

COMP90016 Tutorial 1

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In this tutorial...

- Server access (digitalis)
- What's Python?
- Examples
- Python cheatsheet

Server access

- access provisioned only after logging in to lab computers (!!)
- open mobaXterm
- start local session
- ssh digitalis.eng.unimelb.edu.au (your student account password)
- cd /home/subjects/comp90016/PythonAndBiopythonExamples

Interactive Prompt

- `$ python`

Python 2.7.9 (default, Jun 8 2016, 15:39:33)

[GCC 4.4.7 20120313 (Red Hat 4.4.7-17)] on linux2Type "help", "copyright", "credits" or "license" for more information.

- Python 2.7 (for assignment)
- `print "hello world!"`
- `print 10%3` `%` is the modulus operator
- `print 'hello'.upper()`

Running a Script

- Read lines from a text file (example1_lines.txt), and print them in uppercase.
- Import system methods
- Declare file name
- Open the file and read line by line
- For each line, convert to upper case, and
- Print line
- ERROR HANDLING
- `python example1ReadFromFile.py`

for loop

- Iterate over each item in a collection (e.g. list, string, tuple, dictionary, file), applying certain function.
- For each number of 1 to 5, double the number and print the result

for num in range(1,6): #should it be range(1,5) or range(1,6)?

 num = num * 2

 print num

if statement

- Given two numbers, x and y , print the larger number; if equals, print 'x equals y.'

```
if x == y:
```

```
    print "x equals y."
```

```
elif x>y:
```

```
    print x
```

```
else:
```

```
    print y
```

File Handling

- Create a file named *data.txt*, and write 'Hello', 'World' on two lines.

create a new file in output mode.

```
f = open('data.txt','w')
```

write the word 'Hello' to the file 'data.txt'

Note the newline character (\n) at the end of each string

```
f.write('Hello\n')
```

```
f.write('World\n')
```

```
f.close()
```