

```
researchtools@ubuntu: ~/video/12
File Edit View Search Terminal Help
1: count = 0
2:
3: [4] while count < 30:
4:     print count
5:     count += 3
6:
7:
8:
9: [5] for count in range(0,30,3):
10:    print count
11:
12:
13: [6] quit
14: Type quit() to exit.
15: [7] quit()
Do you really want to exit ([y]/n)? y
researchtools@ubuntu: ~/video/12 ps -adef
```

```
researchtools@ubuntu: ~/video/12
File Edit View Search Terminal Help
1800 2019 1 0 09:14 ? 00:00:00 /usr/lib/gvfs/gvfsd-metadata
1800 2023 1 0 09:14 ? 00:00:00 /usr/lib/8-conf/dconf-service
1800 2027 1 0 09:14 ? 00:00:00 gnome-screensaver
1800 2029 1 0 09:14 ? 00:00:00 /usr/lib/indicator-session/indicator-session-s
1800 2031 1 0 09:14 ? 00:00:00 /usr/lib/indicator-datetime/indicator-datetime
1800 2033 1 0 09:14 ? 00:00:00 /usr/lib/indicator-application/indicator-applic
1800 2035 1 0 09:14 ? 00:00:00 /usr/lib/indicator-messages/indicator-messages
1800 2037 1 0 09:14 ? 00:00:00 /usr/lib/indicator-unity/service
1800 2043 1 0 09:14 ? 00:00:00 /usr/lib/indicator-sound/indicator-sound-servi
1800 2077 1 0 09:14 ? 00:00:00 /usr/lib/psacct/psacct-master
1800 2127 1788 0 09:15 ? 00:00:00 /usr/lib/gnome-disk-utility/gdu-notification-d
1800 2131 1788 0 09:15 ? 00:00:00 /usr/bin/python /usr/share/system-config-print
1800 2133 1788 0 09:15 ? 00:00:00 update-notifier
1800 2151 1 0 09:15 ? 00:00:00 /usr/bin/python /usr/lib/systemd/system
1800 2281 1 0 09:21 ? 00:00:25 gnome-terminal
1800 2285 2281 0 09:21 ? 00:00:00 gnome-pty-helper
1800 2286 2281 0 09:21 pts/0 00:00:00 bash
1800 2349 1 0 09:21 ? 00:00:05 home /usr/lib/tomboy/tomboy.exe --search
1800 2351 2281 0 09:28 pts/1 00:00:00 bash
1800 2369 2 0 17:27 ? 00:00:00 [kworker/0:2]
1800 2385 2 0 17:30 ? 00:00:00 [kworker/0:1]
1800 2389 1 1 17:44 ? 00:00:05 /usr/bin/emacs23
1800 2389 2511 0 17:47 pts/1 00:00:00 /bin/bash /home/researchtools/class/screencapt
1800 23438 2 0 17:48 ? 00:00:00 [kworker/0:0]
1800 23593 2389 0 17:51 pts/1 00:00:00 sleep 5
1800 23594 2286 0 17:51 pts/0 00:00:00 ps -adef
researchtools@ubuntu: ~/video/12
```

```
emac23@ubuntu
File Edit View Search Terminal Help
-rw-r--r-- 1 researchtools re
researchtools@ubuntu: ~/video/
File ~/.readdata2.py, line
if '#' is in line:
-
SyntaxError: invalid syntax
researchtools@ubuntu: ~/video/
1 2 3
def readdata1():
for line in open('data.dat'):
if '#' in line:
continue
print line
123 45 12
123 432 88
researchtools@ubuntu: ~/video/
Python 2.7.14 (r271:86832, Ap
Type "copyright", "credits" o
Python 2.7.14 -- An enhanced
1 --> Introduction and
helpref -> Quick reference
help -> Python's own hel
object? -> Details about 'o
welcome to pylab, a matplotlib
For more information, type
1: [1] []
File Edit View Search Terminal Help
Comment Out Region C-c #
Uncomment Region C-c #
Mark current block C-c C-#
Mark current def C-c #
Mark current class C-c #
Shift region left C-c +
Shift region right C-c -
Import/Reload File C-c RET
Execute buffer C-c C-c
Execute region C-c |
Execute def or class C-c #
Execute string C-c C-#
Start interpreter... C-c I
Go to start of block C-c C-u
Go to start of class C-c C-u
Move to end of class C-c C-u
Move to end of def C-c C-u
Move to start of def C-c C-u
Move to end of def C-c C-u
Describe mode C-c ?
```

RESEARCH TOOLS 2011

VIDEO 12

2011-Oct-12

Kurt Schwehr

<http://schwehr.org>

UNH CCOM/JHC

Python Part 5: while loops



Thursday, October 13, 2011

<http://vislab-ccom.unh.edu/~schwehr/Classes/2011/esci895-researchtools/>

<http://creativecommons.org/licenses/by-nc-sa/3.0/>

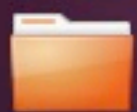
researchtools@ubuntu:~/video/12\$

RT Video 12 - Python Part 5 - while

Search Link **a^cb** Text [Settings] [No] Notebook

[RT Video 12 - Python Part 5 - while](#)

Kurt Schwehr
2011-Oct-13



video

researchtools@ubuntu: ~/video/12

File Edit View Search Terminal Help

Subdir Help

```

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.
object?    -> 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
...:

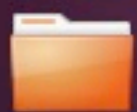
```

```

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
```



researchtools@ubuntu: ~/video/12

File Edit View Search Terminal Help

Subdir Help

```
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 -aef
```




```

researchtools@ubuntu: ~/video/12
File Edit View Search Terminal Help
1001      2019      1  0 09:14 ?      00:00:00 /usr/lib/gvfs/gvfsd-metadata
1001      2023      1  0 09:14 ?      00:00:00 /usr/lib/d-conf/dconf-service
1001      2027      1  0 09:14 ?      00:00:00 gnome-screensaver
1001      2029      1  0 09:14 ?      00:00:00 /usr/lib/indicator-session/indicator-session-s
1001      2031      1  0 09:14 ?      00:00:00 /usr/lib/indicator-datetime/indicator-datetime
1001      2033      1  0 09:14 ?      00:00:00 /usr/lib/indicator-application/indicator-appli
1001      2035      1  0 09:14 ?      00:00:00 /usr/lib/indicator-messages/indicator-messages
1001      2037      1  0 09:14 ?      00:00:00 /usr/lib/indicator-me/indicator-me-service
1001      2043      1  0 09:14 ?      00:00:00 /usr/lib/indicator-sound/indicator-sound-servi
1001      2077      1  0 09:14 ?      00:00:00 /usr/lib/geoclue/geoclue-master
1001      2127    1788  0 09:15 ?      00:00:00 /usr/lib/gnome-disk-utility/gdu-notification-d
1001      2131    1788  0 09:15 ?      00:00:00 /usr/bin/python /usr/share/system-config-print
1001      2133    1788  0 09:15 ?      00:00:00 update-notifier
root      2151      1  0 09:15 ?      00:00:00 /usr/bin/python /usr/lib/system-service/system
1001      2281      1  0 09:21 ?      00:00:25 gnome-terminal
1001      2285    2281  0 09:21 ?      00:00:00 gnome-pty-helper
1001      2286    2281  0 09:21 pts/0      00:00:00 bash
1001      2348      1  0 09:21 ?      00:00:05 mono /usr/lib/tomboy/Tomboy.exe --search
1001      2511    2281  0 09:28 pts/1      00:00:00 bash
root      22969     2  0 17:27 ?      00:00:00 [kworker/0:2]
root      23105     2  0 17:38 ?      00:00:00 [kworker/0:1]
1001      23349     1  1 17:44 ?      00:00:05 /usr/bin/emacs23
1001      23389    2511  0 17:47 pts/1      00:00:00 /bin/bash /home/researchtools/class/screencapt
root      23438     2  0 17:48 ?      00:00:00 [kworker/0:0]
1001      23593   23389  0 17:51 pts/1      00:00:00 sleep 5
1001      23594    2286  0 17:51 pts/0      00:00:00 ps -aef
researchtools@ubuntu:~/video/12$

```

Subdir Help




```

researchtools@ubuntu:~/video/
Python 2.7.1+ (r271:86832, Ap
Type "copyright", "credits" o

IPython 0.10.1 -- An enhanced
?      -> Introduction and
%quickref -> Quick reference.
help    -> Python's own hel
object? -> Details about 'o

In [1]: import time

In [2]: time.sleep?
Type:      builtin_funct
Base Class: <type 'builti
String Form: <built-in fun
Namespace: Interactive
Docstring:
    sleep(seconds)

    Delay execution for a giv
    a floating point number f

In [3]:

```

```

emacs23@ubuntu
File Edit Options Buffers Tools IM-Python Python YASnippet Help

#!/usr/bin/env python

import time # use sleep

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

```

-U:**- mydaemon.py All L9 (Python yas)




```

researchtools@ubuntu:~$ python mydaemon.py
Namespace: Interactive
Docstring:
sleep(seconds)

Delay execution for a given
a floating point number f

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

In [4]: quit()
Do you really want to exit ([Y/n])?
researchtools@ubuntu:~/video/
total 4
-rw-r--r-- 1 researchtools re
researchtools@ubuntu:~/video/
researchtools@ubuntu:~/video/
total 4
-rwxr-xr-x 1 researchtools re
researchtools@ubuntu:~/video/
0
Traceback (most recent call l
  File "./mydaemon.py", line
    time.sleep()
TypeError: sleep() takes exac
researchtools@ubuntu:~/video/

```

```

emacs23@ubuntu
File Edit Options Buffers Tools IM-Python Python YASnippet Help

#!/usr/bin/env python

import time # use sleep

count = 0
while True:
    print count
    count += 1
    time.sleep(.2)

```

```

-U:--- mydaemon.py All L9 (Python yas)-----

```




```

10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
^CTraceback (most recent call
  File "./mydaemon.py", line
    time.sleep( 0.2 )
KeyboardInterrupt
researchtools@ubuntu:~/video/

```

```

#!/usr/bin/env python

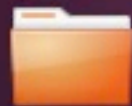
import time # use sleep

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

    if count > 20:
        running = False

print 'Cleaning up a

```



video

```

researchtools@ubuntu:~/video/
File Edit View Search Termin
File "/mydaemon.py", line
time.sleep( 0.2 )
KeyboardInterrupt
researchtools@ubuntu:~/video/
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Cleaning up and exiting
researchtools@ubuntu:~/video/

```

```

emacs23@ubuntu
File Edit Options Buffers Tools IM-Python Python YASnippet Help
+ Home X Download Undo Cut Copy Paste Find Print Settings ?
#!/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'
-U:--- mydaemon.py All L6 (Python yas)-----

```




```

7
8
9
10
11
12
13
14
15
16
17
18
19
20
Cleaning up and exiting
researchtools@ubuntu:~/video/
total 16
-rw-r--r-- 1 researchtools re
-rwxr-xr-x 1 researchtools re
-rwxr-xr-x 1 researchtools re
-rw-r--r-- 1 researchtools re
researchtools@ubuntu:~/video/
^CTraceback (most recent call
  File "readdata.py", line 6,
    while line[0] == '#':
KeyboardInterrupt
researchtools@ubuntu:~/video/

```

```

#!/usr/bin/env python

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

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

for line in infile:
    print line

```

```

-U:--- readdata.py All L6 (Python yas)-----
# header 1
# This file contains sample junk data
1 2 3
123 45 12
123 432 88
-U:--- data.dat All L6 (Fundamental)-----

```




```

12
13
14
15
16
17
18
19
20
Cleaning up and exiting
researchtools@ubuntu:~/video/
total 16
-rw-r--r-- 1 researchtools re
-rwxr-xr-x 1 researchtools re
-rwxr-xr-x 1 researchtools re
-rw-r--r-- 1 researchtools re
researchtools@ubuntu:~/video/
^CTraceback (most recent call
  File "readdata.py", line 6,
    while line[0] == '#':
KeyboardInterrupt
researchtools@ubuntu:~/video/
123 45 12
123 432 88
researchtools@ubuntu:~/video/

```

```

File Edit Options Buffers Tools IM-Python Python YASnippet Help
#!/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

-U:--- readdata.py All L9 (Python yas)-----
# header 1
# This file contains sample junk data
1 2 3
123 45 12
123 432 88
-U:--- data.dat All L6 (Fundamental)-----

```




```

researchtools@ubuntu:~/video/
123 45 12

123 432 88

researchtools@ubuntu:~/video/
researchtools@ubuntu:~/video/
total 24
-rw-r--r-- 1 researchtools re
-rwxr-xr-x 1 researchtools re
-rwxr-xr-x 1 researchtools re
-rwxr-xr-x 1 researchtools re
-rwxr-xr-x 1 researchtools re
-rw-r--r-- 1 researchtools re
researchtools@ubuntu:~/video/
File "./readdata2.py", line
if '#' is in line:
^
SyntaxError: invalid syntax
researchtools@ubuntu:~/video/
1 2 3

123 45 12

123 432 88

researchtools@ubuntu:~/video/

```

```

emacs23@ubuntu
File Edit Options Buffers Tools IM-Python Python YASnippet Help

#!/usr/bin/env python

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

-U:--- readdata2.py All L7 (Python yas)-----
# header 1
# This file contains sample junk data
1 2 3
123 45 12
123 432 88

-U:--- data.dat All L3 (Fundamental)-----

```




```

researchtools@ubuntu:~/video/
File Edit View Search Termin
-rw-r--r-- 1 researchtools re
researchtools@ubuntu:~/video/
File "./readdata2.py", line
if '#' is in line:
^
SyntaxError: invalid syntax
researchtools@ubuntu:~/video/
1 2 3
123 45 12
123 432 88
researchtools@ubuntu:~/video/
Python 2.7.1+ (r271:86832, Ap
Type "copyright", "credits" o
IPython 0.10.1 -- An enhanced
? -> Introduction and
%quickref -> Quick reference.
help -> Python's own hel
object? -> Details about 'o
Welcome to pylab, a matplot
For more information, type
In [1]:

```

```

emacs23@ubuntu
File Edit Options Buffers Tools IM-Python
#!/usr/bin/env python

def loaddata():
for line in open('data.dat'):
if '#' in line:
continue
print line

-U:***- readdata2.py All L9 (Python y
# header 1
# This file contains sample junk data
1 2 3
123 45 12
123 432 88
-U:--- data.dat All L5 (Fundamen

```

Python YASnippet Help

- Comment Out Region C-c #
- Uncomment Region
- Mark current block C-c C-k
- Mark current def C-M-h
- Mark current class
- Shift region left C-c <
- Shift region right C-c >**
- Import/reload file C-c RET
- Execute buffer C-c C-c
- Execute region C-c |
- Execute def or class C-M-x
- Execute string C-c C-s
- Start interpreter... C-c !
- Go to start of block C-c C-u
- Go to start of class
- Move to end of class
- Move to start of def C-M-a
- Move to end of def C-M-e
- Describe mode C-c ?



researchtools@ubuntu: ~/video/12

File Edit View Search Terminal Help

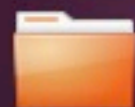
Welcome to pylab, a matplotlib-based Python environment.
For more information, type 'help(pylab)'.

```
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~*
-rw-r--r-- 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]:
```



video