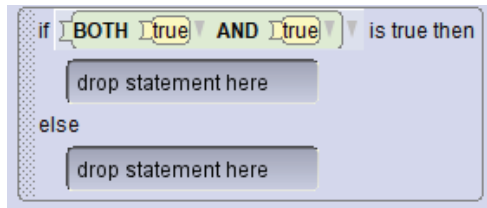


CompSci 94

Logic with Ifs, Nested Ifs

October 7, 2021



Prof. Susan Rodger

Announcements

- 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?

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

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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.aliens.isBehind(this.diningTable)) add detail is true then
    this.aliens.serveFood()
  else
    this.aliens.say("No service today") add detail
else
  this.aliens.say("No service today") add detail
  
```

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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.



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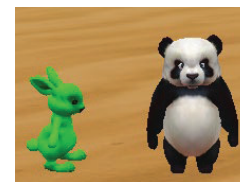
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Q5. Bunny different. What does bunny say?

```

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.



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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").addDetail()
else
  if (this.panda.getHeight() <= this.bunny.getHeight()) is true then
    (this.bunny).say("second").addDetail()
  else
    if (this.bunny.getPaint() != RED) is true then
      (this.bunny).say("third").addDetail()
    else
      (this.bunny).say("fourth").addDetail()
```

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Class Today

- Nested Ifs, Logic – and/or/not



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