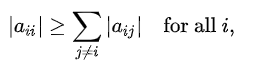
**Experiment-5 (Lab Task)**

* A square [matrix](https://en.wikipedia.org/wiki/Matrix_(mathematics)) is said to be **diagonally dominant** if, for every row of the matrix, the magnitude of the diagonal entry in a row is larger than or equal to the sum of the magnitudes of all the other (non-diagonal) entries in that row. More precisely, the matrix *A* is diagonally dominant if

{\displaystyle |a\_{ii}|\geq \sum \_{j\neq i}|a\_{ij}|\quad {\text{for all }}i,\,}

where *aij* denotes the entry in the *i*th row and *j*th column.

You have to convert a given square matrix into a diagonally dominant one. For example, you are given a 3 X 3 matrix

W =

Your output matrix should be

W =

Hints: Swap the absolute value of maximum element in each row with the diagonal element in that row. Your code should be generalized for any size of square matrix.