1 Finger theorem for Splay Trees (THM 3)

Assume the keys in the tree are $x_1 < x_2 < \ldots < x_n$. The m accesses are to keys of rank $i_1, i_2, \ldots, i_m$.

Static Finger Theorem: For an fixed item x_f the total access time is $O(n \log n + m + \sum_{j=1}^{m} \log(|i_j - f| + 1)$.

Note: if most access are close to any given rank, than fast.