In this lab, we looked at the concepts of array, array of pointers, vector, stack, and queues. In this lab, different data structures were covered. For students majoring in computer science, data structures are crucial, and picking the best data structure can save a lot of time. Data structures also make Manipulation of large amounts of data easier. A strong foundation in data structures is important for CS majors as it helps crack interviews. Stacks and queues are covered in-depth in this lab. These data structures should be learned because they are also used in daily life.

TASK 4 SOLUTION:

In Task 4 I used vector string to store the move instructions. I used array for three towers and used push and pop function to move a disk from Tower X to Tower Y. The queue is displayed either after the game is completed or if the user chooses to quit.

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TASK-3

For TASK 3 is used 2 towers for 2 players and a tower in between them. To make sure the user isn’t playing any illegal moves I used three conditional statements to make sure all rules are followed.

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TASK-2

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TASK-1

In Task 1, I used array of pointers as stack and used a while loop to ask user for input and in the end, I used a pop function to remove the last element.

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