OMIS 30 - Fall 2018 - Project 4

Logistics:

Assigned: Sunday, November 11, 2018
Due: Thursday, December 6, 2018 at 11:59 PM

The requirements for this project are:

- Demonstrate mastery of (in Python):
    - Variable types (e.g. ints, strings, lists, dicts, etc.)
    - If/elif/else
    - Loops
    - Functions
- Build a stand-alone application

Project Ideas

- Rebuild the game you made in Project 2, but with a GUI (Graphical User Interface)
- Do an analysis like in Project 3, but scrape the data (get instructor approval of data source) and present your results in a stand-alone manner for general audience
- Create a financial calculator which analyzes a financial situation or cash flow with certain inputs. Make it pretty and intuitive.
- Solve a meaningful problem for the course - e.g. write an autoGrader that can grade almost any homework assignment and document it

Collaboration:

You will work as a group on the assignment. Your group must be 3-4 members. You are allowed and encouraged to use Google extensively.

You will need to submit your group by 11:59 PM on Tuesday, November 13, 2018.

Proposal:

- We will spend time Tuesday brainstorming ideas and helping groups finalize ideas
- A written, graded proposal will be due on Thursday. This proposal needs to include details on what exactly you wish to accomplish, and include some technical details. Think of this as the blueprint to your project.
- This proposal is a handshake between you and your instructor about the scope of work you will accomplish. I.e. if you accomplish that work, you get paid (graded).
- You are allowed to change your proposal once submitted, but any new submissions, if approved by the instructor, becomes a new handshake agreement.

Submission:

- Speak with your instructor once you've finished the proposal for any additional requirements for submitting your project.
- Zip your files to a folder. Name that zip file <yourgroupname>_project4_fall2018.
- Include a .txt file that includes each team member's name and username.
- Make sure it runs completely and correctly on your computer
- Submit it via Camino

Grading Rubric:

Section	**Grade**	**Criteria**
Proposal	5%	Detailed proposal submitted and approved
Strategy & code	20%	Order of code, procedures, correctness
Mastery of data types	15%	Use variable types & structures to your advantage and apply them efficiently.
OOP	15%	Create AT LEAST 3 functions. Do not repeat code (but create a function instead)
Interactive Robustness	15%	No user input should be able to "break" your app/code (if interactive). No bad file upload should be able to "break" you calculator (if a calculator).
Code Readability	10%	Documentation of author & dates; Explanation of steps; Use of whitespace; Naming convention of variables; Sequencing of code and outputs
Learn Something New	15%	Use a library or technique that hasn't been taught in class. Identify and explain in your write-up
Release Documentation	5%	Write a user document describing your app/tool, how to use it, what went into developing it, and any known limitations. Though you wouldn't normally include this in the Release Notes, you may add an appendix to describe what you did in the code/why you deserve credit for each requirement.

Bonus:

- Host your app on AWS or GCP