

Homework 4

Suppose you are asked to use a **binary search tree** to implement a **max priority queue**. Write a C++ program that does the following:

1. It first prompts the user for entering a sequence of data elements of type *int* and constructs a **binary search tree** by inserting these elements one by one. This binary search tree represents a **max priority queue**.
2. The user can then **insert** or **delete** from the **max priority queue** from a **menu**. Note that, to demonstrate that the binary search tree is correctly restructured after each insertion or deletion, print out the tree using **level-order traversal**.
3. In addition, you have to also implement a **function** called *computsum* which returns the **sum of all elements** in the subtree rooted at any element (inclusive) given by the user.

Due date: Dec. 11, 2017