

## QUIZ 2 REVIEW

**lists: mutable, “[ ]”**

**tuples: immutable, “( )”**

```
county = 'Fairfax'
for n in county:
    print (n)
```

F  
a  
i  
r  
f  
a  
x

```
course = 'IT109'
for n in course:
    print (n,end='*')
```

I\*T\*1\*0\*9\*

```
address = 'Fairfax, Virginia'
for n in address:
    print (n,end='')
```

Fairfax, Virginia

```
for x in range(8,12):
    print (x)
```

8  
9  
10  
11

Lists can contain numbers, character strings, or objects

Assume L = [ 1, 3, 5, 7, 11, 13, 17, 19, 23]

len(L) = ?

A.: 9

L[0] = ?

A.: 1

L[3:7] = ?

A.: [7, 11, 13, 17]

len(L[4:9]) = ?

A.: 5

L[:7] = ?

[1, 3, 5, 7, 11, 13, 17]

L[7:] = ?

[ 19, 23]

```
GMU = 'Mason'
for n in range(len(GMU)):
    print (n)
```

0  
1  
2  
3  
4

Assume L = [ 1, 3, 5, 7, 11, 13, 17, 19, 23]

L += [2, 4, 6, 8, 10] , result L = ?

A.: L = [ 1, 3, 5, 7, 11, 13, 17, 19, 23, 2, 4, 6, 8, 10]

L.append(12) , result L = ?

A.: L = [ 1, 3, 5, 7, 11, 13, 17, 19, 23, 12]

L[3] = 8 , result L = ?

A.: L = [ 1, 3, 5, 8, 11, 13, 17, 19, 23]

L.insert(4, 8) , result L = ?

A.: L = [ 1, 3, 5, 7, 8, 11, 13, 17, 19, 23]

L[1:4] = [2] , result L = ?

A.: L = [ 1, 2, 11, 13, 17, 19, 23]

Assume L = [ 1, 3, 5, 7, 11, 13, 17, 19, 23]

del L[3] , result L = ?

A.: L = [ 1, 3, 5, 11, 13, 17, 19, 23]

L.remove(11) , result L = ?

A.: L = [ 1, 3, 5, 7, 13, 17, 19, 23]

del L[:4] , L = ?

A.: L = [ 11, 13, 17, 19, 23]

Method	Description
append(value)	Adds 'value' to the end of the list
sort()	Sorts elements ascending, Parameter 'reverse=True' sorts descending
reverse()	Reverses the order of the list
count(value)	Returns the number of occurrences of 'value'
index(value)	Returns the first position of 'value'
insert(i, value)	Inserts 'value' at position i (just before it)
pop([i])	Returns the value at position 'i' and removes it – default is last item in list
remove(value)	Removes the first occurrence of 'value'

Assume L1 = [ [1, 3, 5], [7, 11, 13], [17, 19, 23, 29]]

- then: len(L1) = 3

Alt. view: L1 = [ [1, 3, 5 ],  
                  [7, 11, 13 ],  
                  [17, 19, 23, 29 ] ]

- Think of the sub-list elements as “row” and “column”:
  - L1[0] [1] = 3           # row 0, column 1
  - L1[1] [2] = 13        # row 1, column 2
  - L1[2] [0] = 17        # row 2, column 0
  - L1[1] [3] =           # results in an **index range error**