Python

General Information

```
Whitespace matters! Indent where needed
Import modules with "import modulename"
# Comments start with a #
print "Hello, World!" # prints to screen
```

Numbers

```
total = 3 * 3      # 9
total = 5 + 2 * 3  # 11
cost = 1.50 + 3.75 # 5.25
nine = int("9")    # convert string to int
```

Conditional Statements

```
if weight < 50 and weight >= 10:
  # do stuff
elif ((role == 'it') or (role == 'qa')):
  # do stuff
elif not os == 'Windows'
  # do stuff
else:
  # do stuff
```

Strings

```
title = 'Us and them'
len(title)        # 11
title[3:6]        # 'and'
title[:-5]        # 'Us and'
title[0]          # 'U'
title[-1]         # 'm'
title.split(' ')  # ['Us', 'and', 'them']
':'.join(['A','B','C']) # 'A:B:C'
```

For Loops

```
grades = ['A', 'C', 'B', 'F']
for grade in grades:           # iterate over all vals
  print (grade)

for k,v in enumerate(grades):  # using key value pair
  if i=='F':
      grades[n]='A'

inv = {'apples': 7, 'peaches': 4}
for fruit in inv:              # using dictionaries
    print("We have " + str(inv[fruit]) + ' ' + fruit)

for i in range(10):       # 0 to 9 counting by 1s
for i in range(5, 10):    # 5 to 9 counting by 1s
for i in range(9, 2, -1): # 9 to 3 decreasing by 1s
```

While Loops

```
while True:
  print('Endless loop!')

i = 1
while i <= 5:
    print('Step: ' + str(i))
    i += 1

while True:
  if(start_the_loop_over):
      continue
  if(end_the_loop):
      break
```

Lists

```
scores = ['A', 'C', 90, 75, 'C']
scores[0]          # 'A'
scores[1:3]        # 'A', 'C'
scores[2:]         # 90, 75
scores[:1]         # 'A'
scores[:-1]        # 'A', 'C', 90
len(scores)        # 4
scores.sort()      # 'C', 75, 90, 'A', 'C'
scores.append(100) # Adds 100 to list
scores.pop()       # removes the last item
scores.pop(2)      # removes the third item
scores.count('C')  # 2
scores.remove('A') # removes 'A'
75 in scores       # True
```

Tuples

```
Like lists, except they cannot be changed
tuple1 = (1,2,3,"a","z")  # Creates tuple
tuple1[3]                 # 'a'
```

Dictionaries

```
votes = {'red': 3, 'blue': 5, 'cyan': 1}
votes['gold'] = 4         # add a value
del votes{'red'}          # deletes item
votes['blue'] = 'orange'  # change value
len(votes)                # 2
votes.keys()        # ['orange', 'cyan']
votes.values()            # [5, 1]
'green' in votes          # False
votes.has_key('orange')   # True
```

Functions

```
def sumNums(numOne, numTwo = 0):
  return numOne + numTwo
print sumNums(3,4)
```

Class

```
class Person:
  __name = ""
  def __init__(self, name):
    self.__name = name
```