CSCI5010 Exercise List 8

Problem 1 (Construction of an Interval Tree). Give an algorithm to construct the interval tree on n intervals in $\mathbb{R}$ using $O(n \log n)$ time.

Problem 2 (Construction of a Priority Search Tree). Give an algorithm to construct the priority search tree on n points in $\mathbb{R}^2$ using $O(n \log n)$ time.

Problem 3* (Optimal Construction of a Priority Search Tree). Let P be a set of n points in $\mathbb{R}^2$ which have been sorted by x-coordinate. Give an algorithm to construct the priority search tree on P using $O(n)$ time.