**CSE 212 – Programming with Data Structures**

**W10 Prove – Response Document**

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**Question 1: Provide the outline for the data structures tutorial you are creating for the final project. Use the Python Fundamentals Tutorial outline provided in the assignment instructions as an example.**

# **Data Structure Tutorial in Python**

## Introduction (0-welcome.md)

* Introduction to the Tutorial.
* Introduce Self and Contact Information.
* Provide links to the three modules.

## Stack Tutorial (1-stack.md)

* Purpose of the stack data structure.
* Last-In-First-Out (LIFO) principle.
* Basic operations: push, pop, and peek.
* Example Python code and a diagram or tables to illustrate the concept.
* A problem to solve independently, with a link to the solution.

## Set Tutorial (2-set.md)

* Purpose of the set data structure.
* Concept of uniqueness and unordered elements.
* Basic operations: add, remove, and check membership.
* Example Python code and a diagram or tables to illustrate the concept.
* A problem to solve independently, with a link to the solution.

## Tree Tutorial (3-tree.md)

* Purpose and characteristics of a tree data structure.
* Brief explanation for the different types of trees (e.g., binary tree, binary search tree).
* Explain the binary search tree (BST) data structure
* Present the operations: search, insert, and delete.
* Example Python code and a diagram or tables to illustrate the concept.
* A problem to solve independently, with a link to the solution.