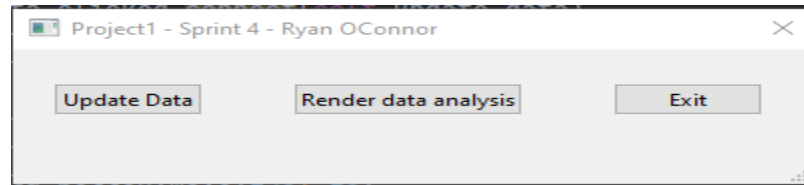


# Detailed Manual Test Plan for Project 1 - Sprint 4

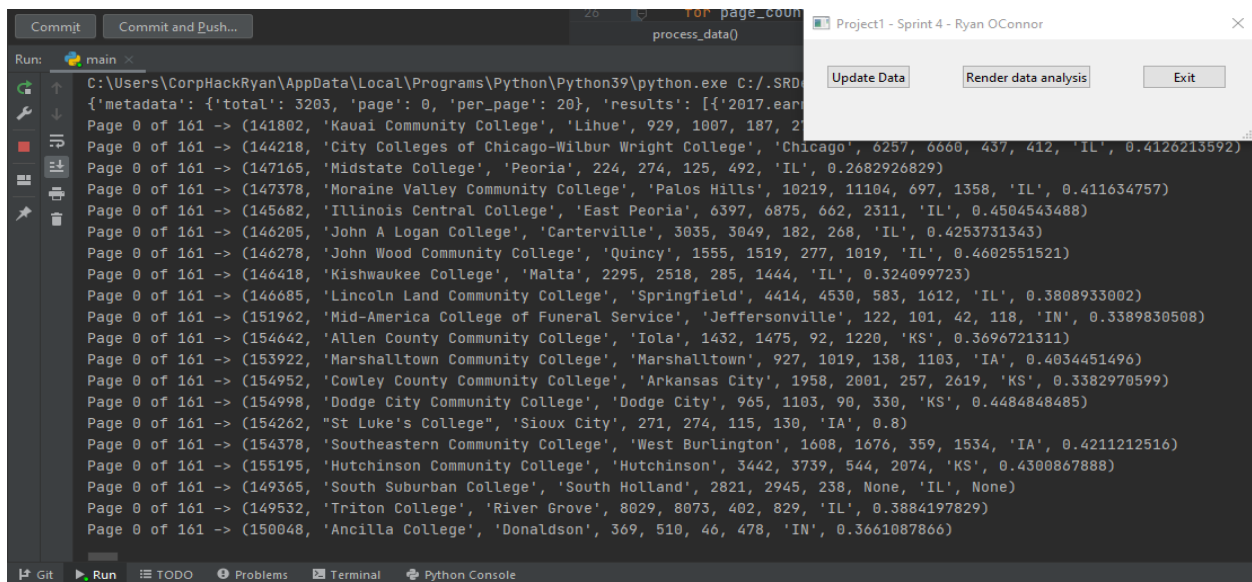
Ryan O'Connor – COMP490 – SR Design – Tues/Thur – 2PM Class

## Graphical User Interface Test Plan

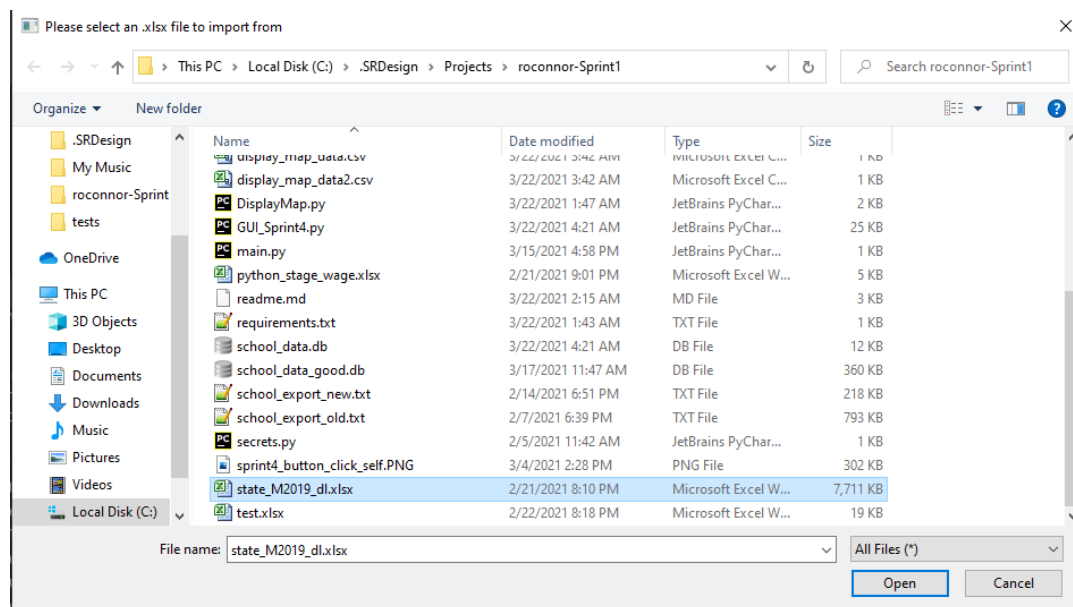
1. When the program is first loaded, it instantiates the GUIWindow(QMainWindow) class. This initial setup is responsible for setting up the main window, 3 buttons, updating the title bar, status bar, setting fixed geometry, adding functionality to each button when clicked and organizing the buttons on the main window.



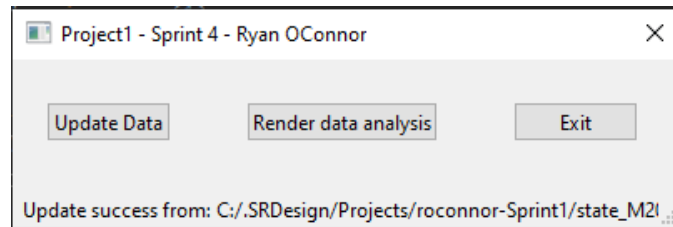
2. When the update data button is invoked, it creates a blank database with two tables, begins the process of collecting data from data.gov and storing it a local database.



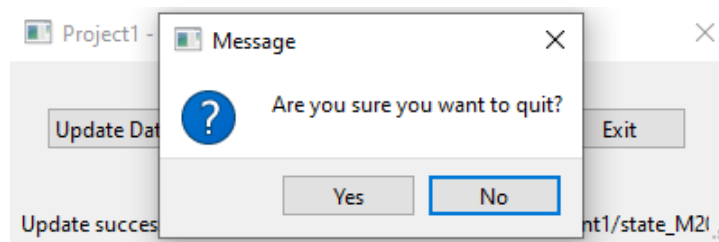
3. Once the data collection is complete, it will open up a file selection dialog from which you will select the excel file to update the database with.



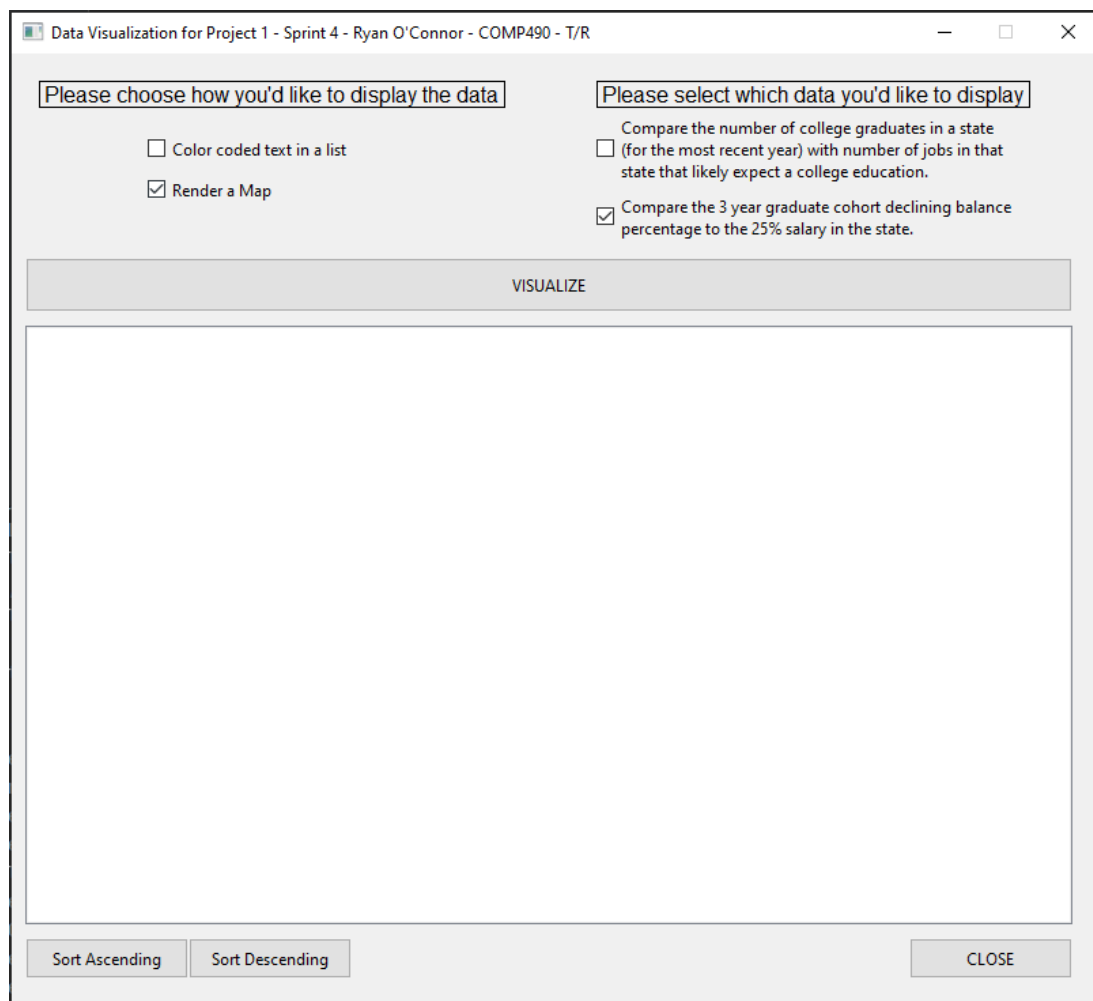
4. After the file has been selected, the program will then iterate through the excel sheet and import specific data into the database. Once that has completed, a message in the status bar will now appear stating the update was successful.



5. When you want to exit the program, you can either click the X button in top right hand corner or the Exit button on the main window. When you do click either button, a prompt will appear asking you if you'd like to exit. Clicking yes will close the application, while clicking no will bring you back to the main window.



6. When you click the Render data analysis button, a second child window will appear. When this window is called the following objects are placed onto the window: two labels, four checkboxes, four buttons and a list box. Each object is labeled according to which action it is to perform.



By default, the initialization assigns the toggle() function (making the checkbox checked) to both the Render map and compare 3 year grad cohort checkboxes. Since we can only have one option on either side, when you click on one box, the other one becomes unchecked. For instance, if you click on the render a map checkbox, the color coded text in a list box will stay unchecked. If you click on the color coded text in a list, then the render a map button becomes unchecked. Only one of these can be checked at a time. The same applies on the right side for the data that you'd like to display.

- Once you've decided on how you'd like to display your data and what type of data you want to display, the next step is to click the visualize button. When the visualize button is clicked, it tests the checkboxes to see which ones are checked (.isChecked()) function) and displays the data accordingly. So for instance, if we selected color coded text in a list with the number of college grads in a state option, the list box would populate with all the data we received and combined to get those numbers. By default, the list is sorted ascending.

Please choose how you'd like to display the data

☒ Color coded text in a list  
☐ Render a Map

Please select which data you'd like to display

☒ Compare the number of college graduates in a state (for the most recent year) with number of jobs in that state that likely expect a college education.  
☐ Compare the 3 year graduate cohort declining balance percentage to the 25% salary in the state.

VISUALIZE

State: AK	Total jobs: 141420	Total college grads: 3884.25	36.41 jobs available per graduating student
State: AL	Total jobs: 934830	Total college grads: 53452.25	17.49 jobs available per graduating student
State: AR	Total jobs: 594980	Total college grads: 23423.25	25.4 jobs available per graduating student
State: AS	Total jobs: 0	Total college grads: 247.75	0.0 jobs available per graduating student
State: AZ	Total jobs: 1255580	Total college grads: 80229.25	15.65 jobs available per graduating student
State: CA	Total jobs: 8263000	Total college grads: 458367.75	18.03 jobs available per graduating student
State: CO	Total jobs: 1241420	Total college grads: 50314.5	24.67 jobs available per graduating student
State: CT	Total jobs: 823440	Total college grads: 38047.75	21.64 jobs available per graduating student
State: DC	Total jobs: 458570	Total college grads: 12442.75	36.85 jobs available per graduating student
State: DE	Total jobs: 205450	Total college grads: 11429.25	17.98 jobs available per graduating student
State: FL	Total jobs: 3654050	Total college grads: 207054.25	17.65 jobs available per graduating student
State: FM	Total jobs: 0	Total college grads: 482.25	0.0 jobs available per graduating student
State: GA	Total jobs: 2213460	Total college grads: 83926.0	26.37 jobs available per graduating student
State: GU	Total jobs: 24980	Total college grads: 1277.75	19.55 jobs available per graduating student
State: HI	Total jobs: 255420	Total college grads: 11271.0	22.66 jobs available per graduating student
State: IA	Total jobs: 763340	Total college grads: 42885.5	17.8 jobs available per graduating student
State: ID	Total jobs: 326810	Total college grads: 22087.25	14.8 jobs available per graduating student
State: IL	Total jobs: 3092400	Total college grads: 101402.75	30.5 jobs available per graduating student
State: IN	Total jobs: 1559960	Total college grads: 57187.25	27.28 jobs available per graduating student
State: KS	Total jobs: 664890	Total college grads: 32761.75	20.29 jobs available per graduating student
State: KY	Total jobs: 922830	Total college grads: 29774.25	30.99 jobs available per graduating student
State: LA	Total jobs: 824820	Total college grads: 34252.0	24.08 jobs available per graduating student
State: MA	Total jobs: 1840470	Total college grads: 83507.75	22.04 jobs available per graduating student
State: MD	Total jobs: 1318460	Total college grads: 67151.5	19.63 jobs available per graduating student

Sort Ascending

Sort Descending

CLOSE

8. Once the data is displayed, you have the option of sorting the list by ascending or descending order simply by clicking on either button located at the bottom of the list box. The list is sorted by descending below.

Data Visualization for Project 1 - Sprint 4 - Ryan O'Connor - COMP490 - T/R

Please choose how you'd like to display the data

☒ Color coded text in a list  
☐ Render a Map

Please select which data you'd like to display

☒ Compare the number of college graduates in a state (for the most recent year) with number of jobs in that state that likely expect a college education.  
☐ Compare the 3 year graduate cohort declining balance percentage to the 25% salary in the state.

↓

VISUALIZE

State: WY	Total jobs: 115030	Total college grads: 5313.0	21.65 jobs available per graduating student
State: WV	Total jobs: 307480	Total college grads: 25036.25	12.28 jobs available per graduating student
State: WI	Total jobs: 1443400	Total college grads: 44714.5	32.28 jobs available per graduating student
State: WA	Total jobs: 1607660	Total college grads: 56859.75	28.27 jobs available per graduating student
State: VT	Total jobs: 151950	Total college grads: 8195.0	18.54 jobs available per graduating student
State: VI	Total jobs: 13710	Total college grads: 412.5	33.24 jobs available per graduating student
State: VA	Total jobs: 1886170	Total college grads: 90094.25	20.94 jobs available per graduating student
State: UT	Total jobs: 728950	Total college grads: 66809.75	10.91 jobs available per graduating student
State: TX	Total jobs: 5559030	Total college grads: 302475.25	18.38 jobs available per graduating student
State: TN	Total jobs: 1483950	Total college grads: 57808.0	25.67 jobs available per graduating student
State: SD	Total jobs: 189090	Total college grads: 9507.0	19.89 jobs available per graduating student
State: SC	Total jobs: 963440	Total college grads: 46193.75	20.86 jobs available per graduating student
State: RI	Total jobs: 225410	Total college grads: 16683.0	13.51 jobs available per graduating student
State: PW	Total jobs: 0	Total college grads: 118.75	0.0 jobs available per graduating student
State: PR	Total jobs: 376240	Total college grads: 38359.25	9.81 jobs available per graduating student
State: PA	Total jobs: 2770870	Total college grads: 130714.25	21.2 jobs available per graduating student
State: OR	Total jobs: 909090	Total college grads: 41910.75	21.69 jobs available per graduating student
State: OK	Total jobs: 727100	Total college grads: 38155.25	19.06 jobs available per graduating student
State: OH	Total jobs: 2707530	Total college grads: 106491.5	25.42 jobs available per graduating student
State: NY	Total jobs: 4317690	Total college grads: 227900.75	18.95 jobs available per graduating student
State: NV	Total jobs: 512510	Total college grads: 22260.25	23.02 jobs available per graduating student
State: NM	Total jobs: 337840	Total college grads: 15001.5	22.52 jobs available per graduating student
State: NJ	Total jobs: 2019500	Total college grads: 81394.75	24.81 jobs available per graduating student
State: NH	Total jobs: 311190	Total college grads: 31365.0	9.92 jobs available per graduating student

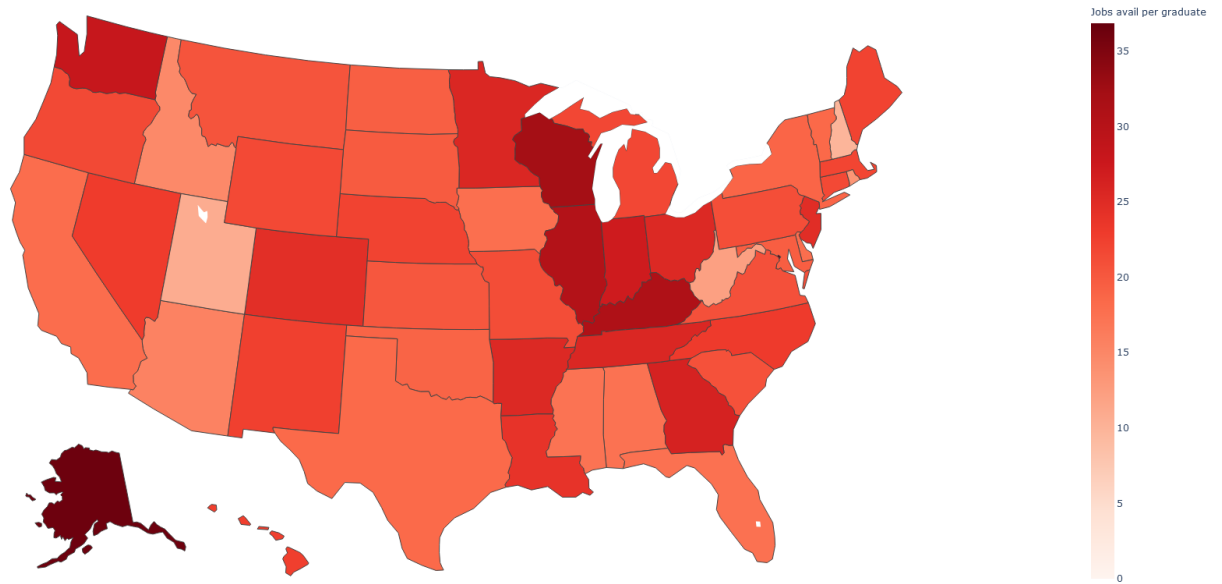
Sort Ascending

Sort Descending

CLOSE

9. When you select the render a map checkbox, the same data will be represented on a United States map in a choropleth styled map. Simply click on the render a map checkbox, select which data you would like to display and click on visualize. The map will open up in a browser with the data you have chosen to represent.

2018 - Ratio of jobs available per graduating student



10. When the close button is clicked, the child window disappears and you are brought back to main window, where you can update the data and select a different excel file if needed.