ساختمان داده ها

نوع داده مجرد صف اولویت (Priority Queue ADT)

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Priority Queues

Two kinds of priority queues:

- Min priority queue.
- Max priority queue.

Min Priority Queue

- Collection of elements.
- Each element has a priority or key.
- Supports following operations:
  - empty
  - size
  - insert an element into the priority queue (push)
  - get element with min priority (top)
  - remove element with min priority (pop)

Max Priority Queue

- Collection of elements.
- Each element has a priority or key.
- Supports following operations:
  - empty
  - size
  - insert an element into the priority queue (push)
  - get element with max priority (top)
  - remove element with max priority (pop)

Complexity Of Operations

empty, size, and top => O(1) time

insert (push) and remove (pop) => O(log n) time where n is the size of the priority queue

Implementing Data Structures

- Heap
- Leftist Tree