Lecture 5: Scheduling and Binary Search Trees

Lecture Overview

- Runway reservation system
  - Definition
  - How to solve with lists
- Binary Search Trees
  - Operations

Readings

CLRS Chapter 10, 12.1-3

Runway Reservation System

- Airport with single (very busy) runway (Boston $6 \rightarrow 1$)
- "Reservations" for future landings
- When plane lands, it is removed from set of pending events
- Reserve req specify "requested landing time" t
- Add t to the set if no other landings are scheduled within k minutes either way. Assume that k can vary.
  - else error, don't schedule

Example

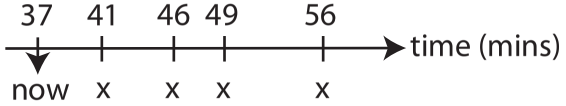

Figure 1: Runway Reservation System Example

Let R denote the reserved landing times: $R = (41, 46, 49, 56)$ and $k = 3$