Homework #4

Data Structure (501324-3)

Fall 2023

Due: Thursday December 7, 2023, 11:59 pm via Blackboard

Required:

- Answer all the following questions.

- Implement and show the output of each linked list question.

- In each coding exercise, add a comment // your name // your id.

- NO homework will be accepted without this comment.

- Put everything in one PDF file and upload it.

- NO LATE homework or excuses will be accepted. I gave you enough time to work on this homework.

**Question 1:**
**Draw the Binary Search *Tree* (BST) that would result from the insertion of the following integer keys:**
**14  58  18   10   99  52   33   69   74   17**

- **Insert 21 into the resulting BST**
- **Delete 52 from the BST**

**Question 2:**
**Build the Minheap for the following items in the array:**

| 11 | 54 | 10 | 2 | 9 | 5 | 8 | 3 | 9 | 0 | 6 | 1 |
|----|----|----|---|---|---|---|---|---|---|---|---|

- **Insert 4 into the resulting Minheap**
- **Delete 5 from the resulting Minheap.**

**Question 3:**
**Given the following keys:**
**90    13    3    77    21    1**
- **Sort these items using bubble sort.**
- **Sort these items using selection sort.**