

## Homework 7: Priority Queue

cs230  
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Allen B. Downey  
Computer Science Department

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The purpose of this assignment is to implement and use a Priority Queue. Since you are acting as an implementor and a client at the same time, you have to be extra careful to think about appropriate encapsulation.

### Linked Priority Queue

1. Write an implementation of a Priority Queue using a linked list. There are three ways you might proceed:
  - A Priority Queue might contain a LinkedList object as an instance variable.
  - A Priority Queue might contain a reference to the first Node object in a linked list.
  - A Priority Queue might extend (inherit from) the existing LinkedList class.

Think about the pros and cons of each and choose one. Also, you can choose whether to keep the list sorted (slow insert, fast remove) or unsorted (slow remove, fast insert).

### Sort those Golfers

Write a program that reads a file containing the names and scores of a set of golfers. It should create Golfer objects, put them in a Priority Queue and then take them out and print them. They should appear in descending order of priority, which is increasing order by score.

```
Tiger Woods    61
Hal Sutton     69
Phil Mickelson 72
```

To get you started, I have written a program that reads lines from a file, and provided some data. Download them from:

<http://rocky.wellesley.edu/cs230spring02/code/hw07/>