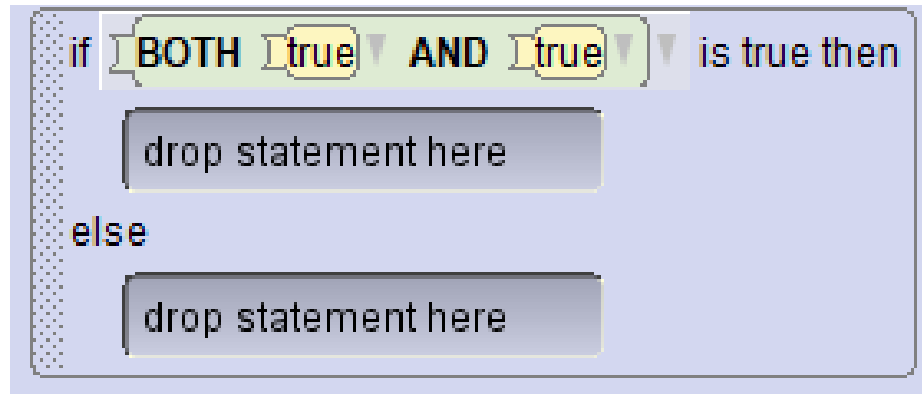


CompSci 94

Logic with Ifs, Nested Ifs

October 3, 2024



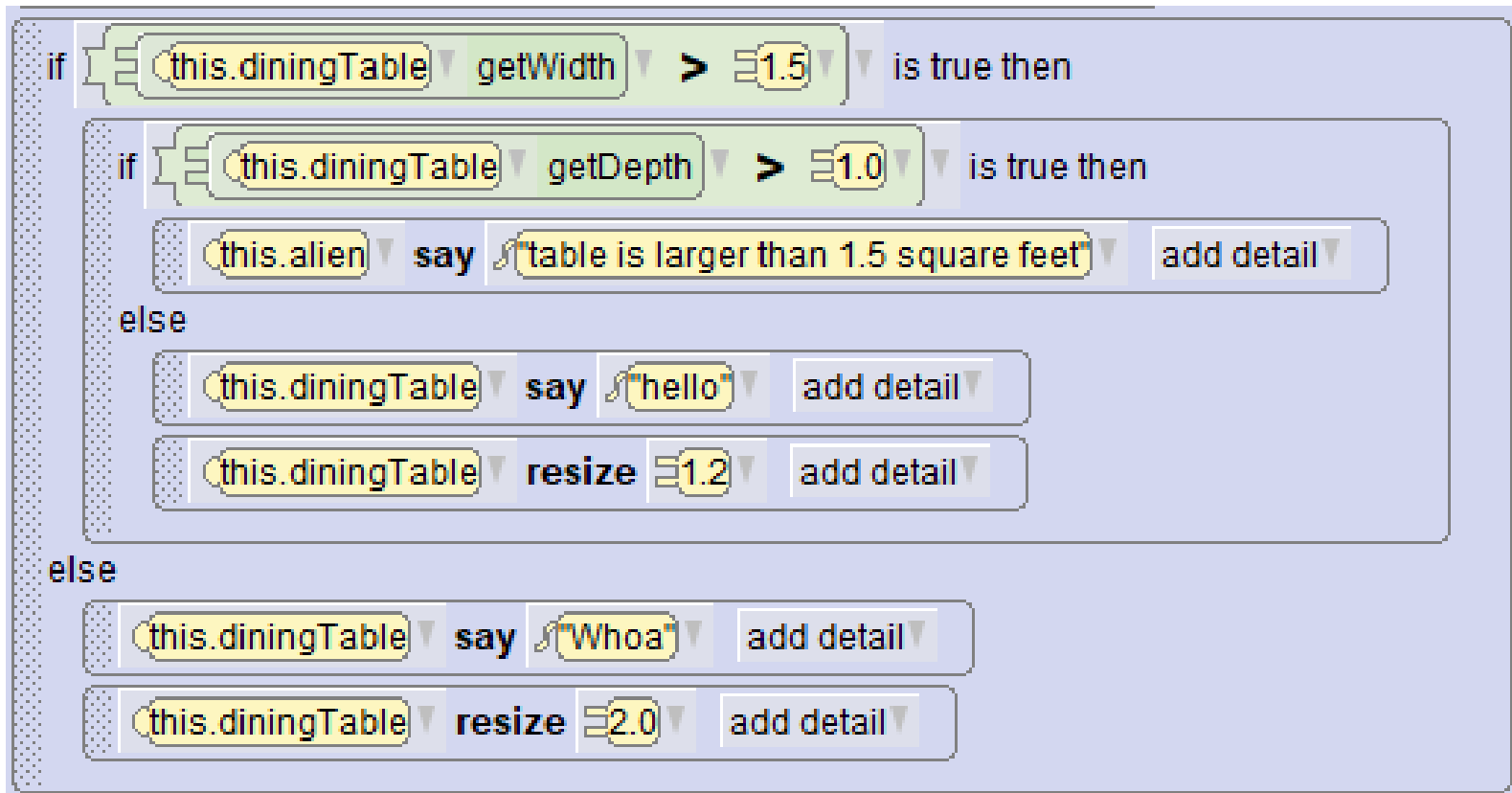
Prof. Susan Rodger

Announcements

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

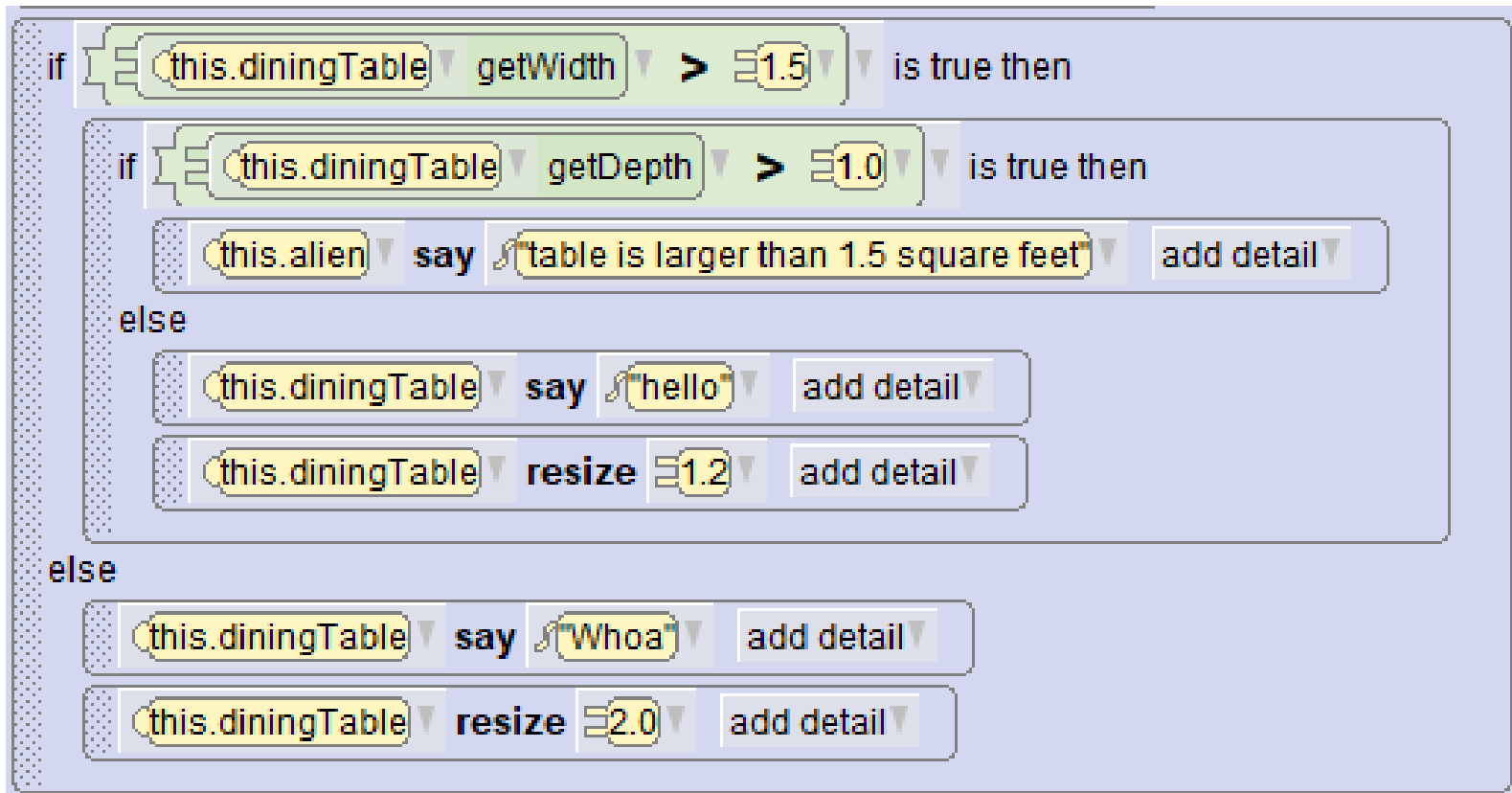
Q1. Review Nested IF

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



Q1. Review Nested IF

- What happens if the diningTable has width 1.7 and depth 1.0?
 - diningTable says hello and is resized larger by 1.2



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?

Q2. Logic Review

- What are possible values of A and B
 - if **A and B** is True?
 - A must be True, B must be True
 - if **A or B** is True?
 - Either A must be True or B must be True, or both
 - if **A or B** is False?
 - A must be False, B must be false

Logic Truth Table

A	B	not A	A and B	A or B
True	True	False	True	True
True	False	False	False	True
False	True	True	False	True
False	False	True	False	False

Logic Truth Table

A AND B is **true** only if both A and B are **true**

A	B	not A	A and B	A or B
True	True	False	True	True
True	False	False	False	True
False	True	True	False	True
False	False	True	False	False

Logic Truth Table

A OR B is **false** only if both A and B are **false**

A	B	not A	A and B	A or B
True	True	False	True	True
True	False	False	False	True
False	True	True	False	True
False	False	True	False	False

Example

- Suppose $x = 7$ and $y = 5$

if $x > 5$ or $y < 3$

if $x > 5$ and $y < 3$

Example

- Suppose $x = 7$ and $y = 5$

if $x > 5$ or $y < 3$

True because at least one of them is True

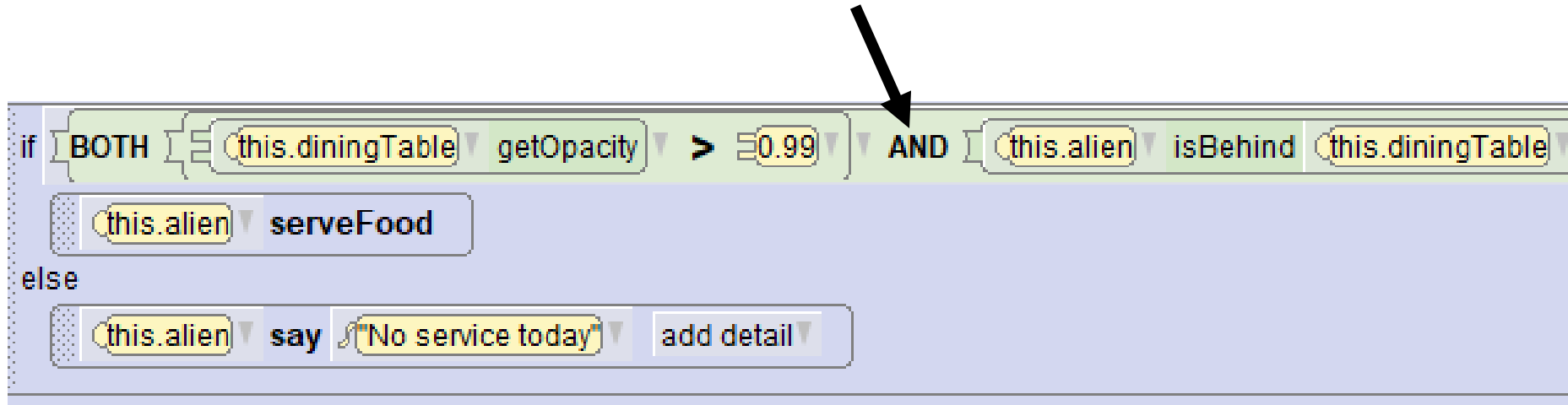
if $x > 5$ and $y < 3$

False because both of them are not True

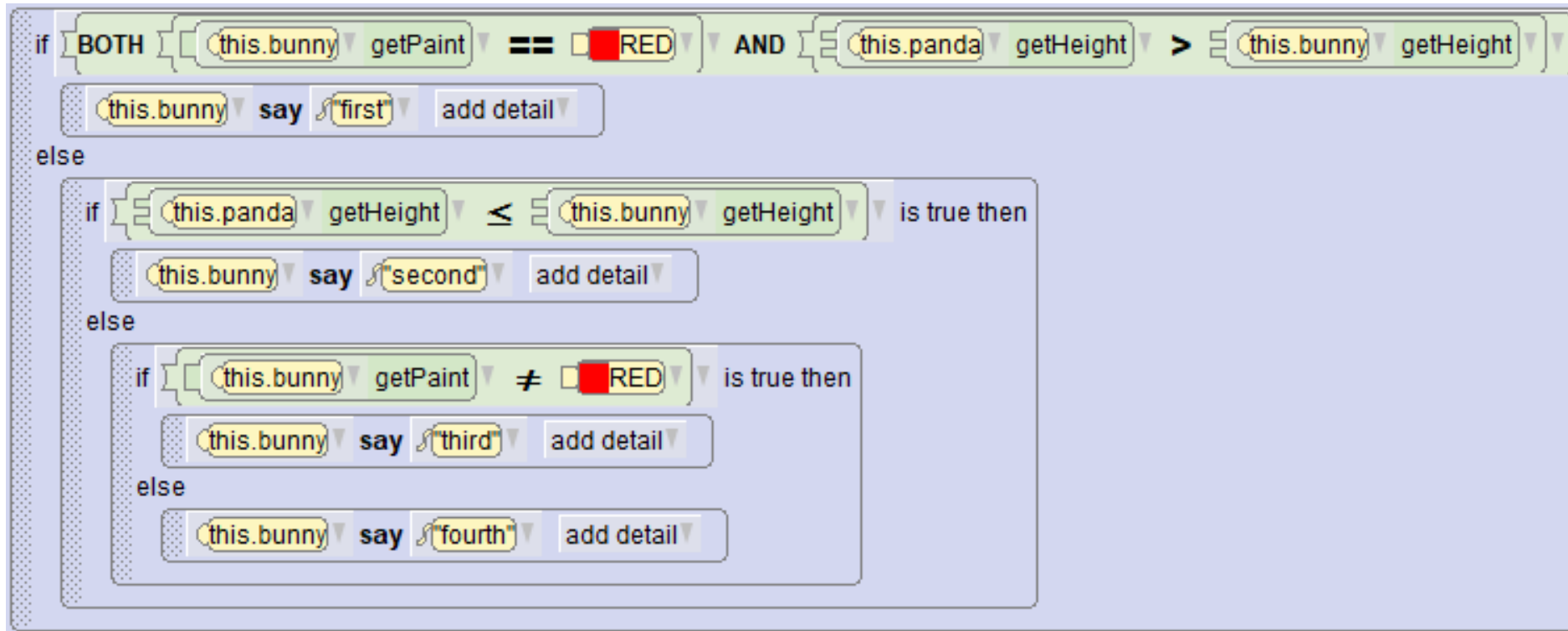
Q3. Consider this code – Nested Ifs
How would you write it with ONE IF?



Rewrite Code - one IF with AND



Q4. What does bunny say?



Bunny is red
to start.



Q4. What does bunny say?

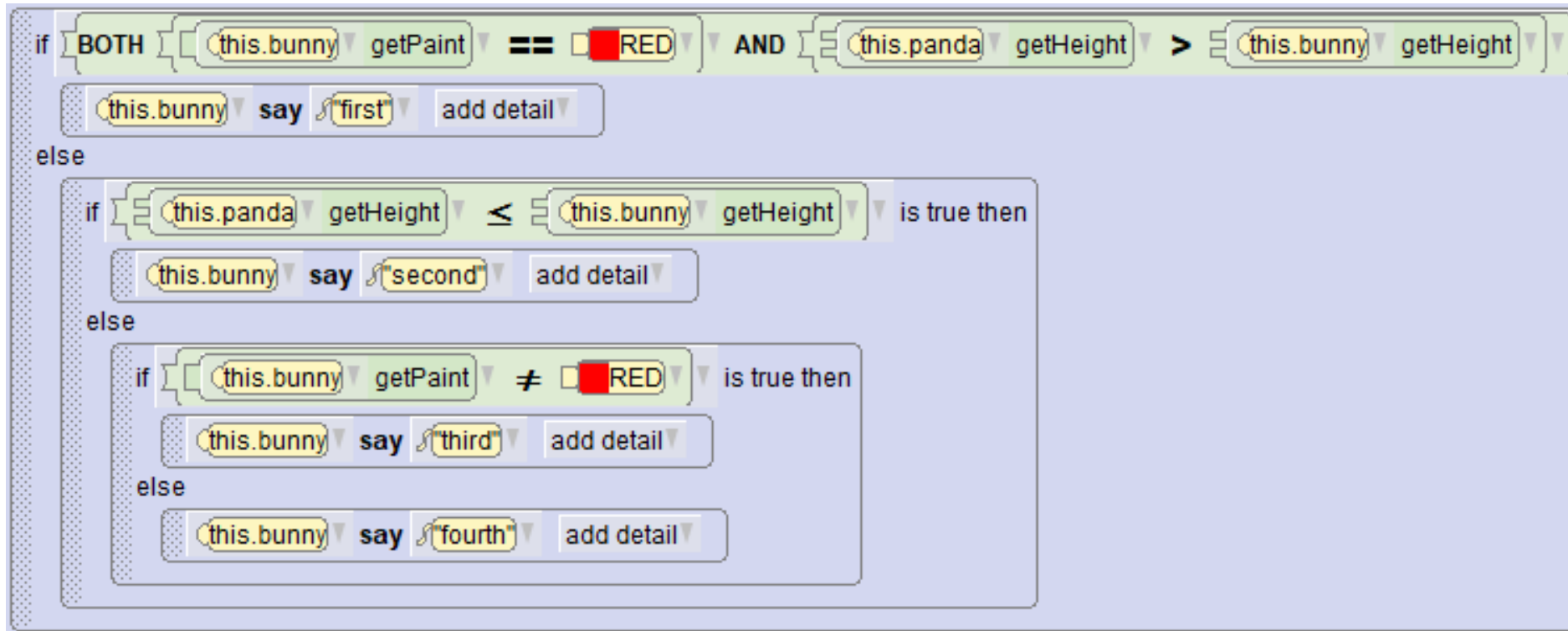


Bunny is red
to start.



Bunny says:
second

Q5. Bunny different. What does bunny say?



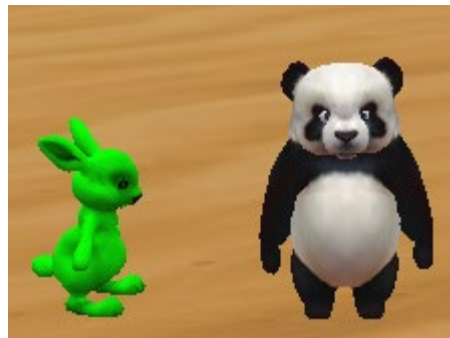
Bunny is
green to start.



Q5. Bunny different. What does bunny say?

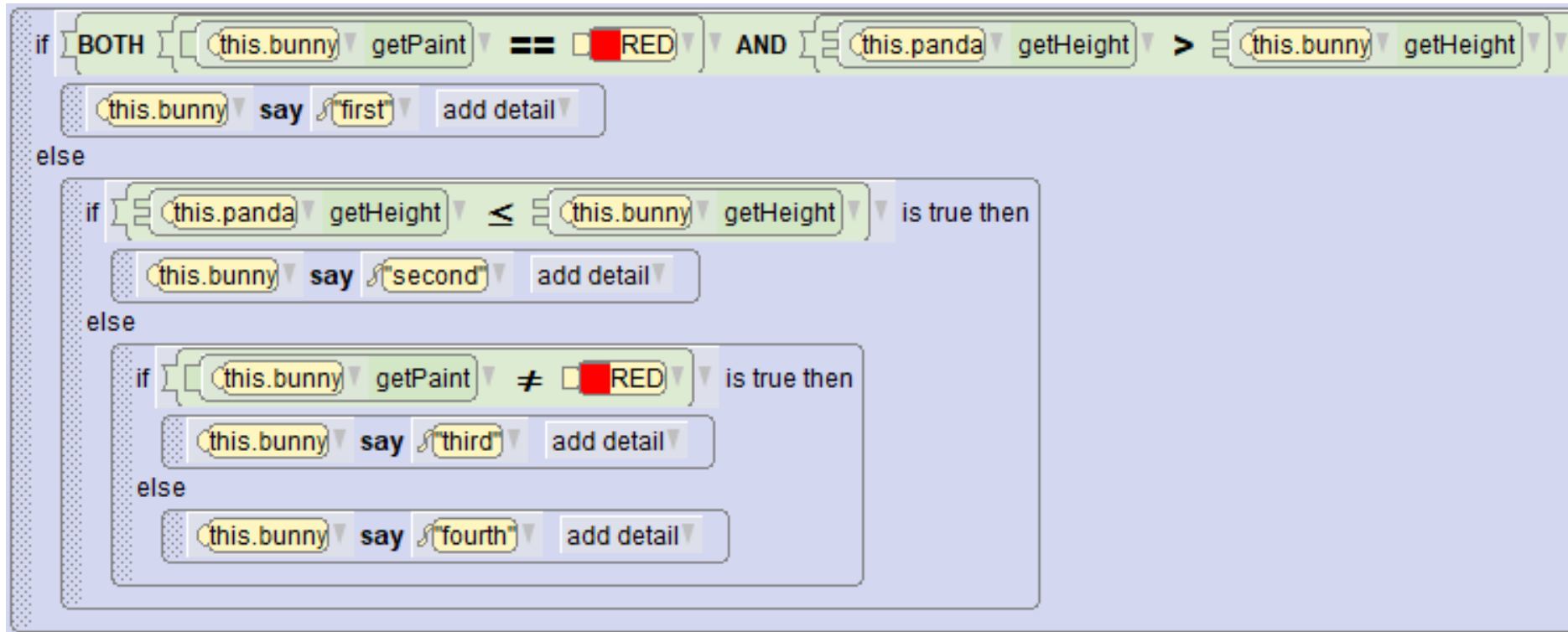


Bunny is
green to start.



Bunny says:
third

Q6. Give an example to make bunny say fourth



Q6. Give an example to make bunny say fourth



Bunny is painted red AND
Panda is shorter than bunny

Give an example to make bunny say fourth



Bunny is red AND
Panda is shorter than bunny

NO!!!!!!!!!!!!!!!!!!!!

No way bunny will
ever say fourth!

Class Today

- Nested Ifs, Logic – and/or/not

