**Algorithm HW7**

EX:

Input: [[1,1],[2,4],[2,10],[5,4],[4,8],[5,5],[8,4],[10,2],[10,1]]

Scan 1: [1, 1]

Output: [[1, 1]]

Scan 2: [2, 4]

2 > 1 && 4 > 1

Output: [[2, 4]]

Scan 3: [2, 10]

2 = 2 && 10 > 4

Output: [[2, 10]]

Scan 4: [5, 4]

5 > 2 but 4 < 10

Output: [[2, 10], [5, 4]]

Scan 5: [4, 8]

4 > 2 but 8 < 10

8 > 4 but 4 < 5

Output: [[2, 10], [5, 4], [4, 8]]

Scan 6: [5, 5]

5 > 2 but 5 < 10

5 = 5 && 5 > 4

5 > 4 but 5 < 8

Output: [[2, 10], [5, 5], [4, 8]]

Scan 7: [8, 4]

8 > 2 but 4 < 10

5 > 5 but 4 < 5

8 > 4 but 4 < 8

Output: [[2, 10], [5, 5], [4, 8], [8, 4]]

Scan 8: [10, 2]

10 > 2 but 2 < 10

10 > 5 but 2 < 5

10 > 4 but 2 < 8

10 > 8 but 2 < 4

Output: [[2, 10], [5, 5], [4, 8], [8, 4], [10, 2]]

Scan 9: [10, 1]

10 > 2 but 1 < 10

10 > 5 but 1 < 5

10 > 4 but 1 < 8

10 > 8 but 1 < 4

10 = 10 but 1 < 2

Output: [[2, 10], [5, 5], [4, 8], [8, 4], [10, 2]]

Approach 1:

用counting sort，LSD的方式排好，取出每一個x值裡面最大的value pair，再將他們互相做比較。

Approach 2:

讀取的時候，對當前unbeatable feature的每個value pair做比較，不可取代，就加入新的元素，取代掉的話就刪掉。