1. Read an integer N from user and create a matrix of alternate rectangles of O and X

   For e.g: N = 5;

   ooooo
   oxxxo
   oxoxo
   oxxxo
   ooooo

2. You are given with a NxN matrix which contains only 0s and 1s. Your job is to write a program which will set every row that contains a 0 to all 0s and set every column that contains a 0 to all 0s. The output for the above input matrix will be:

   e.g. if input is

   1 0 1 1 0

   0 1 1 1 0

   1 1 1 1 1

   1 0 1 1 1

   1 1 1 1 1

   output should be

   0 0 0 0 0

   0 0 0 0 0

   0 0 1 1 0

   0 0 0 0 0

   0 0 1 1 0

3. Write a program to search for the "saddle points" in a 2D array of integers. A saddle point is a cell whose value is greater than or equal to any in its row, and less than or equal to any in its column. There may be more than one saddle point in the array. Print out the coordinates of any saddle points your program finds. Print out "No saddle points" if there are none
4. Given an n x n matrix, where every row and column is sorted in increasing order. Given an integer key, K write a program to find if the key exists in the matrix or not

5. Find number of substrings of string which are palindrome
6. Given a 2D array, print it in Spiral form. Examples:

   Input :

   1 2 3 4
   5 6 7 8
   9 10 11 12
   13 14 15 16

   Output: 1, 2,3,4,8,12,16,15,13,9,5,6,7,11,10
7. You are given with an array of negative and positive numbers. Write an function to find the index at which the array should be divided into 2 sub-arrays in such a way that the difference between the sum of the 2 sub-array is maximum.

   Example –
   Input – [2, -4, 3, 1, -6, -1, 2, 7]
   Output – 5
   [**2, -4, 3, 1, -6, -1]** and **[2, 7]**. The difference is **9 – (-5) = 14**, which is maximum
8. Take N strings from the user, and sort them lexicographically.
9. Write a program that determines which row or column in a 2d array of integers has the largest sum