CompSci 94
Logic with Ifs, Nested Ifs
September 26, 2019

Prof. Susan Rodger
Review Nested IF

• What happens if the diningTable has width 1.7 and depth 1.0?
**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
Logic Review

• What are possible values of $A$ and $B$
  – if $A \text{ and } B$ is True?

  – if $A \text{ or } B$ is True?

  – if $A \text{ or } B$ is False?
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?
    • A must be True or B must be True
  – if A or B is False?
    • A must be False, B must be false
# Logic Truth Table

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>not A</th>
<th>A and B</th>
<th>A or B</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>True</td>
<td>False</td>
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</tbody>
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Logic Truth Table

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

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<tbody>
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Logic Truth Table

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

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Consider this code – Nested Ifs
How would you write it with ONE IF?
Rewrite Code - one IF with AND
What does bunny say?

Bunny is red to start.
What does bunny say?

Bunny is red to start.

Bunny says: second
Bunny different. What does bunny say?

Bunny is green to start.
Bunny different. What does bunny say?

Bunny is green to start.

Bunny says:

third
Give an example to make bunny say fourth
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 painted red AND
Panda is shorter than bunny

NO!!!!!!!!!!!!!!!
No way bunny will ever say fourth!
Announcements

• Assignment 3 due Tuesday night
• RQ and Videos due Tuesday 8:30am
• Exam 1 in two weeks, review next Thursday
Class Today

- Nested Ifs, Logic – and/or/not