

PP1: Finding Saddle Points of a Matrix

Data Structures Lab (CS111)

A *saddle point* of a $m \times n$ matrix M is an element M_{ij} of M such that, M_{ij} is the minimum element of that row (i.e. i^{th} row) and the maximum element of that column (i.e. j^{th} column). So a saddle point is an element such that the minimum element of the row and the maximum element of the column are the same i.e. that element.

For example in the 3×3 matrix given below, 7 is a saddle point of that matrix.

$$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$$

Note that, there are might be more than one or zero saddle points in a matrix.

Write a C/C++ program to find saddle points of a given $m \times n$ matrix.