

# Swimmers with Priority Queues

**Lab Description :** Create a Priority Queue of Swimmer and store x Swimmer. The Java PriorityQueue is a minimum heap where the smallest value is always the first one removed.

## Sample Data and Output :

How many Swimmers did you wish to enter? :: 8

Enter the ht :: 1  
Enter the wt :: 1  
Enter the age :: 1

Enter the ht :: 2  
Enter the wt :: 2  
Enter the age :: 2

Enter the ht :: 1  
Enter the wt :: 2  
Enter the age :: 3

Enter the ht :: 3  
Enter the wt :: 2  
Enter the age :: 1

Enter the ht :: 2  
Enter the wt :: 1  
Enter the age :: 3

Enter the ht :: 2  
Enter the wt :: 3  
Enter the age :: 1

Enter the ht :: 3  
Enter the wt :: 1  
Enter the age :: 2

Enter the ht :: 3  
Enter the wt :: 3  
Enter the age :: 3

[1 1 1, 2 1 3, 1 2 3, 3 2 1, 2 2 2, 2 3 1, 3 1 2, 3 3 3]

getMin() - 1 1 1  
removeMin() - 1 1 1

[1 2 3, 2 1 3, 2 3 1, 3 2 1, 2 2 2, 3 3 3, 3 1 2]

getMin() - 1 2 3  
removeMin() - 1 2 3

[2 1 3, 2 2 2, 2 3 1, 3 2 1, 3 1 2, 3 3 3]

## Files Needed ::

SwimmerPQ.java  
SwimmerPQRunner.java

```
class Swimmer implements Comparable<Swimmer>
{
    //code for instance variable not shown
    //code for methods not shown

    public Swimmer()

    public Swimmer(int ht, int wt, int age)

    public void setWeight(int wt)

    public void setHeight( int ht)

    public void setAge( int age)

    public Object clone()

    public int getWeight()

    public int getHeight()

    public int getAge()

    public boolean equals( Object o )

    public int compareTo( Swimmer rhs )

    public String toString( )
}
```