

ARCH-7210: Idea Seminar | ARCH-5050: S.T.A.P.A.C.D

Instructor: Milad Rogha, mrogha@uncc.edu

ASSIGNMENT 1: Python Fundamentals (10 pts)

Due: 09.02.21 AT 2:29 PM

Brief:

This assignment reviews the fundamental concepts of Python programming such as variables, data structures, loops and iteration, conditional statements, functions, and classes through a set of problems. For this assignment, provide only a single Jupiter Notebook file (.ipynb).

Note: Comments are required in your code.

Problem 1: (1pts)

Write a function that, for any given number, determines whether it is Odd or Even.

Example: (input: 2 → output: "Even", 3 → "Odd")

Problem 2: (1 pts)

Write a function that reverses the order of a sentence.

(Example: input: ("This is the original sentence.") → output: "sentence. original the is This")

Problem 3: (1 pts)

Write a function that finds the maximum and minimum of a given list of numbers and returns them as a tuple.

Problem 4: (2 pts)

For a given list of items, write a function that returns a list with unique items of the original list.

For example: 1,1,2,2,3,3,4,4 -> 1,2,3,4

Problem 5: (5 pts)

In this part, create a calculator with code! The calculator should be an instance of a class and perform simple arithmetic functions (addition, subtraction, multiplication). Use OOP, user input, and functions in your code.

Hints:

- You may need to use the Math library.
- Google is your friend.
- Stack Overflow is also a good friend.