

# Lecture 16

CSE 331

Mar 8, 2021

# Grading issues

Don't expect annotations if you get L0 or L1!!

- Instead, go check the solution!
- TAs spend significant amount of time to grade your stuff!

Be respectful to your TAs!

- Don't send them emails that you wouldn't dare to send me!

# Quiz 1 on Friday

note @486

## Quiz 1

The first quiz will be on **Friday, March 12, between 3:00-3:15pm**. We will have a 5 mins break after the quiz and **the lecture will start at 3:20 pm at its usual place**.

The quiz will be **in-class** and **LIVE**. There will be two T/F with justification questions (like those in the sample midterm 1: @485) Also, quiz 1 will cover all topics we cover in class till Wednesday, [internet exam](#). **You can use one letter-sized cheat-sheet during the quiz (you can use both sides).**

**In this quiz, you'll read questions from your computer screen, solve on paper, and then will take the pictures of the solutions and upload them as a single pdf to Autolab's "Quiz 1" assignment.**

Now read the instructions below very carefully:

- The link for the Zoom room that you'll use during the quiz will be emailed to you on Thursday, Mar 11.
- The quiz starts at 3:00pm but **you must be online at the provided Zoom link at 2:50pm**.
  - Proctors will be online at 2:50pm and will do necessary checks.
- Before the exam, you must show your UB id to the proctor. If you don't have it (!), you must show your driver's license or passport (your photo must be there!)
- **The exam duration is 15 minutes.**
  - If this was in-class, we'd give you only 10 mins. But we're giving extra 5 minutes so that you can upload your solutions to AutoLab (see below for more on this).
  - The deadline for submission in Autolab will be set to **3:15pm sharp (no extensions!)**.
- You'll receive an email (to your buffalo address) at **2:50pm** that contains the link to the quiz (pdf). The quiz will be put on LIR Box and be accessible by this link

**Read this very carefully!**

# Midterms next week: Wed & Fri

Will make a detailed post on Piazza this week.

# Interval Scheduling Problem

**Input:**  $n$  intervals  $[s(i), f(i))$  for  $1 \leq i \leq n$

**Output:** A schedule  $S$  of the  $n$  intervals

No two intervals in  $S$  conflict

$|S|$  is maximized

# Analyzing the algorithm

$R$ : set of requests

Set  $S$  to be the empty set

While  $R$  is not empty

    Choose  $i$  in  $R$  with the earliest finish time

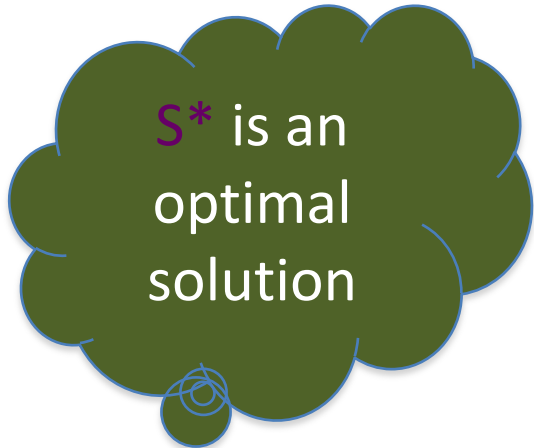
    Add  $i$  to  $S$

    Remove all requests that conflict with  $i$  from  $R$

Return  $S^* = S$

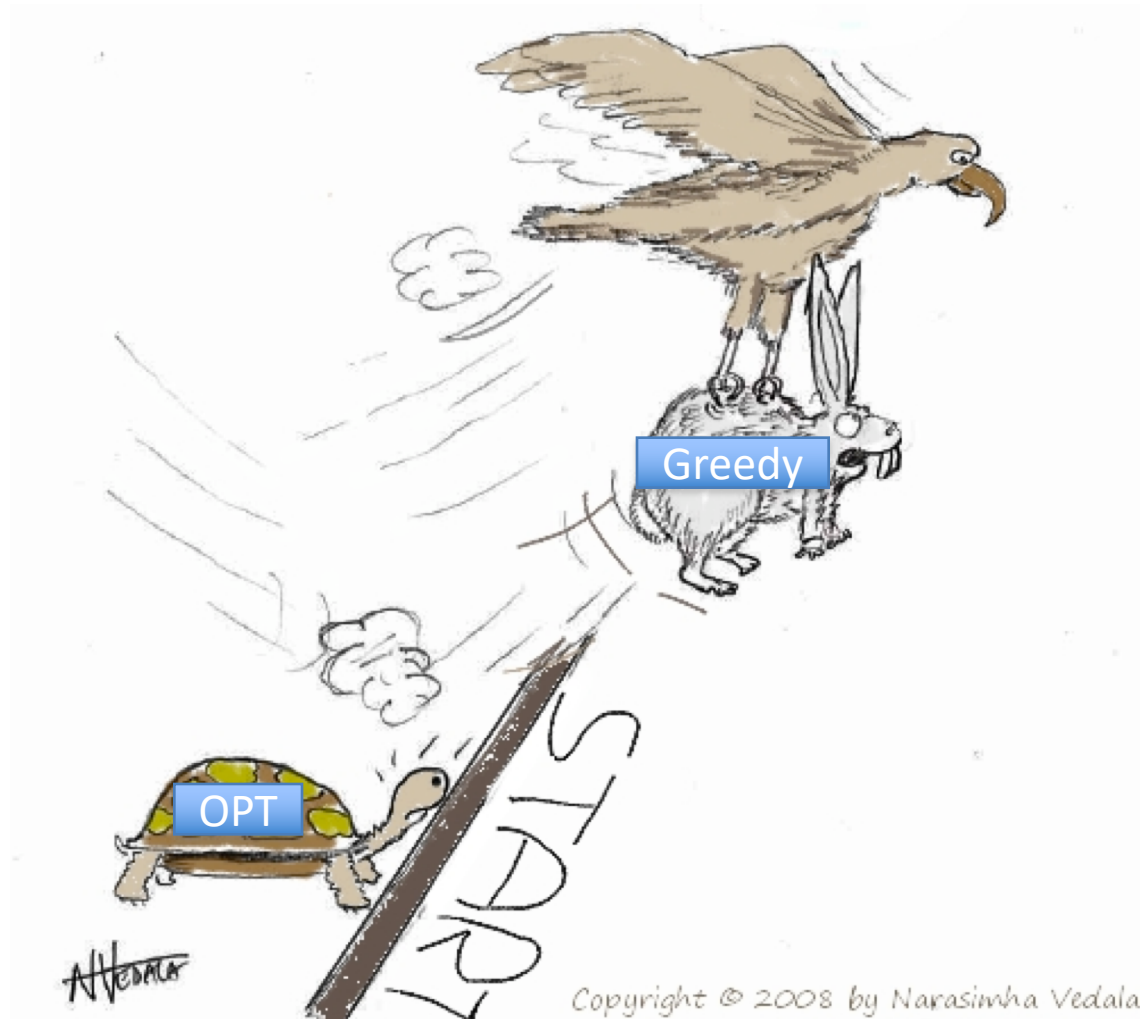


$S^*$  has no conflicts



$S^*$  is an optimal solution

# Greedy “stays ahead”



# Today's agenda

Prove the correctness

Analyze run-time of the greedy algorithm