Optional Lab: Brief Introduction to Python and Jupyter Notebooks

Welcome to the first optional lab! Optional labs are available to:

- provide information - like this notebook
- reinforce lecture material with hands-on examples
- provide working examples of routines used in the graded labs

Goals

In this lab, you will:

- Get a brief introduction to Jupyter notebooks
- Take a tour of Jupyter notebooks
- Learn the difference between markdown cells and code cells
- Practice some basic python

The easiest way to become familiar with Jupyter notebooks is to take the tour available above in the Help menu:
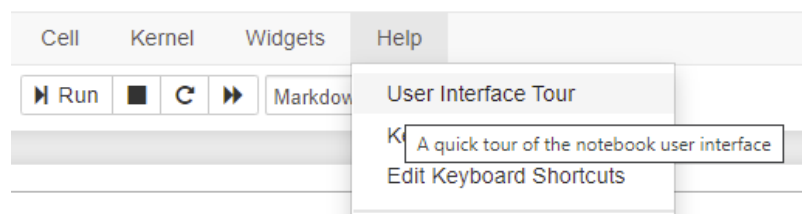
Jupyter notebooks have two types of cells that are used in this course. Cells such as this which contain documentation called `Markdown Cells`. The name is derived from the simple formatting language used in the cells. You will not be required to produce markdown cells. Its useful to understand the `cell pulldown` shown in graphic below. Occasionally, a cell will end up in the wrong mode and you may need to restore it to the right state:
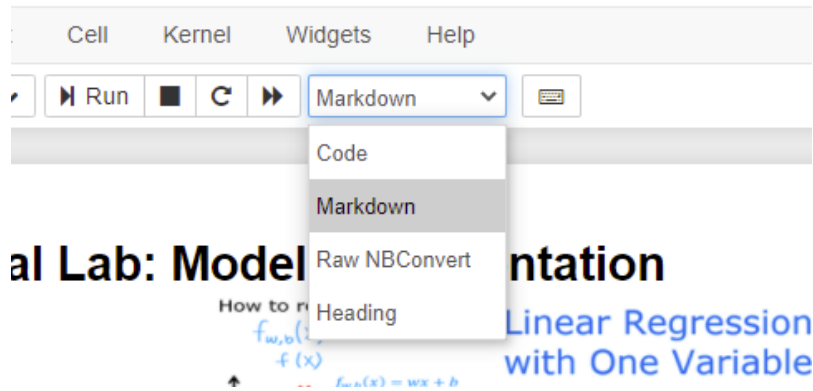
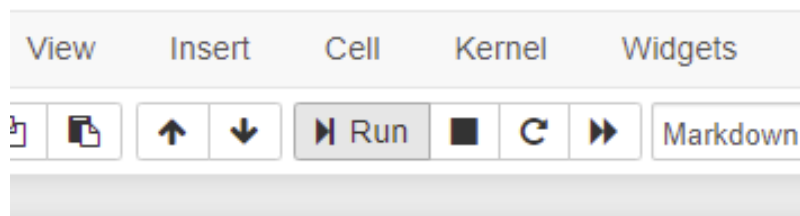The other type of cell is the `code cell` where you will write your code:

```
In [1]: #This is  a 'Code' Cell
        print("This is  code cell")

        This is  code cell
```

Python

You can write your code in the code cells. To run the code, select the cell and either

- hold the shift-key down and hit 'enter' or 'return'
- click the 'run' arrow above

Print statement

Print statements will generally use the python f-string style.
Try creating your own print in the following cell.
Try both methods of running the cell.

```
In [2]: # print statements
        variable = "right in the strings!"
        print(f"f strings allow you to embed variables {variable}")

        f strings allow you to embed variables right in the strings!
```

Congratulations!

You now know how to find your way around a Jupyter Notebook.