**CS5590 APS - Python Programming**

**LAB1**

**Deadline: 9/19/2018**

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

**Lab Assignment:**

1. search in a string and find the first non-repeated characters in that string

Input: Deep data structure

Output: p

(hint: if there is space in the string you need to consider the whole as one string. In the above example Deepdatastructure)

2. Suppose you have two files. And what is inside the files are as follows:

File1:

“This time, we are going to learn how to write programs that recognize objects in images using deep learning. In other words, we are going to explain the black magic that allows Google Photos to search your photos based on what is in the picture”

File2:

“this we to are in the that your on based what is how other”

Program a code such that you remove everything in the File1 which is inside File2.

The output of File1 will be:

“time, going learn write programs recognize objects images using deep learning. words, going explain black magic allows Google Photos search photos picture”

3. 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 “python” classes but not “Web Application”

4. Write a python program to create the following management systems.

a. Hospital admission System (e.g. classes Patient, Doctor, Medical Admission Clerk, Book, Nurse, etc.)

Prerequisites:

a. Your code should have at least five classes

b. Your code should have \_init\_ constructor in all the classes

c. Your code should show inheritance at least once

d. Your code should have one super call

e. Use of self is required

f. Use at least one private data member in your code

g. Use multiple Inheritance at least once

h. Create instances of all classes and show the relationship between them

*Comment your code appropriately to point out where all these things are present*

5. program a code which download a webpage contains a table using Request library, then parse the page using Beautifusoup library. You should save all the information of the table in a file.

*Sample input:* https://www.fantasypros.com/nfl/reports/leaders/qb.php?year=2015

*Sample output:* Save the table in this link into a file

**LAB Submission Guidelines (for both In Class and Online students):**

1. LAB submission is in pairs of two students.

2. Submit your source code and documentation to GitHub and represent the work through wiki page properly (submit your screenshots as well. The screenshot should have both the code and the output)

3. Comment your code appropriately

4. Video Submission (2 – 3 min video showing the demo of the LAB, with brief voice over on the code explanation)

5. Submit **only** report at Turnitin in UMKC blackboard

6. Remember that similarity score should be less than **15%**

7. Use this link to submit your LAB#: <https://docs.google.com/forms/d/11G5fCSqRqIDfmeMA6E3IcQ25w9LN_Q8A04lVVTydPx4/edit?ts=5b74fd15>

8. Report should include below details

I. Introduction

II. Objectives

III. Approaches/Methods

IV. Workflow

V. Datasets (if applicable)

VI. Parameters

VII. Evaluation & Discussion

VIII. Conclusion

**LAB Evaluation Criteria:**

1. Report similarly score (should be less than **15%**)

2. Report Quality (check the below example reports for reference)

3. Time (should submit before due time)

4. Wiki page

**Example Reports:**

<https://github.com/stratospark/food-101-keras>

<https://github.com/matterport/Mask_RCNN>

<http://blog.stratospark.com/deep-learning-applied-food-classification-deep-learning-keras.html>

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