Homework 1 Tensorflow:

You are supposed to create simple tensors / Tensorflow ops to do certain tasks

1. Create two 0-d tensors a and b randomly selected from the range [-1, 1).
    a. Return a+b if a<b
    b. Return 0 if a>b. You can use tf.case() if it helps
2. Create a 2d tensor of size 16x16 from any distribution
    a. Calculate the determinant using tensorflow.
3. Create the tensor t of value
   [30.05088806, 17.61298943, 41.19073486, 19.35532951,
   31.97266006, 16.67541885, 28.08450317, 21.74983215,
   32.94445419, 30.45999146, 39.06485367, 32.01657104,
   26.88236427, 27.56035233, 10.20379066, 22.51215172,
   30.71149445, 24.59134293, 56.05556488, 30.66994858]
    a. Get the indices of elements in t whose values are greater than 25.
    b. Extract the element whose values are greater than 30.
       You can try tf.where() and tf.gather()
4. Create the tensor t of the value [[-1, 0, 2], [1, 0, 2]] and t1 as tensor of zeros with the same shape as t. Return a boolean tensor that yields Trues if t equals t1 element-wise.

5. Create a csv file using the below tabular data, name it place_holder.csv.

    a.

X	Y
1	2.5
4	3.5
6.6	2.5
9	9.5
1.5	1.8
3.2	9
1.8	3
6.2	9.4
5	7.8
8.5	3.2

    b. Read in data from the csv file into a dataframe. You can use any of the python libraries (Ex: Pandas)
    c. Create placeholders for input X ,Y and a constant C of same shape and size as X. Define an operation **sum** = X + Y + C
    d. Using the tensorflow session,
        i. Initialize the variables
        ii. Feed the data in to place holders
        iii. Execute the computation **sum**

Submission Guidelines:

- Submit **ipynb** file containing the code for the above-mentioned questions and the **html** export of the same after execution with relevant comments if applicable