals:**

**1. Griffinwings (10pcs) $10.99**

**2. Voldenose $14.99**

**3. Hufflemuffin $ 8.99**

**4. Ravenclaw Meat $19.99**

**Choose 1-4: 4**

**How many Ravenclaw Meats do you want? 2**

**Hi, Hermione Granger. What would you like to order?**

**1. Appetizer**

**2. Drinks**

**3. Meal**

**4. I'm done!**

**Enter 1-4: 4**

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**RECEIPT**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**LIST OF ITEMS OREDERED:**

**Appetizers**

**-Dumbledonuts X 3**

**-Potterfries X 5**

**Drinks**

**-Death Eater Negroni X 3**

**-Butter Beer X 1**

**Meals**

**-Griffinwings (10pcs) X 1**

**-Ravenclaw Meat X 2**

**\*\*\*\*\*TOTAL BILL: $115.85**

**THANK YOU!!**

## What to Turn In

**Compress/zip** the **Lab5Purple\_yourTTUusername** folder and upload it to the ilearn assignment folder named **Lab 5**.