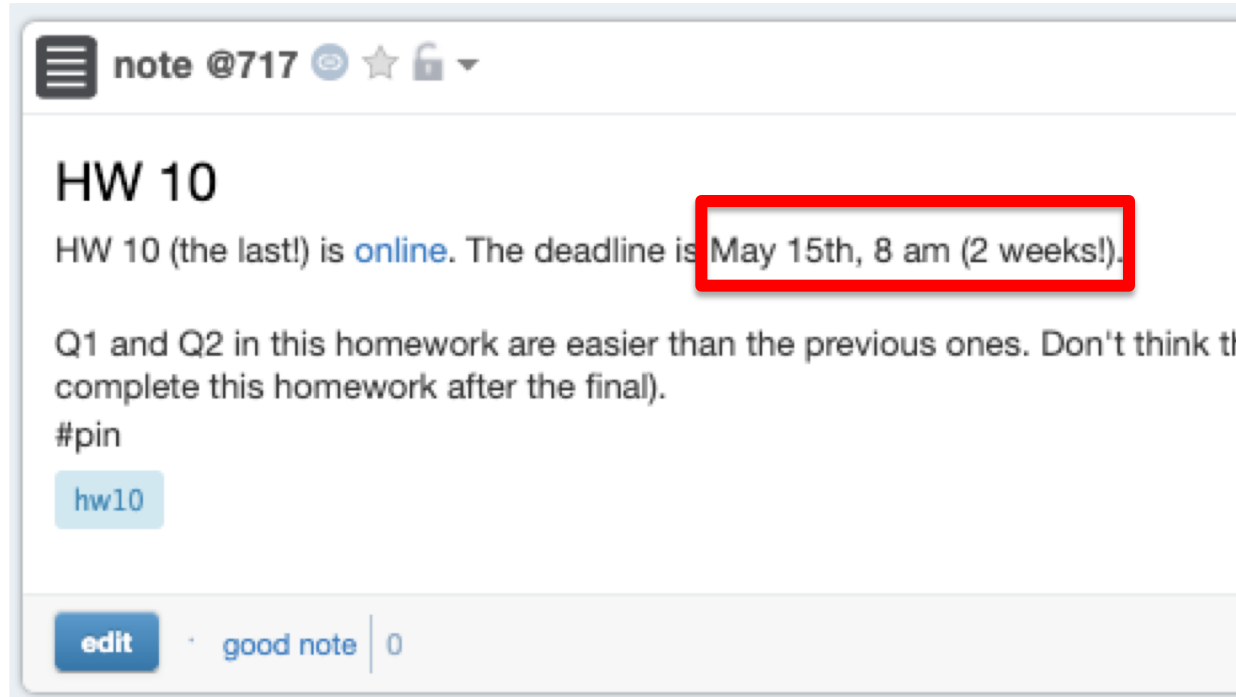


# Lecture 37

CSE 331

May 1, 2020

# HW 10 (last one!) is out



note @717

## HW 10

HW 10 (the last!) is [online](#). The deadline is **May 15th, 8 am (2 weeks!)**.

Q1 and Q2 in this homework are easier than the previous ones. Don't think they're complete this homework after the final).

#pin

hw10

edit · good note | 0

No walkthrough videos: sorry!

Quiz 2: on Monday (May 4<sup>th</sup>)

I'll post details on Piazza today

# Course evaluations incentive

## Incentive for filling in course evals

I will release some questions on the final exam **depending on the level of response on the official course evals.**

- If  **$\geq 85\%$**  students submit the course evals, I will release **Q1**
- If  **$\geq 90\%$**  students submit the course evals, I will release **Q1 AND Q2**

Some other relevant comments:

- I will post the current response rate in the comments section below every 3 days until May 9th.
- The % is based on current student registered (151): i.e. it does not include students who have resigned
- I believe this is the link to the course evals: <https://sunyub.smartevals.com/>
  - But double check the email you might have received on this.

#pin

logistics

57% as of 1:38pm today!

Deadline for the incentive is May 9, 11:59pm!

$$Y \leq_P X$$

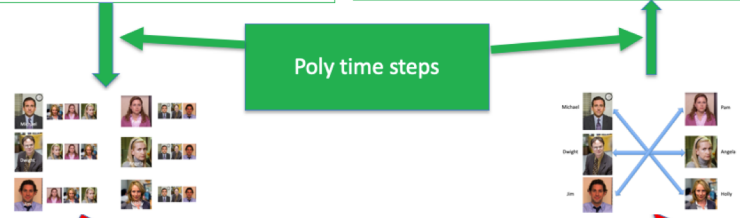
Question 2 (Big G is in town)

$\leq_P$



| CSE Major      | Slot 1         | Slot 2         | Slot 3         | Slot 4         |
|----------------|----------------|----------------|----------------|----------------|
| S <sub>1</sub> | E <sub>1</sub> | free           | E <sub>2</sub> | free           |
| S <sub>2</sub> | free           | E <sub>1</sub> | free           | E <sub>2</sub> |

| CSE Major      | Slot 1         | Slot 2                         | Slot 3                         | Slot 4 |
|----------------|----------------|--------------------------------|--------------------------------|--------|
| S <sub>1</sub> | E <sub>1</sub> | free                           | E <sub>2</sub> (truncate here) |        |
| S <sub>2</sub> | free           | E <sub>1</sub> (truncate here) |                                |        |



ANY algo for stable matching problem works!

Arbitrary Y instance

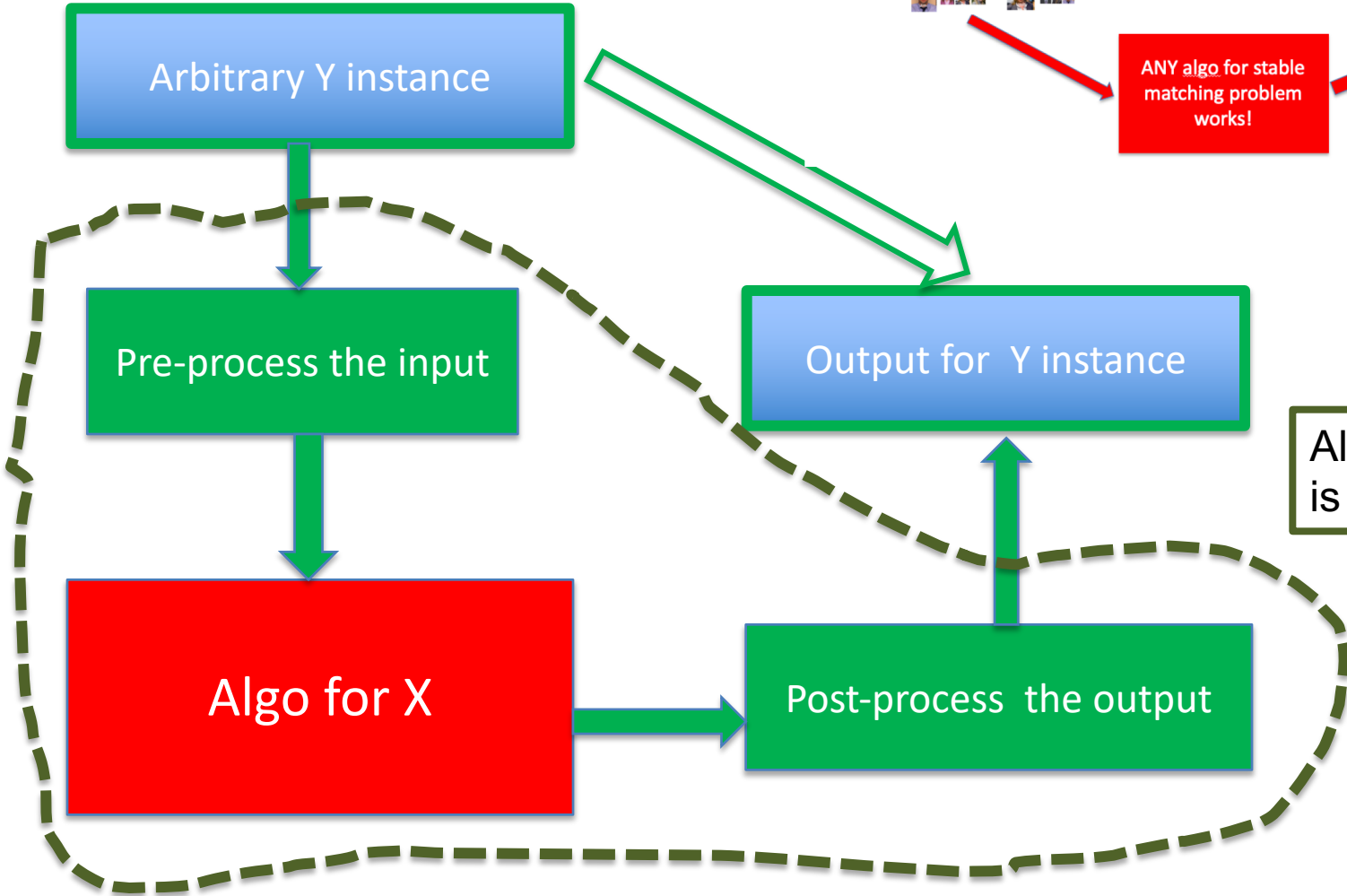
Pre-process the input

Algo for X

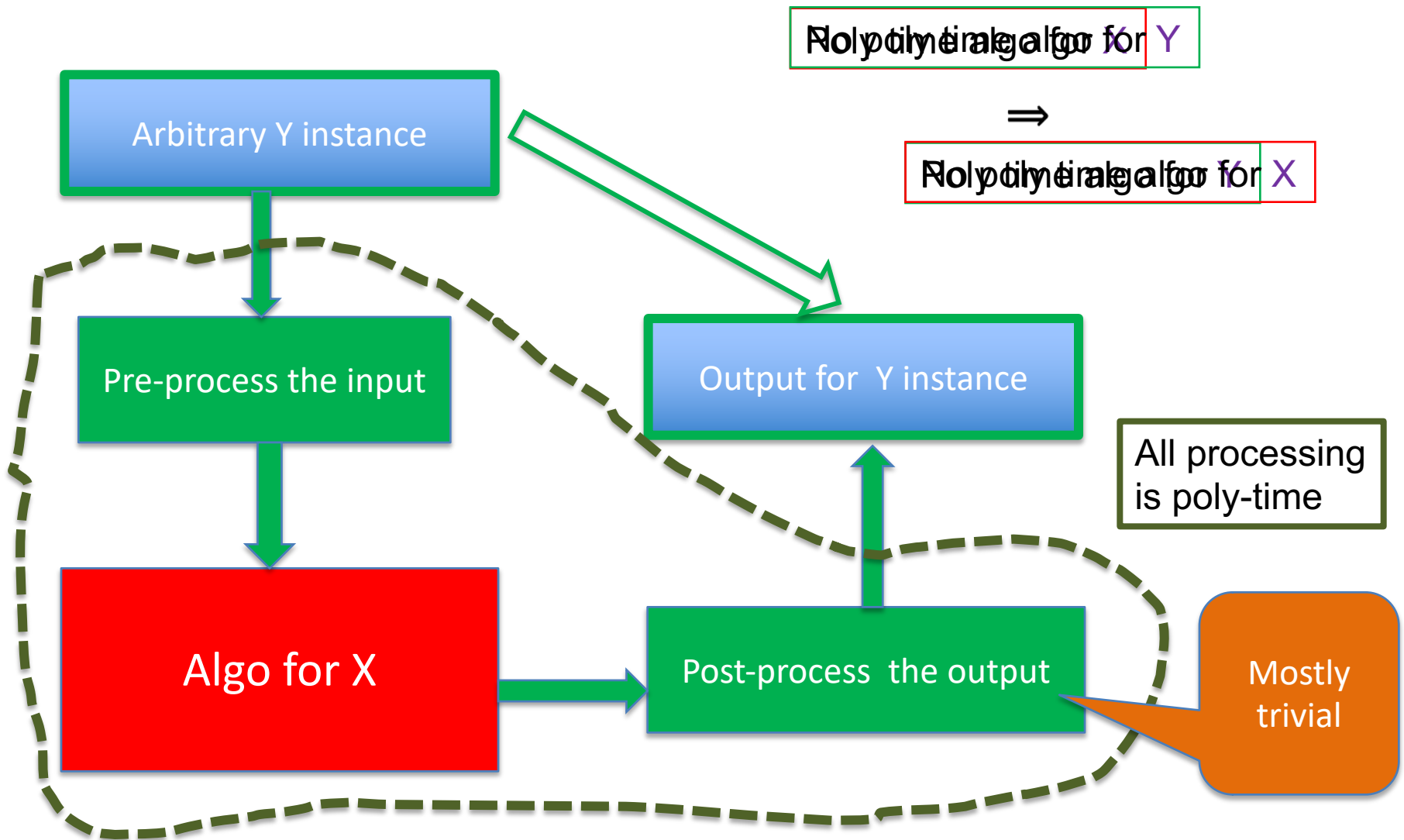
Output for Y instance

Post-process the output

All processing is poly-time



# Implications of $Y \leq_p X$



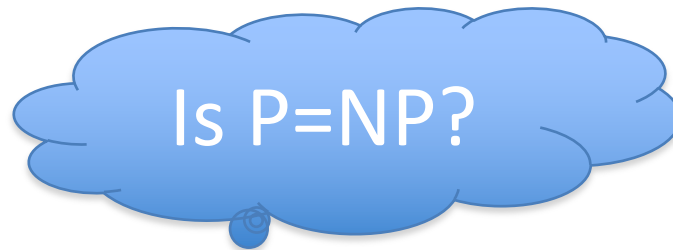
# Last lecture

3-SAT  $\leq_p$  Independent Set

Read Sec 8.2 of [KT]

# P vs NP question

**P**: problems that can be solved by poly time algorithms



**NP**: problems that have polynomial time verifiable witness to optimal solution