

Lab Goal : This lab was designed to teach you more about Heaps and Priority Queues.

Lab Description : Create a class of your choosing that stores some data you cook up. The class must implement Comparable as it will be stored in a priority queue. Instantiate and store at least 8 Objects of the type you create. Print out the 8 Objects in ascending order using the max heap setup of your heap lab. You will use your heap class as the underlying data structure for this lab.

Sample Data and Output (this output would apply if you were storing Monster):

How many things do you wish to enter? :: 8

Enter the ht :: 1
Enter the wt :: 1
Enter the age :: 1

Enter the ht :: 2
Enter the wt :: 2
Enter the age :: 2

Enter the ht :: 1
Enter the wt :: 2
Enter the age :: 3

Enter the ht :: 3
Enter the wt :: 2
Enter the age :: 1

Enter the ht :: 2
Enter the wt :: 1
Enter the age :: 3

Enter the ht :: 2
Enter the wt :: 3
Enter the age :: 1

Enter the ht :: 3
Enter the wt :: 1
Enter the age :: 2

Enter the ht :: 3
Enter the wt :: 3
Enter the age :: 3

[3 3 3, 3 2 1, 3 1 2, 2 2 2, 2 1 3, 1 2 3, 2 3 1, 1 1 1]
getMax() - 3 3 3
removeMax() - 3 3 3

[3 2 1, 2 2 2, 3 1 2, 1 1 1, 2 1 3, 1 2 3, 2 3 1]
getMax() - 3 2 1
removeMax() - 3 2 1

[3 1 2, 2 2 2, 2 3 1, 1 1 1, 2 1 3, 1 2 3]

Files Needed ::

Heap.java
YourPQ.java
Lab18b.java