

Prerequisites

1. Install Python

Make sure Python (version 3.x) is installed on your system.

If not, download and install it from the official website:

<https://www.python.org>

2. Install Required Package (Colorama)

Open your Command Prompt (Windows) or Terminal (Mac/Linux) and run:

3. pip install colorama

This package is used to add color formatting to the console output.

4. Prepare Folder Structure

The project folder contains the three Python files and a Dataset folder.

The structure should look like this:

HW5/

 data_layer.py

 business_layer.py

 presentation_layer.py

Dataset/

 ingredient_inventory.csv

 pizza_dataset.csv

 standard_menu.csv

 customizable_ingredients.csv

 side_dish_menu.csv

2. Steps to Execute the Program

1. Save the Python Files

Save the provided files into your project directory:

- data_layer.py
- business_layer.py
- presentation_layer.py (this is the one we will run)

Make sure the filenames are exactly the same.

2. Prepare the Dataset Folder

Inside the same directory as your Python files, create a folder named:

Dataset

Place all the CSV files inside this folder:

- ingredient_inventory.csv
- pizza_dataset.csv
- standard_menu.csv
- customizable_ingredients.csv
- side_dish_menu.csv

The program will not run correctly unless this folder name and file names match exactly.

3. Run the Program

Follow these steps to execute the system:

1. Open a terminal or command prompt.
2. Navigate to your project folder using the cd command.

Example (Windows):

cd C:\Users\Username\Desktop\HW5

3. Run the presentation layer:

Windows:

python presentation_layer.py

Mac/Linux:

python3 presentation_layer.py

If everything is placed correctly, you will see:

Ingredient inventory loaded.

Pizza recipes loaded.

Standard pizza menu loaded.

Customizable ingredients loaded.

Side dish menu loaded.

4. Interact With the Program

Once the program starts, a main menu will appear:

Main Menu:

1. Add Recipe
2. Edit Recipe
3. Delete Recipe
4. Categorize Recipes
5. Search Recipe
6. Display Ingredient Inventory
7. Display Standard Pizza Menu
8. Customize Pizza Order
9. Display Side Dish Menu
10. Process Order
11. Exit

You can now perform various tasks:

- Enter **1** to add a new recipe
- Enter **2** to edit an existing recipe
- Enter **3** to delete a recipe
- Enter **6** to view ingredient inventory
- Enter **8** to build a customized pizza
- Enter **10** to process a full order

Each option performs the required action when selected.

5. Test the Program

To verify that your system works correctly:

- Refer to the “Test Cases & Results” document
- Run each test case through the console.
- Check that:
 - Stock decreases correctly
 - Low-stock alerts appear
 - Recipes update in-memory
 - Customized pizzas price correctly
 - Order summaries calculate totals accurately
 - Standard menus and side dishes display properly

Modify CSV files only if you need specific testing scenarios.

6. Exit the Program

To close the application safely:

- Enter **11** at the main menu.

The program will display an exit message and terminate normally.