

## GIT Department of Computer Engineering CSE 222/505 Spring 2015 Homework 06

Heap Implementation Due date: Apr 20<sup>th</sup> 2015 23:55

In this homework, you will implement the methods of Java PriorityQueue<E> listed at <a href="http://docs.oracle.com/javase/7/docs/api/java/util/PriorityQueue.html">http://docs.oracle.com/javase/7/docs/api/java/util/PriorityQueue.html</a>

## Part 1:

Write unit tests for the methods of Java PriorityQueue<E> listed at <a href="http://docs.oracle.com/javase/7/docs/api/java/util/PriorityQueue.html">http://docs.oracle.com/javase/7/docs/api/java/util/PriorityQueue.html</a>
Write at least 4 tests for each method. You should write tests for the methods of the iterator class.

## Part 2

Design and implement a new PriorityQueue<E> class that includes the above methods. Your class will use an inner Node<E> class and will impement all methods using node structure.

Your new class should pass all unit tests in Part 1 without any modification. Write additional tests to show that your new class works as a heap. Include all your design documents (EA drawings) in your submission.