Working with Lists

Chapter 04b

List Syntax

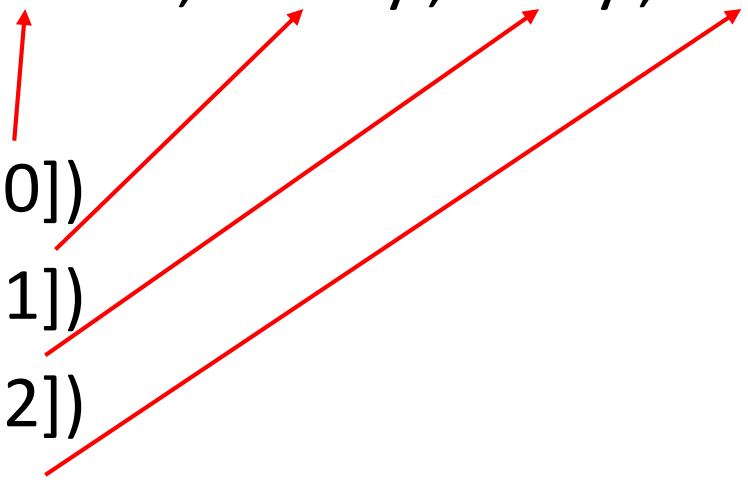
```
empty_list = [ ]

test_scores = [80, 78, 95, 88, 92]

guests = [‘Michael’, ‘Sandy’, ‘Kelly’, ‘Joe’]
```

List Syntax

guests = [‘Michael’, ‘Sandy’, ‘Kelly’, ‘Joe’]



print(guests[0])

print(guests[1])

print(guests[2])

print(guests[3])

#values in list begins with index 0.

#index must be integers

#Error if index number exceeds list

REVIEW: LIST Methods

For Lists

- listName.**index**(listItem) – **SEARCH** the list and return the **position** where it was found.
- listName.**append**(listItem) – **ADDING** an item to the end of the list
- listName.**insert**(index#,listItem) – **INSERTING** an item to a specific position in the list
- listName.**remove**(listItem) – **REMOVING** item from list
- listName.**pop**(listIndex#) – **REMOVING** item from list
- **del** listName[indexNum] – **DELETING** item from list

METHOD 1: Iterate over a List

```
animals = [‘cat’, ‘rat’, ‘bat’, ‘bird’]

for pet in animals:
        print(pet)
```

pet
cat
rat
bat
bird

METHOD 2: Iterate over a List using Range

```
animals = [‘cat’, ‘rat’, ‘bat’, ‘bird’]

for pet in range(4):
        print(animals[pet])
```

pet		
0	animals.[0]	cat
1	animals.[1]	rat
2	animals.[2]	bat
3	animals.[3]	bird

METHOD 3: Iterate over a List using len Function

```
animals = [‘cat’, ‘rat’, ‘bat’, ‘bird’]

for pet in range(len(animals)):
        print(animals[pet])
```

pet		
0	animals.[0]	cat
1	animals.[1]	rat
2	animals.[2]	bat
3	animals.[3]	bird

For Loops to Iterate over the Index of Lists

```
supplies = [‘pens’, ‘staplers’, ‘binders’, ‘pens’]

for item in range(len(supplies)):
        print(supplies[item])
```

in and not in Operators: True or False

animals = [‘bat’, ‘cat’, ‘rat’, ‘bird’]

>>>’cat’ **in** animals

True

>>>’dog’ **in** animals

False

>>>’dog’ **not in** animals

True

Searching through a List myPets.py

```
myPets = [‘Zophie’, ‘Pooka’, ‘Fat-tail’]

name = input(‘Enter a pet name: ’)

if name not in myPets:
        print(‘I do not have a pet named ‘ + name)
else:
        print(name + ‘ is my pet.’)
```

Searching through a List myPets.py

```
myPets = [‘Zophie’, ‘Pooka’, ‘Fat-tail’]

name = input(‘Enter a pet name: ’)

if name not in myPets:
        print(‘I do not have a pet named ‘ + name)
else:
        print(name + ‘ is my pet.’)
```