

Lab Goal : This lab was designed to teach you more about using a Priority Queue.

Lab Description : Read a list of Strings. Store the Strings in the PriorityQueue and display the list in priority queue order, display the min value, and display the queue in natural order.

Sample Data :

```
one two three four five six seven
1 2 3 4 5 one two three four five
a p h j e f m c i d k l g n o b
```

Files Needed ::

```
PQTest.java
PQTestRunner.java
```

Sample Output :

```
toString() - [five, four, seven, two, one, three, six]
getMin() - five
getNaturalOrder() - five four one seven six three two
```

```
toString() - [1, 3, 2, 4, 5, three, five, two, four, one]
getMin() - 1
getNaturalOrder() - 1 2 3 4 5 five four one three two
```

```
toString() - [a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p]
getMin() - a
getNaturalOrder() - a b c d e f g h i j k l m n o p
```

BASIC PRIORITYQUEUE CODE

```
PriorityQueue<Integer> pq;
pq = new PriorityQueue<Integer>();
pq.add(67);
pq.add(34);
pq.add(12);

out.println(pq.remove()); //outs 12

out.println(pq.remove()); //outs 34

out.println(pq.remove()); //outs 67

PriorityQueue is a minimum heap with the
smallest value at root.
```