DIET PROBLEM APPLICATION USER MANUAL

Purpose of Application:

The Diet Problem Solver is an application that aims to find the cheapest and most nutritious combination of foods that will satisfy all the daily nutritional requirements of an individual. The problem is formulated as a linear program where the objective is to minimize cost and meet constraints but will still satisfy the nutritional needs.

How to Install and Run:
Install R :

1. Go to the CRAN website.
2. Click on "Download R for Windows".
3. Click on "install R for the first time" link to download the R executable (.exe) file.
4. Run the R executable file and start installation.

To install RStudio Desktop on your computer, do the following:

1. Go to the RStudio website.
2. Click on "DOWNLOAD" in the top-right corner.
3. Click on "DOWNLOAD" under the "RStudio Open Source License".
4. Download RStudio Desktop recommended for your computer.
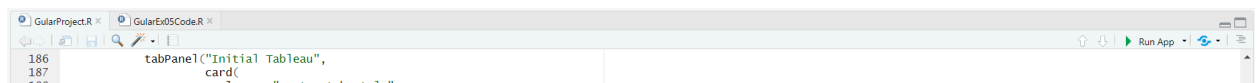5. Run the RStudio Executable file (.exe) for Windows OS and install.

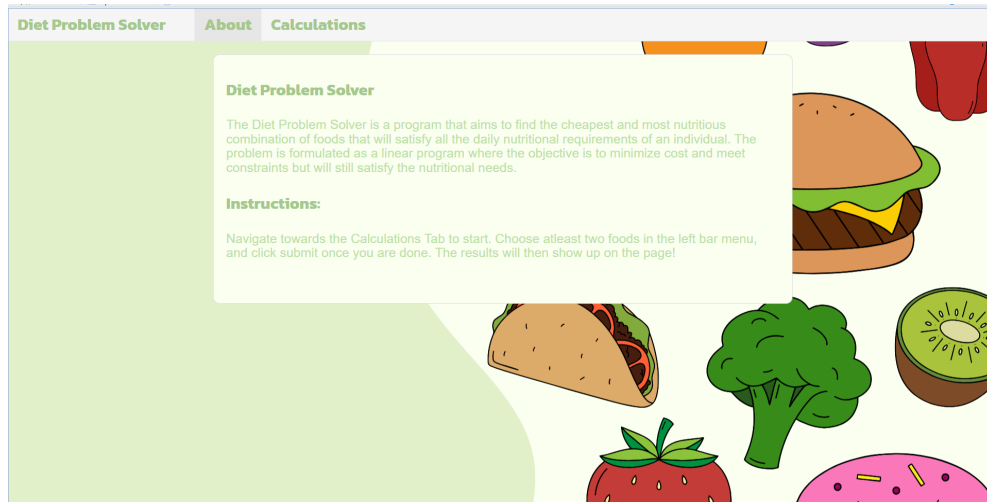source: https://www.dataquest.io/blog/installing-r-on-your-computer/

Install R Shiny :
    Open an R session, connect to the internet and run install.packages("shiny")
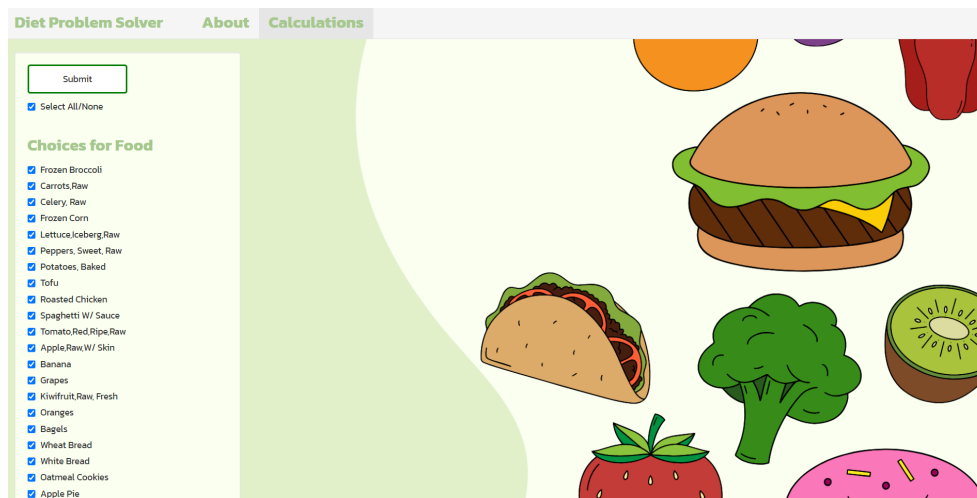
Run the Program :
1. Open up GularProject.R on R studio
2. Ensure the libraries are installed
3. Click "Run App" on the upper right corner

How to Navigate the Application:

1) Navigate to the Calculations Page.

2) Choose your desired Foods, then click Submit.

Diet Problem Solver   About   Calculations

Submit

☑ Select All/None

Choices for Food

☑ Frozen Broccoli
☑ Carrots,Raw
☑ Celery, Raw
☑ Frozen Corn
☑ Lettuce,Iceberg,Raw
☑ Peppers, Sweet, Raw
☑ Potatoes, Baked
☑ Tofu
☑ Roasted Chicken
☑ Spaghetti W/ Sauce
☑ Tomato,Red,Ripe,Raw
☑ Apple,Raw,W/ Skin
☑ Banana
☑ Grapes
☑ Kiwifruit,Raw, Fresh
☑ Oranges
☑ Bagels
☑ Wheat Bread
☑ White Bread
☑ Oatmeal Cookies
☑ Apple Pie

Results   Initial Tableau   Tableaus and Solutions

The Optimized Menu :

The cost of this optimal diet is $ 0.96 per day.

The Solution and Cost Breakdown by Food :

Show 10 ⌄ entries   Search: [   ]

	Servings	Costs
Carrots,Raw	0.24	0.02
Potatoes, Baked	3.54	0.21
Skim Milk	2.17	0.28
Peanut Butter	3.6	0.25
Popcorn,Air– Popped	4.82	0.19

Showing 1 to 5 of 5 entries   Previous 1 Next

3) You can navigate through the different tabs to see the Initial Tableau, and the Tableaus and Basic Solutions per Iteration

About the Author :

Jazmine Niña Gular is a 20 year old sophomore taking BS Computer Science in the University of the Philippines Los Banos. She is a student under class CMSC 150 AB3L, and is also a resident member of the academic organization Alliance of Computer Science Students - UPLB. Outside of academics in Computer Science, Jazmine also participates in the theater art scene in the university, performing and volunteering under her organization Umalohokan Incorporated.