FPU Fall 2020 - COP 3337C Homework-3

Due Date & Time: 11/18/2020 Wednesday – 11.59pm through CANVAS.
Total Marks: 10 marks.
Weight in final Grade: 4%

Part- 1: Carry **3** marks.
Create a C++ project and upload it under Homework-3 in the Canvas. Use Your First Name + Your Last Name + Part-1 + HW3. For example, Bayazit_Karaman_Part1_HW3.zip.

In this homework, you will complete the implementation of Singly Linked List data structure. The following functions should be added to the SinglyLinkedList.cpp.

int getMin (Node *head) → Finds and returns the smallest element in the list.
Node * insertAt (Node *head, int newData, int pos) → Finds the location of the new node and inserts it.
int middleNode (Node *head) → Finds and returns the data of middle node in the list.

Test your functions with the given main function on Module Week-11(test.cpp).

Part- 2: Carry **3** marks.
Create a C++ project and upload it under Homework-3 in the Canvas. Use Your First Name + Your Last Name + Part-2 + HW3. For example, Bayazit_Karaman_Part2_HW3.zip.

Write a generic function that finds the largest among the three values. Your function should have three parameters of the same type. Test the function with int, double, and string values.

Part- 3: Carry **4** marks.
Create a C++ project and upload it under Homework-3 in the Canvas. Use Your First Name + Your Last Name + Part-3 + HW3. For example, Bayazit_Karaman_Part3_HW3.zip.

Write a generic function that returns the sum of values at odd locations of an array. Your function should have two parameters that are a generic data type pointer and an integer (size of the array). Test the function with int and double values.