

INLS 560 - Assignment 4: Student Administration

Date Assigned: Fri. Sept 19, 2014

Early Completion Date: Fri. Sept 26, 2014 (midnight)

Completion Date: Fri. Oct 3, 2014 (midnight)

Those who turn in the assignment by the early completion date will receive 10 extra credit points.

Software issues:

If you feel there are mistakes in this assignment, check the web page and Sakai for corrections, and report them to us if they have not been made.

Description

UNC needs you to write a program to help the registrar manage their student database. In our case, a database is a list. You will be creating a program that lets the user perform various operations on the database. Write a program that has the following lists:

- all_students = ['Ellen', 'Sam', 'Victoria', 'Rachel', 'Austin']
- all_majors: [Information Library Science, 'English', 'Computer Science', 'History', 'Chemistry']

Then, let the user choose from the following operations:

- Add a new student (and their major) to the list.
- You will need to prompt the user for the name and major of the student they would like to add to the list.
- Print a list of all the students.
- Print a list of all the majors.
- Quit the program. The program should keep running until the user wants to quit.

Requirements

This program requires you to use:

- The input function to prompt the user.
- The print function to output the results.
- At least one branching statement (if/else statements)
- At one while loop
- At least two for loops
- Boolean logic
- The in operator to determine if an item is in a list

Assignment Specification

Write a Python program that includes the following functions:

- `print_instructions()`
 - Prints out the instructions
- `main()`
 - Calls `print_instructions()`
 - Allows the user to interact with the database (lists)
 - Uses a while loop to allow the user to continuously use the database (lists)

You must use if-else and while statements in your code. Be sure to comment your code.

Sample Interactions

Please select an action:

- 1.Add a student
- 2.Print all students
- 3.Print all majors
- 4.Quit

Choose an option: *1*

What is the new student's name? *Jason*

What is the new student's major? *English*

English is already in the list.

Please select an action:

- 1.Add a student
- 2.Print all students
- 3.Print all majors
- 4.Quit

Choose an option:

```
/System/Library/Frameworks/Python.framework
Please select an action:
1.Add a student
2.Print all students
3.Print all majors
4.Quit
Choose an option: 1
What is the new student's name? Jason
What is the new student's major? Physics
Please select an action:
1.Add a student
2.Print all students
3.Print all majors
4.Quit
Choose an option: 2
Ellen
Sam
Victoria
Rachel
Austin
Jason
Please select an action:
1.Add a student
2.Print all students
3.Print all majors
4.Quit
Choose an option: 3
Information Library Science
English
Computer Science
History
Chemistry
Physics
Please select an action:
1.Add a student
2.Print all students
3.Print all majors
4.Quit
Choose an option: 4
Done
```

Your code does not need to follow this exact script, but all the mentioned functionality should work as shown.

Use the Pycharm Community Edition IDE to develop and execute the code.

Grading

Programs will be graded based on whether they display the correct output, the correct logic, and style.

In this assignment style means, make variable names meaningful. Do not create one letter variable

names or variable names that do not have anything to with the assignment. The program must not only print the correct values, but the code must actually perform the correct operations.

Getting Help

If you have trouble, please post a question on Piazza before contacting me. Before posing a question, please check if this question has been asked before. This will reduce post clutter and reduce our burden.

Repeat questions will be ignored by the instructors.

Piazza allows anyone to respond. So if you see a question that you think you can respond to, please do so, as that will reduce our burden and help you "teach" your fellow students.

Good luck!

Extra Credit (5 points)

You may only attempt the extra credit after your program is working correctly as described above. To earn extra credit on this assignment, your program Look up a student's major by their name. Ask the user to type in the name of a student. If that student exists in the list, the program should print the students name and their major. If the student doesn't exist, the program should print an appropriate error message.