Big Data in Biology Summer School, 2015
Center for Computational Biology and Bioinformatics
University of Texas at Austin

INTRODUCTION TO PYTHON
DAY TWO CHEATSHEET: CONTROL FLOW

LOGICAL OPERATORS AND KEYWORDS

Symbol	What it does	Examples
==	Equal to	`5 == 5` → `True`; `5 == 7` → `False`
!=	Not Equal to	`5 != 5` → `False`; `5 != 7` → `True`
>	Greater than	`5 > 3` → `True`; `5 > 6` → `False`; `5 > 5` → `False`
<	Less than	`5 < 3` → `False`; `5 < 6` → `True`; `5 < 5` → `False`
>=	Greater than or equal to	`5 >= 3` → `True`; `5 >= 6` → `False`; `5 >= 5` → `True`
<=	Less than or equal to	`5 <= 3` → `False`; `5 <= 6` → `True`; `5 <= 5` → `True`
and	Join logical statements with "and" rules	`5 >= 2 and 3 == 3` → `True`; `5 >= 2 and 3 != 3` → `False`
or	Join logical statements with "or" rules	`5 >= 2 and 3 == 3` → `True`; `5 >= 2 and 3 != 3` → `True`

IF-ELIF-ELSE STATEMENTS

```
if <logical condition> == True:
      do this command
```

```
if 7.5 > 3:
      print "yes!"

yes
```

```
if <logical condition> == True:
      do this command
else:
      do that command
```

```
if 7.5 == 3:
      print "yes!"
else:
      print "no :("

no :(
```

```
if <logical condition> == True:
      do this command
elif:
      do that command
else:
      do other command
```

```
if 7.5 < 3:
      print "less!"
elif 7.5 > 3:
      print "greater!"
else:
      print "equal!"

greater!
```

FOR-LOOPS

```
for item in container:
      do this command
```

```
my_list = [45, 48, 51, 54.5]
for entry in my_list:
      print entry
```

```
45
48
51
54.5
```

```
for i in range(5):
      print "Iteration" + str(i)
```

```
Iteration 0
Iteration 1
Iteration 2
Iteration 3
Iteration 4
```

NESTED FOR-LOOPS

```
for item in container:
      for item2 in container2:
            do this command
```

```
count = 0
for i in range(4):
      for j in range(3):
            count += 1
            print count, ":", i, j, i*j
```

```
1: 0 0 0
2: 0 1 0
3: 0 2 0
4: 1 0 0
5: 1 1 1
6: 1 2 2
7: 2 0 0
8: 2 1 1
9: 2 2 4
10: 3 0 0
11: 3 1 3
12: 3 2 0
```