

# Regiment

## Introduction:

Special thanks to: <http://chrisalbon.com/> for sharing the dataset and materials.

## Step 1. Import the necessary libraries

```
In [1]: import pandas as pd
```

## Step 2. Create the DataFrame with the following values:

```
In [2]: raw_data = {'regiment': ['Nighthawks', 'Nighthawks', 'Nighthawks', 'Nighthawks', 'Dragoons', 'Dragoons', 'Dragoons', 'Dragoons', 'Scouts', 'Scouts', 'Scouts',  
    'company': ['1st', '1st', '2nd', '2nd', '1st', '1st', '2nd', '1st', '1st', '2nd', '2nd'],  
    'name': ['Miller', 'Jacobson', 'Ali', 'Milner', 'Cooze', 'Jacon', 'Ryaner', 'Sone', 'Sloan', 'Piger', 'Riani', 'Ali'],  
    'preTestScore': [4, 24, 31, 2, 3, 4, 24, 31, 2, 3, 2, 3],  
    'postTestScore': [25, 94, 57, 62, 70, 25, 94, 57, 62, 70, 62, 70]}
```

## Step 3. Assign it to a variable called regiment.

Don't forget to name each column

```
In [3]: regiment = pd.DataFrame(raw_data, columns = raw_data.keys())  
regiment
```

```
Out[3]:
```

	regiment	company	name	preTestScore	postTestScore
0	Nighthawks	1st	Miller	4	25
1	Nighthawks	1st	Jacobson	24	94
2	Nighthawks	2nd	Ali	31	57
3	Nighthawks	2nd	Milner	2	62
4	Dragoons	1st	Cooze	3	70
5	Dragoons	1st	Jacon	4	25
6	Dragoons	2nd	Ryaner	24	94
7	Dragoons	2nd	Sone	31	57
8	Scouts	1st	Sloan	2	62
9	Scouts	1st	Piger	3	70
10	Scouts	2nd	Riani	2	62
11	Scouts	2nd	Ali	3	70

## Step 4. What is the mean preTestScore from the regiment Nighthawks?

```
In [4]: regiment.groupby("regiment").mean()
```

```
Out[4]:
```

	preTestScore	postTestScore
regiment		
Dragoons	15.50	61.5
Nighthawks	15.25	59.5
Scouts	2.50	66.0

## Step 5. Present general statistics by company

```
In [5]: regiment.groupby("company").describe().transpose()
```

```
Out[5]:
```

	company	1st	2nd
preTestScore	count	6.000000	6.000000
	mean	6.666667	15.500000
	std	8.524475	14.652645
	min	2.000000	2.000000
	25%	3.000000	2.250000
	50%	3.500000	13.500000
postTestScore	count	6.000000	6.000000
	mean	57.666667	67.000000
	std	27.485754	14.057027
	min	25.000000	57.000000
	25%	34.250000	58.250000
	50%	66.000000	62.000000
postTestScore	count	6.000000	6.000000
	mean	57.666667	67.000000
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