More looping
Announcements

• Nice job on the quiz!
• Lab 3 posted
• After this week we’ll have most of the basics
Today’s plan

• Hand back quizzes

• Review practice problems from Friday

• while loops: repeat indented lines of code until a condition becomes False
Testing parity

• Use the **remainder** operator, %, to test a number’s parity, i.e. whether it is even or odd.

• If a number has remainder 0 when divided by 2 it is even.

• If a number has remainder 1 when divided by 2 it is odd.
n = int(input("Enter number: "))

if n % 2 == 0:
    print("%d is even" % n)
else:
    # n % 2 is either 0 or 1 so
    # if we reach here, n % 2 == 1
    print("%d is odd" % n)
Truth Tables

- We can use truth tables to verify rules of logic like De Morgan’s laws:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>not (A or B)</th>
<th>(not A) and (not B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>T</td>
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</tbody>
</table>
More on if-elif-else

- Within a single conditional statement (if, possibly followed by one or more elif's and possibly followed by one else) at most one block of indented code will execute.

- Each appearance of if starts a new conditional statement.
Compatibility Quiz

• The program uses:
  - Indexing within a for loop
  - String formatting
  - Accumulator
  - Parallel lists of strings
  - Conditionals
while loops

• Syntax:

```python
while <boolean expression>:
    <block of code>
```

• Semantics: repeat the block of code as long as the `<boolean expression>` evaluates to True. If the block of code does nothing to change the boolean expression, the while loop will repeat indefinitely.
See you Wednesday!