

# 1942. The Number of the Smallest Unoccupied Chair

## Description

There is a party where  $n$  friends numbered from  $0$  to  $n - 1$  are attending. There is an infinite number of chairs in this party that are numbered from  $0$  to infinity. When a friend arrives at the party, they sit on the unoccupied chair with the **smallest number**.

- For example, if chairs  $0$ ,  $1$ , and  $5$  are occupied when a friend comes, they will sit on chair number  $2$ .

When a friend leaves the party, their chair becomes unoccupied at the moment they leave. If another friend arrives at that same moment, they can sit in that chair.

You are given a **0-indexed** 2D integer array `times` where `times[i] = [arrivali, leavingi]`, indicating the arrival and leaving times of the  $i^{\text{th}}$  friend respectively, and an integer `targetFriend`. All arrival times are **distinct**.

Return *the chair number that the friend numbered `targetFriend` will sit on*.

### Example 1:

```
Input: times = [[1,4],[2,3],[4,6]], targetFriend = 1
Output: 1
Explanation:
- Friend 0 arrives at time 1 and sits on chair 0.
- Friend 1 arrives at time 2 and sits on chair 1.
- Friend 1 leaves at time 3 and chair 1 becomes empty.
- Friend 0 leaves at time 4 and chair 0 becomes empty.
- Friend 2 arrives at time 4 and sits on chair 0.
Since friend 1 sat on chair 1, we return 1.
```

### Example 2:

```
Input: times = [[3,10],[1,5],[2,6]], targetFriend = 0
Output: 2
Explanation:
- Friend 1 arrives at time 1 and sits on chair 0.
- Friend 2 arrives at time 2 and sits on chair 1.
- Friend 0 arrives at time 3 and sits on chair 2.
- Friend 1 leaves at time 5 and chair 0 becomes empty.
- Friend 2 leaves at time 6 and chair 1 becomes empty.
- Friend 0 leaves at time 10 and chair 2 becomes empty.
Since friend 0 sat on chair 2, we return 2.
```

### Constraints:

- $n == \text{times.length}$
- $2 \leq n \leq 10^4$
- $\text{times}[i].\text{length} == 2$
- $1 \leq \text{arrival}_i < \text{leaving}_i \leq 10^5$
- $0 \leq \text{targetFriend} \leq n - 1$
- Each  $\text{arrival}_i$  time is **distinct**.

