McMaster University	W Booth School of Engineering Practice and Technology
SFWRTECH 4AI3 Artificial Intelligence	**Assignment # 1**

Prepare a Python program to do the following tasks. Please notice that the program must be runnable in Google's Colab. (Only submit a single file as the assignment with the format of .ipynb)

1) Read data from the file "pima-indians-diabetes.data.csv" given in the A2L.
2) Print the features of the first 5 samples.
3) Calculate and print the correlation between the features (columns).
4) Rescale **all 9** features into the range of (0,1) and print the scaled value of the features of the first 5 samples.
5) Calculate and print the correlation of the features for the rescaled data.
6) Have the correlations changed? (Please answer this question in a Text box inside your program.)
7) Group data by 'class'.
8) Calculate the correlation of the features (columns) over samples in 'class'=0.
9) Are the correlations equal to that of the whole data (item (3) above)? (Please answer this question in a Text box inside your program.) (Hint: You may see NaN for some of the results. Do not worry. This is because the value of one of the features for all of the samples are equal; 0 in this case).
10) Calculate the correlation of the features (columns) over samples in 'class'=1.
11) Are the correlations between features in class 1 and class 0 the same? (Please answer this question in a Text box inside your program.)