

Some Hints on project 4:

Do not assume, print your values to see what you are passing and what you are returning from a function. Test each function as you implement.

- 1) Create two classes (if you do not remember how, check the slides and examples posted in the Modules section of Canvas)
 - a. Create class Division, with given attributes name
 - b. Create class Graduate, with given attributes name
- 2) Need to read the csv file (csv: comma separated value file that separates values by comma)
 - a. similar to your lab 8, or examples we did in the class (posted in Canvas)
 - b. first 3 lines is header
 - c. data starts from 4th line
 - d. your function returning two lists of string that holds the header and data values.
- 3) Now you are ready to create objects of Division class
 - a. You have list of data values as string
 - b. Access each value the first value is id. Division id has 00 at the end.
 - c. Create an object and append to list of Division object
- 4) Same for Graduate objects.
 - a. From list of values, select the id that the last two digit is not 00
 - b. Create Graduate object based on the attributes
- 5) Create files
 - a. Use list of Graduate objects,
 - b. To find each division majors, and
 - c. Write to their own files in a given format
- 6) find_total_avg
 - a. From list of Division objects for each Division
 - b. Find the total and average graduate for all majors in Division and create a list of tuples
 - c. There are 4 Division objects, therefore your output will be list of 4 tuples.

Pseudocode:

for each Division object:

 for each major in graduate list objects :

 if they are in the same division

 add graduate value of each level

 append (total, average) to the list

- 7) find_graduate_rate
 - a. from list of Graduate objects
 - b. search for a given major
 - c. return males and females graduate for all levels (bachelor, master, and doctoral)
- 8) print results for the last 4 questions on screen. You can create any necessary extra functions as you need.