The final project that I have submitted allows the user to review aggregated salary data for certain undergraduate majors throughout the progression of their careers. I first came across the inspiration for this when reviewing a Wall Street Journal article outlining information associated to how the salaries of certain majors fluctuated throughout individual’s careers. After reading this I then reviewed the dataset published by the Wall Street Journal on Kaggle.com ([Degrees that pay back](https://www.kaggle.com/wsj/college-salaries/version/1)), where it outlined the following attributes: Undergraduate Major, Starting Median Salary, Mid-Career Median Salary, Percent change from Starting to Mid-Career Salary, Mid-Career 10th Percentile Salary, Mid-Career 25th Percentile Salary, Mid-Career 75th Percentile Salary, Mid-Career 90th Percentile Salary. This was all provided for 50 undergraduate majors (50 rows of data). Given that there was a plethora of information provided from this data, I decided I wanted an application that provided the user with easy to view metrics. Thus, I designed my application to display metrics mostly around the top and bottom salaries regarding starting salaries and mid-career salaries.

When starting the application, the dataset, which is saved as an Excel file, is imported into my Python application. Each column is imported in separately as its own list. By doing this, I could cleanly separate the data, as well as allowing users to view data that only they are concerned with, rather than doing a data dump of all the information within the workbook. In addition, to ensure the rows within the worksheet were keeping their cardinality, I utilized a “zip” function when the user calls for a specific list that has been sorted (i.e. ascending undergraduate major salaries would be sorted with the undergraduate major list). For the most part I utilized “if” and “while” loops to make sure the user is entering a correct selection from the menus provided. Though I also did include assertion statements to fulfill the requirements of the project. To keep the code readable, I separated this out into various classes, and functions, which also assisted with debugging the code as well. Please see below for an outline of how the application operates.

The user is prompted with a brief message outlining the data and where it comes from. The user then has the option to review the data, get the source link, or exit the application. When the user selects to review the data, they are prompted with a main menu list that provides the following prompts:

1. Top 10 undergraduate degrees that have the lowest median starting salaries.
2. Top 10 undergraduate degrees that have the highest median starting salaries.
3. Top 10 undergraduate degrees that have the lowest median mid-career salaries.
4. Top 10 undergraduate degrees that have the highest median mid-career salaries.
5. Detailed statistics broken down by major.
   1. With this the user can view all the majors within the worksheet, and then select which one they would like to see all of the statistics on
6. Return to original menu

The modules that I utilized for this application were pandas & sys.

**Please import the excel file as “degrees\_salaries.xlsx” so that the application can run correctly.**