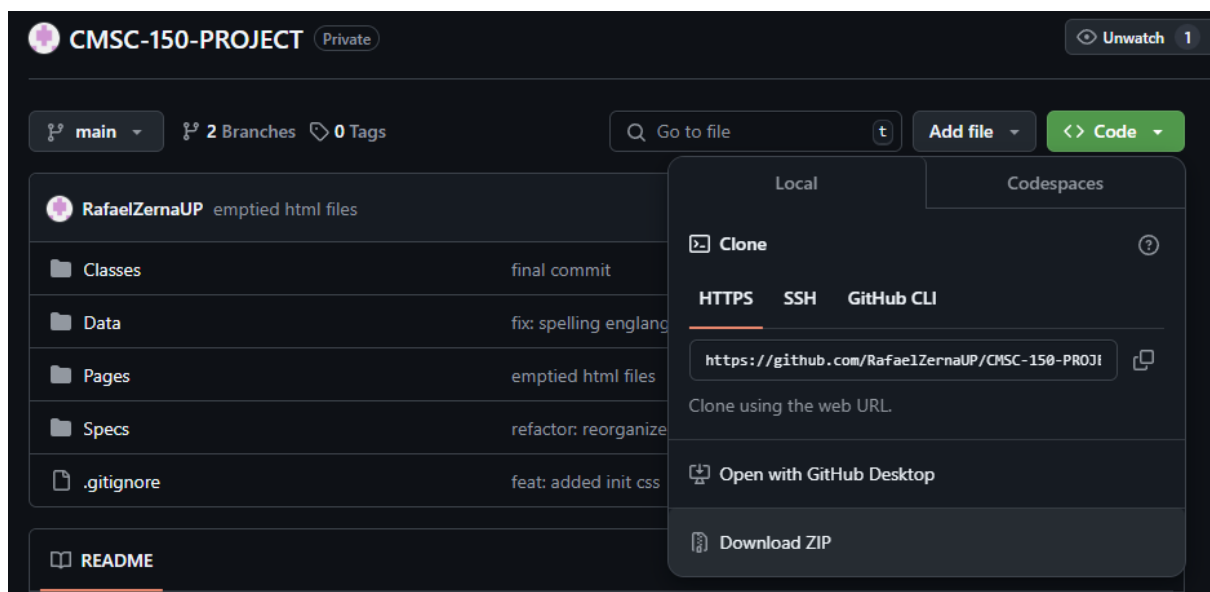


# WELCOME TO THE DIET OPTIMIZER

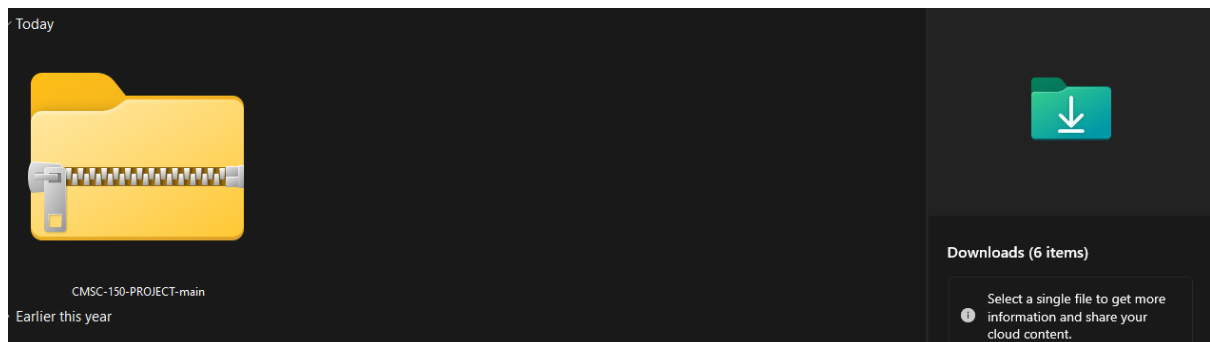
## Requirements:

- PC with Python 3.12 or above
- Any Modern Browser

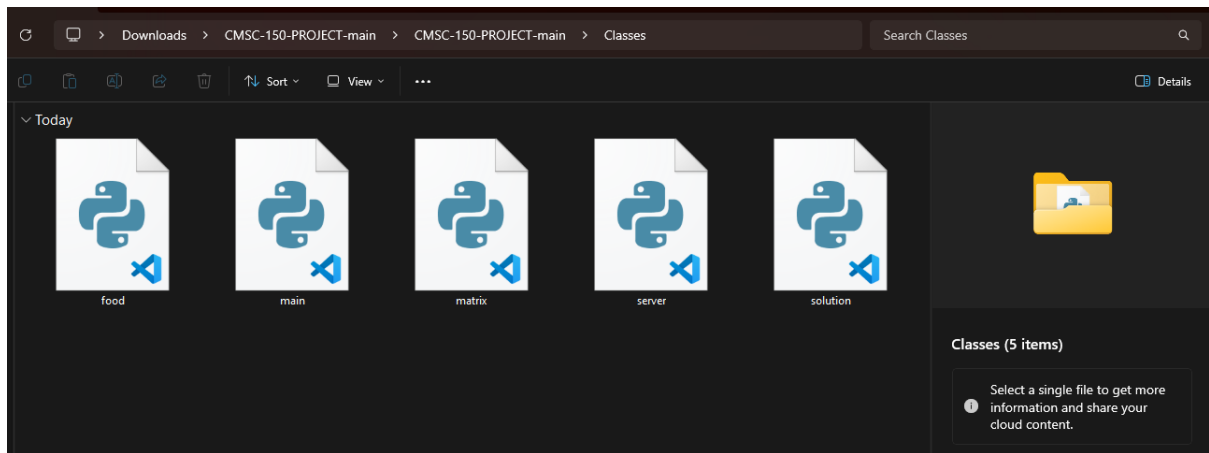
## Opening the Program:



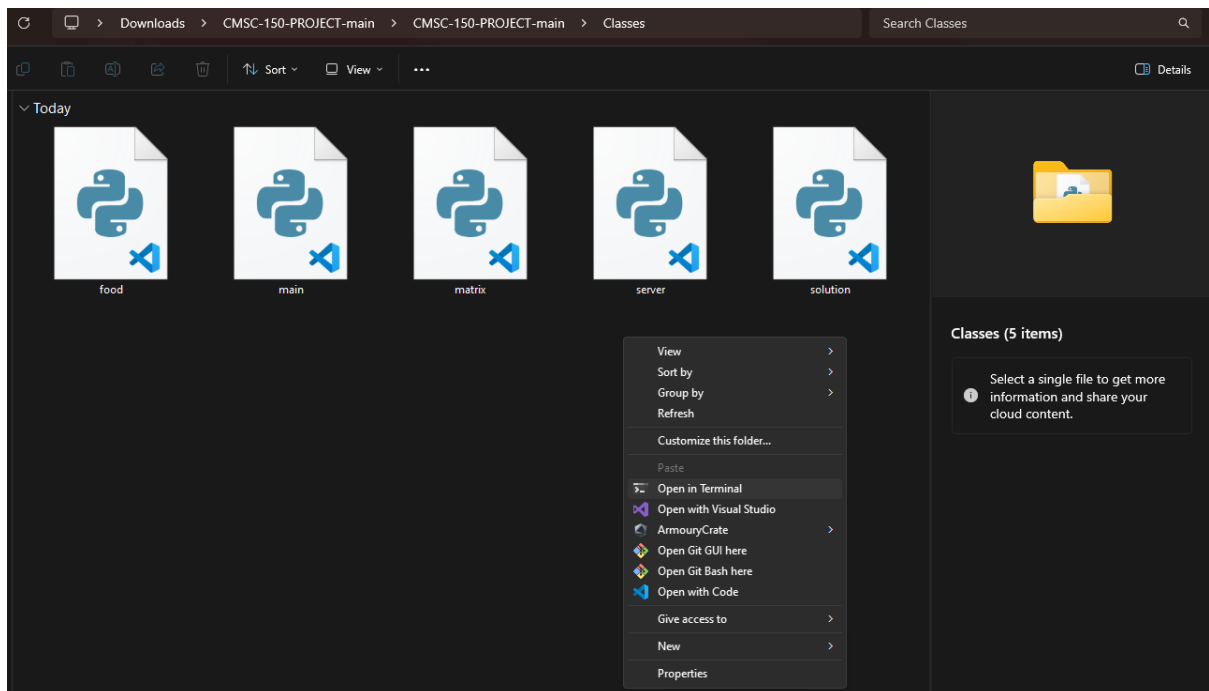
Download the Program at <https://github.com/RafaelZernaUP/CMSC-150-PROJECT>. To do this, proceed to the link and click on the green '<> Code' button. Then download the zip file of the program.



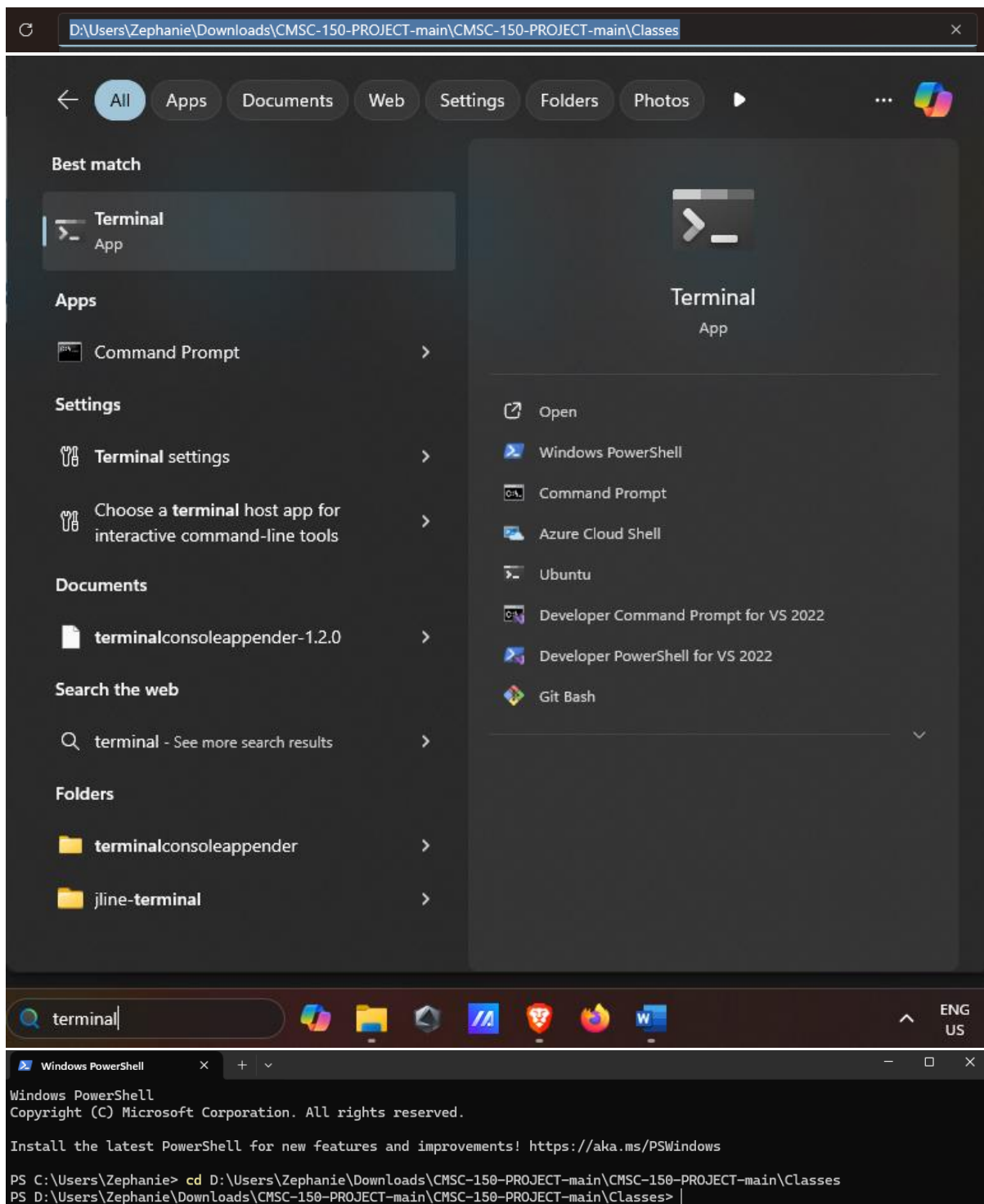
Locate the downloaded file and extract.



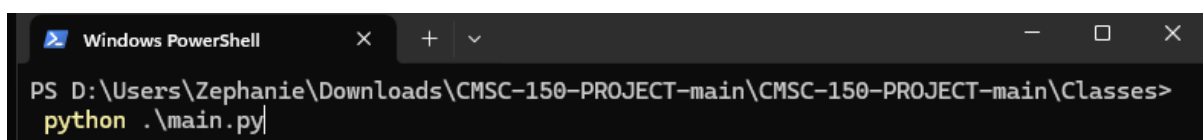
Enter the 'Classes' folder. Open 'PowerShell' or 'Terminal' in this folder.



Do this either by right clicking the 'Classes' folder then clicking on "Open in Terminal/Windows PowerShell"



or opening the said programs using 'Search' then typing: `cd [insert path to folder here]`.



Type "python" (space) then press the 'Tab' key until 'main.py' appears. Press Enter to continue.

# The Running Program:

```
Windows PowerShell
PS D:\Users\Zephaniae\Downloads\CMSC-150-PROJECT-main\CMSC-150-PROJECT-main\Classes> python .\main.py
Run on terminal? [y/n]: n
Open browser? [y/n]: y
```

The program will then ask you if you wish to run on the terminal. Type 'y' if so. Else, type 'n' to proceed to the webpage. We recommend that you choose 'n' for a better user experience. Choosing 'n' will make the program ask whether to open your default browser to use the app. We recommend you choose 'y'.

## WELCOME TO THE DIET OPTIMIZER

Please choose among the given foods to include in your diet. Click 'Solve' when you are done.

|   |   |   |   |   |  |   |  |
|---|---|---|---|---|--|---|--|
| <input type="checkbox"/> Frozen Broccoli      | <input type="checkbox"/> Carrots, Raw         | <input type="checkbox"/> Celery, Raw            | <input type="checkbox"/> Frozen Corn              | <input type="checkbox"/> Lettuce, Iceberg, Raw  | <input type="checkbox"/> Peppers, Sweet, Raw               | <input type="checkbox"/> Potatoes, Baked              | <input type="checkbox"/> Tofu                      |
| <input type="checkbox"/> Roasted Chicken      | <input type="checkbox"/> Spaghetti W/ Sauce   | <input type="checkbox"/> Tomato, Red, Ripe, Raw | <input type="checkbox"/> Apple, Raw, W/ Skin      | <input type="checkbox"/> Banana                 | <input type="checkbox"/> Grapes                            | <input type="checkbox"/> Kiwifruit, Raw, Fresh        | <input type="checkbox"/> Oranges                   |
| <input type="checkbox"/> Bagels               | <input type="checkbox"/> Wheat Bread          | <input type="checkbox"/> White Bread            | <input type="checkbox"/> Oatmeal Cookies          | <input type="checkbox"/> Apple Pie              | <input type="checkbox"/> Chocolate Chip Cookies            | <input type="checkbox"/> Butter, Regular              | <input type="checkbox"/> Cheddar Cheese            |
| <input type="checkbox"/> 3.3% Fat, Whole Milk | <input type="checkbox"/> 2% Lowfat Milk       | <input type="checkbox"/> Skim Milk              | <input type="checkbox"/> Poached Eggs             | <input type="checkbox"/> Scrambled Eggs         | <input type="checkbox"/> Bologna, Turkey                   | <input type="checkbox"/> Frankfurter, Beef            | <input type="checkbox"/> Ham, Sliced, Extralean    |
| <input type="checkbox"/> Kielbasa, Pork       | <input type="checkbox"/> Cap'N Crunch         | <input type="checkbox"/> Cheerios               | <input type="checkbox"/> Corn Flakes, Kellogg's   | <input type="checkbox"/> Raisin Bran, Kellogg's | <input type="checkbox"/> Rice Krispies                     | <input type="checkbox"/> Special K                    | <input type="checkbox"/> Oatmeal                   |
| <input type="checkbox"/> Malt-O-Meal, Choc    | <input type="checkbox"/> Pizza W/ Pepperoni   | <input type="checkbox"/> Taco                   | <input type="checkbox"/> Hamburger W/ Toppings    | <input type="checkbox"/> Hotdog, Plain          | <input type="checkbox"/> Couscous                          | <input type="checkbox"/> White Rice                   | <input type="checkbox"/> Macaroni, Cooked          |
| <input type="checkbox"/> Peanut Butter        | <input type="checkbox"/> Pork                 | <input type="checkbox"/> Sardines in Oil        | <input type="checkbox"/> White Tuna in Water      | <input type="checkbox"/> Popcorn, Air-Popped    | <input type="checkbox"/> Potato Chips, BBQ Flavor          | <input type="checkbox"/> Pretzels                     | <input type="checkbox"/> Tortilla Chip             |
| <input type="checkbox"/> Chicken Noodle Soup  | <input type="checkbox"/> Split Pea & Ham Soup | <input type="checkbox"/> Vegetable Beef Soup    | <input type="checkbox"/> New England Clam Chowder | <input type="checkbox"/> Tomato Soup            | <input type="checkbox"/> New England Clam Chowder, W/ Milk | <input type="checkbox"/> Cream Mushroom Soup, W/ Milk | <input type="checkbox"/> Bean Bacon Soup, W/ Water |

Inside the webpage, there are plenty of foods to choose from to include in your diet. Click any that you wish. 'Reset' and 'Check All' buttons are available to much easier uncheck or check all the food options respectively. After checking, please click 'Solve' to proceed.

After clicking 'Solve', you will be provided a summary of your chosen foods. If the chosen foods can meet the basic dietary requirements, a cost for the optimal diet will be provided, along with the serving sizes for each of the chosen foods. Else, it will say that the chosen foods create an infeasible diet, meaning that you must choose a different set of foods. A 'Return to Menu' button is included. Clicking it will return you to the food chooser page. The solver's full solution is provided below for those who need it.

### Infeasible Diet:

[Return to Menu](#)

**You selected 5 foods to consider in your diet.**

Roasted Chicken  
Bagels  
3.3% Fat, Whole Milk  
Kielbasa, Pork  
Malt-O-Meal, Choc

**The problem is infeasible.**

### Feasible Diet:

[Return to Menu](#)

**You selected 8 foods to consider in your diet.**

Frozen Broccoli  
Roasted Chicken  
Bagels  
3.3% Fat, Whole Milk  
Kielbasa, Pork  
Malt-O-Meal, Choc  
Peanut Butter  
Chicken Noodle Soup

**The cost of this optimal diet is \$2.85 per day.**

| Food                 | Servings | Cost (\$) |
|----------------------|----------|-----------|
| Frozen Broccoli      | 1.81     | 0.29      |
| Roasted Chicken      | 0.11     | 0.09      |
| Bagels               | 10.00    | 1.60      |
| 3.3% Fat, Whole Milk | 3.67     | 0.59      |
| Kielbasa, Pork       | 0.00     | 0.00      |
| Malt-O-Meal, Choc    | 0.30     | 0.16      |
| Peanut Butter        | 1.69     | 0.12      |
| Chicken Noodle Soup  | 0.02     | 0.01      |