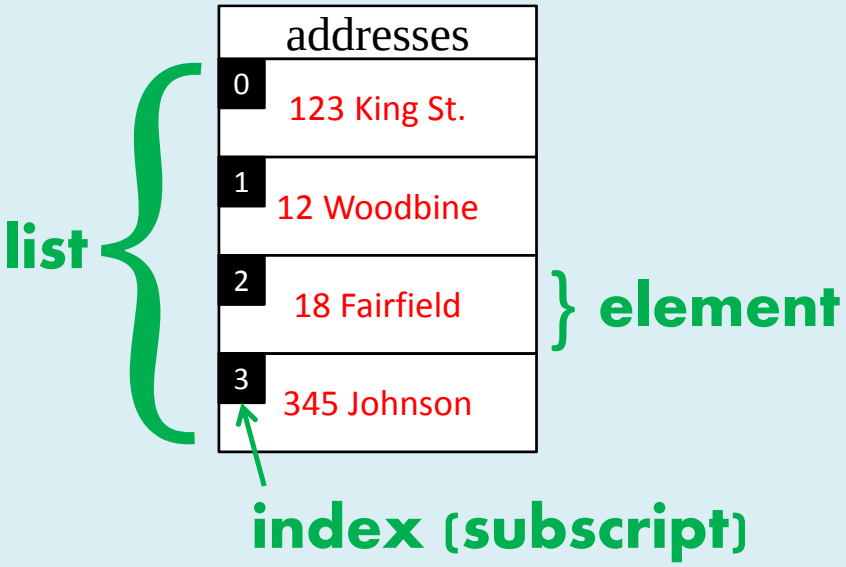
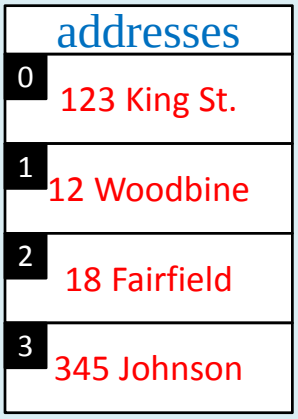
Review of Lists

A Simple Diagram of a List





- For example, given our list on the left, the following Python command:

addresses [3] = "345 Johnson"

  - the **name** of the list is *addresses*
  - the **element** is *addresses [3]* -> pronounced "addresses sub 3"
  - the **subscript** or **index** is *3*
  - the **data** assigned to this element is *345 Johnson*

Review of Dictionaries

- Remember that dictionaries are defined as a series of **key:data pairs**.
- This means that individual pieces of data are accessed using a **key** instead of their relative position in the dictionary.

A Simple Diagram of a Dictionary

address

Number	Street	City
18	Fairfield Boulevard	Amherstview

The name of the dictionary is *address* and it contains three keys:data pairs:

- Number -> 18
- Street -> Fairfield Boulevard
- City -> Amherstview

Lists of Dictionaries

- A list contains a number elements identified with a subscript (index) which contain data.
- Instead of one piece of data, each element in a list can contain a dictionary containing multiple key:value pairs.

manyAddresses

	Number	Street	City
0	1233	King Street	Kingston
1	18	Fairfield Boulevard	Amherstview
2	423-A	Carter Crescent	Bath
3	77	Dawson Road	Kingston

- For example, given our list on the previous slide, the following Python command: *addresses [2] ["Street"] =* "Carter Crescent"
  - the **name** of the list is *addresses*
  - the **element** is *addresses [2]* -> pronounced "addresses sub 2"
  - the **subscript** or **index** is *2*
  - the **data** assigned to the *addresses [2]* a dictionary with three keys.
  - the **key (field)** of the dictionary in the element is "Street"
  - the **data** assigned to the key Street in the element *addresses [2]* is *Carter Crescent*

Program to Create a Lists of Dictionaries

```
manyAddresses = [ ]   # Creates an empty list

for i in range (0, 4):

    singleAddress = {}    # Creates an empty dictionary
                          # Must be in the loop

    # Allows the user to input data into the dictionary
    singleAddress ["Nunber"] = input ("Enter street number")
    singleAddress ["Street"] = input ("Enter street name")
    singleAddress ["City"] = input ("Enter the city")

    # Adds the dictionary to the list
     manyAddresses.append (singleAddress)
```