

Week 8 Assignment - Priority Queues

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Due Sunday by 11:59pm **Points** 10 **Submitting** a text entry box or a file upload

Priority Queue HW

1. Implement a Queue class using a priority queue as the underlying data structure. Implement the methods enqueue, dequeue, __len__, and is_empty. In your comments,
 - Describe how you can revise this class to behave like a stack LIFO by changing one line of code.
 - Indicate what software design pattern this represents.
2. Revise the attached Priority Queue class to use iteration (loops) instead of recursion for upheap and downheap.
3. Write a method called checkHeapProperty that determines whether or not a heap represented by a python list meets the heap properties. Put this in a separate file.
4. Using the attached code, write a MaxHeapPriorityQueue. Instead of the minimum-oriented abstraction it will implement a maximum abstraction. Instead of having methods called remove_min and min, it will have methods called remove_max and max. Your implementation should not make any assumptions about whether or not the underlying data structure is an array or list nor about the type of keys that will be used.

[heap_priority_queue.py](#)  [priority_queue_base.py](#) 

