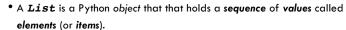


## LIST BASICS

COMP130 - INTRODUCTION TO COMPUTING DICKINSON COLLEGE



### **LISTS**



- A Python List is represented as comma delimited values between [ ].
  - cs\_profs = ['Braught', 'Fruchter', 'MacCormick', 'Siddiqui', 'Skalak']
  - cs classes = [130, 132, 190, 232, 256, 290, 314, 332, 491, 492]
- When a List is an element in another list, it is a nested List:
  - sections=[[130, 1, 'Fruchter'], [130, 2, 'Braught']]

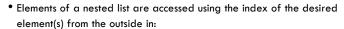


### STRINGS ARE SEQUENCES - LISTS ARE SEQUENCES

- Many of the things we could do with a String (a sequence of characters) we can do with a List (a sequence of elements).
  - List elements and slices are accessed using [ ] in the same way characters are in a String.
    - cs\_profs = ['Braught', 'Fruchter', 'MacCormick', 'Siddiqui', 'Skalak']
    - cs\_classes = [130, 132, 190, 232, 256, 290, 314, 332, 491, 492]
    - next\_class = cs\_classes[1]
- soph\_classes = cs\_classes[2:6]
- [190, 232, 256, 290]
- sr seminar = cs classes[8:]
- [491, 492]



### **ACCESSING NESTED LISTS**



• sections=[[130, 1, 'Fruchter'], [130, 2, 'Braught']]

- sect2 = sections[1] [130, 2, 'Braught'] prof2 = sect2[2] 'Braught'
- prof2 = sections[1][2] 'Braught'

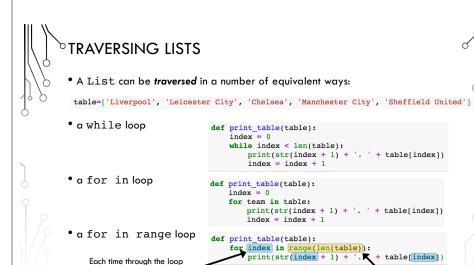






# LISTS ARE MUTABLE

- A List is mutable, meaning that the elements of the sequence can be changed.
  - schedule = ['COMP132', 'MATH170', 'HIST203', 'SPAN116']
  - Elements can be changed (replaced)
    - schedule[2] = 'MUSC204'
  - Slices can be changed (replaced)
    - schedule[1:3] = ['PHIL101', 'ECON116']
  - Elements can be added (inserted, appended)
    - schedule.append('ARTH378')
    - schedule.extend(['ARTH378', 'INBM207'])
  - Elements can be deleted (removed)
    - drop = schedule.pop(3)
    - drop = schedule.remove('MATH170')



The range is:

0, 1, 2, 3, 4

index takes on the next

value in the range.