2018 Spring: COMP-SCI 5590/490 - Special Topics

Python Programming

Lab Assignment 1

Assignment Overview

The following assignment focus on to make one familiar with python basic topics.

Lab Assignment

1) For any web application login, the user password need to be validated against database rules. For My UMKC web application following are the criteria for valid password:
   a) The password length should be in range 6-16 characters
   b) Should have atleast one number
   c) Should have atleast one special character in [$@!*]
   d) Should have atleast one lowercase and atleast one uppercase character

   Use loops to write a python program for the above scenario.

2) Write a Python function that accepts a sentence of words from user and display the following:

   a) Middle word
   b) Longest word in the sentence
   c) Reverse all the words in sentence

   Sample input:

   ```
   My name is Jacqueline Fernandez Dsouza
   ```

   Sample output:

   Middle words are : [is,Jacqueline]

   Longest word is : Jacqueline

   Sentence with reverse words is: ym eman si enileuqcaj zednanref azuosd

3) Given a list of n number, write a Python program to find triplets in the list which gives the sum of zero.

   Sample input:

   ```
   [1, 3, 6, 2, -1, 2, 8, -2, 9 ]
   ```

   Sample output:

   [(3,-1,-2)]

4) Consider the following scenario. You have a list of students who are attending class "Python" and another list of students who are attending class "Web Application".

Find the list of students who are attending both the classes. Also find the list of students who are not common in both the classes. Print it.

Submission guidelines:

- Submit your code at Github and properly document it. Submit your screenshots as well. The screenshot should have both the code and the output
- Each part of code should have the comment.
- Use following link to submit your assignment.
- Submit your code through this
  https://goo.gl/forms/cxvY8Kg1pvNNzrpw1