

Ds

Row Major Formula for 2D Arrays

- In compiler a 2D array is in linear form (1D Array) in terms of down and column

Example :

A

	0	1	2	3
0	A ₀₀	A ₀₁	A ₀₂	A ₀₃
1	A ₁₀	A ₁₁	A ₁₂	A ₁₃
2	A ₂₀	A ₂₁	A ₂₂	A ₂₃

A

0	1	2	3	4	5	6	7	8	9	10	11

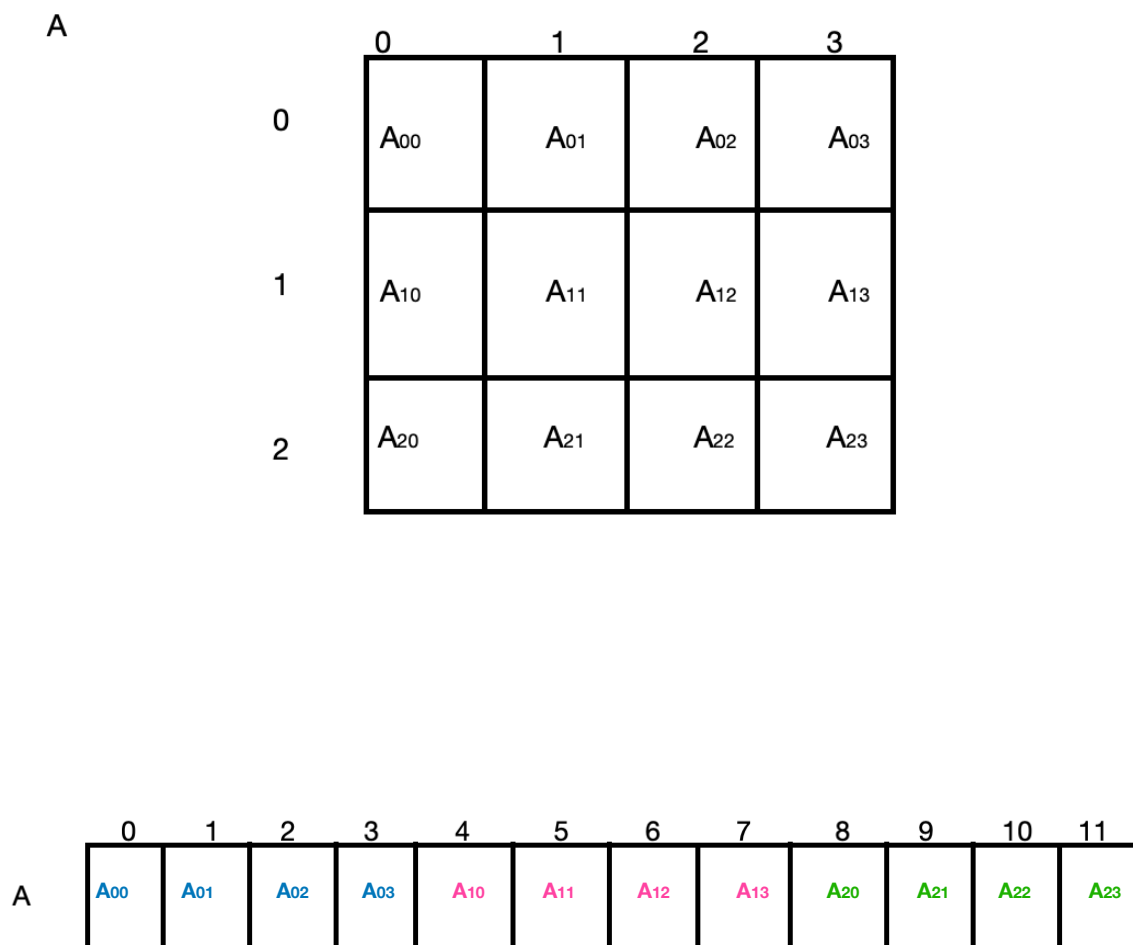
The 2D array can be represented in 2 ways

1. Row major mapping
2. Column major mapping

1. Row major mapping

- Here the elements are stored row by row

Example :



- The formula for accessing this 2D array is

$$\text{Add}(A[i][j]) = L_0 + [i * n + j] * w$$