

Numpy Challenge

How would compute the row wise counts of all possible values in an array as in - compute the counts of unique values row-wise?

Input:

```
np.random.seed(100)
arr = np.random.randint(1,11,size=(6, 10))
arr
> array([[ 9,  9,  4,  8,  8,  1,  5,  3,  6,  3],
>        [ 3,  3,  2,  1,  9,  5,  1, 10,  7,  3],
>        [ 5,  2,  6,  4,  5,  5,  4,  8,  2,  2],
>        [ 8,  8,  1,  3, 10, 10,  4,  3,  6,  9],
>        [ 2,  1,  8,  7,  3,  1,  9,  3,  6,  2],
>        [ 9,  2,  6,  5,  3,  9,  4,  6,  1, 10]])
```

Expected output:

```
> [[1, 0, 2, 1, 1, 1, 0, 2, 2, 0],
>   [2, 1, 3, 0, 1, 0, 1, 0, 1, 1],
>   [0, 3, 0, 2, 3, 1, 0, 1, 0, 0],
>   [1, 0, 2, 1, 0, 1, 0, 2, 1, 2],
>   [2, 2, 2, 0, 0, 1, 1, 1, 1, 0],
>   [1, 1, 1, 1, 1, 2, 0, 0, 2, 1]]
```

Output contains 10 columns representing numbers from 1 to 10. The values are the counts of the numbers in the respective rows. For example, Cell(0,2) has the value 2, which means, the number 3 occurs exactly 2 times in the 1st row.

Pandas Challenge

In `df`, Replace `NaNs` with `'missing'` in columns `'Manufacturer'`, `'Model'` and `'Type'` and create a index as a combination of these three columns and check if the index is a primary key.

Input:

```
df =
pd.read_csv('https://raw.githubusercontent.com/selva86/datasets/master/Cars93_miss
.csv', usecols=[0,1,2,3,5])
```

Expected output:

	Manufacturer	Model	Type	Min.Price	Max.Price
Acura_Integra_Small	Acura	Integra	Small	12.9	18.8
missing_Legend_Midsize	missing	Legend	Midsize	29.2	38.7
Audi_90_Compact	Audi	90	Compact	25.9	32.3
Audi_100_Midsize	Audi	100	Midsize	NaN	44.6
BMW_535i_Midsize	BMW	535i	Midsize	NaN	NaN