**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.**

**Topics:**

**\* Stack**

**\* Linked List**

**\* Tree**

**Cover each in depth, if there is time, include illustrations as .png files, if possible, embed into markdown.**

**Cover in each tutorial:**

\* Purpose

\* Why it matters

\* Performance - `Big 'O` Notation

\* Problems

\* How you use it - Recursion for the linked list and tree

\* Errors

\* Common Pitfalls

**# Welcome**

\* Greeting

\* Overview of tutorials

\* Links

\* Additional notes

\* Comic?

**# Stack**

\* Intro

\* Explain what the stack is and what we use it for - purpose

\* Stack trace error example

\* Why it matters

\* Explain stack performance

\* Show how to use the stack

\* Show common stack errors

\* Common Pitfalls

\* Additional notes

**# Linked List**

\* Intro

\* Explain what a linked list is - purpose

\* Why it matters -

\* What we use them for

\* Performance

\* Problems

\* Common pitfalls

\* Error examples

\* Additional Notes

**# Tree**

\* Intro

\* What it is and its Purpose

\* Why it matters

\* What we use it for

\* Recursion

\* Performance

\* How to use

\* Common pitfalls

\* Errors

\* Additional Notes