CPADS Final Project

Due Friday, 12-15-17 (section 102) and Monday, 12-18-17 (sections 101, 103)

The objective of this project is for you to **learn something(s)** that extends your programming knowledge by undertaking a project of interest to you. You will be allowed to do a project individually or form a group of no more than 2. Each group will propose several projects they wish to attempt. At the end of the semester, each group will prepare a 2-3 page written report and give a 5 minute oral presentation describing their project.

The report and presentation should cover:

- what was *undertaken*
- what was *accomplished*
- what *problems* were encountered and any *solutions* to them
- **what was learned through the experience!**

Due Dates:

Monday, 11-20-17: 2-3 project proposal(s) and list of group members. Include at least one paragraph for each project. You will discuss these ideas with your instructor to decide on an appropriate project.

Wednesday, 12-6-17: An in-class demonstration of the progress accomplished thus far.

Friday, 12-15-17, Monday, 12-18-17: Final report and presentation is due during the final exam period for your respective section:

Section 101: 12/18 8-10a; **Section 102:** 12/15 10:15a-12:15p; **Section 103:** 12/18 10:15a-12:15p)

Be creative! Here are some ideas to get you started, but I **STRONGLY** encourage you to come up with something unique and relevant to everyone in the group.

- Utilize the turtle graphics library to create an interesting drawing. Your drawing should incorporate user input, loops, and decisions.
- Expand Assignment 3 (Turtle Game) to add additional features.
- Explore the PyGame library, which allows for interactive 2D sprite-based games to be developed in Python. There are several available games that can be used as a starting point for modification.
- Write a console based program using Python. For example, a text based game or other practical application.
- Investigate some of the advanced features of Python 3 such as objects, tuples, dictionaries, lists, etc.
- Research a new technology of interest through expanding on introductory tutorials.

Your grade will be determined both on the difficulty of the project you undertake (relative to your current knowledge), the amount of progress you make, and to a lesser extent the quality of the final report and presentation. In particular, not getting very far on a challenging project in which you learn a tremendous amount will receive a higher grade than successful completion of a rather trivial project from which you learn very little. The emphasis is on the learning through the exploration process and not necessarily on the final product. But most of all, the project is intended to **BE FUN!**