Priority Queue

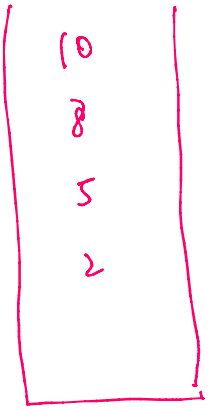
08 June 2022 10:00 AM

(Max Heap)

Priority Queue : largest element stays at the top.

```
void expPQ() {
    priority_queue<int> pq;
    pq.push(5);     // 5
    pq.push(2);     // {5, 2}
    pq.push(8);     // {8, 5, 2}
    pq.emplace(10); // {10, 8, 5, 2}

    cout << pq.top();  //print 10
    pq.pop();          // {8, 5, 2}
    cout << pq.top();  // print 8
```



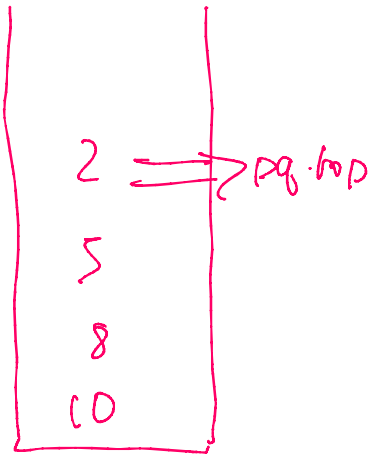
(Min Heap)

Minimum Heap Syntax: For smallest element

```
priority_queue <int, vector<int>, greater<int>> pq;
pq.push(5); // 5
pq.push(2); // 2,5
```

↳ You need to add this for smallest element

```
pq.push(8); // {2, 5, 8}
pq.emplace(10); {2, 5, 8, 10}
cout << pq.top(); //prints 2
```



T.C

push → log n

top → O(1)

pop → log n