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] ...] (si < ei), 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** |  |