

Assignment-1

Lesson Overview:

This lesson will focus on installation and making one familiar with python programming concepts.

Use Case Description:

1. Hello World
2. Add two numbers
3. Basic operations
4. Basic for loop

Programming elements:

Python Features, Applications, Installation, Python version, Data types, Operators, Conditional Statements

Lecture-1:

Note: Code quality (in terms of time and space complexity) is highly valued

1. Write a python program for the following:

- Input the string “Python” as a list of characters from console, delete at least 2 characters, reverse the resultant string and print it.

Sample input:

- python

Sample output:

- ntyp

- Take two numbers from user and perform at least 4 arithmetic operations on them.

3. Write a program that accepts a sentence and replace each occurrence of ‘python’ with ‘pythons’ without using regex

Sample input:

- I love playing with python

Sample output:

- I love playing with pythons

Lecture-2:

- Write a program, which reads weights (lbs.) of **N** students into a list and convert these weights to kilograms in a separate list using:
 - 1) Loops and
 - 2) List comprehensions

N: No of students (Read input from user)

Example: **L1: [150,155, 145, 148]**

Output: [68.03, 70.3, 65.77, 67.13]

- Write a program that returns every other char of a given string starting with first using a function named “string_alternative”
Str = “**Good evening**”
Output: Go vnn
Note: You need to create a function named “string_alternative” for this program and call it from main function.
- Write a python program to find the wordcount in a file for each line and then print the output.
 - Finally store (Append) the output back to the file.

Example:

Input: a file includes two lines:

Python Course

Deep Learning Course

Output:

Python Course

Deep Learning Course

Word_Count:

Python: 1

Course: 2

Deep: 1

Learning: 1

Note: Your program should work for any number of lines.

Online Submission Guidelines (for Online students):

1. Submit your source code and documentation to GitHub and represent the work in a ReadMe file properly (submit your screenshots as well. The screenshot should have both the code and the output)
2. Comment your code appropriately

3. Video Submission (1 – 3 min video showing the demo of the assignment, with brief voice over on the code explanation)

Note: *Cheating, plagiarism, disruptive behavior and other forms of unacceptable conduct are subject to strong sanctions in accordance with university policy. See detailed description of university policy at the following URL:* <https://catalog.umkc.edu/special-notice/academic-honesty/>