Python Lists

What is a List?

- Collection of objects

- Like an array in R

- Can be changed

- Lists have square brackets [ ]

- Elements are separated with commas ,

What about Nested Lists?

- A list within a list
- Start with [ ]
- Put additional lists in [ ]
- Separate with ,

Empty Lists

- [ ]

- They'll be important when looping – open something to fill later

len()

- Find the length of the list

Indexing

Indexing

• Zero Index – Python starts counting at 0, not 1

• listName[#ofElement]

• From left to right: positive number (starts with 0)

• From right to left: negative number (starts with -1)

Indexing Example

	Data	Science	is	Fun
Left to Right	0	1	2	3
Right to Left	-4	-3	-2	-1

Accessing Multiple Items

- **listName[#Start : #End]**

- **Non-inclusive – does not provide the #End**

Modifying Lists

Modifying Lists

You can overwrite any list

Assign it a new value

listName[index] = NewValue

.append()

• Add to the end of a list

listName.append(NewValue)

.insert()

- Add to the middle of the list

listName.insert(index, value)

del

- Delete an item from a list

- When you DO KNOW the index

.remove()

• Delete an item from a list

• When you don't know the index

• Uses a similar format as .append()

listName.remove(item)

Ordering Data

.sort()
- Order from A-Z
- Smallest-largest

.sort(reverse=True)
- Order from Z-A
- Largest to smallest

sorted()

• Sorts temporarily

• Use it when printing

print(sorted(listName))