Assignment 1_A

1. Space required to store any two-dimensional array is $number\ of\ rows \times number\ of\ columns$. Assuming array is used to store elements of the following matrices, implement an efficient way that reduces the space requirement.

    (a) Diagonal Matrix.

    (b) Tri-diagonal Matrix.

    (c) Lower triangular Matrix.

    (d) Upper triangular Matrix.

    (e) Symmetric Matrix

2. Write a program to implement the following operations on a Sparse Matrix, assuming the matrix is represented using a triplet.

    (a) Transpose of a matrix.

    (b) Addition of two matrices.

    (c) Multiplication of two matrices.

3. Write a program to find sum of every row and every column in a two-dimensional array.

4. Write a program to find a saddle point in a two-dimensional array. A saddle point in a numerical array is a number that is larger than or equal to every number in its column, and smaller than or equal to every number in its row.

5. https://www.interviewbit.com/problems/spiral-order-matrix-i/

6. https://www.interviewbit.com/problems/spiral-order-matrix-ii/