2020-01-18 - Handout – Priority Queue (using Binary Heap)

Q1. K closest points to origin

Link: https://leetcode.com/problems/k-closest-points-to-origin/

We have a list of points on the plane. Find the K closest points to the origin (0, 0).

(Here, the distance between two points on a plane is the Euclidean distance.)

You may return the answer in any order. The answer is guaranteed to be unique (except for the order that it is in.)

```
Example 1:
Input: points = [[1,3], [-2,2]], K = 1
Output: [[-2,2]]
```

```
Example 2:
Input: points = [[3,3], [5, -1], [-2,4]], K = 2
Output: [[3,3], [-2,4]]
(The answer [[-2,4], [3,3]] would also be accepted.)
```

Q2. Find minimum number of meeting rooms

Link: https://leetcode.com/problems/meeting-rooms-ii/

Given an array of meeting time intervals consisting of start and end times [[s1, e1], [s2, e2] ...] ($s_i < e_i$), find the minimum number of conference rooms required.

```
Example 1:
Input: [[0, 30], [5, 10], [15, 20]]
Output: 2
```

```
Example 2:
Input: [[7,10], [2,4]]
Output: 1
```

Q3. Merge k Sorted Lists

Link: https://leetcode.com/problems/remove-k-digits/

Merge *k* sorted linked lists and return it as one sorted list. Analyze and describe its complexity.

```
Example 1:
Input:
[
  1->4->5,
  1->3->4,
  2->6
]
Output: 1->1->2->3->4->4->5->6
```