# 2-D Lists Problems :

Agenda :

- 2 D list questions
- Approach for a question
- List comprehension.

# ★ Adding 2-D matrix / lists

Sachin = [ [20, 50, 60],
[50, 100, 200],
[80, 90, 60] ]

Ganguly = [ [5, 80, 10],
[10, 20, 30]
[5, 1, 2]]

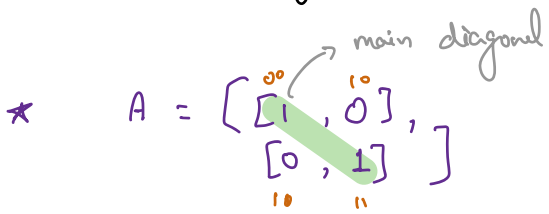
Partnership =

Sachin [0][0] + Ganguly [0][0]
Sachin [0][1] + Ganguly [0][1]
Sachin [0][2] + Ganguly [0][2]

Sachin [1][0] + Ganguly [1][0]
Sachin [1][1] + Ganguly [1][1]
Sachin [1][2] + Ganguly [1][2]

Sachin [2][0] + Ganguly [2][0]
Sachin [2][1] + Ganguly [2][1]
Sachin [2][2] Ganguly [2][2]

## ★ Check Identity :




⇒ When $i == j$, $A[i][j] == 1$

⇒ When $i != j$, $A[i][j] == 0$

```python
def identity(A):
    n = len(A)

    for row in range(n):
        for col in range(n):

            # Check for main diagonal
            if row == col and A[row][col] != 1:
                return 0

            # Check for non diagonal
            if row != col and A[row][col] != 0:
                return 0
    return 1
```