

Lecture slides by Kevin Wayne
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<http://www.cs.princeton.edu/~wayne/kleinberg-tardos>

4. GREEDY ALGORITHMS I

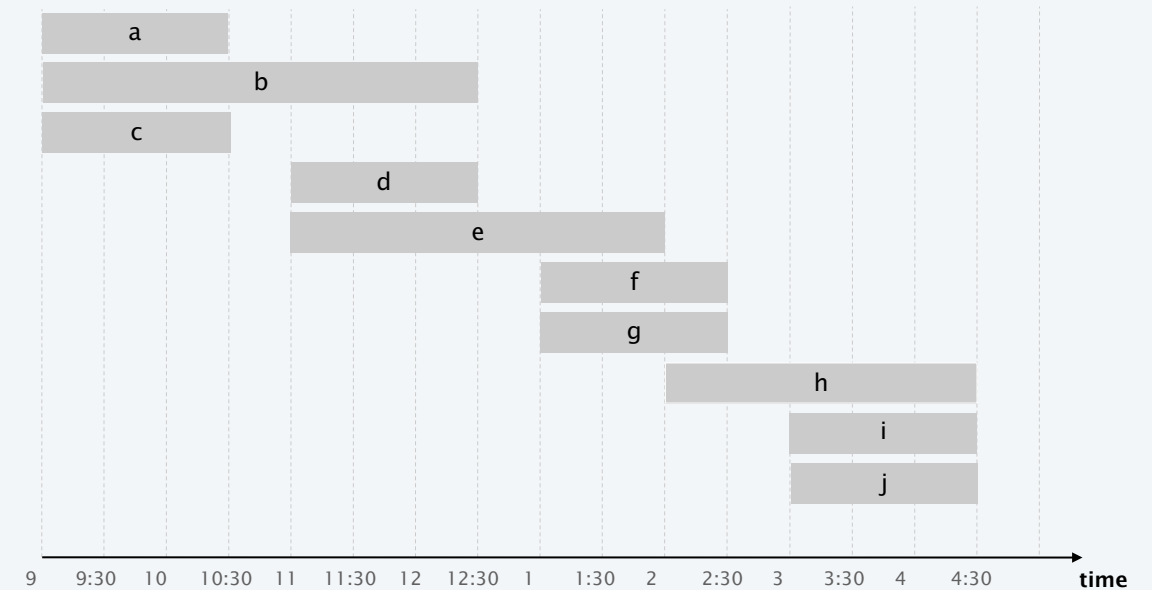
▶ *earliest-start-time-first algorithm demo*

Last updated on Feb 4, 2015, 5:54 PM

Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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



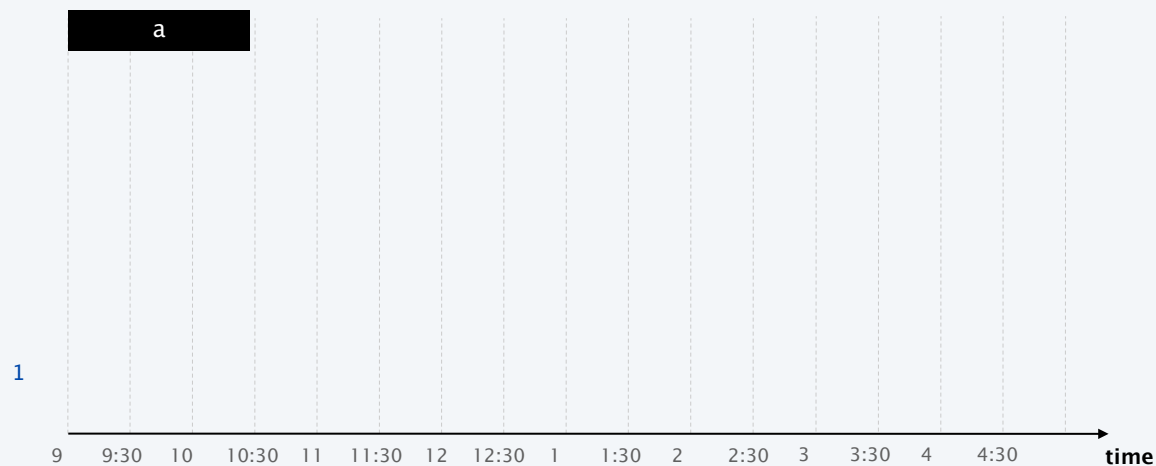
2

Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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

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



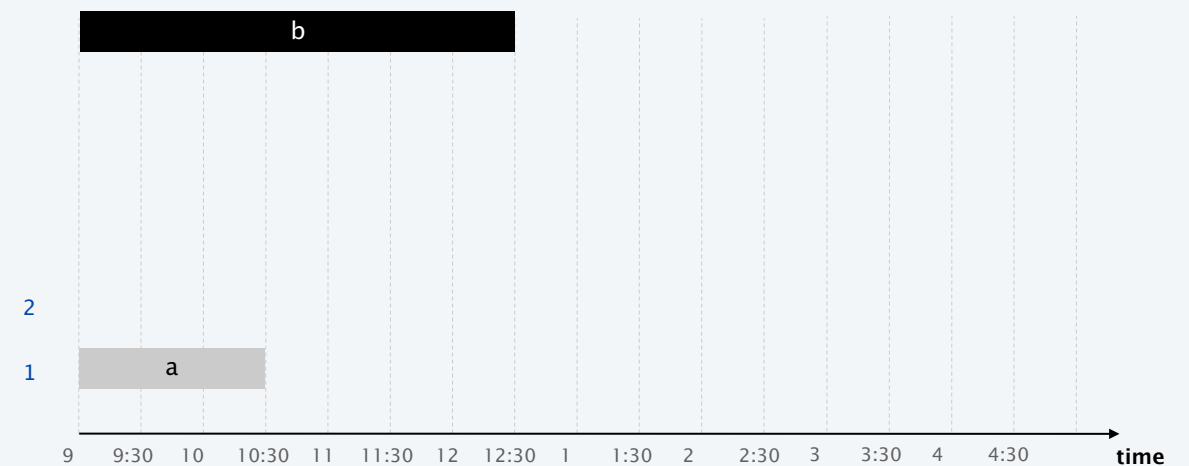
3

Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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- Otherwise, open up a new classroom.

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



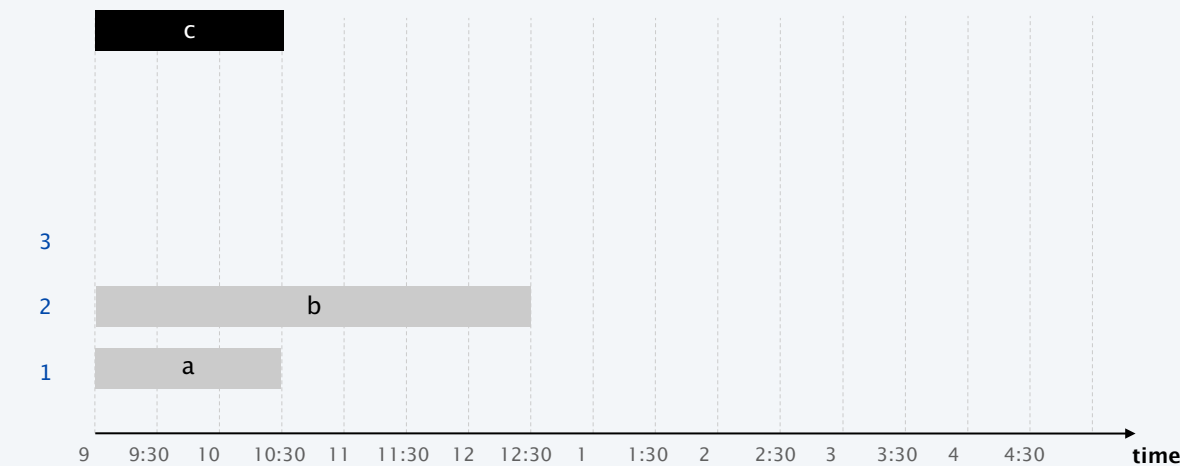
4

Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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

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



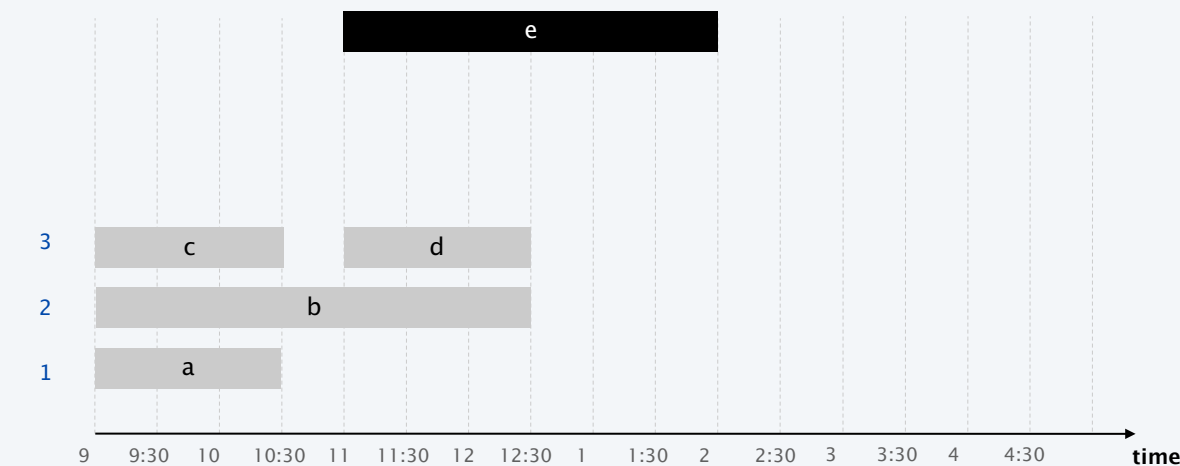
5

Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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

lecture e is compatible with classroom 1



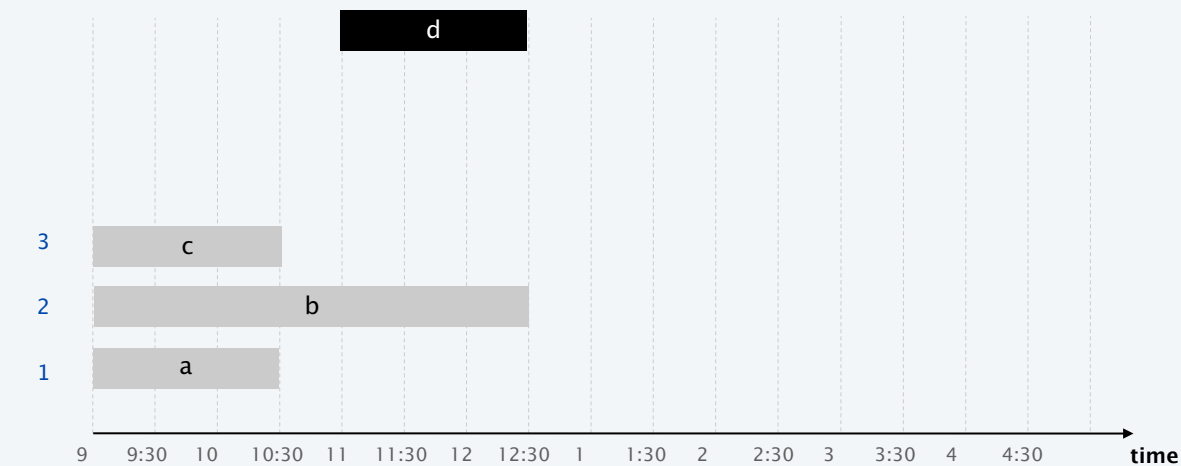
7

Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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

lecture d is compatible with classrooms 1 and 3



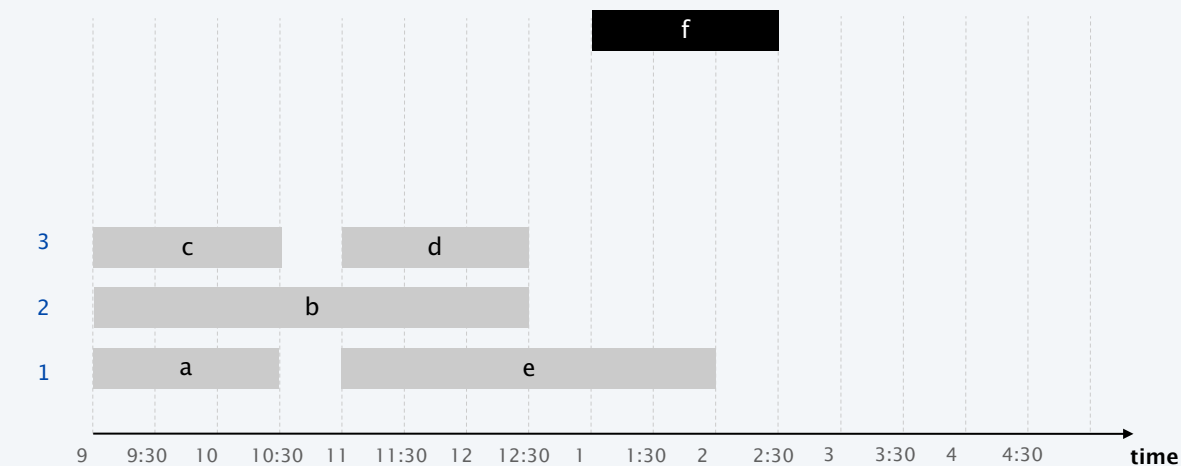
6

Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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

lecture f is compatible with classroom 2 and 3

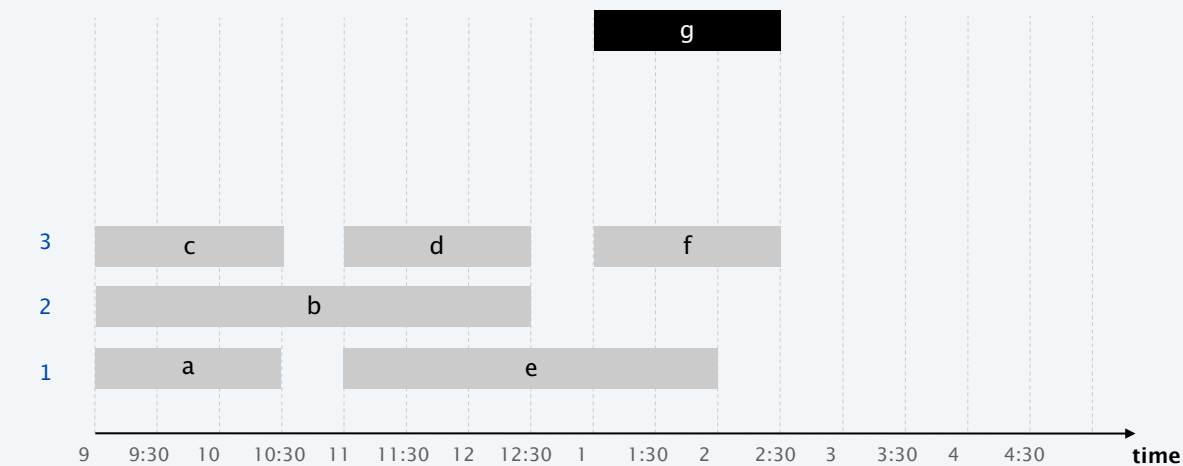


8

Earliest-start-time-first algorithm demo

- Consider lectures in order of start time:
- Assign next lecture to any available classroom (if one exists).
 - Otherwise, open up a new classroom.

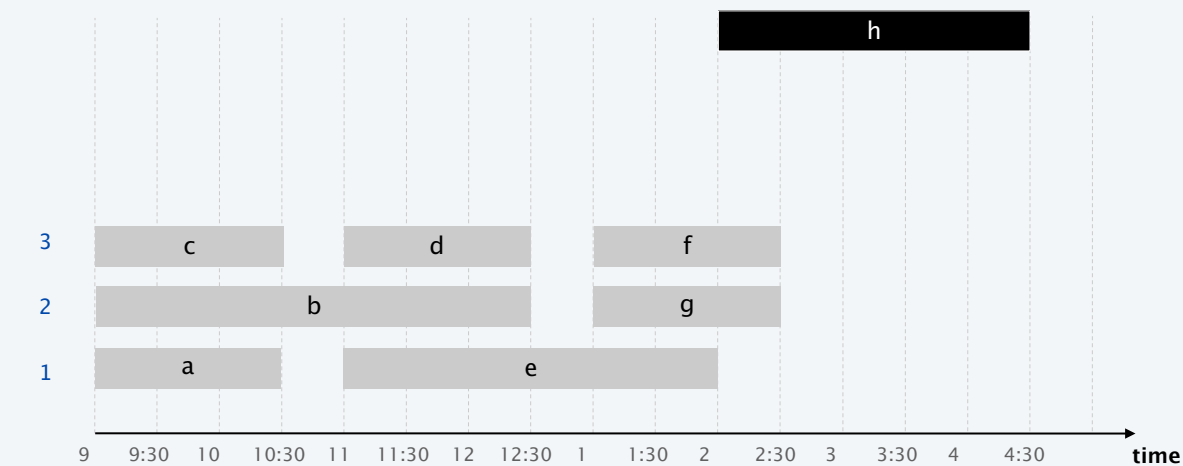
lecture g is compatible with classroom 2



Earliest-start-time-first algorithm demo

- Consider lectures in order of start time:
- Assign next lecture to any available classroom (if one exists).
 - Otherwise, open up a new classroom.

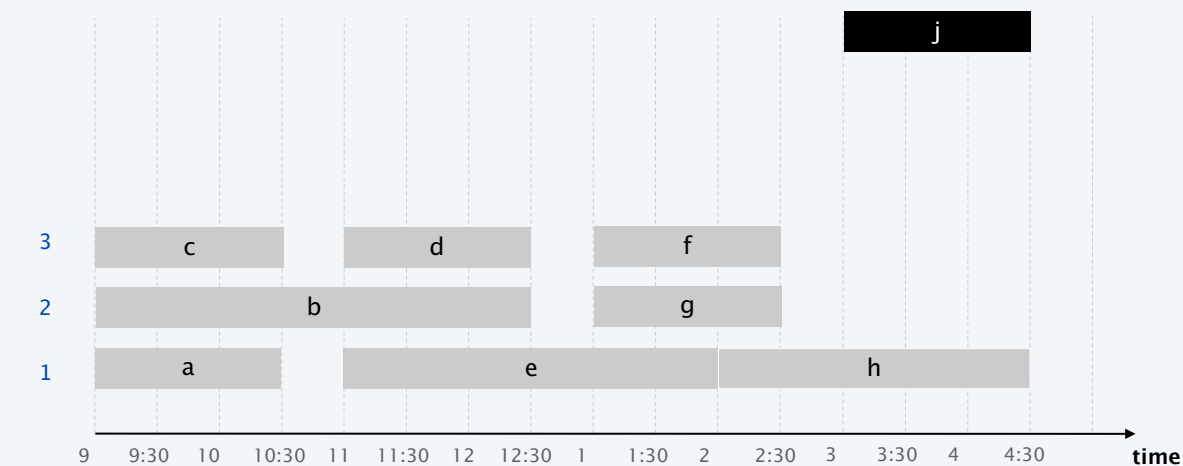
lecture h is compatible with classroom 3



Earliest-start-time-first algorithm demo

- Consider lectures in order of start time:
- Assign next lecture to any available classroom (if one exists).
 - Otherwise, open up a new classroom.

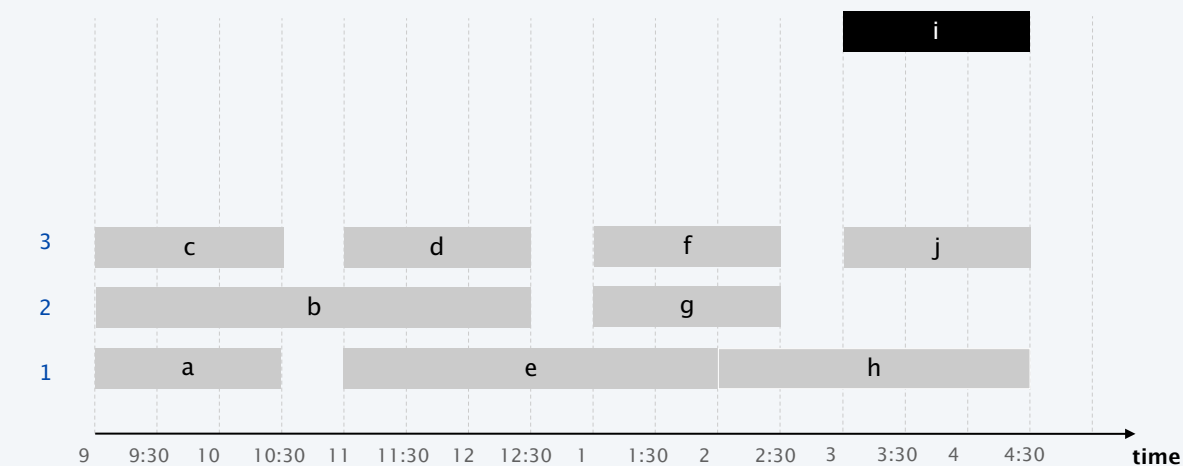
lecture j is compatible with classrooms 2 and 3



Earliest-start-time-first algorithm demo

- Consider lectures in order of start time:
- Assign next lecture to any available classroom (if one exists).
 - Otherwise, open up a new classroom.

lecture i is compatible with classroom 2



Earliest-start-time-first algorithm demo

Consider lectures in order of start time:

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

done

