☆. Nested Lists

Announcement

Problem Solving Session

: Sunday, 12th June (9 pm)

optional

Test (Before 22nd June)

details will be shared by mid next week.

Beg → Intermediate.

From 22nd June

Tuples

Strings

List Comprehension

OOPS-1 Beg

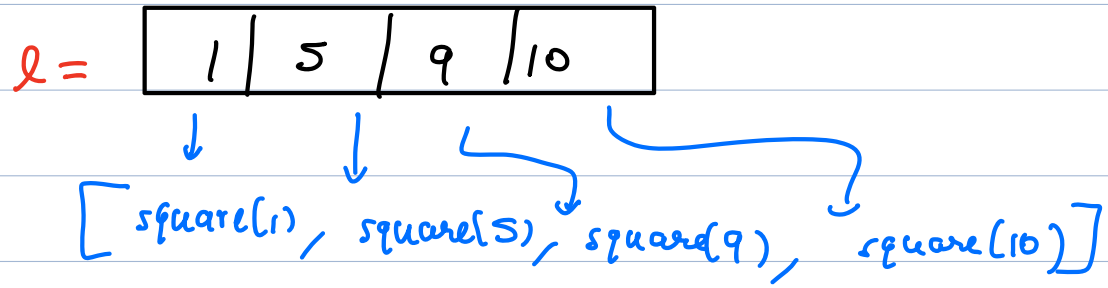
Int 2-3

Dict ??

Q1. Given a list, create another list containing squares of these numbers.

l = [1, 5, 9, 10]

res = [1, 25, 81, 100]



list (map (square, l))

↑ function ↑ list

odi = [- - - -]

t20 = [- - -]

test_runs = [— — —]

runs = [odi, test_runs, t20]

Image → pixels

Excel

List of List

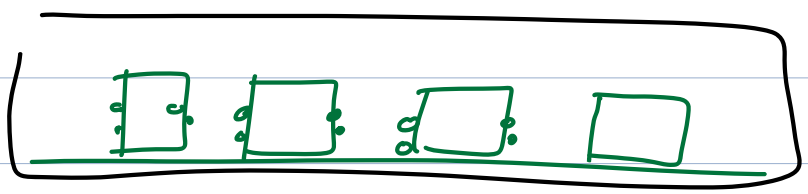
Nested list

2-D list

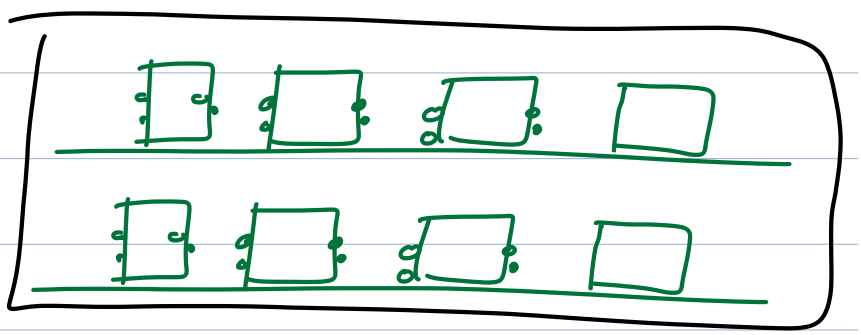
[[[ ]]]

Parking lot

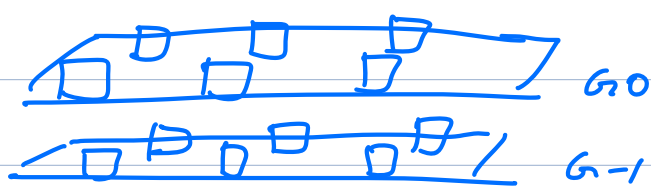
1-D



2-D parking lot



3-D Parking lot



3×3 Grid

2-D

R C

3 3

range(3)

0	10	22	52	001
1	250	300	199	Test
2	5	15	20	T20

l

3×5

	0	1	2	3	4
0	l_{00}	l_{01}	l_{02}	l_{03}	l_{04}
1	l_{10}	l_{11}	l_{12}	l_{13}	l_{14}
2	l_{20}	l_{21}	l_{22}	l_{23}	l_{24}

(2, 4)

Input Format

R C

R rows

l_{00} l_{01} --- $l_{0,C-1}$

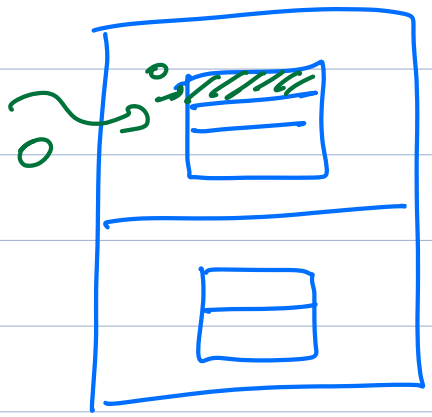
l_{10} l_{11} --- $l_{1,C-1}$

⋮

$l_{R-1,0}$ $l_{R-1,1}$ $l_{R-1,2}$ --- $l_{R-1,C-1}$

Q1. Find runs made by Sachin in all the formats.

How to iterate?



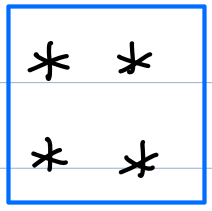
```
l = [[10  20  30],
     [98  99]]
```

	0	1	2
0	10	20	30
1	98	99	

nums[0][0]

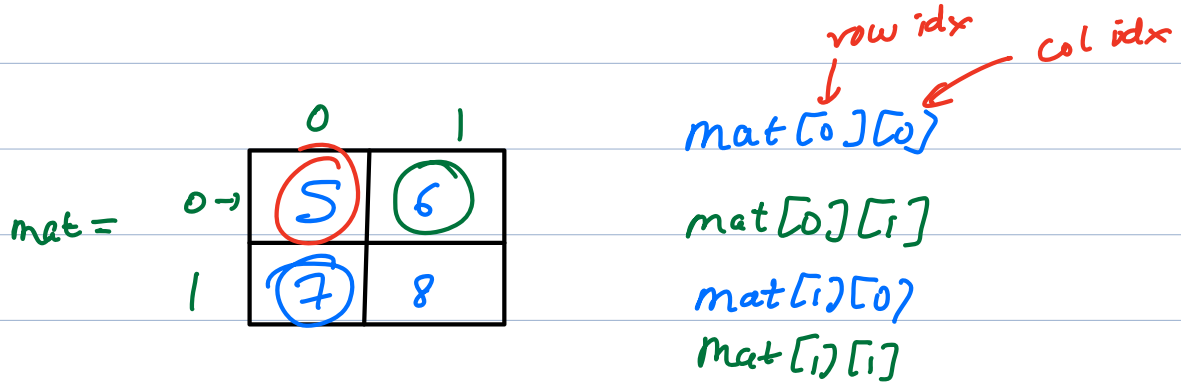
nums[1][1]

	0	1	2
0	10	22	52
1	260	300	199
2	5	15	20




```
for i in range(2):
    for j in range(2):
        print('*', end='')
```

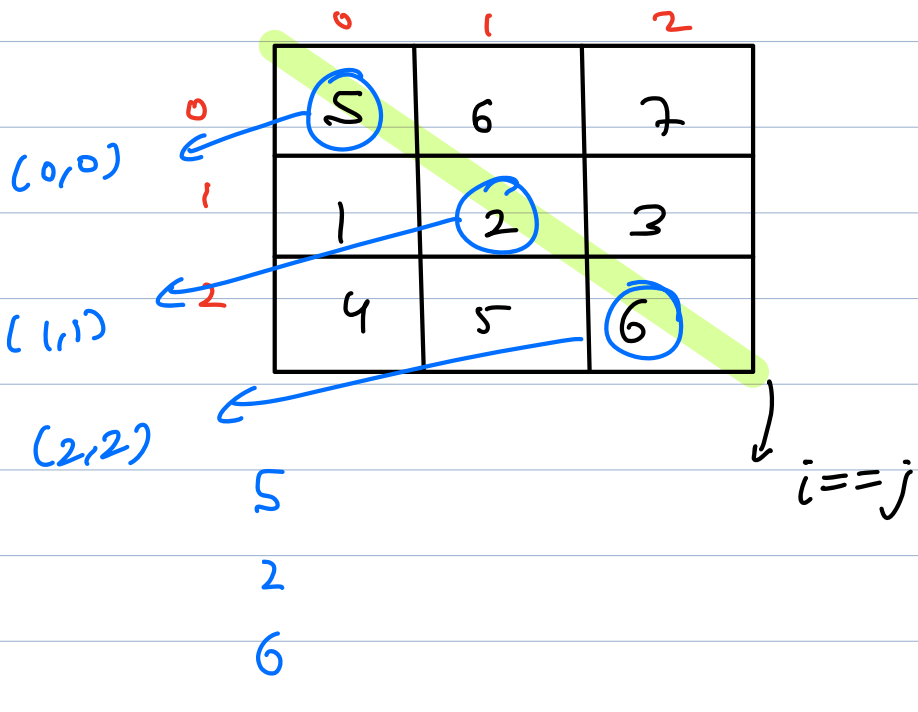
print()




```
for i in range(2):
    for j in range(2):
        print(mat[i][j])
```

Q) Given a 2D matrix, print the main diagonal.

NxN square matrix



5
2
6

HW: Challenge: Think about right diagonal.

10	22	52
260	300	199
5	15	20