# Lists (Revisited)

Lists typically contain objects which all have the same type

     Ex. a list of strings

Lists (in Python) can contain multiple types

     Ex. ["title", "artist", 45.0] is a list containing two strings and a float

Lists can also contain other lists!

     Ex. [["song1", "artist1", 45.0], ["song2", "artist2", 12.0]]

# Lists of lists (lol)

How can we use indexing to get a value in a list of lists?

Ex. Get "artist1" out of songs =  [["song1", "artist1", 45.0], ["song2", "artist2", 12.0]]

We want the 2nd item from the first list (recall: indexing starts at 0!)

    -> songs[0] returns the first list

    -> songs[0][1] returns the second item from the first list

How can we output all the values songs?  Use a nested for loop!

Example: print a list of lists containing the numbers 1-9!

```
lol.py — ~/CS21/cs21-devel/examples/inclass/w07 — Atom

File  Edit  View  Selection  Find  Packages  Help

    lol.py
1   """
2   Print out the items in this list using a nested for loop
3
4     $ python3 lol.py
5     1
6     2
7     3
8     4
9     5
10    6
11    7
12    8
13    9
14  """
15
16  def main():
17      lol = [[1,2],[3,4],[5,6],[7,8,9]]
18      for i in range(len(lol)):
19          for j in range(len(lol[i])):
20              print(lol[i][j])
21
22  main()
23

lol.py   10:4                              LF   N   UTF-8   Python   0 files
```