**Final Project Phase 1 (FP-1):**

**Proposal**

**Out Class 6**

**Due Class 9 (earlier suggested)**

**10 points**

This is Phase 1 (**FP1**) of your Final Project.

You may work with one other student on your Final Project; if so, you only need to turn in one copy of the deliverables described below - but make sure you list both student names. Teams of three students require prior permission from the professor.

For this Phase, **write a brief proposal for your Final Project**: what you propose to design, code, and present. This only needs to be a paragraph or two.

You may choose to do **one** of the following:

(a) Design, code, debug, and test your own original Python program.

(b) Start with an existing Python program, then modify and extend its code in some way, perhaps adding new functionality. You may also **refactor** its code, cleaning up its internal design to make it more readable and changeable. Multiple possible starting Python programs will be provided.

(c) Research, learn, and demonstrate an alternate Python IDE, other than PyCharm. The **FP1 Suggestions** document describes some of these.

(d) Create an original data study, finding your own data sets and processing them with the Python library tools discussed in the Python Data Science Handbook (PDSH). You must use tools from at least two of the PDSH chapters, using them to manipulate one or more data sets. Describe your outcomes and conclusions.

(e) Find an existing data study, then enhance or extend it in some way, again using tools from at least two of the PDSH chapters. Describe your outcomes and conclusions.

(f) Research and prepare a short lecture with sample code, discussing some advanced Python topic, feature or technique not discussed (or briefly and incompletely discussed) in assigned readings.

Whatever you choose, **be concise and to the point**.

**Don't be *too* *ambitious* in your project choice: many projects fail because they attempt to do *too much* in *too little time*. Plan realistically**.

Create an electronic document for your specification, name it **603\_project-spec\_*name*.docx**, where ***name*** is your first initial + last name or reasonable approximation thereto. (Mine would use **elevel** as ***name***.) If you have two or more team members, name your document as **spec\_*name1\_name2***. Then submit it to the **FP1** assignment link in Canvas.

I'll meet with each student/team and discuss your proposal, and then give you a second chance to fix any problems. Once I've given you approval, you can begin working on the rest of your project.