NATIONAL UNIVERSITY

OF COMPUTER &EMERGING SCIENCES

Problem Set:	Assignment 03	**Semester**:	Spring 2019
Points:	*See autograder*		
Date Set:	*See autograder*	**Due Date**:	*See autograder*
Course:	CS118 Prog. Fundamentals		

1 Autograder Test

Since you are reading this, you have already downloaded and extracted the zip file.

1.1 Tasks to do

1. Open the file a03.py and look between the markers.

   The purpose of this assignment is locate saddle point. In a matrix m m[i][j] is said to be a saddle point if the value of m[i][j] is greater than or equal to every element in its row and less than or equal to every element in its column:

   Let you you have matrix [[8, 7, 9], [6, 7, 6], [3, 2, 5]], the only Saddle point is on matrix[2][2]= 5 Write a function

   saddle_pointsto find Saddle points in a matrix.

   There may be more than one possible solutions but one listed below:

   For the matrix: [8, 7, 9][6, 7, 6][3, 2, 5]

   The first step is finding "row's max.", and convert into boolean matrix. is_row_max=[[False, False, True], [False, True, False], [False, False, True]] The second matrix, "col's min" represents the same thing 'min' values within columns: is_col_min=[[False, False, False], [False, False, False], [True, True, True]]

   Finally saddle points of matrix[i][j] will be true if both is_row_max[i][j] and is_col_min[i][j] are true Matrix([False, False, False], [False, False, False], [False, False, True])

   Here you can notice that the only index at which a saddle point has been found is matrix[2][2) which is 5.

2. Then, run local tests using the following command:

   python run.py local

3. If all tests succeed, submit your assignment using the following command:

   python run.py remote

4. It will ask for you email and submission password. You can get both of these from the assignment page where you downloaded the zip file from.

5. Once the submission is successful, you may visit the Autograder front-end to view your submission history.

6. If you face any issue, please send me an email informing me of the error. We're still trying to work out the issues in this new system. So, your help will be greatly appreciated.