Challenge: Summing and Swapping

In this challenge, pandas is used to sum the minimum and maximum values of the rows and columns of a DataFrame, which are then swapped.

We'll cover the following

Problem statement

We have to implement the function `Sum_Swap(df)`. The `df` is the `DataFrame` on which operations will be performed. The task is to create a new column and a new row and then swap their values. The following steps are performed to calculate the values for the new row and column before swapping:

1. The sum of the minimum and maximum values of each row are calculated.
2. These values are assigned to the new column `row_sum`.
3. The sum of the minimum and maximum value of each column are calculated.
4. These values are assigned to the new row `col_sum`.
5. Finally, the new row and column values are swapped.

Input

The input to the function is a `DataFrame` with random data. The following is just an example of what the input `DataFrame` would look like.

```
   0  1  2  3
0 12 2  3  44
1 40 1  34 9
2 6  99 56 69
```

```
3 2   24 4   71
```

Output

The output is a `DataFrame` with a new row and column. The following is an example of what the output of the above input `DataFrame` would look like after summing and swapping the row and column.

```
         0  1  2   3   row_sum

0        12 2  3   44  42
1        40 1  34  9   100
2        6  99 56  69  59
3        2  24 4   71  80
col_sum 46 41 105 73  NaN
```

Coding exercise

Write your code below. It is recommended that you try solving the exercise yourself before viewing the solution.

```
def Sum_Swap(df):
    # Write code here!

    return df
```

The next lesson shows a solution to the above problem.