

Python – Initial Project Proposal

Professor:

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Your initial project proposal should do the following:

1. It should be a typed document submitted on Canvas (1 page)
 2. It should have a short reflection on your current understanding of the the material, number of absences, and grade in the class.
 3. You should state which level of project you are planning to complete. Information about the different levels is found below. (NOTE: level 1 = 10 hours, level 2 = 20 hours, and level 3 = 30 or more hours).
 4. Describe at least one idea you have for what problem you would like to solve. Talk about how you plan to solve the problem at the level you choose.
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Here is how you can do a grade check

Grade	Practice (1pt each)	Programming Assignments (2pts each)	Exams (sum of points)	Final Project (20 points) + Level	Attendance
4.0	20	20	35	17 or more P3	missed 2 or less = 10
3.7	18	20	35	12 or more P3	missed 2 or less = 10
3.3	18	20	30	17 or more P2	missed 4 or less = 8
3.0	18	18	30	12 or more P2	missed 4 or less = 8
2.7	18	18	30	17 or more P1	missed 6 or less = 4
2.3	18	16	25	12 or more P1	missed 6 or less = 4
2.0	16	16	20	10 or more P1	missed 8 or less = 2
1.7 and below	less than 16	less than 16	less than 20	less than 10 on project	missed more than 8 = 0

Just make sure that you are checking all the boxes in the row of the grade you want.

For example if I want a 4.0

- You need to complete at least 20 practice problems (out of a total of 23)
- You will need to pass a total of 10 programming assignments (out of a total of 11)
- You will need to earn 35 points on exams (out of a total of 40)
- You will need to earn 17 or more points on a P3 project.
- You should miss fewer than two days.

So even if you have missed one programming assignment, three practice problems, and got 15/20 on exam 1, you could still earn a 4.0 - but you would have to 100% the rest of class.

Final Project Info:

Your project will solve a problem from an area of your own interest. This could be code that might help you on homework assignments, code that analyzes some data, or even code that helps you with something from your life. You are welcome to be creative (eg. build a small video game - the problem is “I am bored”). Projects can be completed at a variety of levels:

P1 A level 1 project will meet all of the following requirements

- Clearly define the problem being solved; explain it's importance and any background.
- Accepts at least one user input.
- Prints or Saves an output (the solution) that includes either a graphical or tabular component.
- Contains appropriate commenting and uses good Python Style (as defined in class).
- Completes a non-trivial calculation (using loops and/or conditionals).
- Is unique and related to an area of your interest

** A level 1 project should be doable in the last week of classes. It should take about 10 hours to complete. (10 points)

P2 A level 2 project will meet all of the level 1 requirements plus

- Contains more advanced user interactions - accepts multiple inputs or imports multiple files as appropriate.
- Contains saves a report of the final data in both tabular and graphical form as appropriate.
- Uses more advanced looping and conditional statements.
- Uses functions and modules to organize the code.

** A level 2 project should be doable in the last two weeks of class. It should take about 20 hours to complete. (15 points)

P3 A level 3 project will meet all of the level 2 requirements plus

- Programmer meets with Joanna at least once to brainstorm.
- Uses classes to define data types used in the program.
- Does one of: Advanced data or graphical processing or advanced user interaction GUI or completes advanced testing and algorithm analysis.
- Learns something that was not directly covered in class.

** A level 3 project must be started well before the end of the semester. It should take 30+ hours to complete. (20 points)

You can find projects by looking up Python tutorials online - but you would have to put your own spin on the tutorial. Make the code your own! The book also has a fun video game project and a tutorial on creating an app using django.