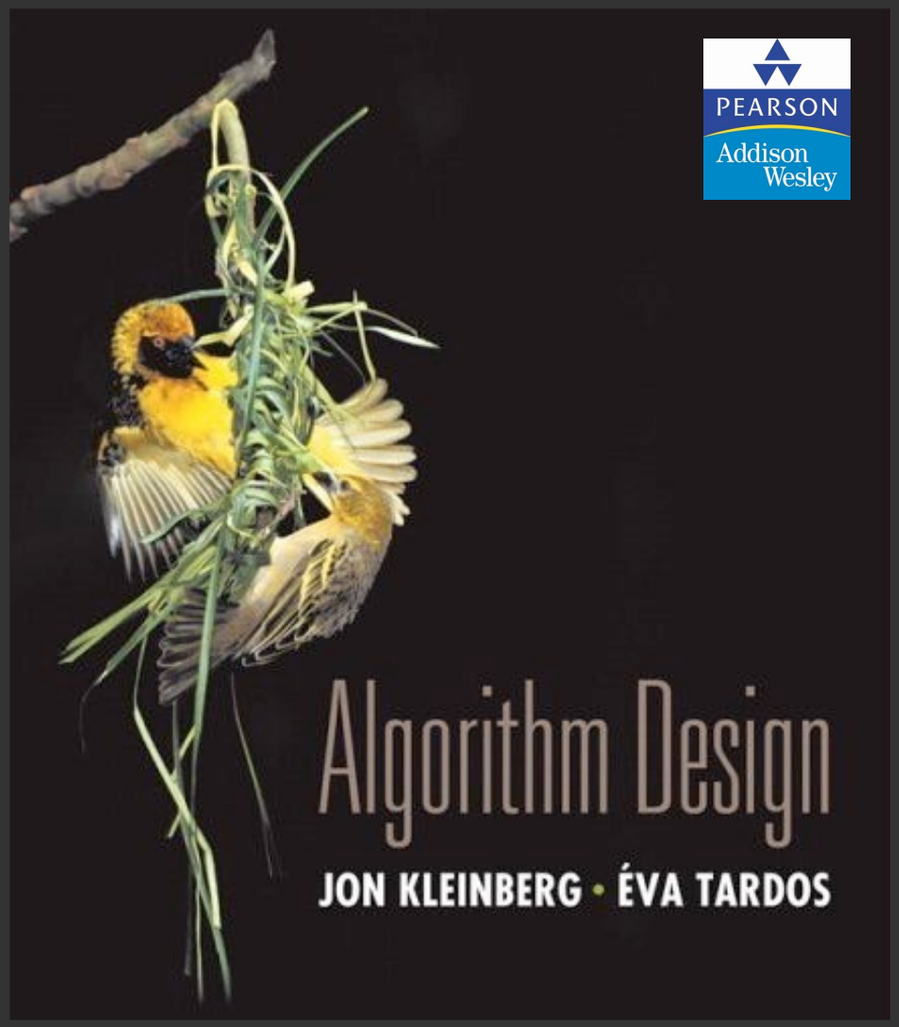


4. Greedy Algorithms I

- *earliest-start-time-first algorithm demo*

Lecture slides by Kevin Wayne

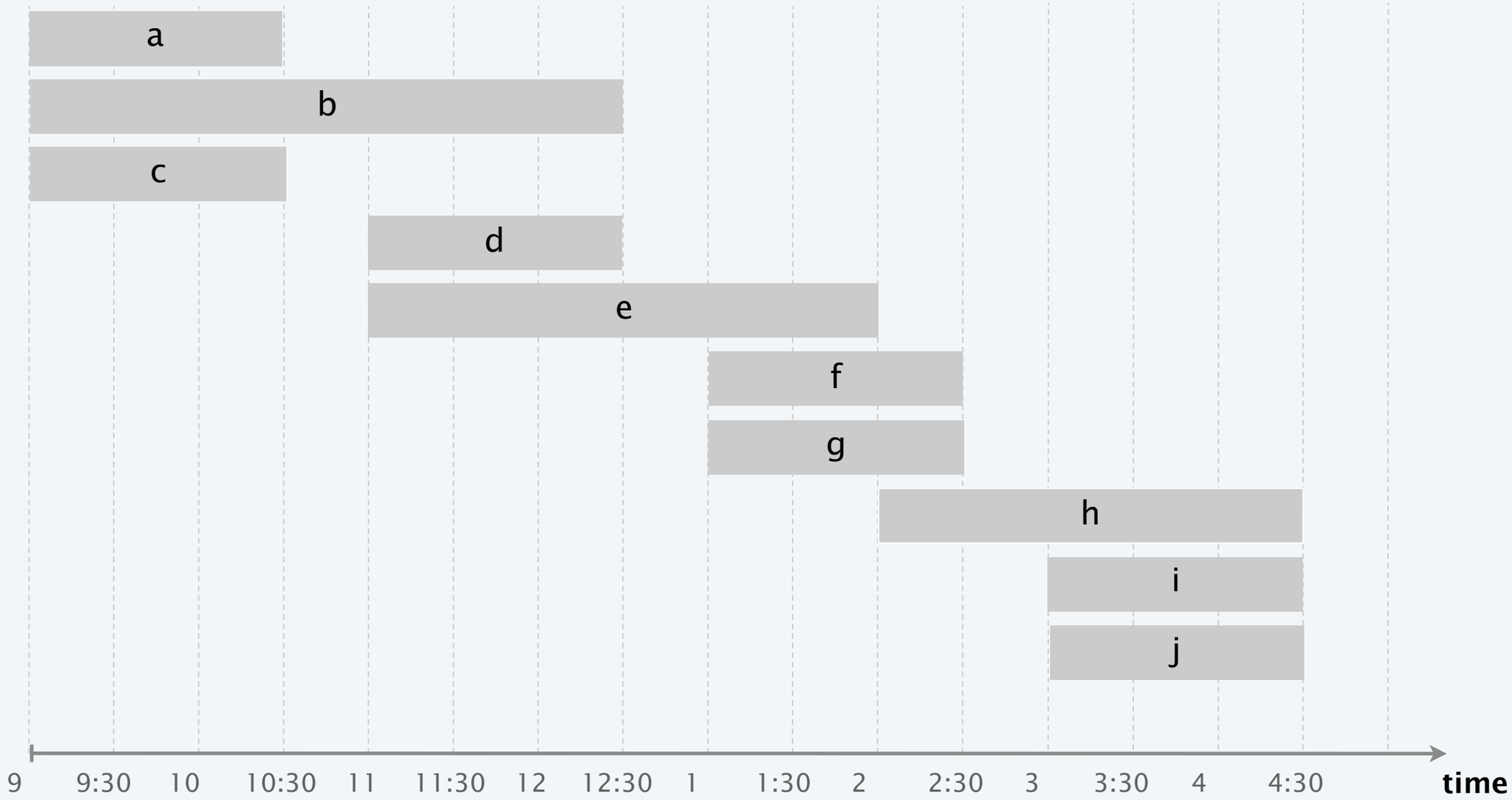
http://www.cs.princeton.edu/~wayne/kleinberg-tardos

Last updated on 7/25/17 10:58 AM

Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

- Assign next lecture to any compatible classroom (if one exists).
- Otherwise, open up a new classroom.

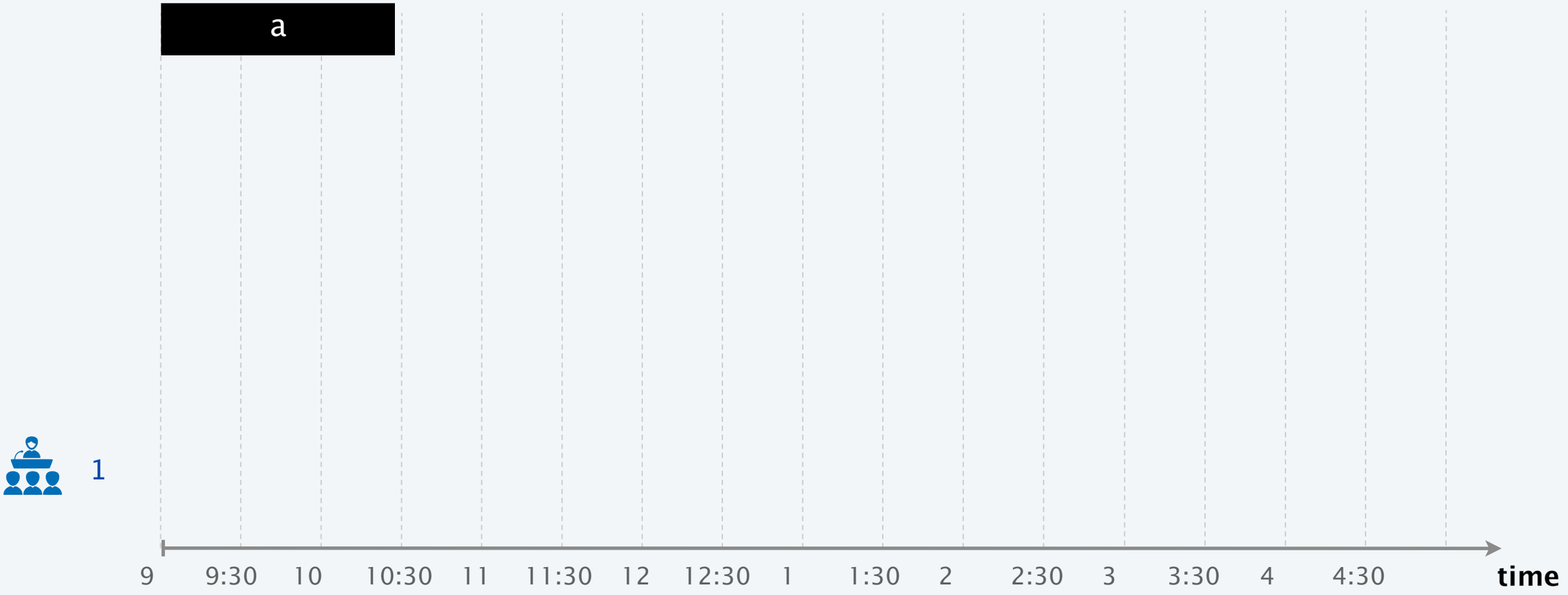


Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

- Assign next lecture to any compatible classroom (if one exists).
- Otherwise, open up a new classroom.

no compatible classroom: open up a new classroom and assign lecture to it



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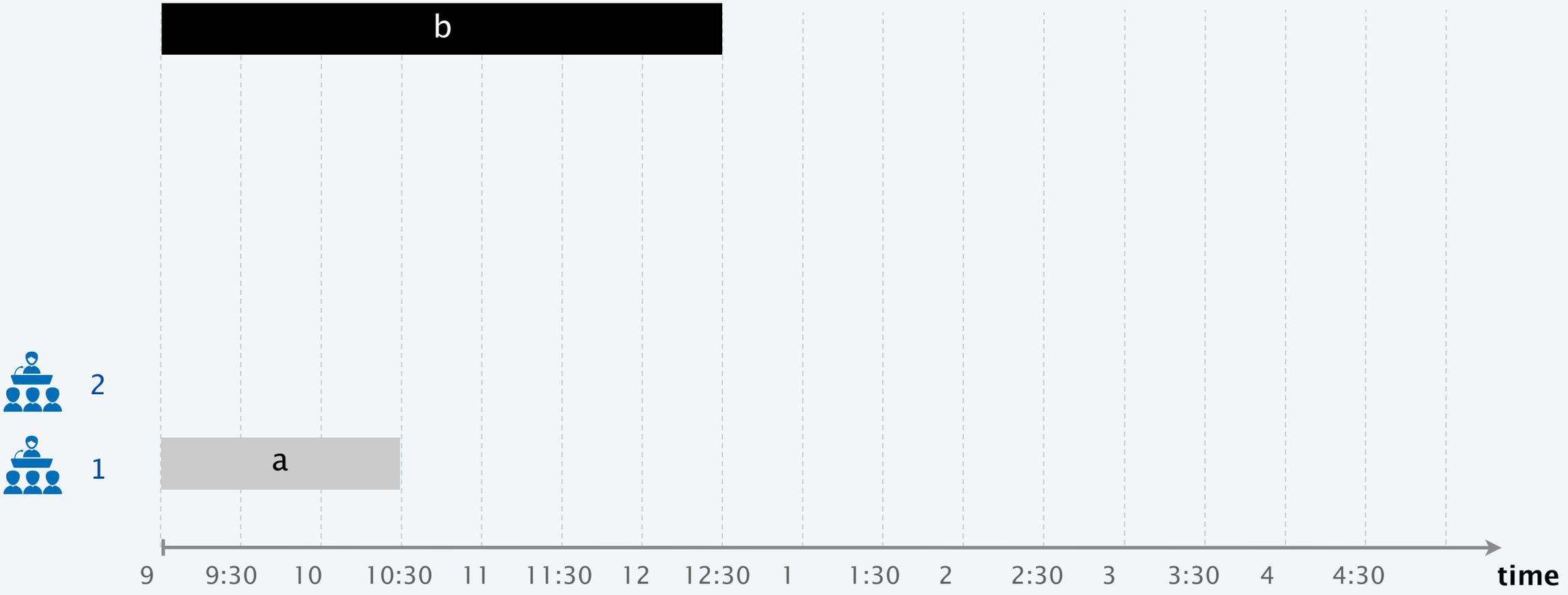

Earliest-start-time-first algorithm demo

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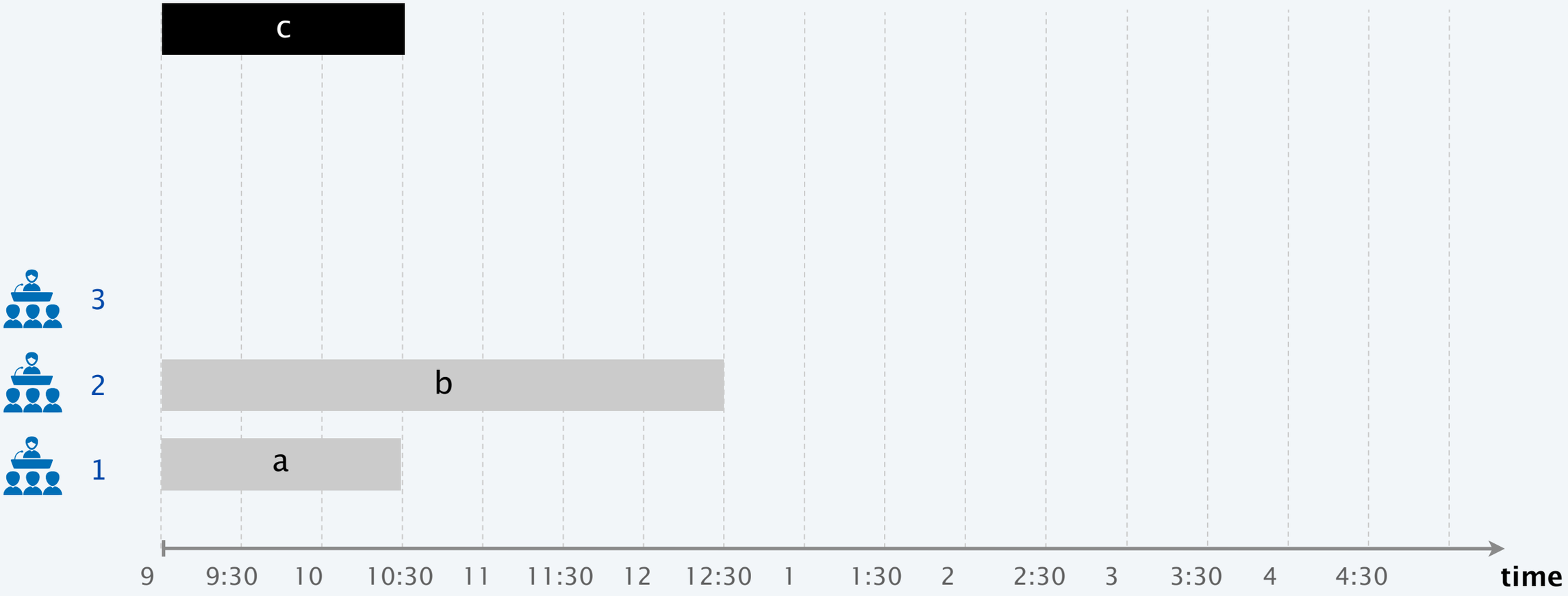

Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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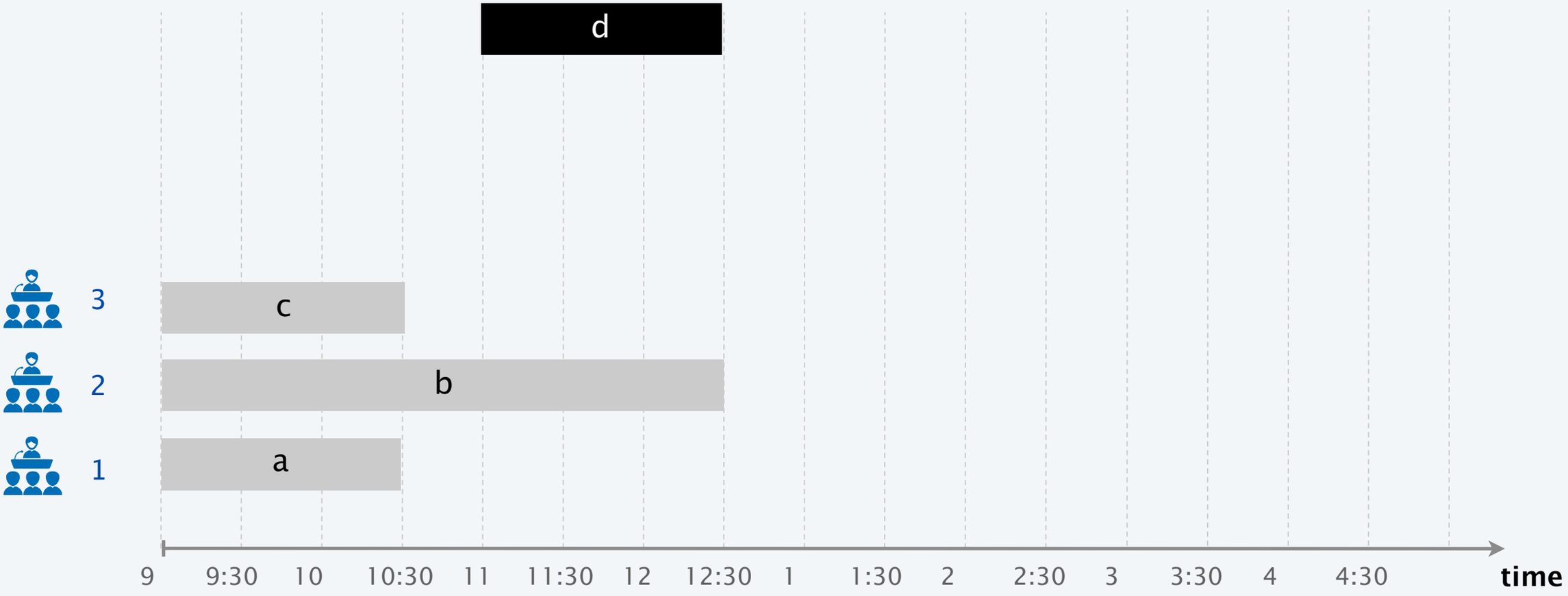
- Otherwise, open up a new classroom.

lecture d is compatible with classrooms 1 and 3

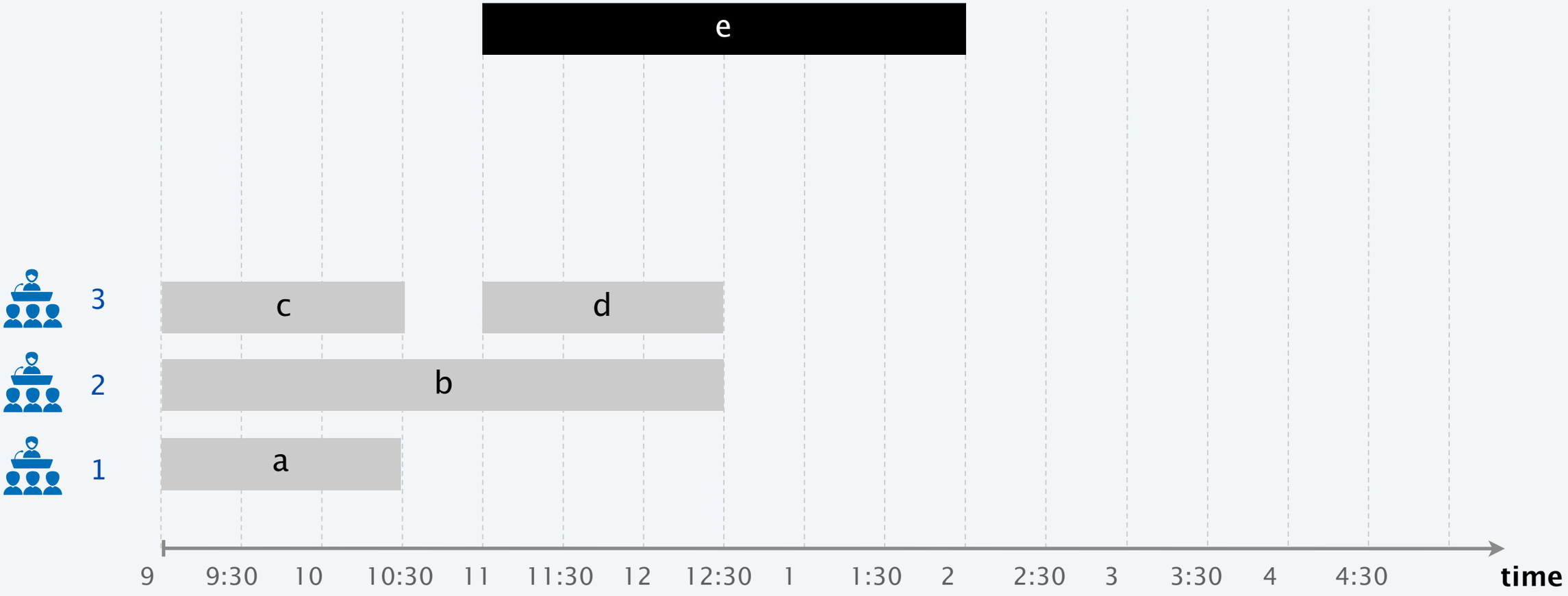


Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

- Assign next lecture to any compatible classroom (if one exists).
- Otherwise, open up a new classroom.

lecture e is compatible with classroom 1

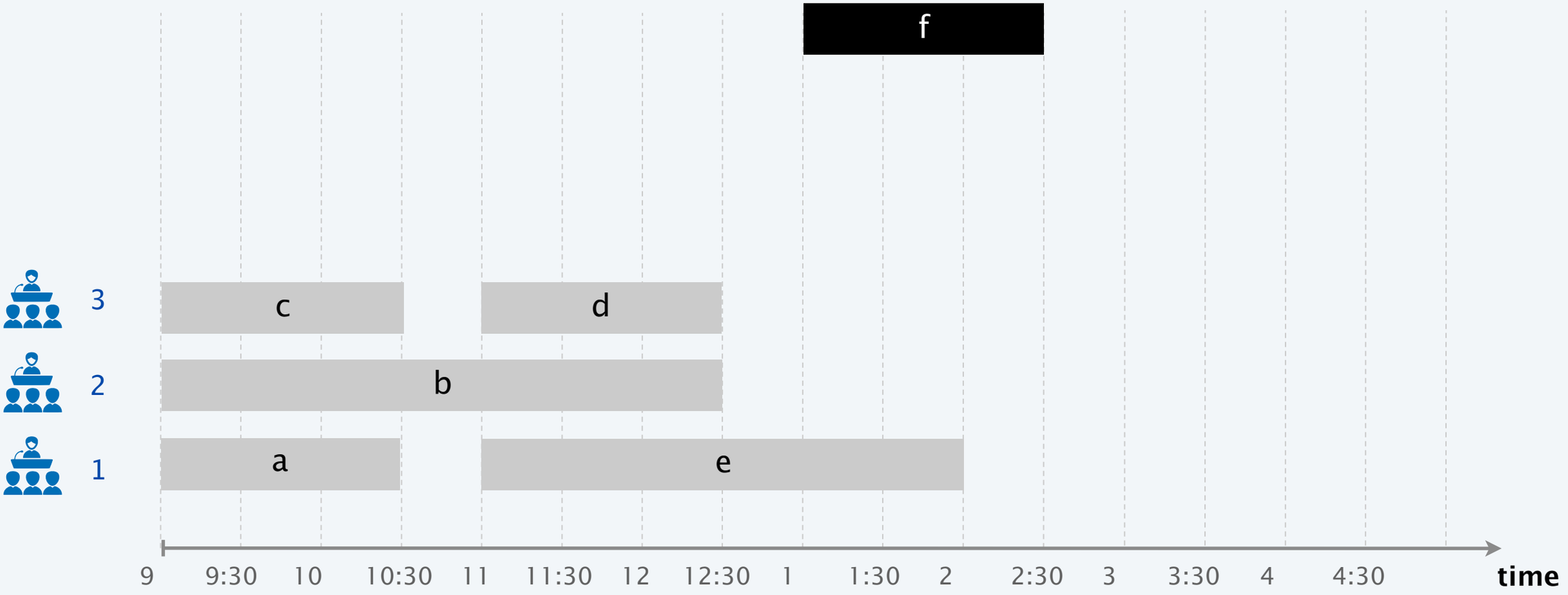


Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

- Assign next lecture to any compatible classroom (if one exists).
- Otherwise, open up a new classroom.

lecture f is compatible with classroom 2 and 3

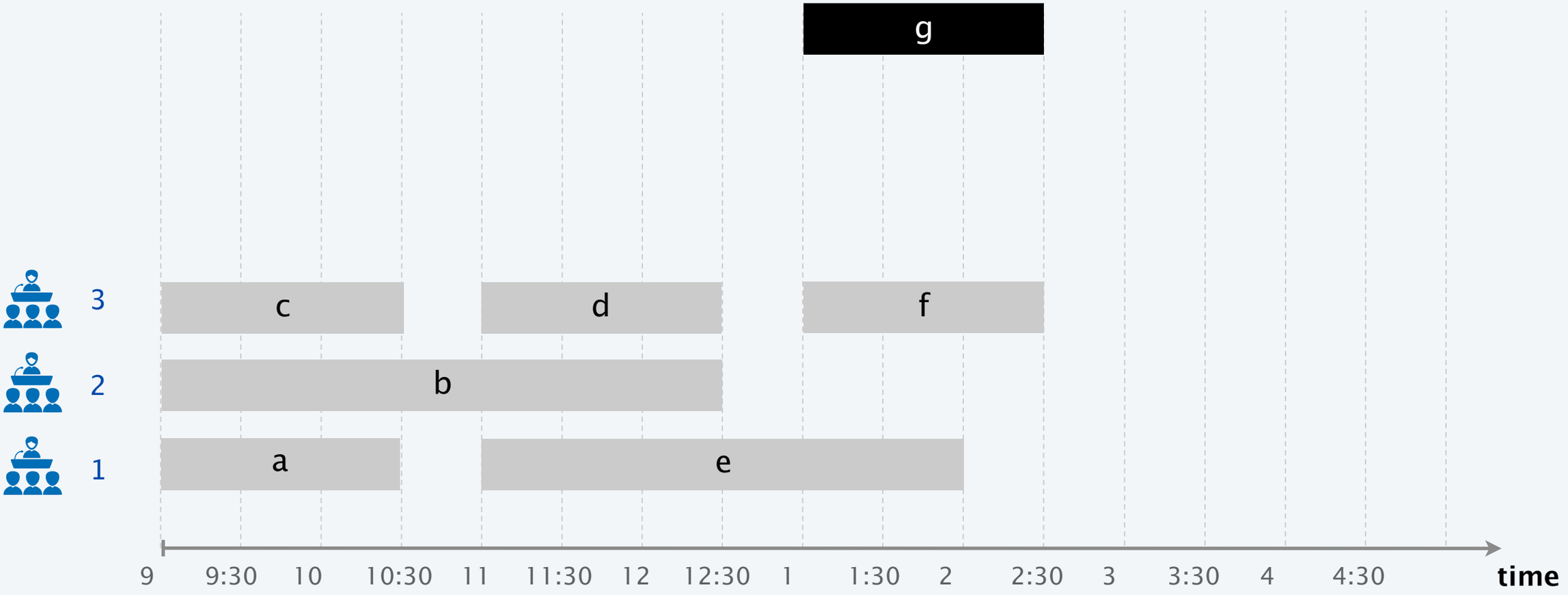


Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

- Assign next lecture to any compatible classroom (if one exists).
- Otherwise, open up a new classroom.

lecture g is compatible with classroom 2



Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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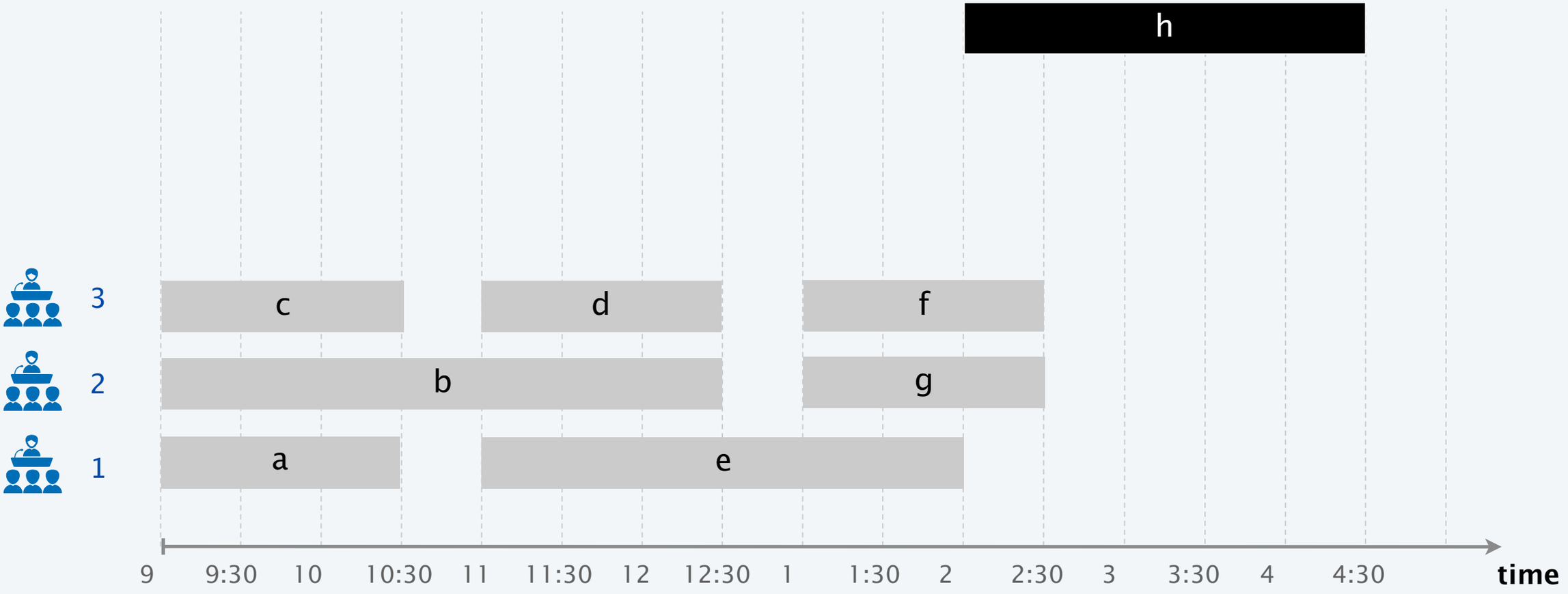
- Otherwise, open up a new classroom.

lecture h is compatible with classroom 1



Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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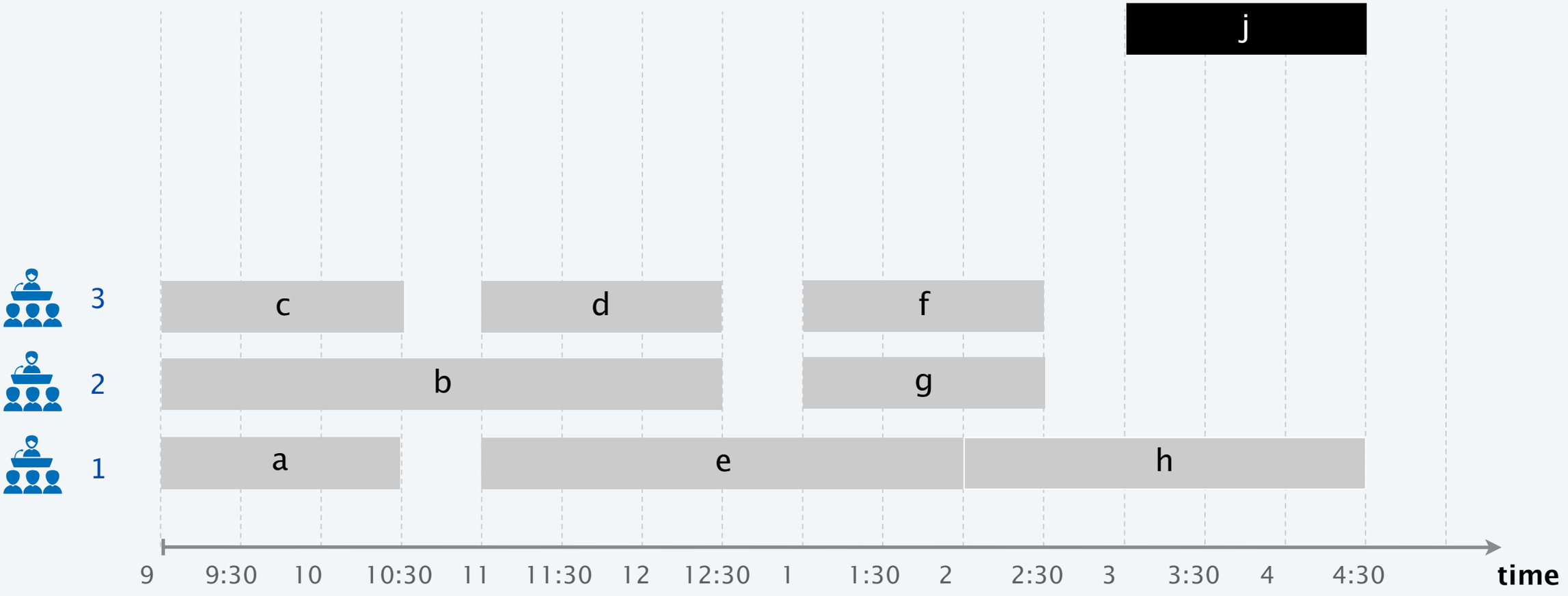
lecture j is compatible with classrooms 2 and 3



Earliest-start-time-first algorithm demo

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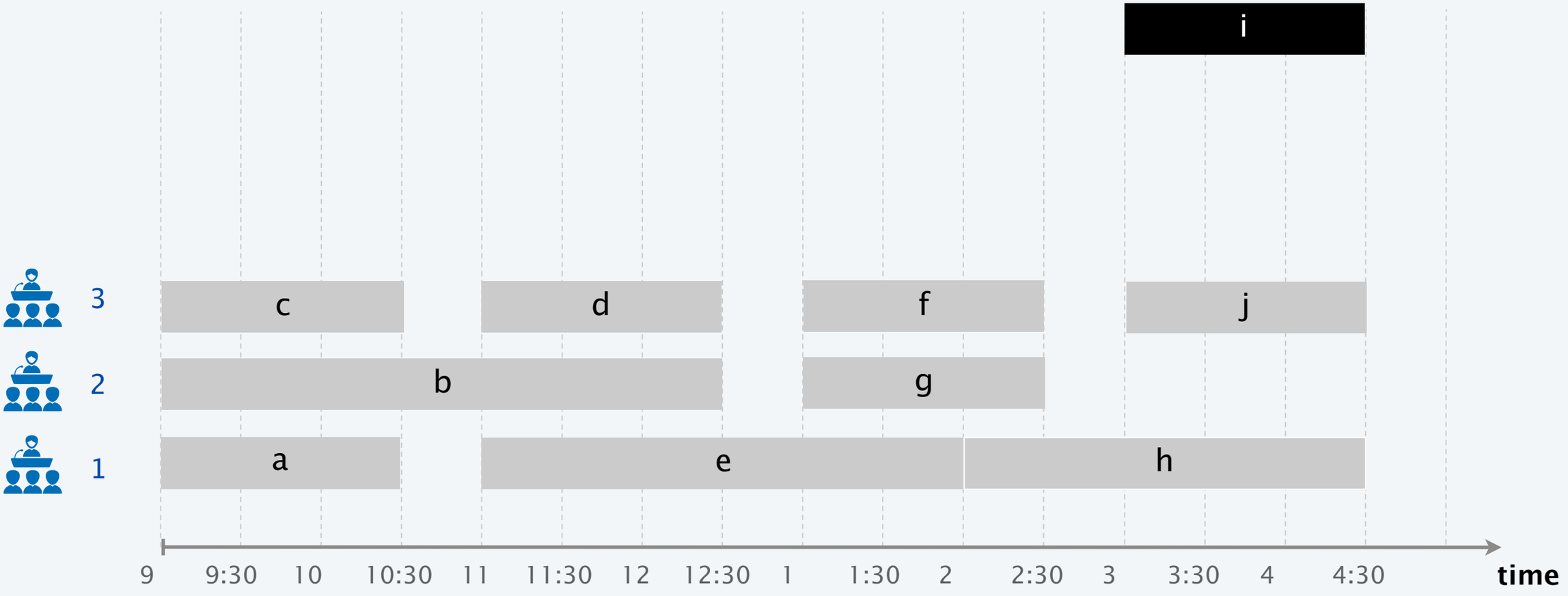
lecture i is compatible with classroom 2



Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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done