**CSE 212 – Programming with Data Structures**

**W03 Prove – Response Document**

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**Question 1: From Part 1, describe what the Mystery Stack 1 code does and how the use of a stack helps in the implementation.**

The mystery stack 1 code returns the horizontally flipped version of the input. For example, the input “Hello world” would result in “dlrow olleH”. A stack helps in the implementation because it provides a way for us to create an altered version of the input without altering the input at all.

**Question 2: From Part 1, what are the three outputs from the Mystery Stack 1 code for the following three different inputs?**

* **racecar**
  + **racecar**
* **stressed**
  + **desserts**
* **a nut for a jar of tuna**
  + **anut fo raj a rof tun a**

**Question 3: From Part 2, describe what the Mystery Stack 2 code does and how the use of a stack helps in the implementation.**

This algorithm performs math operations. The stack organizes the numbers in a useful way so the algorithm can work properly without altering the original input.

**Question 4: From Part 2, answer the following regarding what the Mystery Stack 2 code does:**

* **What will the result be if the input parameter is: 5 3 7 + \***
  + **50**
* **What will the result be if the input parameter is: 6 2 + 5 3 - /**
  + **4**
* **What input parameter would result in the display of “Invalid Case 1!”**
  + **10 + 5**
* **What input parameter would result in the display of “Invalid Case 2!”**
  + **10 0 /**
* **What input parameter would result in the display of “Invalid Case 3!”**
  + **Hello world**
* **What input parameter would result in the display of “Invalid Case 4!”**
  + **1 2 3**