

## SECTION 2.1

# 4. GREEDY ALGORITHMS

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

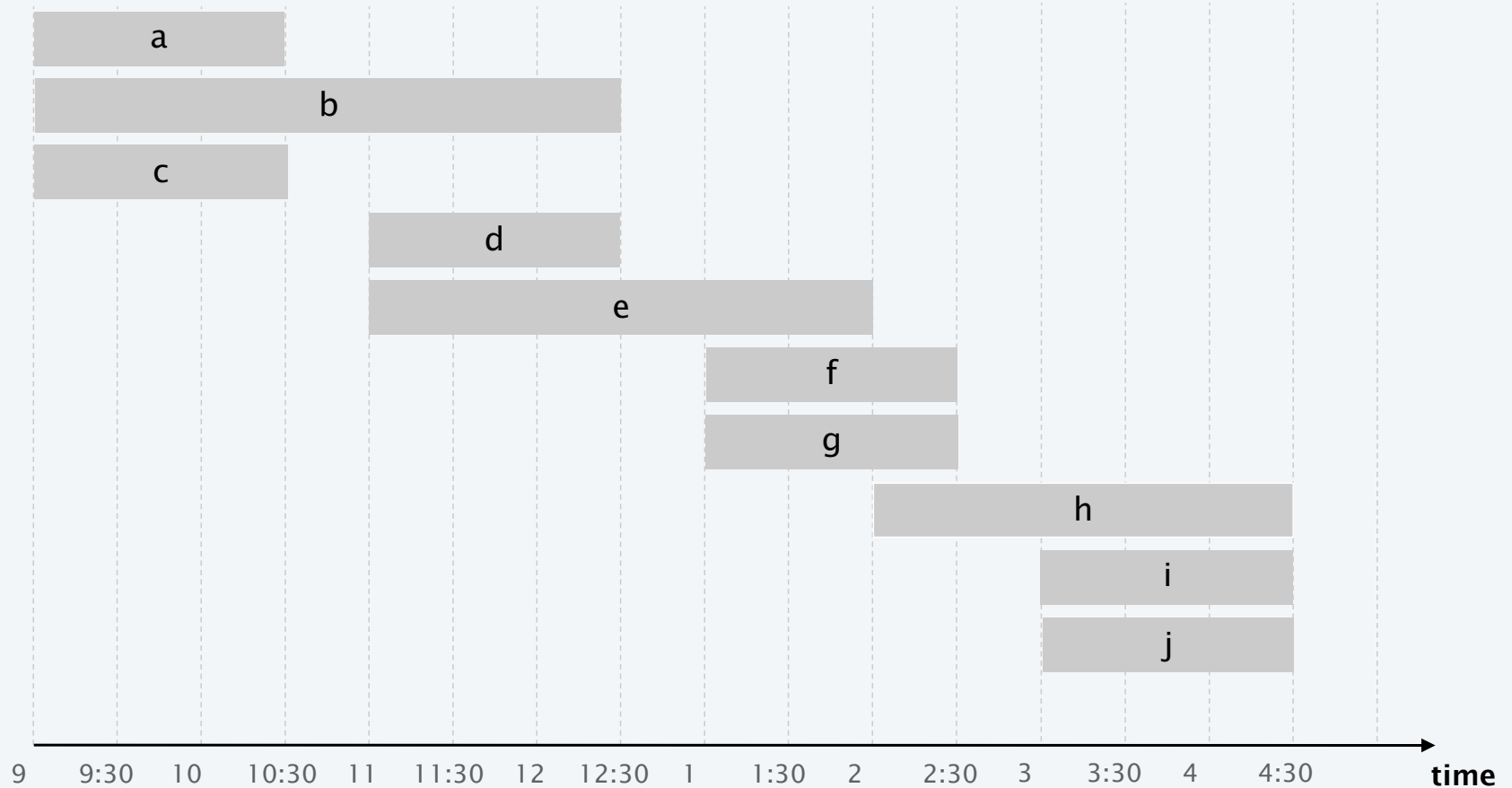


# Earliest-start-time-first algorithm demo

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Consider lectures in order of start time:

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



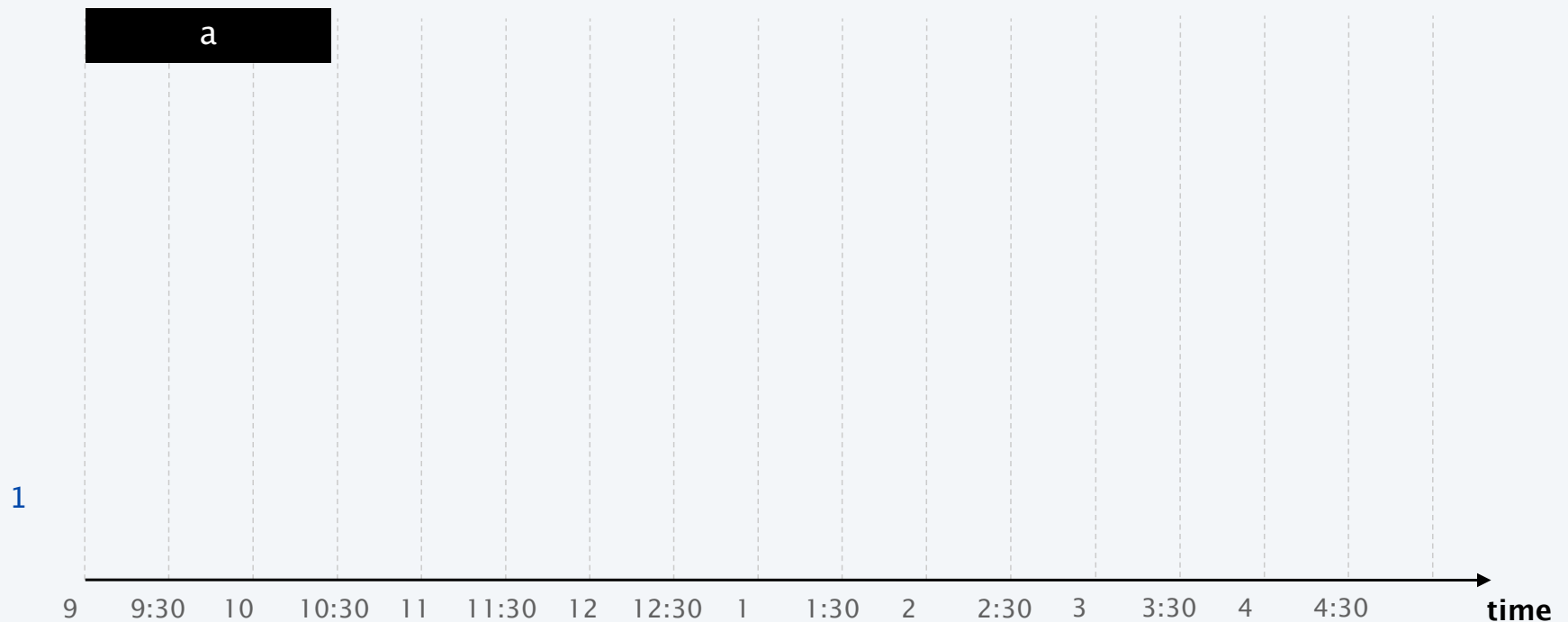
# Earliest-start-time-first algorithm demo

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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**



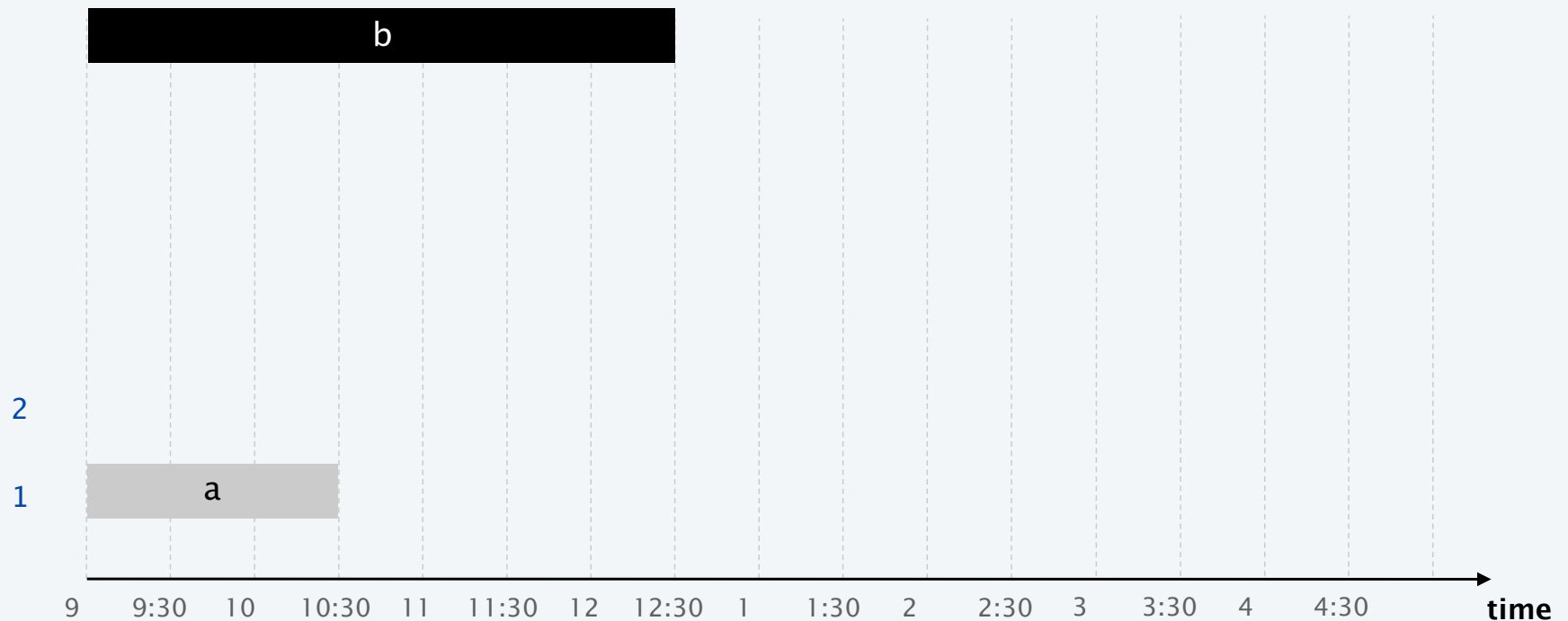
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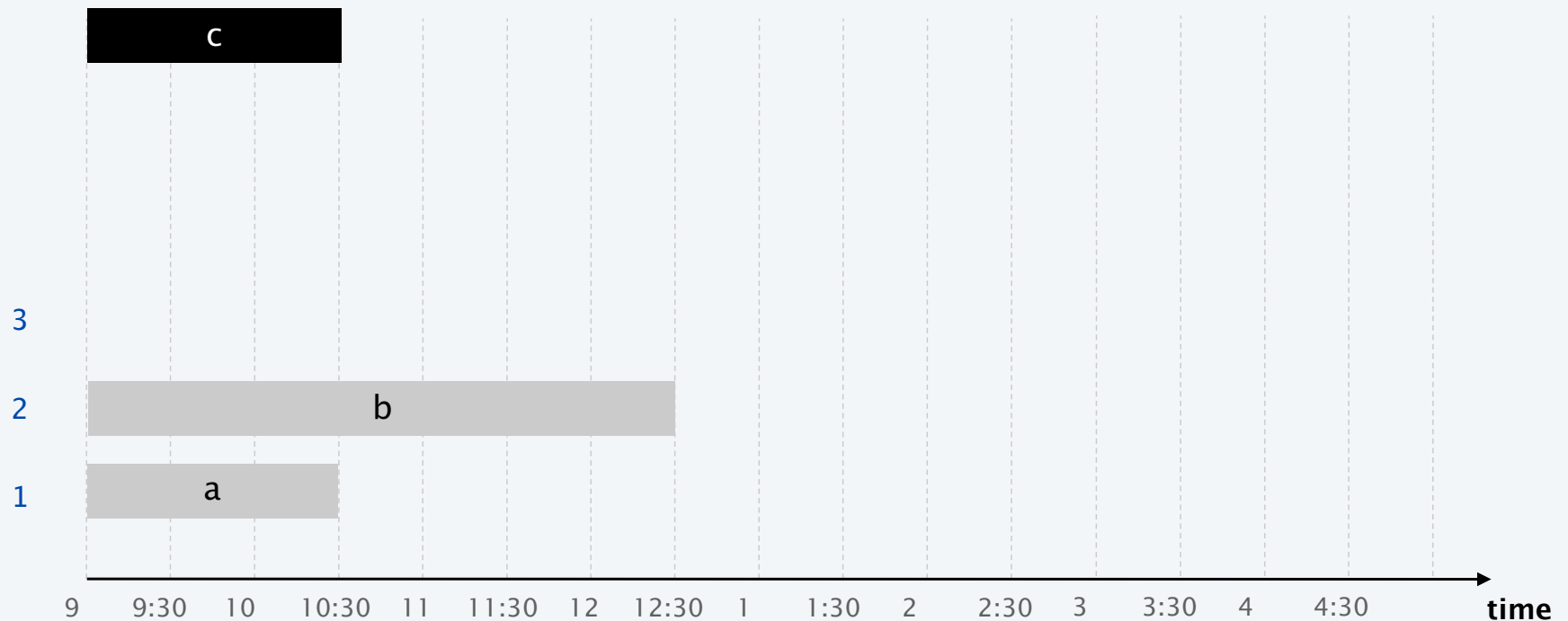
# Earliest-start-time-first algorithm demo

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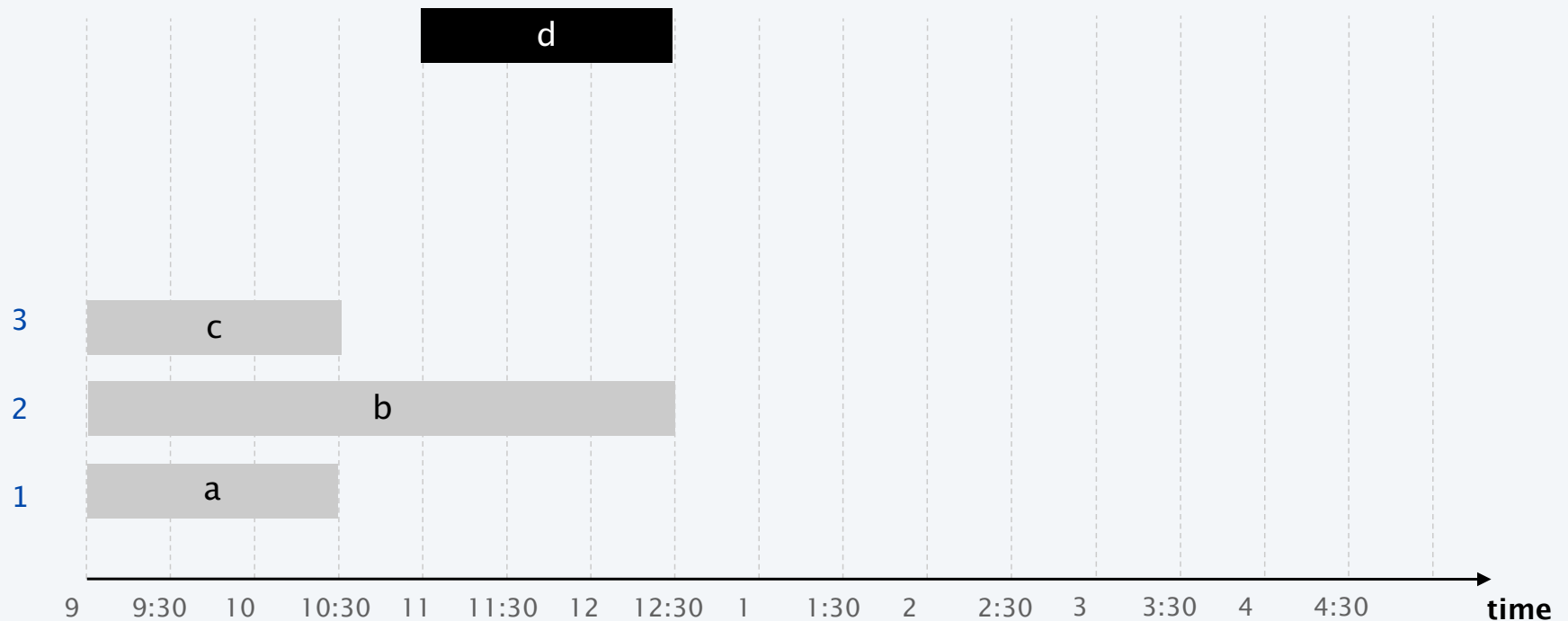
# Earliest-start-time-first algorithm demo

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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**



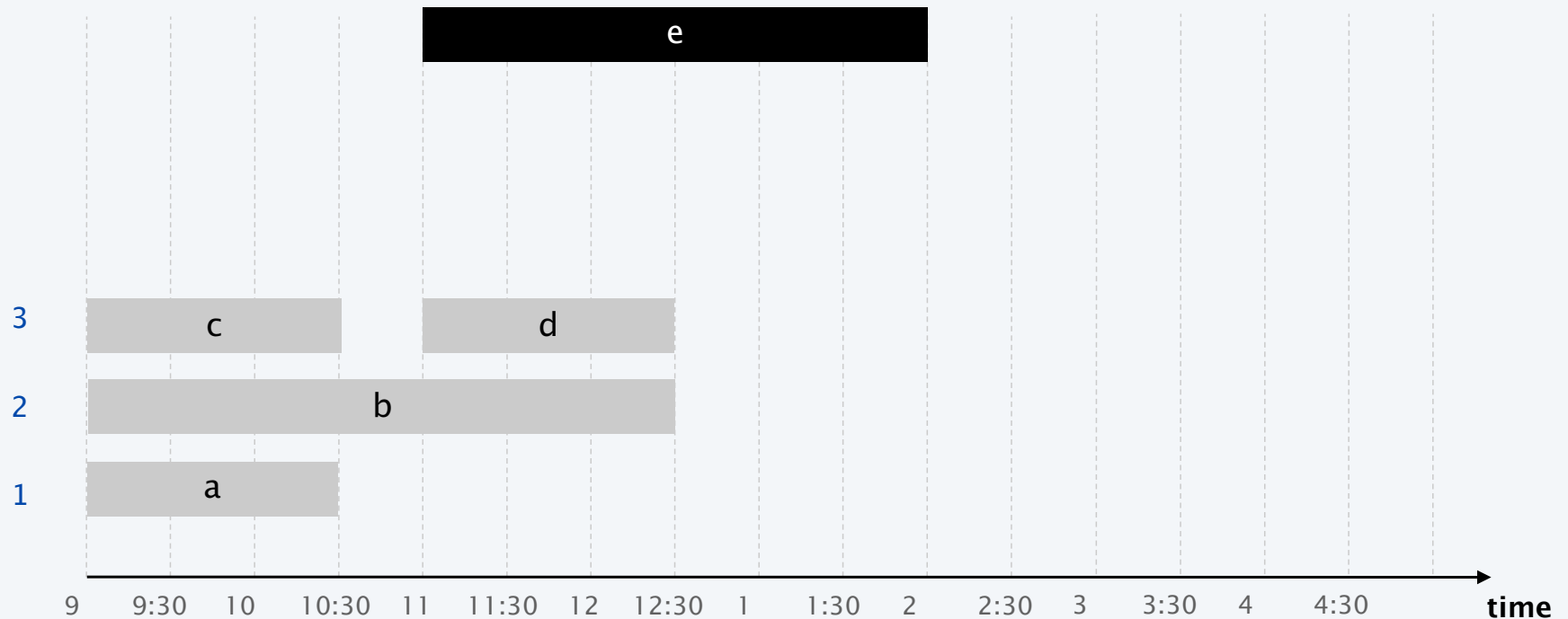
# Earliest-start-time-first algorithm demo

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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**



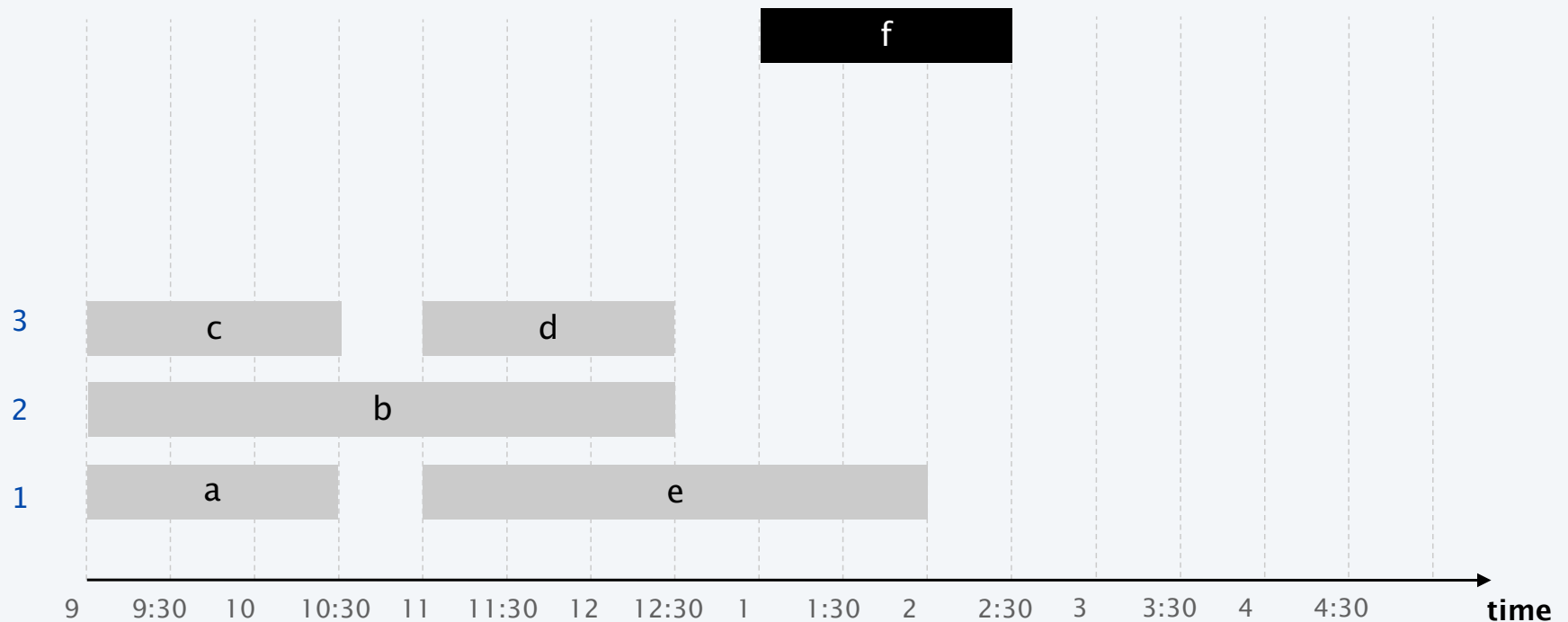
# Earliest-start-time-first algorithm demo

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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





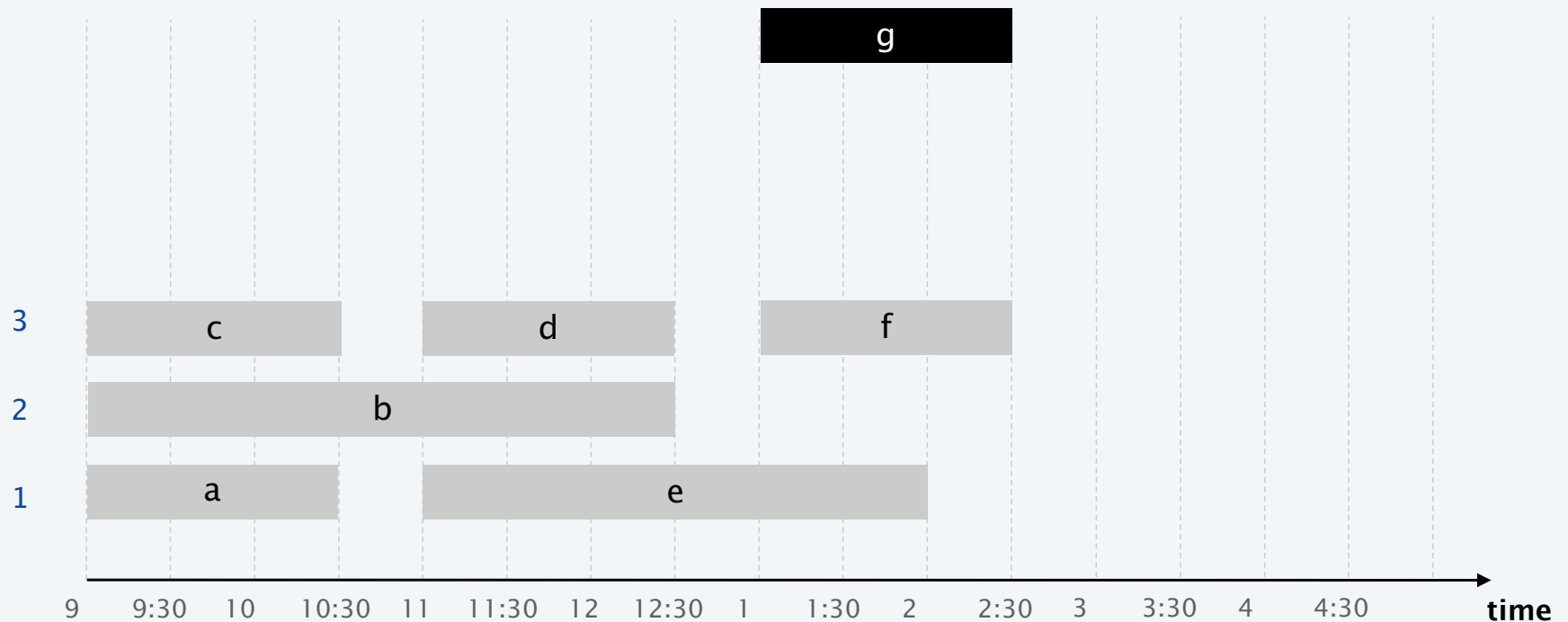
# Earliest-start-time-first algorithm demo

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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**



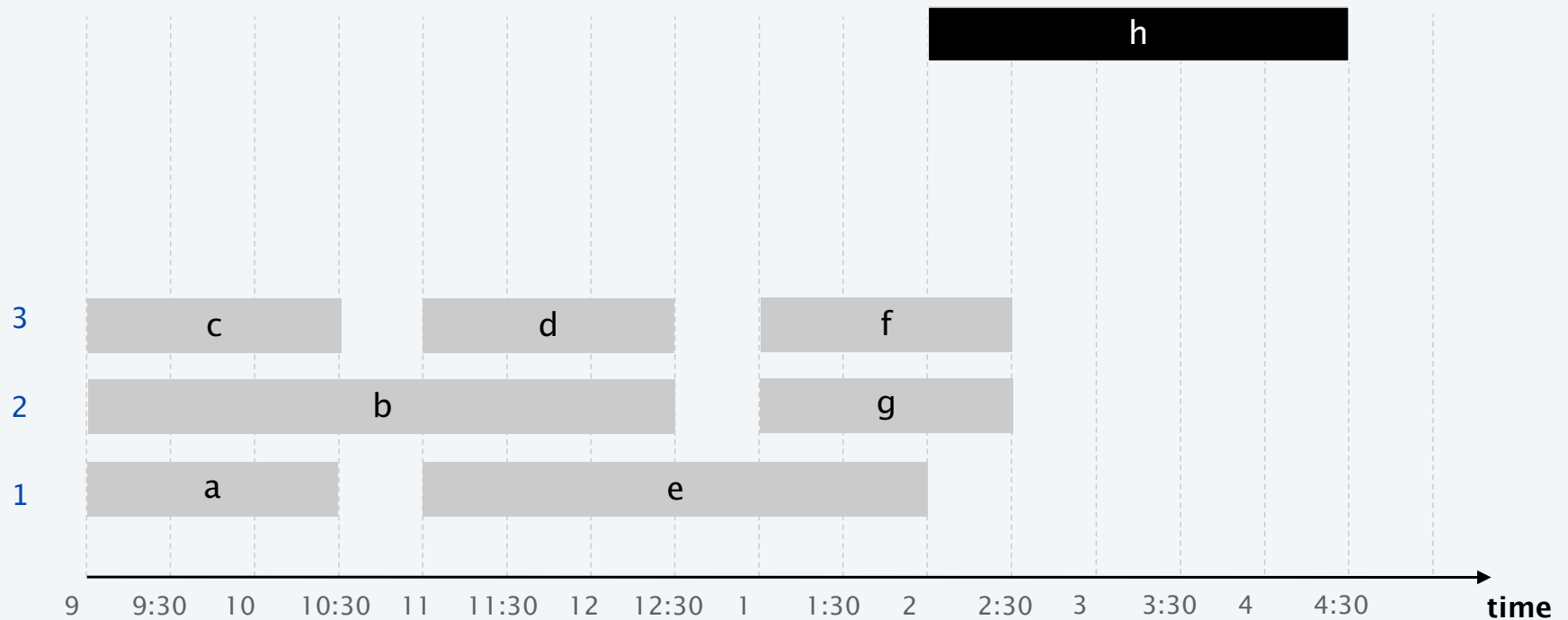
# Earliest-start-time-first algorithm demo

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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



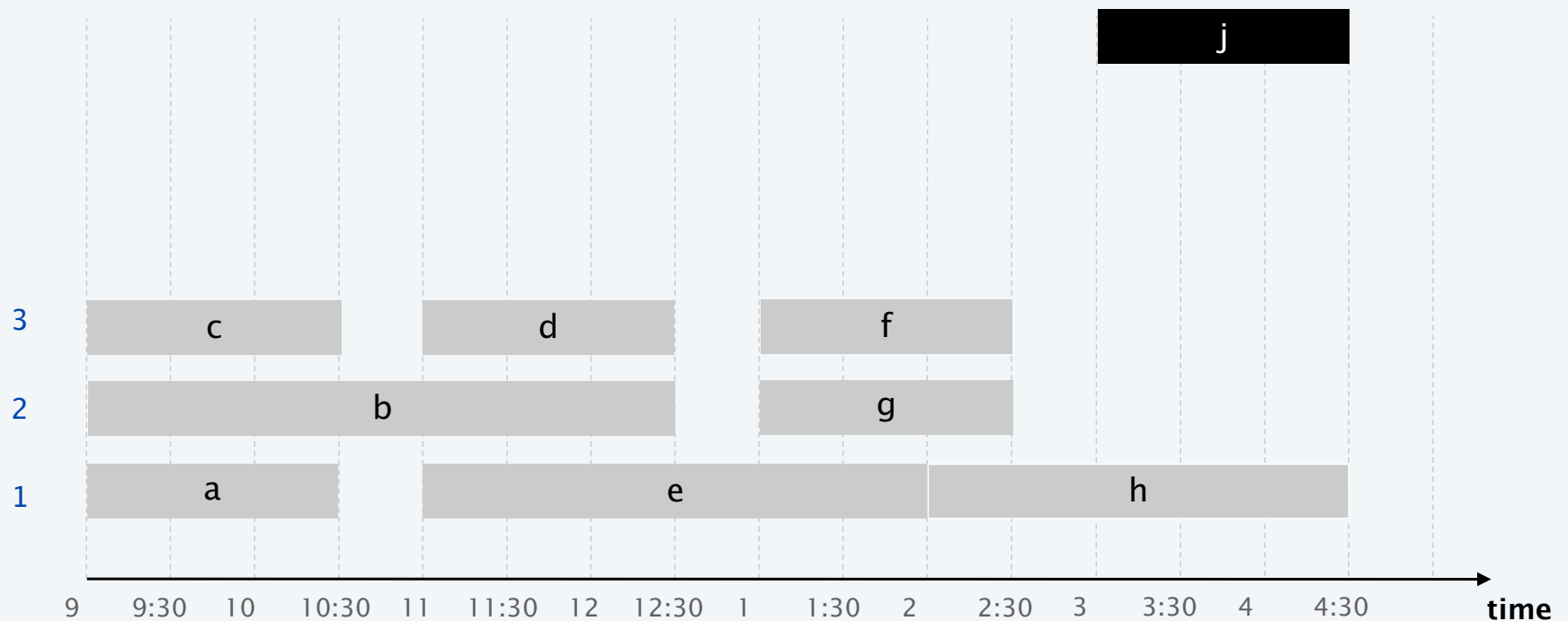
# Earliest-start-time-first algorithm demo

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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



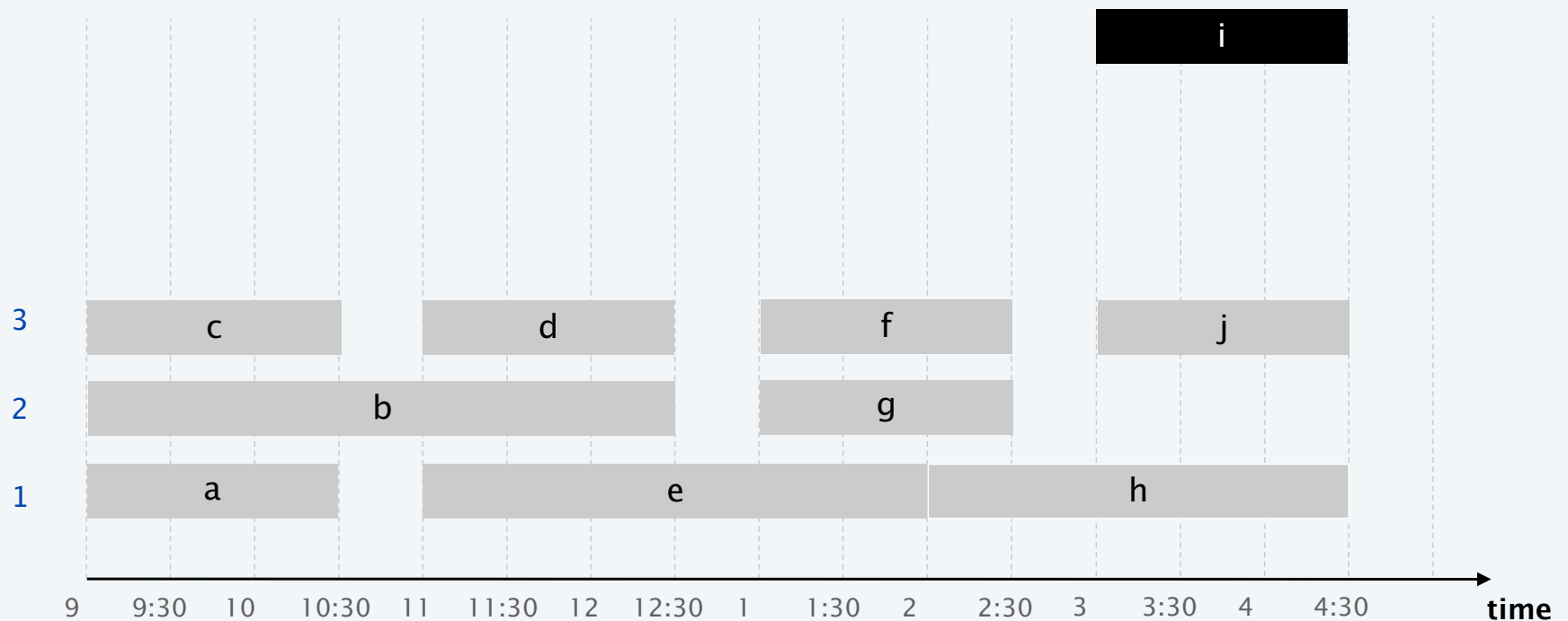
# Earliest-start-time-first algorithm demo

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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 3



# Earliest-start-time-first algorithm demo

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Consider lectures in order of start time:

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

done

