ISM 370 Module 1 In-Class Project

This is an individual project. You must do your own work and code so that you can be better prepared for the more complex coding coming up in this course.

Project: Simple Restaurant Bill Calculator

Objectives

Practice working with dictionaries and their key-value pairs.

Implement basic calculations and data manipulation.

Gain experience with loops and user input.

Planning

Define a dictionary where keys are menu item names and values are their respective prices (e.g., `menu_items = {"Pizza": 10.00, "Salad": 7.50, "Drink": 2.00}`).

Decide on any additional charges like tax (e.g., tax_rate = 0.08) or service fee (e.g., service_fee = 0.1).

Coding

Start by setting variables to store the total bill amount and tax amount:

```
total_bill = 0.0
```

```
tax_amount = 0.0
```

Use a `for` loop to iterate through the `menu_items` dictionary:

Ask the user how many of each item they ordered (e.g., `quantity = int(input("How many Pizzas? "))`).

Access the price for the current item using its name as the key in the dictionary (e.g., `item_price = menu_items["Pizza"]`).

Calculate the cost for each item by multiplying quantity by price.

Add the cost to the `total_bill` variable.

Calculate the `tax_amount` by multiplying `total_bill` by the `tax_rate`.

Add the `service_fee` to the `total_bill` (if applicable).

Finally, display the calculated total bill amount, tax amount (if applicable), and service fee (if applicable) in a clear and formatted way.

Testing and Refinement

Test the program with different orders and verify the calculations.

Optional Enhancements

Implement a menu system for users to easily choose items and quantities.

Add features like splitting the bill, applying discounts, or handling different tax rates for different items.

Additional Tips

Use clear and consistent naming conventions for keys and variables.

Experiment with different ways to structure your code for clarity and efficiency.

Submission

Submit only your .py project file on Canvas by the end of class.