Assignment Name: Priority Queue

Assignment Specifications: Implement a priority queue in Java using a <u>single linked list</u>. For information on Priority Queues, visit: https://en.wikipedia.org/wiki/Priority_queue. You are to implement the following methods: insert(element, priority), remove_maximum(), decrease(element, priority_delta), increase(element, priority_delta), and display(). The specifications for each method is as follows:

- 1. insert insert an element into the queue with a given priority (higher priority value, the higher the priority is for the data element).
- 2. remove_maximum removes the highest priority element from the priority queue.
- 3. decrease search for element in the priority queue and decrease its priority to the new priority level (priority priority delta).
- 4. increase search for element in the priority queue and increase its priority to the new priority level (priority = priority + priority delta).
- 5. display display the elements in the priority queue in order from highest priority to lowest priority.

Assignment Grading Rubric:

Major functionalities(1)	50 pts
Project Correctness(2)	40 pts
Documentation ⁽³⁾	10 pts
Total	100 pts

- 1. All required functionality implemented, properly tested, and working for full credit.
- 2. Project specifications met, and project compiles (your instructor will not fix compile errors make sure your project compiles) for full credit.
- 3. Properly fill out Programmer Documentation text file.

Additional Notes:

Provide in your project a test driver main class demonstrating the project correctness (I will give 5 points extra credit if you are adventurous in creating a Junit test class with a minimum of 5 test methods per priority queue method listed above).

This project must be done using Netbeans 8.1+ (as this is the IDE your instructor will be compiling your project when grading).

Name your project: your-lastname-your-firstname-priority-queue

School policy on academic honestly is strictly enforced on this project. Your work is to be your own individual work, no copying from other students or Internet sources. Plagiarism in any form will result in an automatic zero!