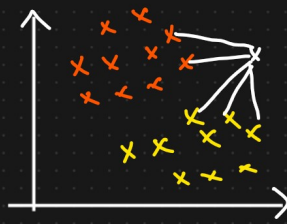


Variants of KNN

Two Variants

- ① KD Tree
- ② Ball Tree

Binary Tree



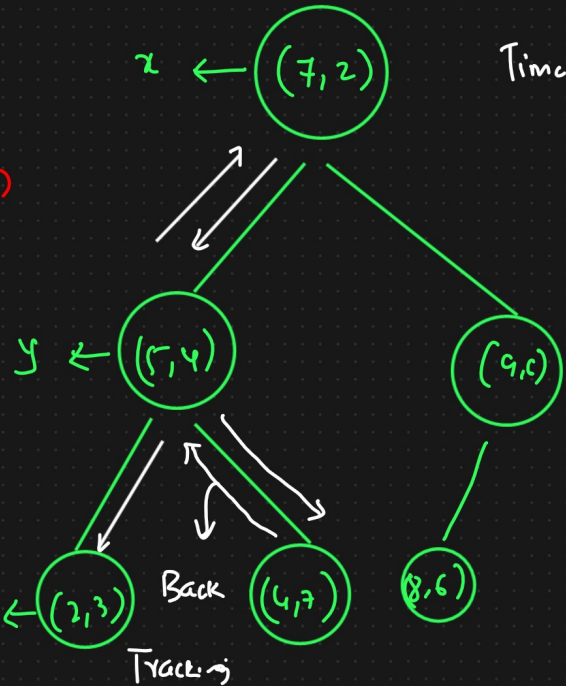
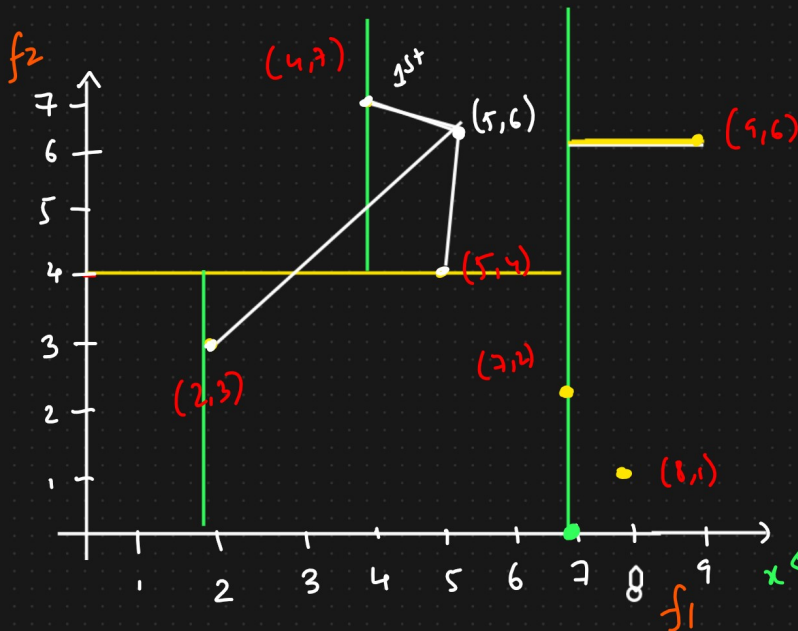
$K=3$

Time Complexity

Brute Search

Auto

① KD Tree \Rightarrow K-Dimensions Tree



Time Complexity
 $\downarrow \downarrow$

① Median of the x coordinates

2, 4, 5, 7, 8, 9

$$\downarrow$$

$$\frac{5+7}{2} = 6.5 \Rightarrow 7$$

② Median of y axis

1, 2, 3.4, 6, 7

② Ball Tree

