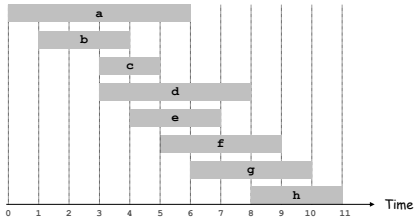
Unweighted Interval Scheduling Problem

- Job j starts at s_j and finishes at f_j.
- Two jobs are **compatible** if they do not overlap.
- **Find:** maximum subset of mutually compatible jobs.



based on slides by S. Raskhodnikova, A. Smith, K. Wayne, E. Demaine and C. Leiserson

Correct Greedy Algorithm

```
Sort jobs by finish times so that f_1 ≤ f_2 ≤ ... ≤ f_n.

A ← ϕ   #Set of selected jobs
for j = 1 to n {
   if (job j compatible with A)
      A ← A ∪ {j}
}
return A
```

```
Sort jobs by finish times so that f_1 ≤ f_2 ≤ ... ≤ f_n.

A ← ϕ   # Queue of selected jobs
for j = 1 to n {
   j* ← A.back()
   if (f_j* <= s_j)
      A.enqueue(j)
}
return A
```