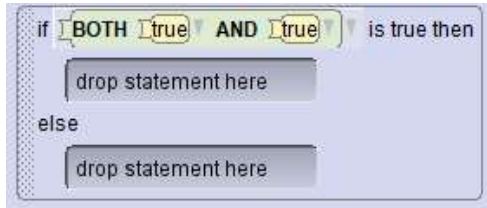# CompSci 94
Logic with Ifs, Nested Ifs
October 3, 2024

Prof. Susan Rodger

Announcements

- Assignment 3 due Tues. Oct 8
  - Also fill out reflect form!
- Next QZ and Videos due Tuesday when class starts
  - They are up!

Q1. Review Nested IF

- What happens if the diningTable has width 1.7 and depth 1.0?

Q2. Logic Review

- What are possible values of A and B
  - if **A and B** is True?

  - if **A or B** is True?

  - if **A or B** is False?

Q3. Consider this code – Nested Ifs How would you write it with ONE IF?

```
if [ this.diningTable  getOpacity  >  0.99 ] is true then
    if [ this.alien  isBehind  this.diningTable  add detail ] is true then
        this.alien  serveFood
    else
        this.alien  say  "No service today"  add detail
else
    this.alien  say  "No service today"  add detail
```

Q4. What does bunny say?

```
if [ BOTH [ this.bunny  getPaint  ==  RED ]  AND [ this.panda  getHeight  >  this.bunny  getHeight ]
    this.bunny  say  "first"  add detail
else
    if [ this.panda  getHeight  ≤  this.bunny  getHeight ] is true then
        this.bunny  say  "second"  add detail
    else
        if [ this.bunny  getPaint  ≠  RED ] is true then
            this.bunny  say  "third"  add detail
        else
            this.bunny  say  "fourth"  add detail
```

Bunny is red
to start.

Q5. Bunny different. What does bunny say?

```
if [ BOTH [ this.bunny  getPaint  ==  RED ]  AND [ this.panda  getHeight  >  this.bunny  getHeight ]
    this.bunny  say  "first"  add detail
else
    if [ this.panda  getHeight  ≤  this.bunny  getHeight ] is true then
        this.bunny  say  "second"  add detail
    else
        if [ this.bunny  getPaint  ≠  RED ] is true then
            this.bunny  say  "third"  add detail
        else
            this.bunny  say  "fourth"  add detail
```
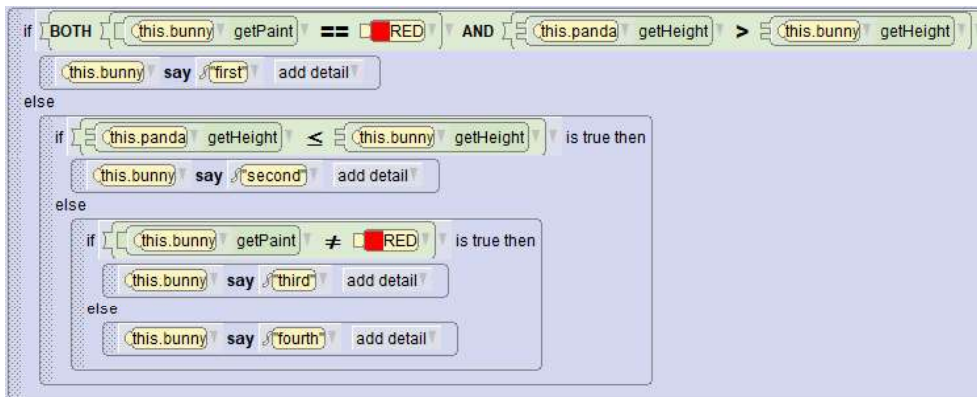
Bunny is
green to start.

Q6. Give an example to make bunny say fourth

```
if [ BOTH [ this.bunny  getPaint  ==  RED ]  AND [ this.panda  getHeight  >  this.bunny  getHeight ]
    this.bunny  say  "first"  add detail
else
    if [ this.panda  getHeight  ≤  this.bunny  getHeight ] is true then
        this.bunny  say  "second"  add detail
    else
        if [ this.bunny  getPaint  ≠  RED ] is true then
            this.bunny  say  "third"  add detail
        else
            this.bunny  say  "fourth"  add detail
```

Class Today

- Nested Ifs, Logic – and/or/not