Assignment – 4

Let $\mathbb{P} = \{p_1, p_2, \ldots, p_n\}$ be a set of n points in two-dimensional space. Many points can share the same x and y coordinates, however no two points are the same.

- Find the closest pair point in $\mathcal{O}(n \log n)$ time.
- Find three closest pair points in $\mathcal{O}(n \log n)$ time.

To achieve the aforementioned time complexity, you have to make sure that the division into left and right parts are nearly equal.