Introduction to Programming: 5th lesson – Introduction to Lists

Length

* User can count the number of entries in any list by inputting len(), which is short term for length by supplying the name of the list in parentheses.
* Example:

# The list has ten entries

print(len(flowers\_list))

10

Indexing

* User can refer to any item in the list according to its position in the list (first, second, third, etc.).
* Note that Python uses zero-based indexing, which means that to pull the first entry in the list by inputting 0, pull the second entry in the list by inputting 1, and pull the final entry in the list by inputting one less than the length of the list.
* Example:

print(“First entry:”, flowers\_list[0])

print(“Second entry:”, flowers\_list[1])

# The list has length ten, so we refer to final entry with 9

print(“Last entry:”, flowers\_list[9])

First entry: pink primrose

Second entry: hard-leaved pocket orchid

Last entry: globe thistle

Slicing

* User can also pull a segment of list (for instance, the first three entries or the last two entries). For instance, to pull the first x entries by inputting [:x], and pull the last y entries by inputting [-y:].
* Example:

print(“First three entries:”, flowers\_list[:3])

print(“Final two entries:”, flowers\_list[-2:])

First three entries: [‘pink primrose’, ‘hard-leaved pocket orchid’, ‘Canterbury bells’]

Final two entries: [‘monkshood’, ‘globe thistle’]

Removing items:

* Remove an item from the list with .remove(), and put the item would the user like to remove in parentheses.
* Example:

flowers\_list.remove(“globe thistle”)

[‘pink primrose’, ‘hard-leaved pocket orchid’, ‘Canterbury bells’, ‘sweet pea’, ‘English marigold’, ‘tiger lily’, ‘moon orchid’, ‘bird of paradise’, ‘’monkshood’]

Adding items:

* Add an item to the list with .append(), and put the item would the user like to add in parentheses.
* Example:

flowers\_list.append(“snapdragon”)

print(flowers\_list)

[‘pink primrose’, ‘hard-leaved pocket orchid’, ‘Canterbury bells’, ‘sweet pea’, ‘English marigold’, ‘tiger lily’, ‘moon orchid’, ‘bird of paradise’, ‘’monkshood’, ‘snapdragon’]