PRACTICAL EXAM [2] – CSD201 – SUMMER 2023
Duration: 85 minutes

Write a Java project that manages **students** (**roll_number**: int, **mark**: double) on a **binary search tree** (ordered based on roll_number) **T** with the following requirements. Given the array of student information, called A: (5, 5.5), (3, 3.3), (2, 2.2), (4, 4.4), (7, 7.7), (6, 6.6), (8, 8.8), (1, 1.1), (9, 9.9).

1. To obtain the tree from A *[constructor, (+student) 2.5]*.
2. Determine the height using a level-order traversal *[height_level_order, 1.0]*.
3. Get the information of the student having the minimum mark *[peek_min_mark, 1.0]*.
4. Using a recursion to traverse by post-order and store the result to array Apost *[post_order_recur, 1.0]*.
5. Using an array-based stack to traverse by in-order and store the result to array Ain *[in_order_array_stack, 1.0]*.
6. Comprise BST T2 from 2 arrays of Ain and Apost with a recursion *[comprise_in_post, 1.0]*.
7. Sort A in increasing order by BubbleSort and check if A is equal with Ain *[bubble_equal, 0.75]*.
8. A main function to test all requirements *[1.75]*!

Note: Submit java files only!