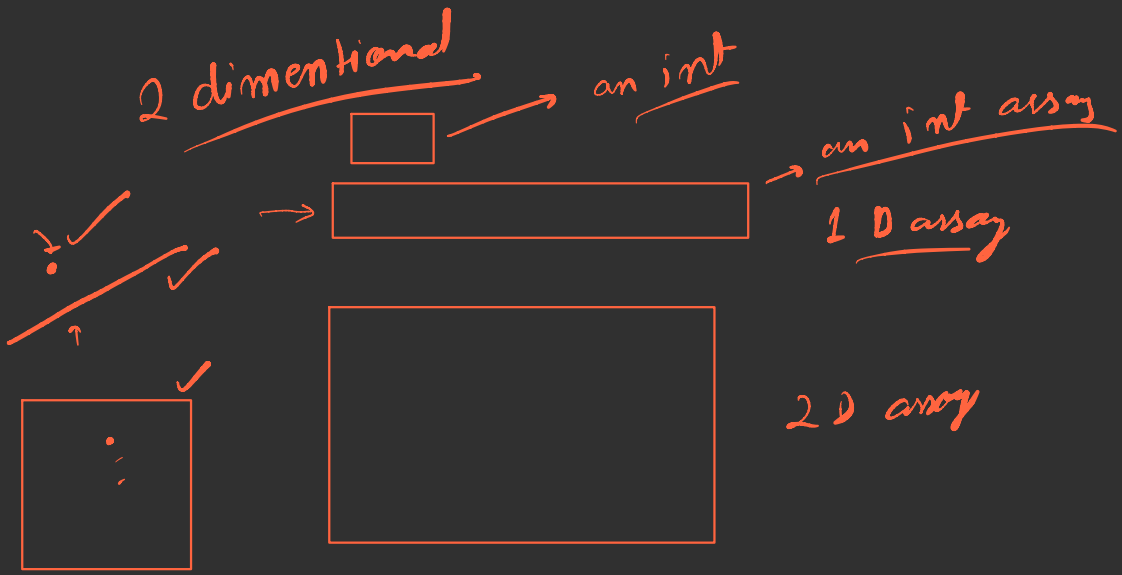
L9
2D arrays

What are 2D Arrays ?

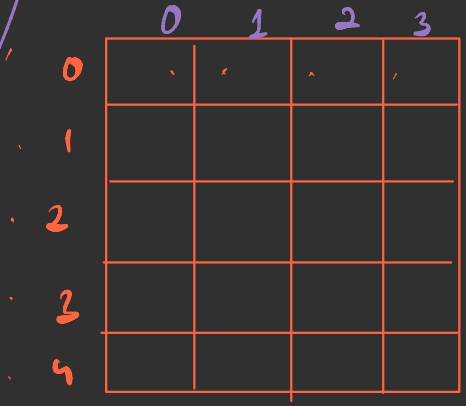


Use-case of 2D Arrays

int ar[5][4];

rows

cols



H → 0
E → 1
M → 2
S → 3

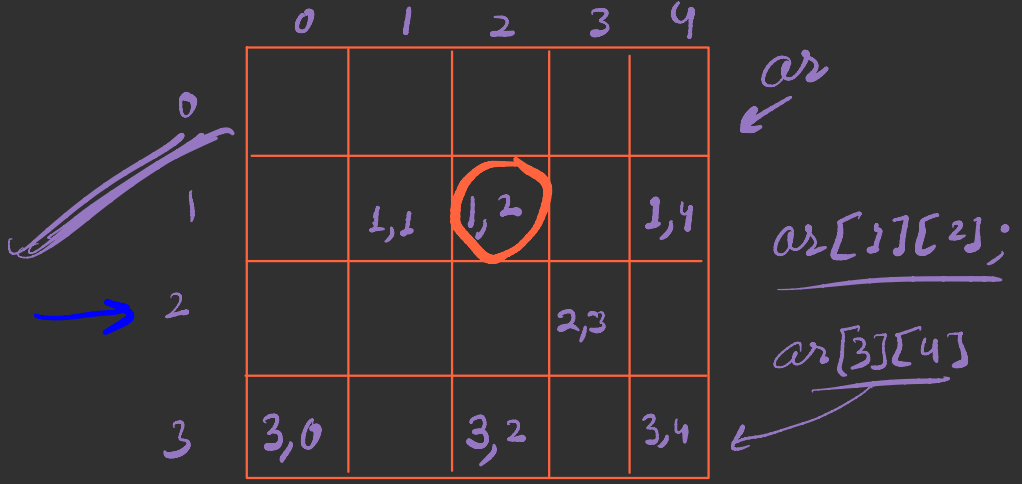
5 × 4 = 20 int

size 20 × 4 = 80 bytes

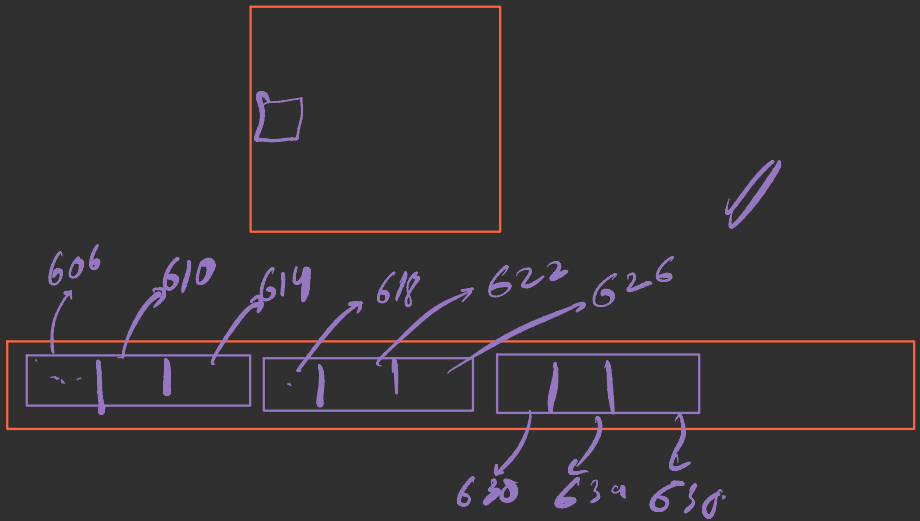
Declaring different 2D arrays

```
int as[10][20];
char as[5][6];
```

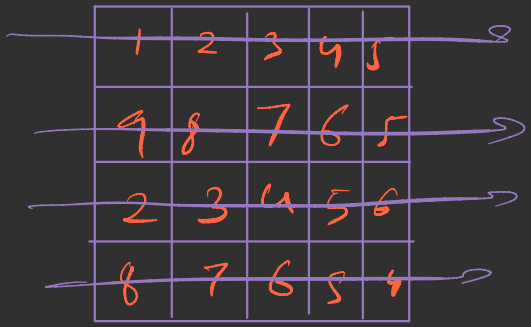
Element Access in 2D array and Indexing in 2D array



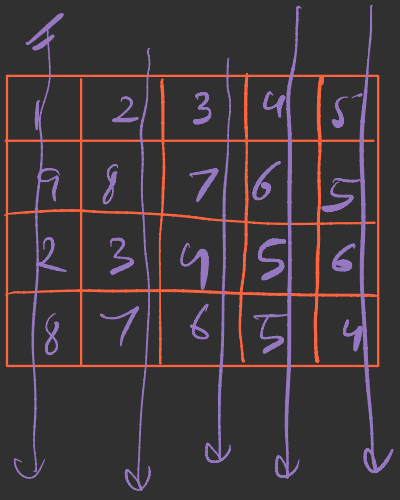
Memory Allocation of 2D Array



Print Row wise traversal of 2D array



Print Column wise traversal of 2D array



j = 0

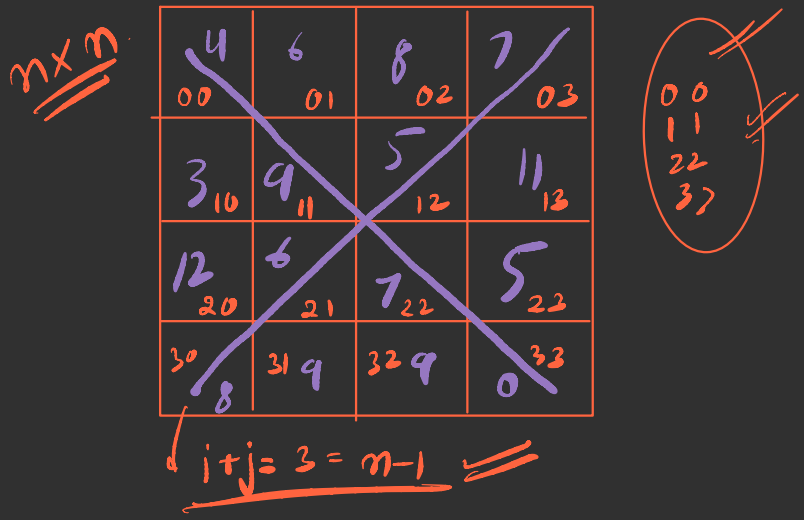
i = 0 - 3

j = 1

i = 0 - 3

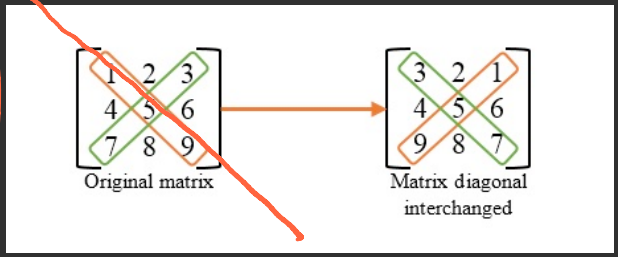
Sum of each row and each column in 2D array

Find sum of diagonal elements in 2D array



Print Only Upper Triangular Elements

Interchange the diagonals in 2D array



Practice and Homework Questions

Homework questions -

1. https://codeforwin.org/c-programming/c-program-to-add-two-matrices
2. https://codeforwin.org/c-programming/c-program-to-subtract-two-matrices
3. https://codeforwin.org/c-programming/c-program-to-find-lower-triangular-matrix
4. https://codeforwin.org/c-programming/c-program-to-find-sum-of-upper-triangular-matrix
5. https://codeforwin.org/c-programming/c-program-to-find-sum-of-lower-triangular-matrix

Thank You!

Please practice more questions and examples as above !!