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1 Base algorithm

1.1 Bisection method

search for $\min(b), b \in \{a[k] \geq x\}$

```
1 while(l<r){
2     int mid = (l + r) >> 1;
3     if(a[mid] >= x) r = mid;
4     else l = mid + 1;
5 }
6 return a[l];
```

search for $\max(b), b \in \{a[k] \leq x\}$

```
1 while(l<r){
2     int mid = (l + r + 1) >> 1;
3     if(a[mid] <= x) l = mid;
4     else r = mid - 1;
5 }
6 return a[l];
```

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