Pizza Store Application

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1. Use Case Diagram and Class Diagram:

Submit the use case diagram and class diagram in either PDF or PNG format.

1.1 Use Case Diagram:

Refer to the use_case.png

1.2 Class Diagram

Refer to the class_diagram.png

2. Python Source Code and Data Files

Provide the complete Python source code and any associated data files required for program execution

Refer to the .py files in the folder

3. Program Execution Instructions

Include clear and detailed instructions on how to run the program. Ensure that testers can execute the program without entering all data manually. Verify that all necessary data is stored in the data files.

3.1 Main Menu:

- 1. Recipe Management
- 2. Inventory Management
- 3. Menu Management
- 4. Customized Pizza Menu Management
- 5. Side Dish Management
- 6. Order Management
- Exit

Enter command: 1

- 1. Recipe Management
- 2. Inventory Management
- 3. Menu Management
- 4. Customized Pizza Menu Management
- 5. Side Dish Management
- 6. Order Management
- 0. Exit

3.2 Recipe Management Menu

- 1. Add Recipe
- 2. Update Recipe
- Remove Recipe
- 4. Search Recipe By Name
- Print Recipes
- 6. Exit
- 1. Add Recipe
- 2. Update Recipe
- 3. Remove Recipe
- 4. Search Recipe By Name
- 5. Print Recipes
- 6. Exit

3.3 Inventory Management Menu

- 1. Add Ingredient
- 2. Update Ingredient
- 3. Remove Ingredient
- 4. Check Reorder Levels
- 5. Print Inventory
- 6. Use Ingredient By Recipe
- 7. Search Ingredient By Name
- 8. Exit
- 1. Add Ingredient
- 2. Update Ingredient
- 3. Remove Ingredient

- 4. Check Reorder Levels
- 5. Print Inventory
- 6. Use Ingredient By Recipe
- 7. Search Ingredient By Name
- 8. Exit

3.4 Menu Management Menu

- 1. Add Menu
- 2. Update Menu
- 3. Remove Menu
- 4. Get Menu By Type
- 5. Get Menu By Size
- 6. Print Menu
- 7. Exit
- 1. Add Menu
- 2. Update Menu
- 3. Remove Menu
- 4. Get Menu By Type
- 5. Get Menu By Size
- 6. Print Menu
- 7. Exit

3.5 Customized Pizza Menu Management Menu

- 1. Add customized pizza ingredient option
- 2. Update customized pizza ingredient option
- 3. Remove customized pizza ingredient option
- 4. Print all pizza base options
- 5. Print all pizza sauce options
- 6. Print all pizza topping options
- 7. Print all pizza additional ingredients options
- 8. Print all pizza options
- 0. Exit
- 1. Add customized pizza ingredient option
- 2. Update customized pizza ingredient option
- 3. Remove customized pizza ingredient option
- 4. Print all pizza base options
- 5. Print all pizza sauce options
- 6. Print all pizza topping options
- 7. Print all pizza additional ingredients options
- 8. Print all pizza options
- 0. Exit

3.6 Side Dish Management Menu

- 1. Add Side Dish
- 2. Update Side Dish
- 3. Remove Side Dish
- 4. Get Side Dish By Type
- 5. Print All Side Dishes
- Exit
- 1. Add Side Dish
- 2. Update Side Dish
- 3. Remove Side Dish
- 4. Get Side Dish By Type
- 5. Print All Side Dishes
- 0. Exit

3.7 Order Management Menu

- 1. Add Order
- 2. Display Order Details
- 3. Generate order slips for kitchen staff
- Exit
- 1. Add Order
- 2. Display Order Details
- 3. Generate order slips for kitchen staff
- 0. Exit

4. Test Cases and Results

Submit a comprehensive document containing your test cases and corresponding test results. Each test case should have a detailed description, the expected outcome, and the actual outcome, including screenshots if applicable.

4.1. Recipe Mangement

Red frames are user inputs, green frames are execution result

- 1. Enter menu management menu: enter command 1 in main menu
 - 1. Recipe Management
 - 2. Inventory Management
 - 3. Menu Management
 - 4. Customized Pizza Menu Management

```
Enter command: 1

1. Add Recipe
2. Update Recipe
3. Remove Recipe
4. Search Recipe By Name
5. Print Recipes
6. Exit
```

2. Add Recipe: enter command 1

```
1. Add Recipe
2. Update Recipe
3. Remove Recipe
4. Search Recipe By Name
5. Print Recipes
6. Exit
Enter command: 1
Enter recipe name: aa
Enter ingredient name: bb
Enter quantity: 1.0
Enter unit: kg
Enter reorder level: 1
Do you want to add more ingredients? (y/n): n
Recipe has been added!
1. Add Kecipe
2. Update Recipe
3. Remove Recipe
4. Search Recipe By Name
5. Print Recipes
6. Exit
Enter command: 5
{'name': 'aa', 'ingredients': [{'name': 'bb', 'quantity': 1.0, 'unit': 'kg', 'reorder_level': 1}]}
```

To see the added recipe, please refer to the next use case

3. Search Recipe by name: enter command 4

```
    Add Recipe
    Update Recipe
    Remove Recipe
    Search Recipe By Name
    Print Recipes
    Exit
        Enter command: 4
    Enter the recipe name you want to search: aa
        ['name': 'aa', 'ingredients': [{'name': 'bb', 'quantity': 1.0, 'unit': 'kg', 'reorder_level': 1}]}
```

4. Update Recipe: enter command 2

```
1. Add Recipe
2. Update Recipe
3. Remove Recipe
4. Search Recipe By Name
Print Recipes
6. Exit
Enter command: 2
Enter the recipe name you want to update: aa
Enter ingredient name you want to update: bb
1. Update quantity
2. Update unit
3. Update reorder level
4. Exit
Enter command: 1
Enter quantity: 4.0
1. Update quantity
2. Update unit
Update reorder level
4. Exit
Enter command: 2
Enter unit: g
1. Update quantity
2. Update unit
3. Update reorder level
4. Exit
Enter command: 3
Enter reorder level: 2

    Update quantity

2. Update unit
3. Update reorder level
4. Exit
Enter command: 4
Recipe has been updated!
```

5. Remove Recipe: enter command 3

Use case 1: recipe is found

```
    Add Recipe

2. Update Recipe
3. Remove Recipe
4. Search Recipe By Name
5. Print Recipes
6. Exit
Enter command: 3
Enter the recipe name you want to remove: aa
Recipe has been removed!
1. Add Recipe
2. Update Recipe
3. Remove Recipe
4. Search Recipe By Name
5. Print Recipes
6. Exit
Enter command: 5
No recipes!
```

Use case 2: recipe is not found

```
1. Add Recipe
2. Update Recipe
3. Remove Recipe
4. Search Recipe By Name
5. Print Recipes
6. Exit
Enter command: 3
Enter the recipe name you want to remove: cc
Recipe not found!
```

6. Print all recipes: enter command 5

```
    Add Recipe
    Update Recipe
    Remove Recipe
    Search Recipe By Name
    Print Recipes
    Exit
    Enter command: 5
    [{'name': 'aa', 'ingredients': [{'name': 'bb', 'quantity': 1.0, 'unit': 'kg', 'reorder_level': 1}]}
```

7. Exit: enter command 6 to exit to main men

```
1. Add Recipe
2. Update Recipe
3. Remove Recipe
4. Search Recipe By Name
5. Print Recipes
6. Exit
Enter command: 6
1. Recipe Management
2. Inventory Management
3. Menu Management
4. Customized Pizza Menu Management
0. Exit
```

4.2. Inventory Mangement

Red frames are user inputs, green frames are execution result

1. Enter inventory management menu: Enter command 2 in main menu

```
1. Recipe Management
2. Inventory Management
3. Menu Management
4. Customized Pizza Menu Management
Side Dish Management
6. Order Management
0. Exit
Enter command: 2
1. Add Ingredient
2. Update Ingredient
3. Remove Ingredient
4. Check Reorder Levels
Print Inventory
6. Use Ingredient By Recipe
7. Search Ingredient By Name
8. Exit
Enter command:
```

2. Add Inventory: Enter command 1

```
1. Add Ingredient
2. Update Ingredient
3. Remove Ingredient
4. Check Reorder Levels
5. Print Inventory
6. Use Ingredient By Recipe
7. Search Ingredient By Name
8. Exit
Enter command: 1
Enter ingredient name: aa
Enter quantity: 1
Enter unit: kg
Enter reorder level: 1
Ingredient has been added!
```

3. Update Menu: Enter command 1

```
Enter ingredient name you want to update: aa

1. Update quantity
2. Update unit
3. Update reorder level
4. Exit
Enter command: 1
Enter quantity: 3
1. Update quantity
2. Update unit
3. Update reorder level
4. Exit
Enter command: 4
Ingredient has been updated!
```

4. Print Inventory: enter command 5

```
1. Add Ingredient
2. Update Ingredient
3. Remove Ingredient
4. Check Reorder Levels
5. Print Inventory
6. Use Ingredient By Recipe
7. Search Ingredient By Name
8. Exit
Enter command: 5
{'name': 'bb', 'quantity': 0.5, 'unit': 'l', 'reorder_level': 1}
{'name': 'cc', 'quantity': 0.39999999999999, 'unit': 'l', 'reorder_level': 1}
{'name': 'aa', 'quantity': 3.0, 'unit': 'kg', 'reorder_level': 1}
```

Check Reorder Levels: enter command 4

```
1. Add Ingredient
2. Update Ingredient
3. Remove Ingredient
4. Check Reorder Levels
Print Inventory
6. Use Ingredient By Recipe
7. Search Ingredient By Name
8. Exit
Enter command: 4
Low stock for bb! Current stock: 0.5
Low stock for cc! Current stock: 0.3999999999999999
1. Add Ingredient
2. Update Ingredient
3. Remove Ingredient
4. Check Reorder Levels
Print Inventory
6. Use Ingredient By Recipe
7. Search Ingredient By Name
8. Exit
Enter command:
```

6. Use Ingredient By Recipe: enter command 6

```
    Add Ingredient

2. Update Ingredient
3. Remove Ingredient
4. Check Reorder Levels
Print Inventory
6. Use Ingredient By Recipe
7. Search Ingredient By Name
8. Exit
Enter command: 6
Enter the recipe name you want to use: aa
Ingredient has been used!
Low stock for bb! Current stock: -4.5
Low stock for cc! Current stock: 0.399999999999999

    Add Ingredient

2. Update Ingredient
3. Remove Ingredient
4. Check Reorder Levels
Print InventoryUse Ingredient By Recipe
7. Search Ingredient By Name
8. Exit
```

7. Search Ingredient By Name: enter command 7

```
    Add Ingredient
    Update Ingredient
    Remove Ingredient
    Check Reorder Levels
    Print Inventory
    Use Ingredient By Recipe
    Search Ingredient By Name
    Exit
    Enter command: 7
    Enter the ingredient name you want to search: aa
    {'name': 'aa', 'quantity': 3.0, 'unit': 'kg', 'reorder_level': 1}
```

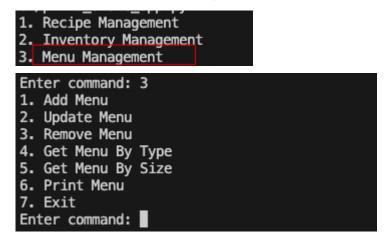
8. Remove Ingredient: enter command 3

```
    Add Ingredient
    Update Ingredient
    Remove Ingredient
    Check Reorder Levels
    Print Inventory
    Use Ingredient By Recipe
    Search Ingredient By Name
    Exit
    Enter command: 3
    Enter the ingredient name you want to remove: aa
    Ingredient has been removed!
```

4.3. Menu Mangement

Red frames are user inputs, green frames are execution result

1. Enter menu management menu: Enter command 3 in main menu



2. Add Menu: Enter command 1

```
1. Add Menu
2. Update Menu
3. Remove Menu
4. Get Menu By Type
5. Get Menu By Size
6. Print Menu
7. Exit
Enter command: 1
Enter menu name: aa
Enter menu description: desc
Enter menu price: 1.00
Enter Enter menu size: 1. Medium 2. Large 3. Extra Large: 1
Enter ingredients (separated by comma): a,d,v
Menu has been added!
```

9. Update Menu: Enter command 2

```
Enter menu price: 3.00
1. Update menu description
2. Update menu price
3. Update menu size
4. Update menu type
5. Update ingredients
6. Exit
Enter command: 3
Enter the menu size you want to search: 1. Medium 2. Large 3. Extra Large:2
1. Update menu description
2. Update menu price
3. Update menu size
4. Update menu type
5. Update ingredients
6. Exit
Enter command: 4
Enter the menu type you want to search: 1. Regular 2. Sicilian: 2
1. Update menu description
2. Update menu price
3. Update menu size
4. Update menu type
5. Update ingredients
6. Exit
Enter command: 5
Enter ingredients (separated by comma): i,g
1. Update menu description
2. Update menu price
3. Update menu size
4. Update menu type
Update ingredients
6. Exit
Enter command: 6
Menu has been updated!
1. Add Menu
2. Update Menu
3. Remove Menu
4. Get Menu By Type
5. Get Menu By Size
6. Print Menu
7. Exit
Enter command: 6
{'name': 'aa', 'description': 'desc2', 'price': 3.0, 'size': 'LARGE', 'ingredients': 'i,g', 'type': 'SICILIAN'}
```

10. Get Menu By Type: Enter command 4

Case1: find results

```
1. Add Menu
2. Update Menu
3. Remove Menu
4. Get Menu By Type
5. Get Menu By Size
6. Print Menu
7. Exit
Enter command 4
Enter the menu type you want to search: 1. Regular 2. Sicilian: 2
['name': 'aa', 'description': 'desc2', 'price': 3.0, 'size': 'LARGE', 'ingredients': 'i,g', 'type': 'SICILIAN'}
```

Case2: don't find results

```
    Add Menu
    Update Menu
    Remove Menu
    Get Menu By Type
    Get Menu By Size
    Print Menu
    Exit
    Enter command: 4
    Enter the menu type you want to search: 1. Regular 2. Sicilian: 1
    Menu not found!
```

11. Get Menu By Size: Enter command 5

Case1: find results

```
    Add Menu

2. Update Menu
3. Remove Menu

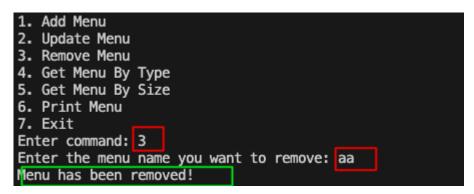
    Get Menu By Type
    Get Menu By Size

6. Print Menu
7. Exit
Enter command: 5
Enter the menu size you want to search: 1. Medium 2. Large 3. Extra Large 2 {'name': 'aa', 'description': 'desc2', 'price': 3.0, 'size': 'LARGE', 'ingredients': 'i,g', 'type': 'SICILIAN'}
        Case2: don't find results
1. Add Menu
2. Update Menu
3. Remove Menu
4. Get Menu By Type
5. Get Menu By Size
6. Print Menu
7. Exit
Enter command: 5
Enter the menu size you want to search: 1. Medium 2. Large 3. Extra Large:3
Menu not found!
```

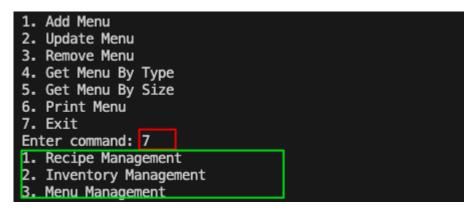
Print all menus: Enter command 6

```
1. Add Menu
2. Update Menu
3. Remove Menu
4. Get Menu By Type
5. Get Menu By Size
6. Print Menu
7. Exit
Enter command: 6
{'name': 'aa', 'description': 'desc2', 'price': 3.0, 'size': 'LARGE', 'ingredients': 'i,g', 'type': 'SICILIAN'}
```

13. Remove Menu: Enter command 3



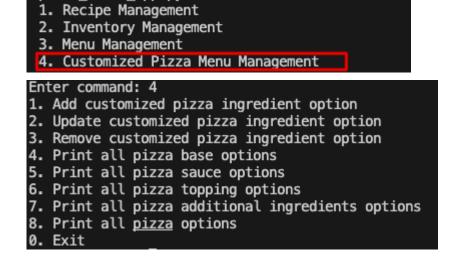
14. Exit to main menu: enter command 7



4.4 Customized Pizza Menu Management

Red frames are user inputs, green frames are execution result

1. Enter menu management menu: Enter command 4 in main menu



2. Print all customized options: Enter command 8

```
1. Add customized pizza ingredient option
Update customized pizza ingredient option
Remove customized pizza ingredient option
4. Print all pizza base options
Print all pizza sauce options
Print all pizza topping options
7. Print all pizza additional ingredients options
Print all pizza options
Exit
Enter command: 8
Pizza bases:
Thin - $1.0
Thick - $2.0
Pizza sauses:
Tomato - $1.0
BBQ - $1.0
Garlic - $1.0
Pizza toppings:
Pepperoni - $1.0
Ham - $1.0
Bacon - $1.0
Mushrooms – $1.0
Onion - $1.0
Black_olives - $1.0
Tomato_slices - $1.0
Pineapple – $1.0
Pizza add ingredients:
Extra_cheese - $1.0
Extra_meat - $1.0
Extra_veggies - $1.0
```

3. Add option: enter command 1

```
    Add customized pizza ingredient option
    Update customized pizza ingredient option
    Remove customized pizza ingredient option
    Print all pizza base options
    Print all pizza sauce options
    Print all pizza topping options
    Print all pizza additional ingredients options
    Print all pizza options
    Exit
    Enter command: 1
    Enter the option type you want to add: 1. Bases 2. Sause 3. Toppings 4. Additional Ingredients: 1
    Enter option name: aa
    Enter option price 2.00
    Add option has been done!
```

Enter command 4 to print base options. The results have included the added option:

```
    Add customized pizza ingredient option
    Update customized pizza ingredient option
    Remove customized pizza ingredient option
    Print all pizza base options
    Print all pizza sauce options
    Print all pizza topping options
    Print all pizza additional ingredients options
    Print all pizza options
    Exit
    Enter command: 4
    Pizza bases:
    Thin - $1.0
    Thick - $2.0
    aa - $2.0
```

4. Update an option: enter command 2

```
1. Add customized pizza ingredient option
2. Update customized pizza ingredient option
3. Remove customized pizza ingredient option
4. Print all pizza base options
5. Print all pizza sauce options
6. Print all pizza topping options
7. Print all pizza additional ingredients options
8. Print all pizza options
9. Exit
Enter command: 2
Enter the option type you want to update: 1. Bases 2. Sauses 3. Toppings 4. Additional Ingredients: 1
Enter option price: 4.00
Update option has been done!
```

Enter command 4 to print base options. The results have included the updated option:

```
1. Add customized pizza ingredient option
2. Update customized pizza ingredient option
3. Remove customized pizza ingredient option
4. Print all pizza base options
5. Print all pizza sauce options
6. Print all pizza topping options
7. Print all pizza additional ingredients options
8. Print all pizza options
9. Exit
Enter command: 4
Pizza bases:
Thin - $1.0
Thick - $2.0
aa - $4.0
```

5. Remove an option: enter command 3

```
1. Add customized pizza ingredient option
2. Update customized pizza ingredient option
3. Remove customized pizza ingredient option
4. Print all pizza base options
5. Print all pizza sauce options
6. Print all pizza topping options
7. Print all pizza additional ingredients options
8. Print all pizza options
0. Exit
Enter command: 3
Enter the option type you want to remove: 1. Bases 2. Sauses 3. Toppings 4. Additional Ingredients: 1
Enter the option name you want to remove: aa
Remove option has been done!
```

Enter command 4 to print base options. The results have removed the option:

```
1. Add customized pizza ingredient option
2. Update customized pizza ingredient option
3. Remove customized pizza ingredient option
4. Print all pizza base options
5. Print all pizza sauce options
6. Print all pizza topping options
7. Print all pizza additional ingredients options
8. Print all pizza options
9. Exit
Enter command: 4

Pizza bases:
Thin - $1.0
Thick - $2.0
```

6. Print all pizza base options: enter command 4

```
1. Add customized pizza ingredient option
2. Update customized pizza ingredient option
3. Remove customized pizza ingredient option
4. Print all pizza base options
5. Print all pizza sauce options
6. Print all pizza topping options
7. Print all pizza additional ingredients options
8. Print all pizza options
0. Exit
Enter command: 4

Pizza bases:
Thin - $1.0
Thick - $2.0
```

7. Print all pizza sauce options: enter command 5

```
    Add customized pizza ingredient option
    Update customized pizza ingredient option
    Remove customized pizza ingredient option
    Print all pizza base options
    Print all pizza sauce options
    Print all pizza topping options
    Print all pizza additional ingredients options
    Print all pizza options
    Exit
    Enter command: 5
    Pizza sauses:
    Tomato - $1.0
    BBQ - $1.0
    Garlic - $1.0
```

8. Print all pizza topping options: enter command 6

```
1. Add customized pizza ingredient option
2. Update customized pizza ingredient option
3. Remove customized pizza ingredient option
4. Print all pizza base options
5. Print all pizza sauce options
6. Print all pizza topping options
7. Print all pizza additional ingredients options
8. Print all pizza options
Exit
Enter command: 6
Pizza toppings:
Pepperoni - $1.0
Ham - $1.0
Bacon - $1.0
Mushrooms – $1.0
Onion - $1.0
Black_olives - $1.0
Tomato slices - $1.0
Pineapple – $1.0
```

9. Print all pizza additional options: enter command 7

```
    Add customized pizza ingredient option
    Update customized pizza ingredient option
    Remove customized pizza ingredient option
    Print all pizza base options
    Print all pizza sauce options
    Print all pizza topping options
    Print all pizza additional ingredients options
    Print all pizza options
    Exit
    Enter command: 7
    Pizza add_ingredients:
    Extra_cheese - $1.0
    Extra_meat - $1.0
    Extra_veggies - $1.0
```

Exit to main menu: enter command 0

```
1. Add customized pizza ingredient option
2. Update customized pizza ingredient option
3. Remove customized pizza ingredient option
4. Print all pizza base options
5. Print all pizza sauce options
6. Print all pizza topping options
7. Print all pizza additional ingredients options
8. Print all pizza options
0. Exit
Enter command: 0

    Recipe Management

2. Inventory Management
3. Menu Management
4. Customized Pizza Menu Management
0. Exit
Enter command:
```

4.5 Customized Pizza Menu Management

Red frames are user inputs, green frames are execution result

1. Enter menu management menu: Enter command 5 in main menu

```
    Recipe Management
    Inventory Management
    Menu Management
    Customized Pizza Menu Management
    Side Dish Management
```

```
Enter command: 5
1. Add Side Dish
2. Update Side Dish
3. Remove Side Dish
4. Get Side Dish By Type
5. Print All Side Dishes
0. Exit
```

2. Add Side Dish: Enter command 1

```
1. Add Side Dish
2. Update Side Dish
3. Remove Side Dish
4. Get Side Dish By Type
5. Print All Side Dishes
Exit
Enter command: 1
Enter side dish name: aa
Enter side dish description: desc
Enter side dish price: 1.00
Enter the side dish type: 1. Appetizers 2. Desserts 3. Beverages: 1
Add side dish has been done!
1. Add Side Dish
2. Update Side Dish
3. Remove Side Dish
4. Get Side Dish By Type
5. Print All Side Dishes
Exit
Enter command: 5
'name': 'aa', 'description': 'desc', 'price': 1.0, 'type': 'APPETIZERS'}
```

3. Update Side Dish: Enter command 2

```
1. Add Side Dish
2. Update Side Dish
3. Remove Side Dish
Get Side Dish By Type
5. Print All Side Dishes
Exit
Enter command: 2
Enter side dish name you want to update: aa
Enter side dish description: bb
Enter side dish price: 3.00
Enter the side dish type: 1. Appetizers 2. Desserts 3. Beverages 3
Update side dish has been done!
1. Add Side Dish
2. Update Side Dish
3. Remove Side Dish
4. Get Side Dish By Type
5. Print All Side Dishes
Exit
Enter command: 5
{'name': 'aa', 'description': 'bb', 'price': 3.0, 'type': 'BEVERAGES'}
```

4. Remove Side Dish: Enter command 3

```
1. Add Side Dish
2. Update Side Dish
3. Remove Side Dish
Get Side Dish By Type
Print All Side Dishes
Exit
Enter command: 3
Enter the side dish name you want to remove: aa
Remove side dish has been done!

    Add Side Dish

2. Update Side Dish
3. Remove Side Dish
4. Get Side Dish By Type
5. Print All Side Dishes
Exit
Enter command: 5
No side dishes!
```

5. Get Side Dish By Type: Enter command 4

Use case 1: find side dish:

```
1. Add Side Dish
2. Update Side Dish
3. Remove Side Dish
4. Get Side Dish By Type
5. Print All Side Dishes
0. Exit
Enter command: 4
Enter the side dish type: 1. Appetizers 2. Desserts 3. Beverages: 3
{'name': 'aa', 'description': 'bb', 'price': 3.0, 'type': 'BEVERAGES'}
Use case 2: can't find side dish
1. Add Side Dish
2. Update Side Dish
3. Remove Side Dish
4. Get Side Dish By Type
5. Print All Side Dishes
0. Exit
Enter command: 4
Enter the side dish type: 1. Appetizers 2. Desserts 3. Beverages: 2
Side dish not found!
```

Print All Side Dishes: Enter command 5

```
    Add Side Dish
    Update Side Dish
    Remove Side Dish
    Get Side Dish By Type
    Print All Side Dishes
    Exit
    Enter command: 5
    ['name': 'aa', 'description': 'bb', 'price': 3.0, 'type': 'BEVERAGES'}]
```

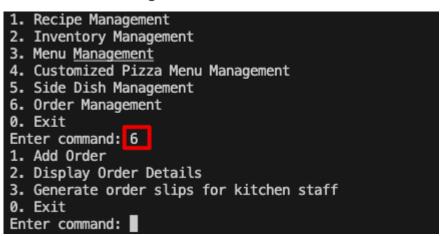
7. Exit to main menu: Enter command 0

```
    Add Side Dish
    Update Side Dish
    Remove Side Dish
    Get Side Dish By Type
    Print All Side Dishes
    Exit
    Enter command: 0
    Recipe Management
    Inventory Management
    Menu Management
    Customized Pizza Menu Management
    Side Dish Management
```

4.6 Order Management

Red frames are user inputs, green frames are execution result

1. Enter order management menu: Enter command 6 in main menu



2. Add Side Dish: Enter command 1

```
1. Add Order
2. Display Order Details
3. Generate order slips for kitchen staff
0. Exit
Enter command: 1
Do you want order standard pizzas? (y/n)
Enter command: y
Please select the menu name for your pizza:
Name: aa, Description: b, Price: 1.0, Size: MEDIUM, Ingredients: a,d,f, Type: SICILIAN
Enter the menu name: aa
Enter quantity: 1
Do you want to add more standard pizzas? (y/n)
Enter command: n
Do you want order customized pizzas? (y/n) 2. ord
Enter command: y
Please select the base name for your pizza:
Name: Thin, Price: $1.0
Name: Thick, Price: $2.0
Enter the base name: Thin
Please select the sause name for your pizza:
Name: Tomato, Price: $1.0
Name: BBQ, Price: $1.0
Name: Garlic, Price: $1.0
Enter the sause name: BBQ
Please select the topping name for your pizza:
Name: Pepperoni, Price: $1.0
Name: Ham, Price: $1.0
Name: Bacon, Price: $1.0
Name: Mushrooms, Price: $1.0
Name: Onion, Price: $1.0
Name: Black_olives, Price: $1.0
Name: Tomato_slices, Price: $1.0
Name: Pineapple, Price: $1.0
Enter the topping name: Ham
Enter quantity: 1
```

```
Enter the topping name: Ham
Enter quantity: 1
Do you want to add more topping? (y/n)
Enter command: y
Please select the topping name for your pizza:
Name: Pepperoni, Price: $1.0
Name: Ham, Price: $1.0
Name: Bacon, Price: $1.0
Name: Mushrooms, Price: $1.0
Name: Onion, Price: $1.0
Name: Black_olives, Price: $1.0
Name: Tomato_slices, Price: $1.0
Name: Pineapple, Price: $1.0
Enter the topping name: Bacon
Enter quantity: 3
Do you want to add more topping? (y/n)
Enter command: n
Please select the additional ingredient name for your pizza:
Name: Extra_cheese, Price: $1.0
Name: Extra_meat, Price: $1.0
Name: Extra_veggies, Price: $1.0
Enter the additional ingredient name: Extra_cheese
Enter quantity: 2
Do you want to add more additional ingredient? (y/n)
Enter command: n
Do you want to add more customized pizzas? (y/n)
Enter command: n
Do you want order side dishes? (y/n)
Enter command: y
Name: aa, Description: dd, Price: $3.0, Type: APPETIZERS
Enter the side dish name you want to order: aa
Enter quantity: 3
Do you want to add more side dishes? (y/n)
Enter command: n
Do you want to display the order details? (y/n)
```

```
Enter the side dish name you want to order: aa
Enter quantity: 3
Do you want to add more side dishes? (y/n)
Enter command: n
Do you want to display the order details? (y/n)y
Order details:
Standard pizzas:
        Name: aa, Description: b, Price: $1.0, Size: MEDIUM, Type: SICILIAN
        Sub Total: $1.0
Customized pizzas:
        Base: Thin
        Sause: BBQ
        Toppings:
                Name: Ham, Price: $1.0, Quantity: 1, Total: $1.0
                Name: Bacon, Price: $1.0, Quantity: 3, Total: $3.0
        Additional ingredients:
                Name: Extra_cheese, Price: $1.0, Quantity: 2, Total: $2.0
        Sub Total: $8.0
Side dishes:
        Name: aa, Description: dd, Price: $3.0, Type: APPETIZERS
        Sub Total: $3.0
Total: $12.0
Add order has been done!
1. Add Order
2. Display Order Details
3. Generate order slips for kitchen staff
Exit
```

Enter command:

3. Generate order slips for kitchen staff: Enter command 3

```
1. Add Order
2. Display Order Details
3. Generate order slips for kitchen staff
0. Exit
Enter command: 3
Please select the order id:
1
2
3
4
Enter the order id: 5
Order ID: 5
        Standard Pizzas:
               Name: aa, Size: MEDIUM, Type: SICILIAN
                Recipe: Name: aa, Ingredients: {'name': 'bb', 'quantity': 5.0, 'unit': 'kg', 'reorder_level': 1},
        Customized Pizzas:
                Base: Thin
                Sauce: BBQ
                Toppings:
                        Name: Ham, Quantity: 1
                        Name: Bacon, Quantity: 3
                Added Ingredients:
                        Name: Extra_cheese, Quantity: 2
        Side Dishes:
               Name: aa, Quantity: 3
1. Add Order
2. Display Order Details
3. Generate order slips for kitchen staff
Exit
Enter command:
```

4. Exit to main menu: Enter command 0

```
    Add Order
    Display Order Details
    Generate order slips for kitchen staff
    Exit
    Enter command: 0
    Recipe Management
    Inventory Management
    Menu Management
    Customized Pizza Menu Management
    Side Dish Management
    Order Management
    Exit
    Enter command:
```