Priority Queue Built-in Functions in C++ STL

1. Constructor

Name	Details	Time Complexity
priority_queue<type> pq;	Construct an empty priority queue.	O(1)
priority_queue<type> pq(cmp);	Construct an empty priority queue with a custom comparator.	O(1)
priority_queue<type> pq(it1, it2);	Construct a priority queue with elements from the range [it1, it2).	O(N log N)
priority_queue<type> pq(pq2);	Construct a priority queue by copying another priority queue pq2.	O(N)

2. Capacity

Name	Details	Time Complexity
pq.size()	Returns the number of elements in the priority queue.	O(1)
pq.empty()	Returns true if the priority queue is empty, otherwise false.	O(1)

3. Modifiers

Name	Details	Time Complexity
pq.push(val)	Adds an element val to the priority queue.	O(log N)
pq.pop()	Removes the top element from the priority queue.	O(log N)
pq.emplace(args...)	Inserts a new element in place constructed with args.	O(log N)
pq.swap(pq2)	Swaps contents with another priority queue pq2.	O(1)

4. Element Access

Name	Details	Time Complexity
pq.top()	Returns a reference to the top element in the priority queue.	O(1)