

2D Arrays in C++

Assignment Questions



Q1 - Given a 2D matrix with m rows and n columns containing integers, find and print the maximum value present in the array.

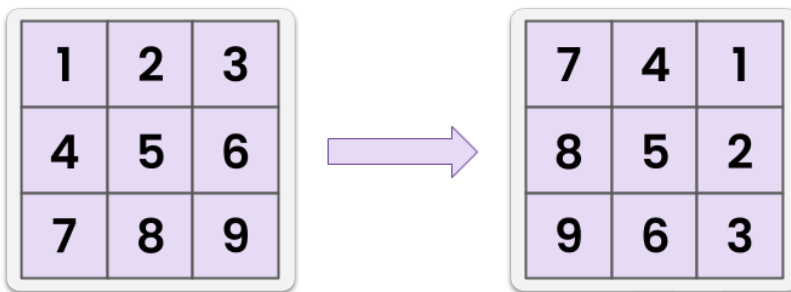
(Easy)

m=3
n=3
arr[] = {{1,2,3}, {4,5,6}, {7,8,9}}
Output: 9

Q2 - You are given a n*n square matrix, you need to rotate the matrix by 90 degrees in clockwise direction. You need to do it in-place i.e. you are not allowed to make a new matrix and allocate the elements to it. Make the changes in the same matrix and print it.

(Medium)

n=3
arr[] = {{1,2,3}, {4,5,6}, {7,8,9}}
Output: {{7,4,1},{8,5,2},{9,6,3}}



Q3 - Given a m*n integer matrix. If an element of the matrix is 0 then set the complete row and column of that element to 0. Make the changes inplace and print the matrix.

(Hard)

m=3
n=3
arr[]={{1,2,3},{1,0,1},{5,6,7}}
Output: {{1,0,3},{0,0,0},{5,0,7}}
arr[]={{0,1,2,0},{3,4,5,2},{1,3,1,5}}
Output:{{0,0,0,0},{0,4,5,0},{0,3,1,0}}