

CptS 223 Micro Assignment #4 - Heap Percolating

For this micro assignment, you must implement the following functions found inside Heap.h.

Note that our heap is a min-heap (smallest items at the top)!

void percolateDown(int index)

void percolateUp(int current_position)

These functions cause the items at the supplied locations to "percolate down" and "percolate up" the heap until the min-heap property is satisfied. percolateDown is called on deleteMin operations; see the deleteMin function inside Heap class to see how percolateDown is called. Note that we're being good programmers and allowing the heap to percolate down at any point, not just the root! Doing so allows us to evoke the percolate down functionality in other situations (e.g. buildHeap).

The percolateUp function is called on insert() calls and moves any given index up in the tree until it satisfies the heap properties of our min heap.

I have tested this code on the EECS SSH server, sig2. I used the command line:

```
g++ -g -Wall -std=c++11 main.cpp
```

You can run this with 'make', 'make test', and 'make run' as per usual

It built and runs properly. The tests for insert and delete currently fail, which is what you're going to fix.

Grading

Your submission will be graded based on the following:

1. [10] Your solution builds, does not cause any runtime issues, and passes all test cases

Due Date

This assignment must be submitted by committing it to your class git repository. Please DO NOT merge your assignment branch into master. Keeping the branch makes it much easier for the graders to find your work, which should be in the MA4 directory itself (not somewhere else). One thing to keep in mind is that even if you overwrite the files I give you to start the code you can always roll back to an earlier commit if you need to. This is a key element in version control systems, so please work right in the MA4 directory instead of making various other temp directories and hoping the graders will find them when you turn your code in.

Please check into a blackboard a text file with these lines:

Your WSU ID & Name	123456789	Student B. Coug
Your EECS username (NOT YOUR WSU EMAIL)	scoug	
The commit hash: git checkout [commit hash]	6c847615fd148880bcd4f22a9a79ace43ea37a84	