61A Lecture 11

Friday, September 21

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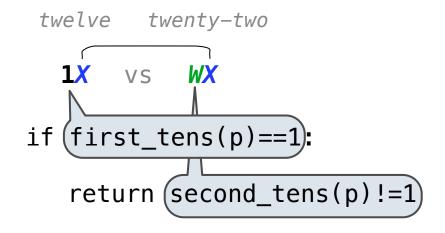
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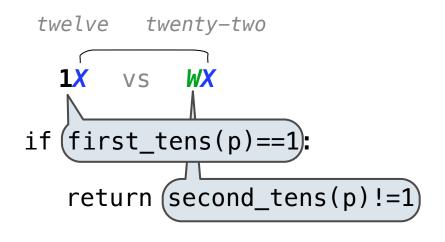
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zero twenty
twenty zero
X0 vs Y0

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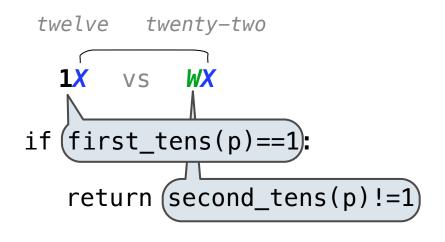
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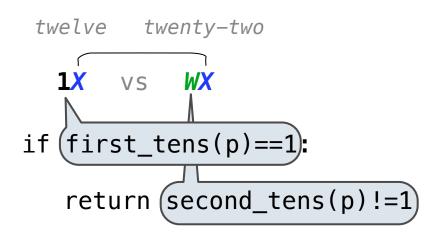


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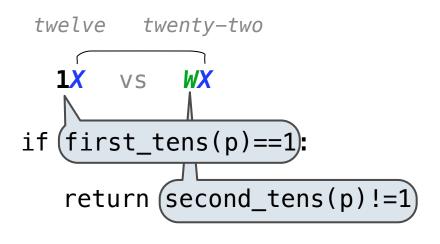
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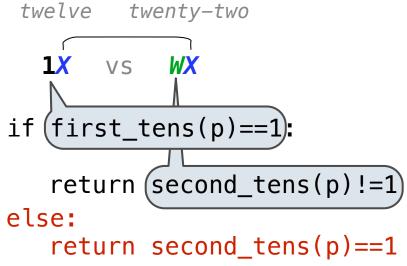
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twenty-two twelve

WX vs 1X

return second_tens(p)==1

else:

"You may not use boolean operator or"

Demo

return second_tens(p)==0

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>>> alternates = (-1, 2, -3, 4, -5)
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The returned value of **filter** is an iterable filter object

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Demo

Iterable objects give access to some elements in order.

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Accumulation and Iterable Values

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For statements also operate on iterable values.

Reduce is a higher-order generalization of max, min, & sum.

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First argument:
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Like accumulate from Homework 2, but with iterable objects

```
(<map exp> for <name> in <iter exp> if <filter exp>)
```

One large expression that evaluates to an iterable object

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- <iter exp> is evaluated when the generator expression
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Precise evaluation rule introduced in Chapter 4.

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Demo

Python Lists

['Demo']

http://docs.python.org/py3k/library/stdtypes.html#mutable-sequence-types

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>>> suits = ['heart', 'diamond', 'spade', 'club']
>>> from unicodedata import lookup
```

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Unlike generator expressions, the map expression is evaluated when the list comprehension is evaluated.

```
>>> suits = ['heart', 'diamond', 'spade', 'club']
>>> from unicodedata import lookup
>>> [lookup('WHITE ' + s.upper() + ' SUIT') for s in suits]
```

8

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Dictionaries

{'Dem': 0}

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The second restriction is an intentional consequence of the dictionary abstraction.