

# CSE 12 – Basic Data Structures and Object-Oriented Design

## Lecture 9

Greg Miranda & Paul Cao, Winter 2021

This lecture is being recorded

# Announcements

- Quiz 9 due Wednesday @ 8am
- PA3 due Wednesday @ 11:59pm
- Survey 4 due Friday @ 11:59pm
- Exam 1 released Friday @ 8am, due Saturday before 10am

# Topics

- Questions on Lecture 9?
- Counting Steps

Questions on Lecture 9?

# Counting Steps – ArrayList Insert – ignore EC

```
public void insert(int index, String s) {  
    expandCapacity();    //ignore  
    for (int i = size - 1; i >= index ; i--) {  
        this.elements[i+1] = this.elements[i];  
    }  
    this.elements[index] = s;  
    this.size += 1;  
}
```

# Counting Steps – ArrayList Expand Capacity

```
private void expandCapacity() {  
    int currentCapacity = this.elements.length;  
    if(this.size < currentCapacity) { return; }  
    String[] expanded = new String[currentCapacity * 2];  
    for(int i = 0; i < this.size; i += 1) {  
        expanded[i] = this.elements[i];  
    }  
    this.elements = expanded;  
}
```

## Counting Steps – ArrayList Insert w/ EC

```
public void insert(int index, String s) {  
    expandCapacity();  
    for (int i = size - 1; i >= index ; i--) {  
        this.elements[i+1] = this.elements[i];  
    }  
    this.elements[index] = s;  
    this.size += 1;  
}
```