RESEARCH TOOLS 2011
VIDEO 12
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UNH CCOM/JHC
Python Part 5: while loops

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RT Video 12 - Python Part 5 - while

Kurt Schwehr
2011-Oct-13
researchtools@ubuntu:~/video/12$ ipython --pylab
Python 2.7.1+ (r271:86832, Apr 11 2011, 18:05:24)
Type "copyright", "credits" or "license" for more information.

IPython 0.10.1 -- An enhanced Interactive Python.
?    -> Introduction and overview of IPython's features.
%quickref -> Quick reference.
help   -> Python's own help system.
oject? -> Details about 'object'. ?object also works, ?? prints more.

Welcome to pylab, a matplotlib-based Python environment.
For more information, type 'help(pylab)'.

In [1]: count = 0

In [2]: while count < 5:
    ...:     print count
    ...:     count = count + 1
    ...

0
1
2
3
4

In [3]:

video
In [3]: count = 0

In [4]: while count < 10:
   ...:     print count
   ...:     count += 3
   ...:

   0
   3
   6
   9

In [5]: for count in range(0,10,3):
   ...:     print count
   ...:

   0
   3
   6
   9

In [6]: quit
Out[6]: Type quit() to exit.

In [7]: quit()
Do you really want to exit ([y]/n)? y
In [3]: count = 0

In [4]: while count < 10:
    ...:     print count
    ...:     count += 3
    ...

0
3
6
9

In [5]: for count in range(0,10,3):
    ...:     print count
    ...

0
3
6
9

In [6]: quit
Out[6]: Type quit() to exit.

In [7]: quit()
Do you really want to exit ([y]/n)? y
researchtools@ubuntu:/video/12$ ps -ade
#!/usr/bin/env python

import time  # use sleep

count = 0
while True:
    print count
    count += 1
Namespace: Interactive

Docstring:
sleep(seconds)

Delay execution for a given number of seconds.

In [3]: quit
Out[3]: Type quit() to exit.

In [4]: quit()
Do you really want to exit ([y/N])

Traceback (most recent call last):
  File "/mydaemon.py", line 1, in <module>
    time.sleep(2)
TypeError: sleep() takes exactly 1 argument (2 given)

--- mydaemon.py All L9 (Python yas)---
#!/usr/bin/env python

import time  # use sleep

count = 0
running = True
while running:
    print count
    count += 1
    time.sleep( 0.2 )

if count > 20:
    running = False

print 'Cleaning up all'
File "./mydaemon.py", line 0
KeyboardInterrupt
researchtools@ubuntu:~/video/

#!/usr/bin/env python

import time # use sleep

count = 0
running = True
while running:
    print count
count += 1
time.sleep( 0.2 )

if count > 20:
    running = False

print 'Cleaning up and exiting'

Cleaning up and exiting
researchtools@ubuntu:~/video/
```python
#!/usr/bin/env python

infile = open('data.dat', 'r')

line = infile.readline()
while line[0] == '#':
    # Skip comments
    pass

for line in infile:
    print line
```
Cleaning up and exiting

```python
# /usr/bin/env python

infile = open('data.dat', 'r')

line = infile.readline()
while line[0] == '#':
    line = infile.readline()
    # Skip comments
    pass

for line in infile:
    print line
```

```
# header 1
# This file contains sample junk data
1 2 3
123 45 12
123 432 88
```

U:--- data.dat All L6  (Fundamental)---

```
#!/usr/bin/env python

for line in open('data.dat'):
    if '!' in line:
        continue
    print line

SyntaxError: invalid syntax

# This file contains sample junk data
1 2 3
123 45 12
123 432 88
Welcome to pylab, a matplotlib-based Python environment.
For more information, type 'help(pylab)'.

In [1]: ls -l
total 28
-rw-r--r-- 1 researchtools researchtools 76 2011-10-12 17:57 data.dat
-rwxr-xr-x 1 researchtools researchtools 218 2011-10-12 17:56 mydaemon.py*
-rwxr-xr-x 1 researchtools researchtools 118 2011-10-12 17:53 mydaemon.py~
-rwxr-xr-x 1 researchtools researchtools 139 2011-10-12 18:02 readdata2.py*
-rwxr-xr-x 1 researchtools researchtools 108 2011-10-12 18:01 readdata2.py~
-rwxr-xr-x 1 researchtools researchtools 196 2011-10-12 17:59 readdata.py*
-rw-r--r-- 1 researchtools researchtools 167 2011-10-12 17:58 readdata.py~

In [2]: import readdata2

In [3]: ls -l
total 32
-rw-r--r-- 1 researchtools researchtools 76 2011-10-12 17:57 data.dat
-rwxr-xr-x 1 researchtools researchtools 218 2011-10-12 17:56 mydaemon.py*
-rwxr-xr-x 1 researchtools researchtools 118 2011-10-12 17:53 mydaemon.py~
-rwxr-xr-x 1 researchtools researchtools 139 2011-10-12 18:02 readdata2.py*
-rwxr-xr-x 1 researchtools researchtools 108 2011-10-12 18:01 readdata2.py~
-rwxr-xr-x 1 researchtools researchtools 295 2011-10-12 18:02 readdata2.pyc
-rwxr-xr-x 1 researchtools researchtools 196 2011-10-12 17:59 readdata.py*
-rw-r--r-- 1 researchtools researchtools 167 2011-10-12 17:58 readdata.py~

In [4]: