CSCE 221 Cover Page
Programming Assignment # 5

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Type of sources		
People		
Web pages (provide URL)	http://www.cprogramming.com/tutorial/templated_functions.html http://courses.cs.tamu.edu/teresa/csce221/csce221-index.html	cplusplus.com
Printed material		
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I certify that I have listed all the sources that I used to develop the solutions/code to the submitted work.

"*On my honor as an Aggie, I have neither given nor received any unauthorized help on this academic work.*"

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Report

In both implementations, the running time of `minElement()` is $\Theta(1)$. For `removeMin()` and `insertItem()`, both implementations are $O(logn)$.

Locator support does not effect the running time of the above functions. It does, however, allow the functionality of the following functions: `remove(loc)` and `decreaseKey(loc, k)`. Both of these functions are $\Theta(1)$.

Minimum priority queues could be useful when there are elements with unequal inportance or urgency. For example, in an emergency room, there may be cases that require a faster response time than others. These cases would be given a lower key value so that they are taken care of first. Another application could be a business in which customers pay a preminum to get "priorty service," such as a shipping company. Customers who paid the extra premium would then recieve service before those who did not pay the premium.