

Oct 11, 2018

CS 301 - Lecture 11

Lists & CSVs.

Lists

Creation

index: 0 1 2 3 4
 $l = [1, 21, 42, 2, 3]$
index: -5 -4 -3 -2 -1

Indexing

$l[2] \Rightarrow 42$

$l[-3] \Rightarrow 42$

Slicing

$l[1:3] \Rightarrow [21, 42]$

for loop

for $\boxed{\text{item in } l}$:
 $\text{print}(\text{item})$

$\text{len}(l) \Rightarrow 5$

iter #	item
1	1
2	21
3	42
4	2
5	3

(2)

Differences

strings vs lists

* lists are mutable.

* lists can store data of any type.

How to mutate a list?

$l = [2, 1, 3]$

1) Update an element in a list.

$l[1] = 10.$

2) Add an element to a list

$l.append(\text{new_value})$

↓
adds to the end of the list.

3) Remove an element

$l.pop(\text{index})$

$l.pop()$ \Rightarrow remove the last element in the list

4) Sorting a list

(3)

l. sort()

I/p: List of numbers

[3, 1, 7, 4, 2]

O/p: median of the list of numbers

0 1 2 3 4
1, 2, 3, 4, 7

len = 5

mid elem = $5//2$

= 2

(3)

I/p: [3, 1, 7, 4, 2, 6]

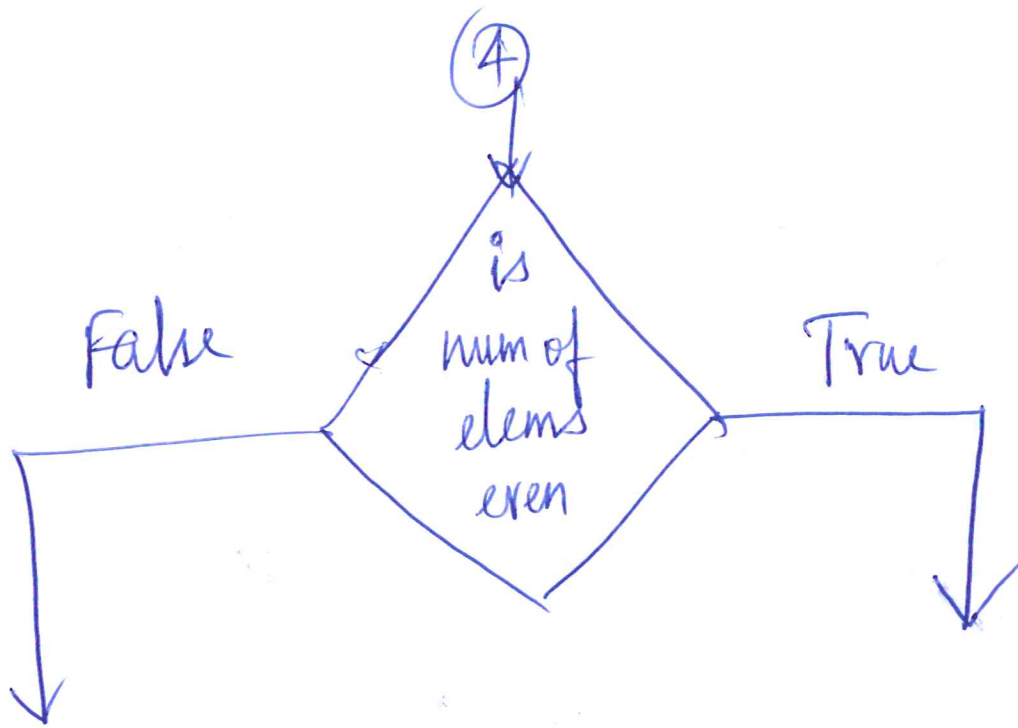
0 1 2 3 4 5
1, 2, 3, 4, 6, 7

O/p:

→ 3.5

len = 6

$6//2 = 3$



CSV Files

CSV - Comma Separated Values.

