

Homework 9
(Due: 1100, 6/4/2014)

The purpose of this exercise is to compare the efficiency of BST and AVL tree data structure.

You are allowed to consult with your peers but you must complete the homework yourself.

Empirical Study

- a. Create a C++ project with the given source code
HW9.cpp, random_array.h, random_array.cpp, BST.h and AVL.h.
- b. Modify the main loop in HW9.cpp to collect following statistics for different tree sizes:
(1) height of the tree, (2) average depth of the tree, (3) average time per insertion,
and (4) average time per search.

Try to collect statistics for tree sizes as large as your computer can handle.

- c. Present the data in a graph to show the growth rates of the different operations.

Submission

Submit your graph in a PDF file to Sakai to complete the homework assignment by 1100, Wednesday (6/4).