



CS211FZ Data Structures & Algorithms (II)

Midterm Test (100 Minutes)

NOTE:

- Do NOT use “package” in your source code
- You must submit the source code files, i.e., the “.java” files.
- You are NOT allowed to search information on the Internet.
- You are allowed to use class notes during the test.
- Sharing your work with others is NOT allowed.

Task 1:

An inexperienced developer has written a program that implements an AVL tree (“*BuggedAVLTree.java*”). The implementation contains 5 mistakes. Identify these mistakes and provide corrections to the mistakes.

Task 2: Implementing Partitioning Strategies

The provided quicksort algorithm (“*QuicksortNeedsPartition.java*”) is missing an implementation of a partition strategy. Your task is to complete the partition strategy using the *Hoare*’s algorithm. No other part of the source code should be modified.