## Lecture 10

**CSE 331** 

### Please have a face mask on

### Masking requirement



<u>UB\_requires</u> all students, employees and visitors – regardless of their vaccination status – to wear face coverings while inside campus buildings.

https://www.buffalo.edu/coronavirus/health-and-safety/health-safety-guidelines.html

### Homework 2 out!

# Homework 2

Due by 8:00pm, Friday, February 25, 2022.

Make sure you follow all the homework policies.

All submissions should be done via Autolab.

### Sample Problem

#### The Problem

This problem is just to get you thinking about asymptotic analysis and input sizes.

An integer  $n \geq 2$  is a prime, if the only divisors it has is 1 and n. Consider the following algorithm to check if the given number n is prime or not:

# Implementation Steps

- (0) How to represent the input?
- (1) How do we find a free woman w?

(2) How would w pick her best unproposed man m?

- (3) How do we know who m is engaged to?
- (4) How do we decide if m prefers w' to w?

# Overall running time

Init(1-4)



n<sup>2</sup> X ( Query/Update(1-4) )

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