

CS370 Spring 2019 Project 2

Restaurants Menu GUI

by Wenbin Wu

Introduction:

Project 2: Design a GUI to display restaurant menus. Administrator has the ability to add/edit/delete restaurants. Customer GUI can search for a restaurant and sort restaurants by name or by distance to the customer.

Programming Language

Written in Python 3.7.3

3rd-party Python libraries

wxpython 4.0.4 – used to build the GUI

pyinstaller 3.4 – used to build the binary executables

Source files

- data folder - contain raw data used to generate the initial database.
- mac folder - contain the binary executable file and database file for MacOS.
- win folder - contain the binary executable file and database files for MS Windows.
- generatedb.py - run this file to generate the initial database of 10 restaurants.
- gui.py - contain the GUI classes.
- main.py - main py file for the app.
- restaurant.py - contain object classes.
- test.py - used to print out the data in the database file.
- macapp.spec - used by pyinstaller to build Mac app binary file.
- winexe.spec - used by pyinstaller to build windows exe binary file.

Running the application

The application can be run from binary executable files or from source code.

on Windows:

open .\win folder, run Restaurants.exe

on Mac:

open .\mac folder, run Restaurants.app

run from source code

1. Must install Python3.7 or above, version below 3.7 will not work:

Latest version of Python can be downloaded from

<https://www.python.org/downloads/>

2. Install wxpython using pip:

from command line type:

`pip3 install wxpython`

3a. After installing Python3.7 and wxpython, application should be able to run from an IDE by running the main.py.

3b. Alternative way to run from the source code is from the command line. From command line, navigate to the source code folder containing .py files, then use the following command to run the program:

`python3 main.py`

Main GUI (Customer GUI) Description:

- The default GUI is the customer GUI.
- Displays every restaurant stored in the database.
- Customers can search a restaurant by name.
- When given a location, restaurants can be sorted by distance to the customer.
- Each restaurant has it's own menu page. Which can be displayed by double clicking its name.
- Customers can not access administrator functions without login via a valid admin username and password.

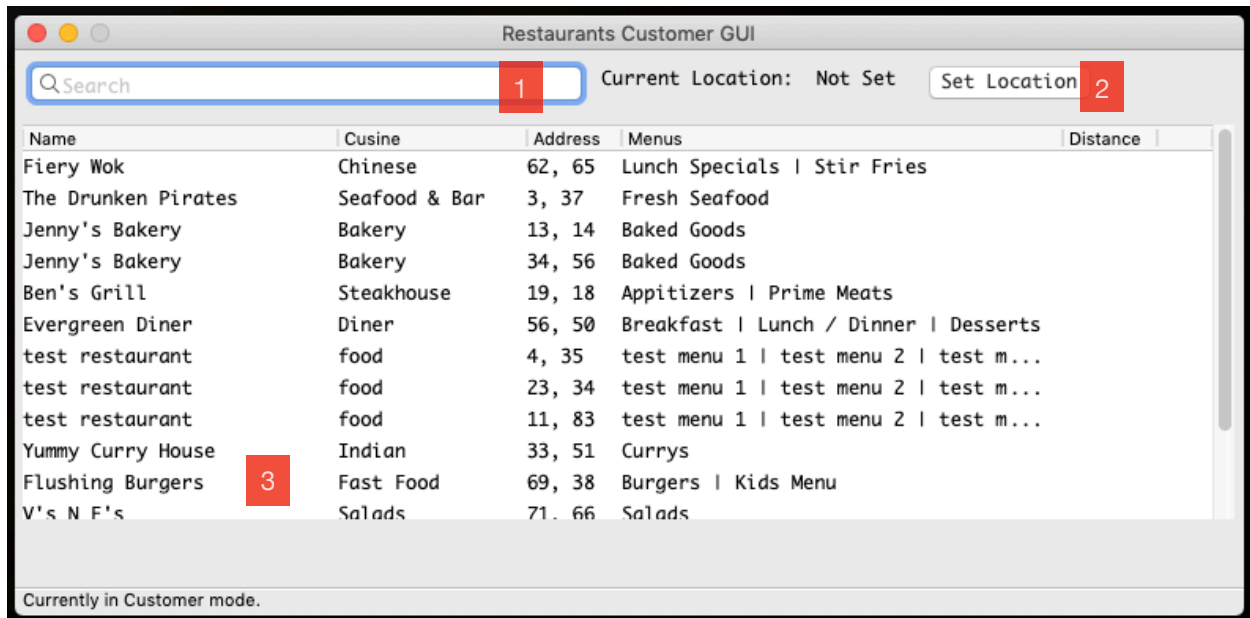
Administrator GUI Description:

- Contains the same functions as Customer GUI.
- In addition, administrators has the ability to add/edit/delete restaurants.
- Default hardcoded admin account is :
 - username: admin
 - password: admin

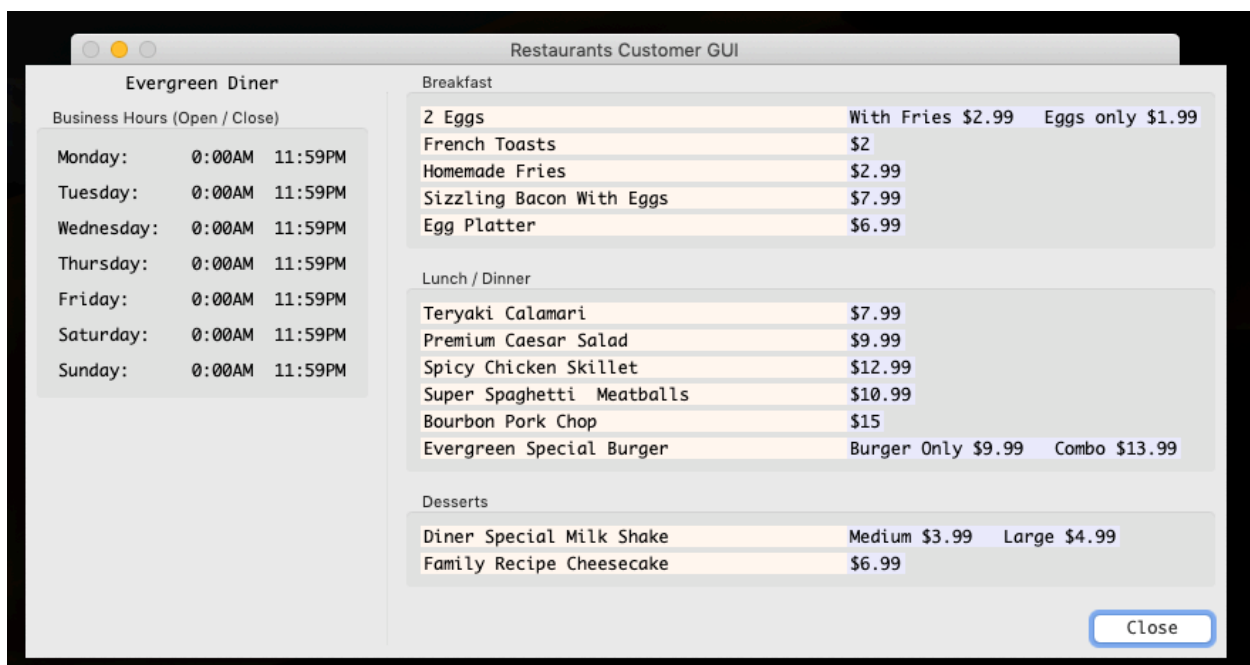
GUI And Usage Tour

Customer GUI

1 Search bar. Restaurants can be searched by name. 2 Set location button is used to enter customer location. 3 Lists the restaurants in the database. The list can be sorted by clicking on any of the 5 headers on top of the list. Double click on any of the restaurant to show its own menu page.

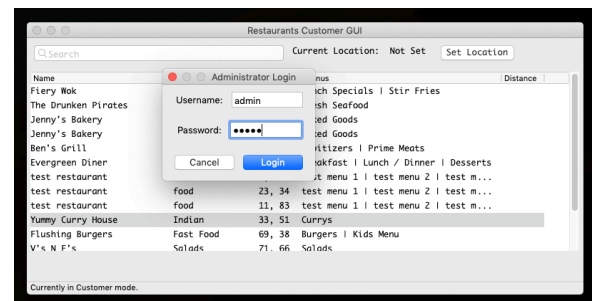
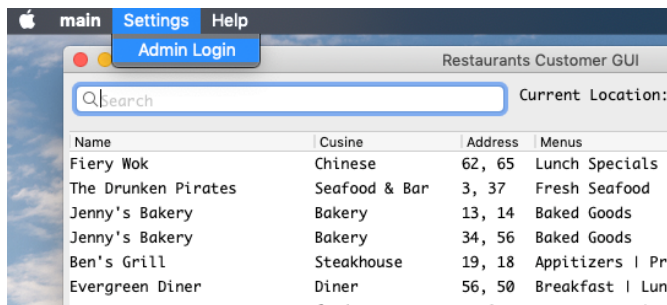


Restaurant Menu Page



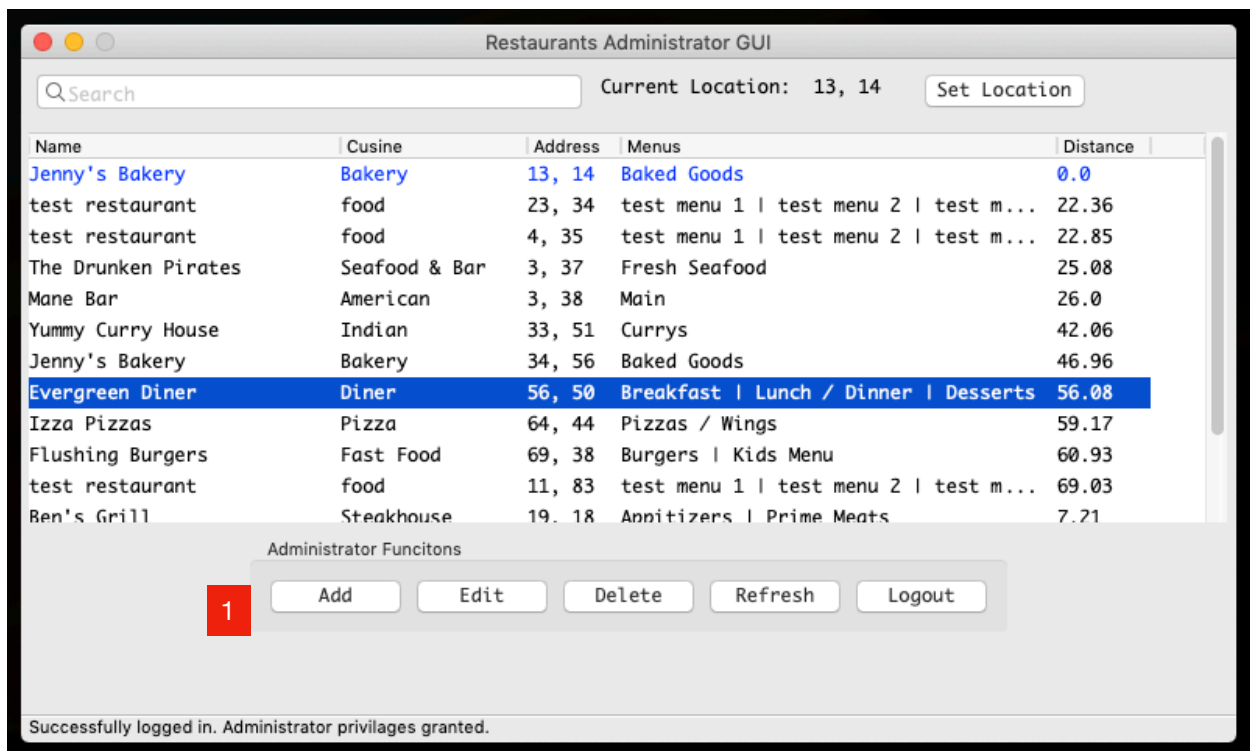
Admin Login

Administrator functions are enabled only after logging in from the Settings menu.



Administrator GUI

1. Administrator functions. Existing restaurants can be edited when it is selected from the list and the "Edit" button is clicked. A new restaurant can be added by clicking on the "Add" button. Both operations are done on the Editor GUI.



Editor GUI

A new restaurant can not be saved without a restaurant name, its cuisine type, at least 1 address, valid business hours and at least 1 menu containing at least 1 menu item.

The screenshot shows the 'Restaurants Administrator GUI' window. It contains several sections for data entry:

- Restaurant Name:** A text input field.
- Cuisine:** A text input field.
- Franchise:** A dropdown menu currently set to 'No'.
- Address:** A section with 'X:' and 'Y:' input fields, an 'Add' button, and a list box containing '5, 18' with a 'Remove' button.
- Business Hours (Open / Close):** A section with input fields for each day of the week (Monday through Sunday), each with two adjacent fields for opening and closing times.
- Menus:** A section with 'Item Name:' and 'Item Prices:' input fields, and buttons for 'Insert Item', 'Modify Item', and 'Remove Item'. Below this is a table with columns 'Menu Item' and 'Prices'. Further down is a 'Menu Title:' input field with buttons for 'Insert Menu', 'Modify Menu', and 'Remove Menu', followed by another table with columns 'Menu Title' and '# of items'.

At the bottom right of the window are buttons for 'Preview', 'Save', 'Clear', and 'Cancel'.

If Franchise is set to No. Only one address can be entered. Otherwise, multiple addresses can be entered.

This close-up shows the 'Franchise: No' dropdown. The 'Address' section has 'X:' and 'Y:' input fields. The 'Add' button is highlighted. Below the input fields is a list box containing '5, 18' and a 'Remove' button.

This close-up shows the 'Franchise: Yes' dropdown. The 'Address' section has 'X:' and 'Y:' input fields. The 'Add' button is highlighted. Below the input fields is a list box containing three entries: '✓ 5, 18', '3, 29', and '20, 76'. The '20, 76' entry is selected and highlighted in blue. A 'Remove' button is also visible.

Business Hours must be filled. Either with opening and closing hours or the word "Closed" indicating a closed day.

Business Hours (Open / Close)

Monday:	Closed	
Tuesday:		Closed
Wednesday:	11AM	9PM
Thursday:	11AM	9PM
Friday:	11AM	10PM
Saturday:	11AM	10PM
Sunday:	11AM	10PM

Creating a restaurant menu

1. Enter a title for the menu. 2. Create a menu item by entering an item name and prices. 3. Click on "Insert Item" to add the item to the menu. 4. Menu items are displayed in the items list box. 5. When all items are entered, click on "Insert Menu" to save the menu. 6. Saved menus are displayed in the menus list box.

Restaurants Administrator GUI

Menus

2 Item Name: Coconut Milk Tea Item Prices: \$4.99

Insert Item 3 Modify Item Remove Item

Menu Item	Prices
Red Bean Milk Tea	\$4.99
Herbal Iced Tea	Med \$4.50 Lrg \$5.55

4

1 Menu Title: Tea Insert Menu 5 Modify Menu Remove Menu

Menu Title	# of items
Hot Drinks	2

6

Preview Save Clear Cancel

Editing and removing an menu item

1. Select an item. 2. Item information is now editable. 3. Make changes. 4. Click on "Modify Item" to save the changes. 5. While an item is selected, click "Remove Item" to remove it from the menu.

Restaurants Administrator GUI

Menus

Item Name: Herbal Iced Tea Item Prices: S \$3.99 M \$4.50 L \$5.55

Insert Item Modify Item Remove Item

Menu Item	Prices
Red Bean Milk Tea	\$4.99
Herbal Iced Tea	Med \$4.50 Lrg \$5.55
Coconut Milk Tea	\$4.99

Menu Title: Tea Insert Menu Modify Menu Remove Menu

Menu Title	# of items
Hot Drinks	2

Preview Save Clear Cancel

Select an existing menu and its items will be populated in the items list box, ready for further editing. After changes are made, click "Modify Menu" to save the changes. A selected menu can be removed entirely by clicking "Remove Menu".

Restaurants Administrator GUI

Menus

Item Name: Item Prices:

Insert Item Modify Item Remove Item

Menu Item	Prices
coffee	\$2.99
Hot Tea	\$2.99

Menu Title: Hot Drinks Insert Menu Modify Menu Remove Menu

Menu Title	# of items
Hot Drinks	2
Tea	3

Preview Save Clear Cancel

Once all information for a restaurant is entered, click the “Save” button to save the restaurant to the database. The “Preview” button provides a preview of what the customer will see on the restaurant page. The “Clear” will reset and clear all data on screen.

The screenshot shows the 'Restaurants Administrator GUI' with a form for adding or editing a restaurant. The form includes fields for Restaurant Name, Cuisine, Franchise, Address (X, Y), and Business Hours (Open / Close). There are also buttons for 'Add', 'Remove', 'Insert Item', 'Modify Item', 'Remove Item', 'Insert Menu', 'Modify Menu', and 'Remove Menu'. At the bottom, there are buttons for 'Preview', 'Save', 'Clear', and 'Cancel'.

After adding or editing a restaurant, click “Refresh” to reload and update the restaurant data on screen.

The screenshot shows the 'Restaurants Administrator GUI' with a list of restaurants and the Administrator Functions section. The list includes columns for Name, Cuisine, Address, Menus, and Distance. The Administrator Functions section includes buttons for Add, Edit, Delete, Refresh, and Logout.

Name	Cuisine	Address	Menus	Distance
Fiery Wok	Chinese	62, 65	Lunch Specials Stir Fries	70.72
The Drunken Pirates	Seafood & Bar	3, 37	Fresh Seafood	25.08
Jenny's Bakery	Bakery	13, 14	Baked Goods	0.0
Jenny's Bakery	Bakery	34, 56	Baked Goods	46.96
Wu's Bubble Tea	Drinks	5, 18	Hot Drinks Tea	8.94
Wu's Bubble Tea	Drinks	3, 29	Hot Drinks Tea	18.03
Wu's Bubble Tea	Drinks	20, 76	Hot Drinks Tea	62.39
Ben's Grill	Steakhouse	19, 18	Appitizers Prime Meats	7.21
Evergreen Diner	Diner	56, 50	Breakfast Lunch / Dinner Desserts	56.08
Yummy Curry House	Indian	33, 51	Currys	42.06
Flushing Burgers	Fast Food	69, 38	Burgers Kids Menu	60.93
V's N F's	Salads	71, 66	Salads	77.9

Administrator Functions

Add Edit Delete Refresh Logout

Successfully logged in. Administrator privileges granted.

If a restaurant is closed for business, select it from the restaurants list box and click "Delete" to delete it from the database. Click "Logout" to return to the customer GUI.

Troubleshooting

In case the database files are deleted or otherwise corrupted. A new database can be generated by running generatedb.py, the database will have 10 initial restaurants.

On Windows, the following 3 files will be generated:

- restaurants.bak

- restaurants.dat

- restuarants.dir

On MacOS, the following file will be generated:

- restaurants.db

The database files must be placed in the same folder as main.py or the executable binary.

Contact Info

Email: dev@wuwenb.in

Github repo: <https://github.com/wenbinwu85/cs370-software-engineering>