Assignment03 question01GUI **README**

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**Installing/Creating GUI**

To run the GUI you can either compile the source code for question01GUI.java and then run the GUI class as it has a main method inside itself that will create the GUI for you. If you would prefer to make it outside of the class, you can simply instantiate a GUI object using it’s default constructor.

**0.General Layout**

The GUI has 3 main sections, the scrollable display area on top, followed by an input field and buttons used to create trees as well as find the kth smallest element, followed by buttons to utilize the required binary search tree methods

**1.Creating a Binary Search Tree(BST)**

Random Numbers: Enter the amount of numbers you wish to generate into the input text field and then click the “Create Random” button and it will insert that many numbers into an empty Binary Tree

Text File: To select a text file that has numbers space separated, simply click the “Choose File” button and a prompt will pop up so that you can select the text file on your computer and it will insert the elements

**2.Display Sorted/Unsorted Tree**

To display the sorted tree in ascending order click the “Display Sorted(asc)”, and to display it in descending order click the “Display Sorted(desc)”. To display the elements in the order that they were inputed into the tree, click the “Display Unsorted” button.

**3.Displaying Height of Tree**

To display the height of the tree simply click the “Display Height” button

**4.Finding the K’th Smallest Element**

To find the k’th smallest element in the tree simply input the k’th number into the input field and click the “Find K’th Smallest” button.