

Final Project

Option #2 – Choose Your Own

Goals

- Complete a project that demonstrates problem solving skills and logical thinking.
- Demonstrate knowledge of Python programming concepts learned throughout the semester.
- Choose only **one** option.

General Requirements

- Create a new Python project named **ITP115_project_Lastname_firstname** (replace **Lastname** with your last/family name and **firstname** with your first name).
- You are free to design and implement a Python program of your own design.
- The program must be sufficiently complex and demonstrate understanding of the concepts we have learned in class.
- Use proper coding styles and comments.
- Project should perform error-checking (on all inputs).

Specific Technical Requirements

- The program must consist of at least two (2) classes (each in its own file).
- The program must consist of at least three (3) .py files.
- The program must do some kind of file reading / writing.
- The program must make use of at least one (1) other Python module such as **BeautifulSoup**, **tkinter**, **os**, **re**, **PyGame**, or **api.ai**.
 - The modules **csv**, **random**, and **math** do NOT count.
 - For GUI applications with **tkinter**, all user interaction (input and output) should take place in the GUI window (not the console).
- The program must be well-designed as we have made in class. Use a main function, have no global variables, use loops / conditionals, use functions and classes to simplify program and reuse code, use clear variable names, and have comments.

Deliverables

Proposal – due on Blackboard 4/15/18 at 11:59 pm

- Write a proposal document with following details:
 - Motivation and need
 - Describe the project, what it will do, and why it is interesting to you.
 - Libraries
 - Describe Python libraries will you expect to use.
 - Classes
 - Describe what classes you expect to create (with attributes and methods).
 - Program flow
 - Describe at a high level how the program will work.
- *Note: If you later modify your project from your original proposal, you **must** submit a revised proposal which describes any changes. Failure to do will lose 10%.*

Project – code due on Blackboard 5/4/18 at 11:59 pm

- It is required that you make an appointment with a TA or faculty member to demonstration your program.
- Project must include a **Read Me** (write-up)
 - Inside your project folder, you must include a file called "**readme.txt**".
 - This will describe how to run your program (e.g. any required libraries with links, version of Python, etc.).
 - You should also give detailed explanation of HOW your program works (e.g. what classes did you use, how are they accessed).
 - If you used any additional online resources or libraries (e.g. PyGame), you must clearly explain which resources you used and which code is your own work.
- **Project that do not run will subject to an automatic 50% penalty.**
- **Late submissions will not be accepted.**

Submission Instructions

- Compress your Python project folder which contains your Python source code.
- You should have a zip file entitled **ITP115_project_*lastname_firstname*.zip** where you replace ***lastname*** with your last/family name and ***firstname*** with your first name.
- Under Assignments on Blackboard, upload the zip file.

Grading

Item	Points
Readme file	10
Detailed and appropriate comments	5
Proper coding style	15
External module	10
Project executes successfully and has error checking	30
Project requirements met	30
Total*	100