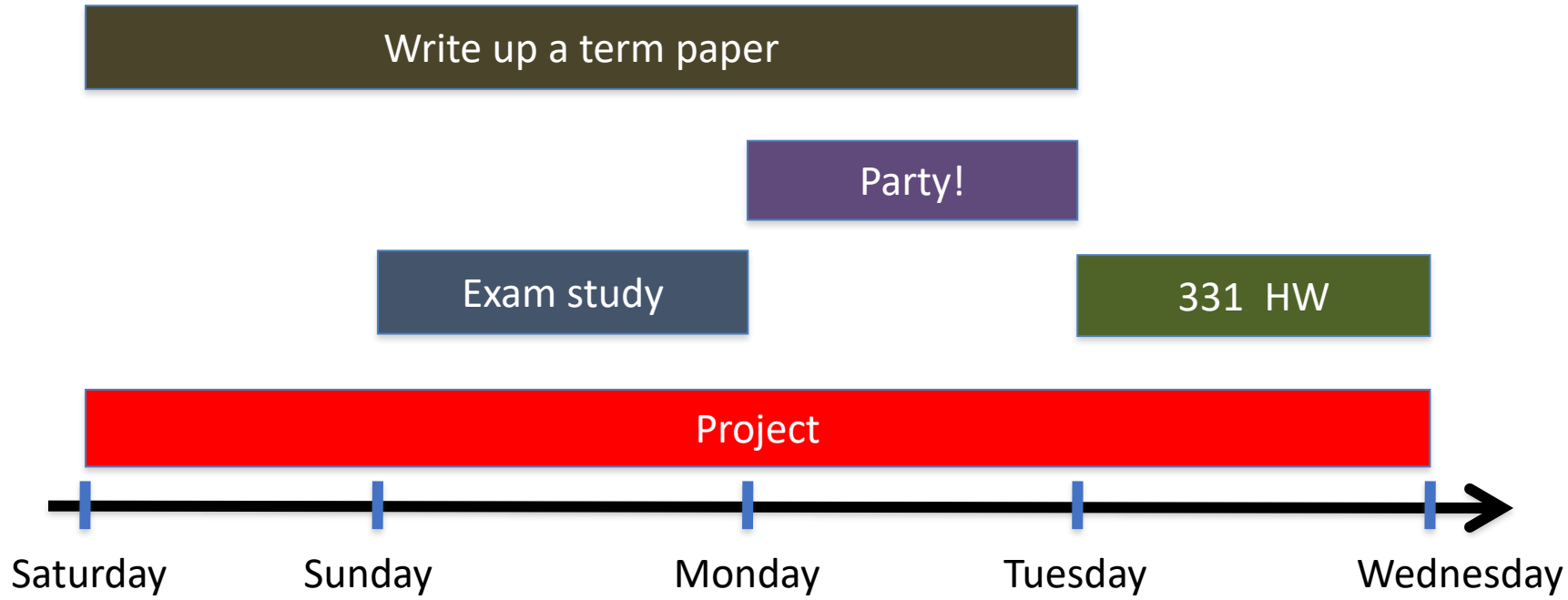
Lecture 18

CSE 331

The “real” end of Semester blues

There are deadlines and durations of tasks



The “real” end of Semester blues

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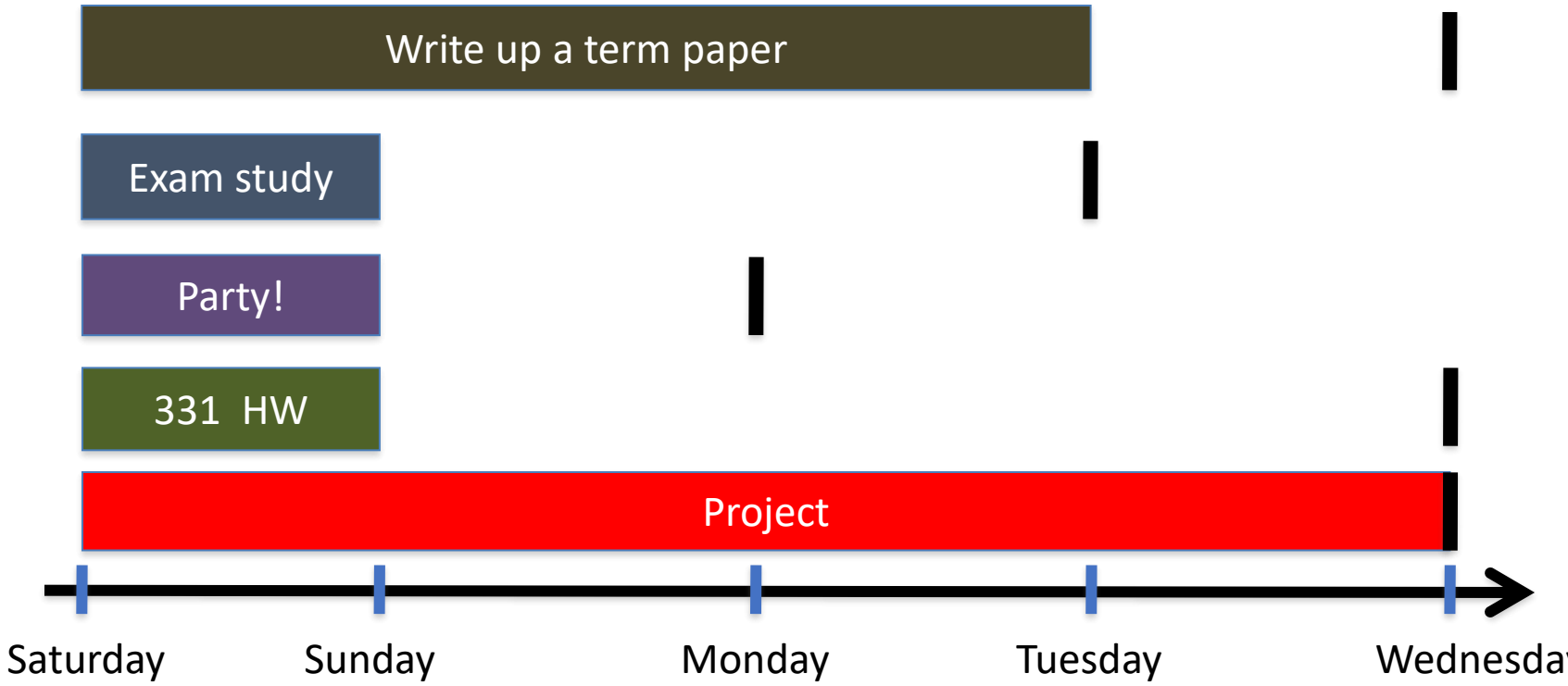
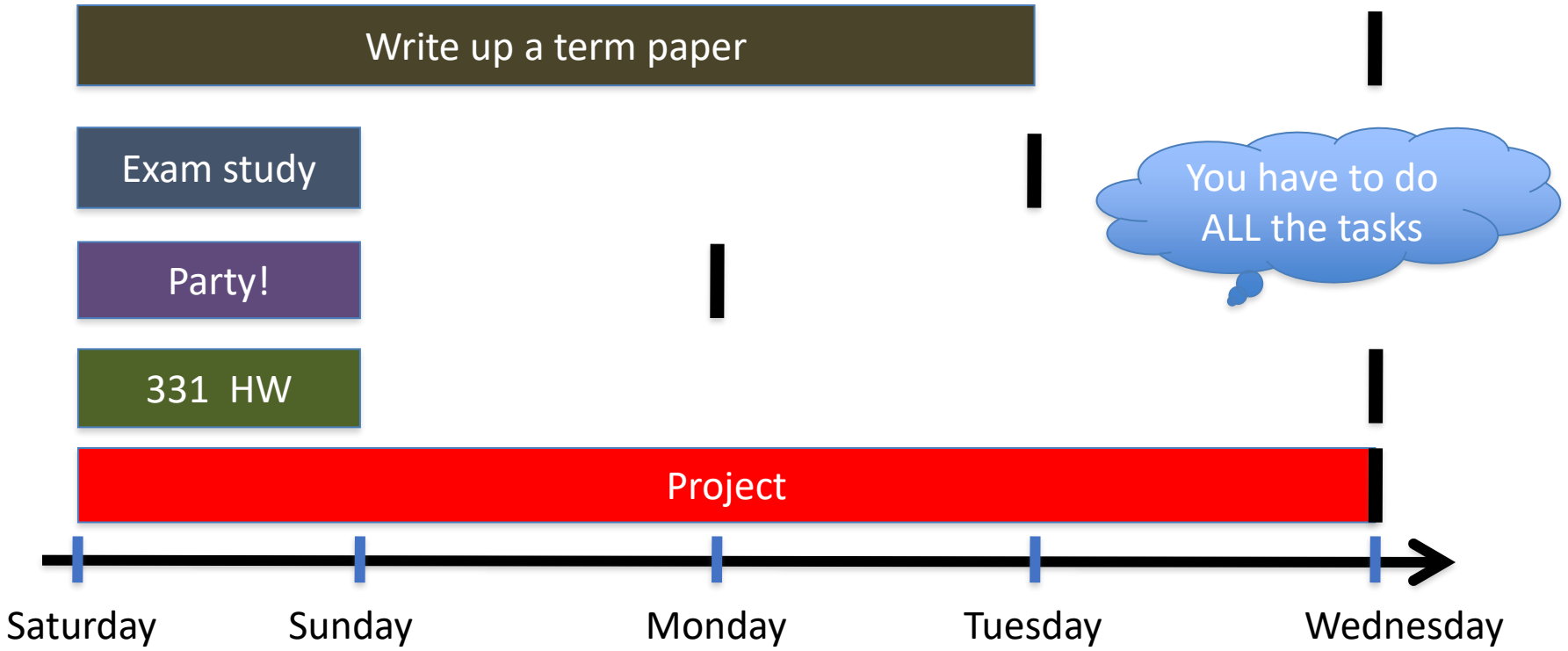


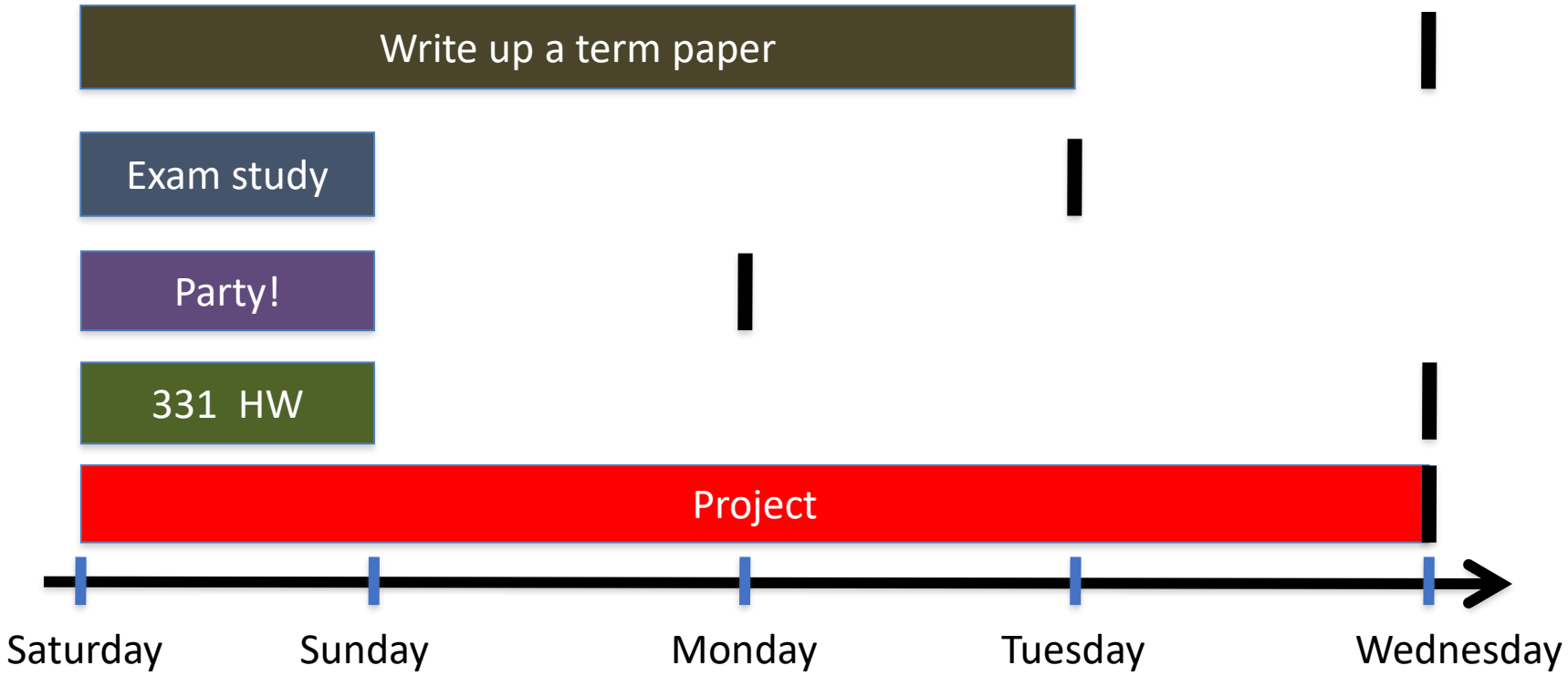
The algorithmic task

YOU decide when to start each task



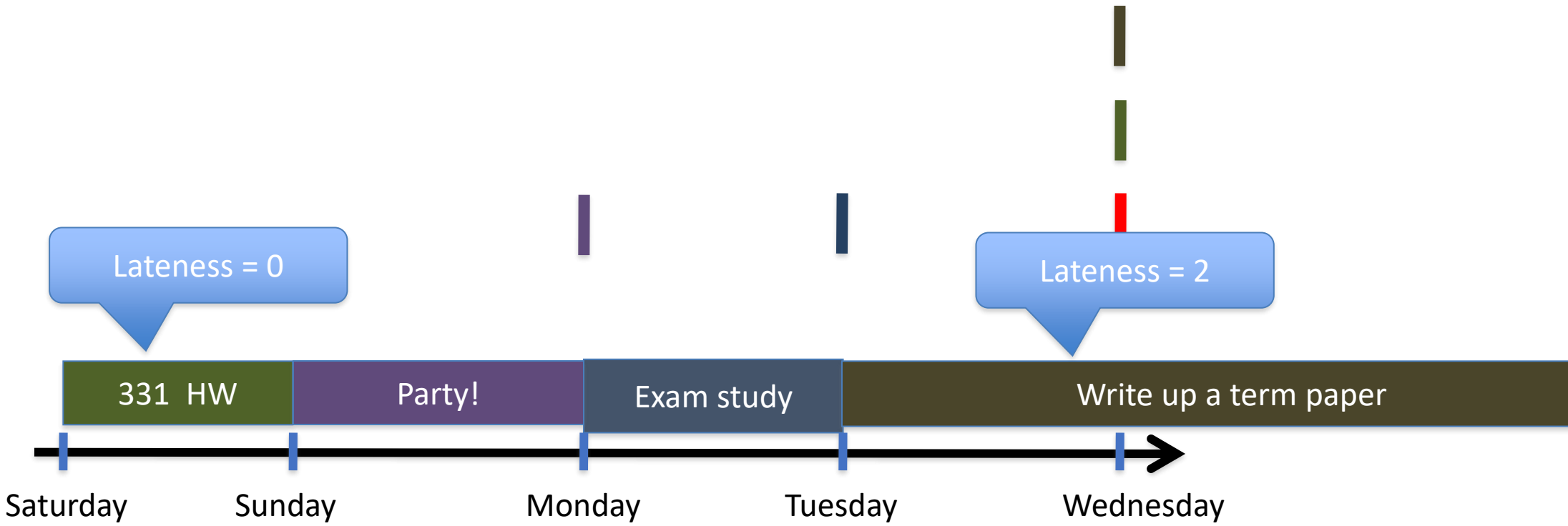
Scheduling to minimize lateness

All the tasks have to be scheduled
GOAL: minimize maximum lateness



One possible schedule

All the tasks have to be scheduled
GOAL: minimize maximum lateness



Minimizing Max Lateness

Minimizing Maximum Lateness

This page collects material from previous incarnations of CSE 331 on scheduling to minimize maximum lateness.

Where does the textbook talk about this?

`Section 4.2` in the textbook has the lowdown on the problem of scheduling to minimize maximum lateness.

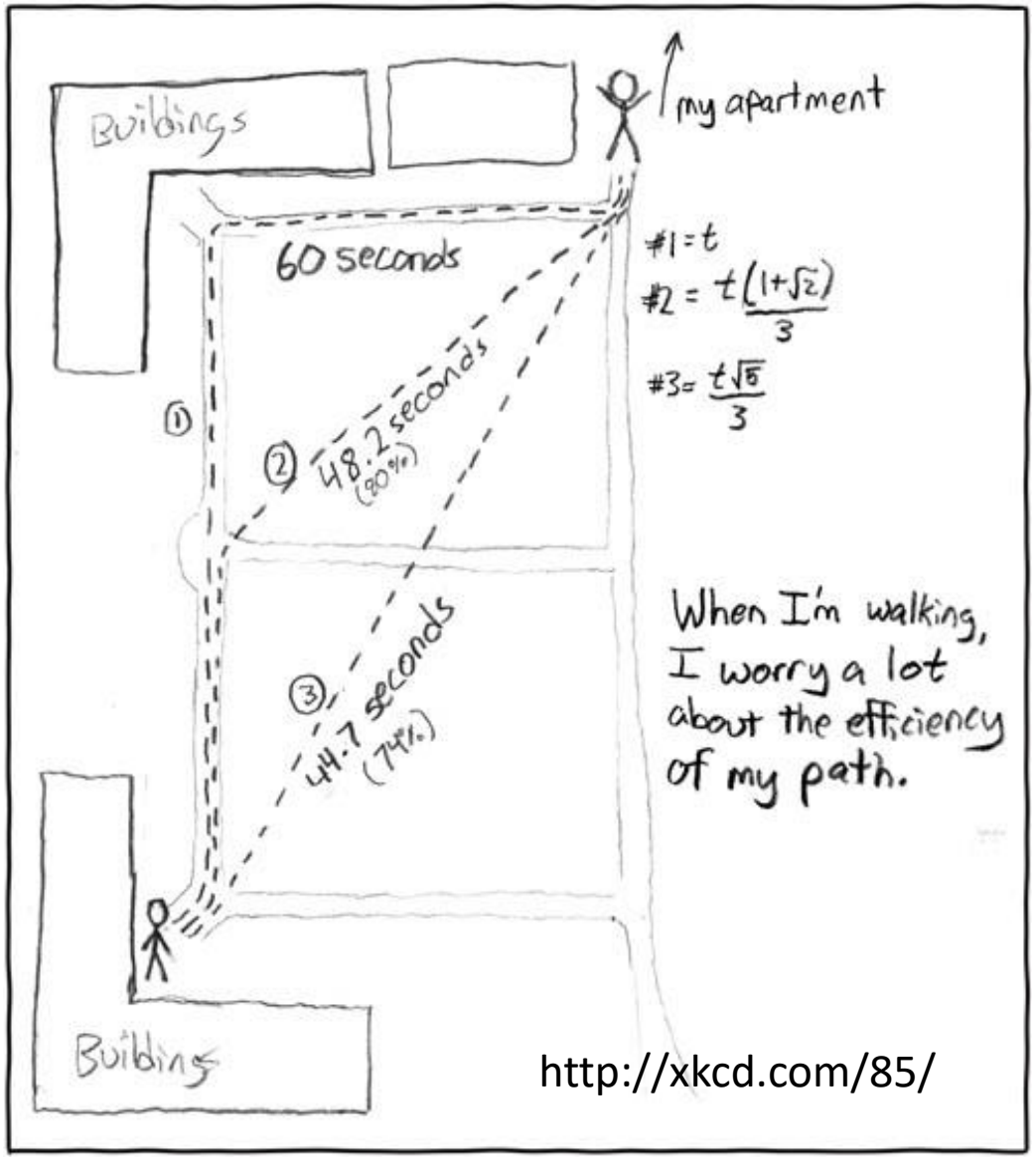
Fall 2018 material

First lecture

Here is the lecture video:

Rest of today

Shortest Path Problem



Reading Assignment

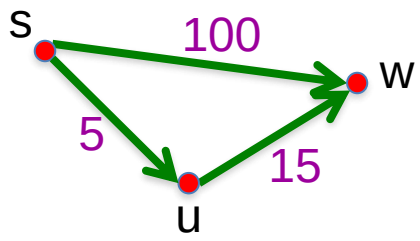
Sec 2.5 of [KT]

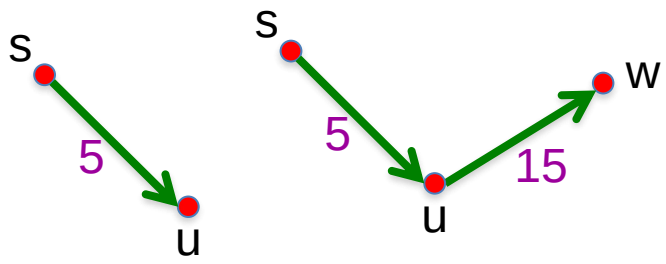
Shortest Path problem

Input: *Directed* graph G=(V,E)

Edge lengths, l_e for e in E

"start" vertex s in V



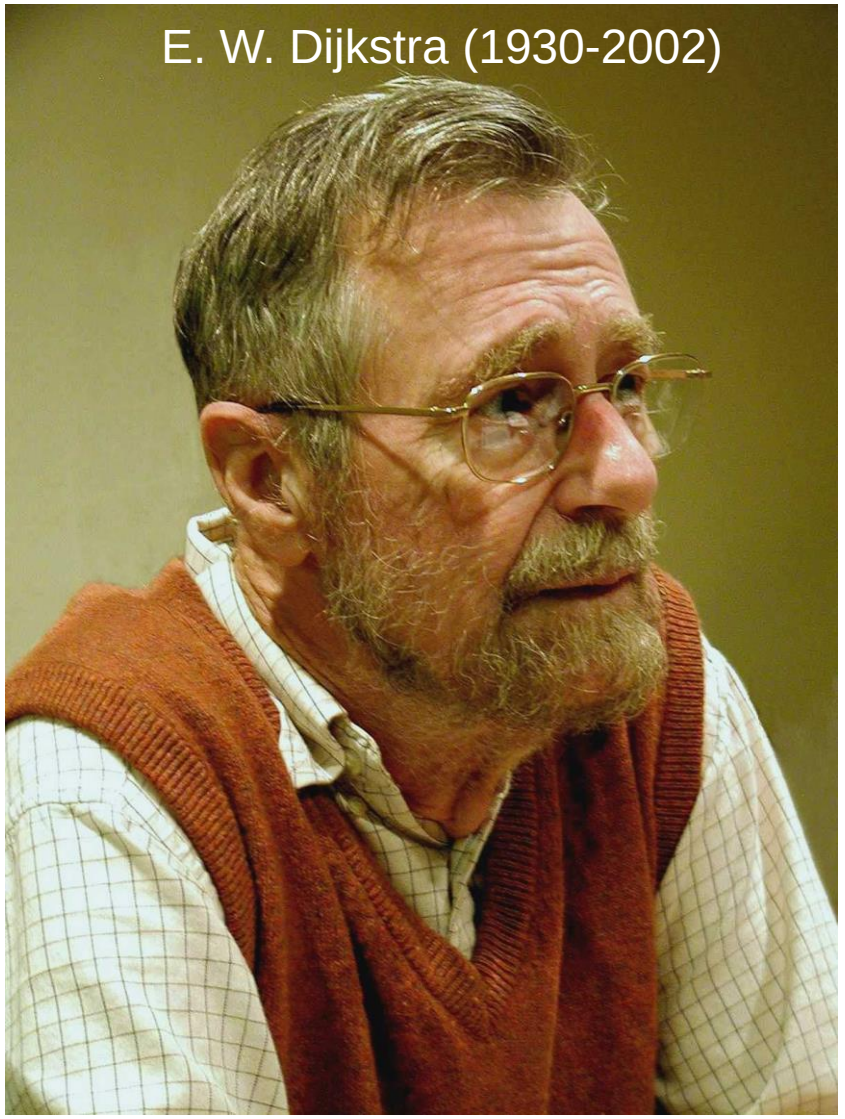


Output: All shortest paths from s to all nodes in V

Naïve Algorithm

$\Omega(n!)$ time

Dijkstra’s shortest path algorithm



On to the board…