**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.**

It reverses the string `text`.

Stack helps keep track of the last element added to the stack array and using `pop()` to recreate a new string.

**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.**

Mystery 2 performs calculation according to the parameters that are passed in.   
It appends the numbers to a stack, when it encounters an operator, it takes the last 2 numbers appended to the stack and performs the operation on them. After the operation it appends the result of the operation back to the stack and continue the loop to finish the entire list/array.

Stack helps because it was able to track which 2 numbers are under the operation, it helps to perform the correct calculation with the correct order.

**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**, (3 + 7) \* 5

* **What will the result be if the input parameter is: 6 2 + 5 3 - /**

**4**, (6 + 2) / (5 - 3)

* **What input parameter would result in the display of “Invalid Case 1!”**

“6 +”

* **What input parameter would result in the display of “Invalid Case 2!”**

“6 0 /”

* **What input parameter would result in the display of “Invalid Case 3!”**

“}”

* **What input parameter would result in the display of “Invalid Case 4!”**

“”