



```
In [14]: import pandas as pd
```

```
In [15]: water_content_in_percentage = pd.Series([20, 21, 22, 23, 24], name="Sparkling")
```

```
In [16]: df = pd.DataFrame(water_content_in_percentage)
```

```
In [17]: df
```

```
Out[17]: Sparkling JackVase
```

0	20
1	21
2	22
3	23
4	24

```
In [31]: df.index = ['0th day', '1st day', '2nd day', '3rd day', '4th day']
```

```
In [32]: df
```

```
Out[32]: Sparkling JackVase
```

0th day	20
1st day	21
2nd day	22
3rd day	23
4th day	24

```
In [33]: shining_jackvase = { "Void_ratio": [0.6, 0.5, 0.4, 0.3],  
                           "Pore_water_pressure": [-1, -2, -3, -4] }
```

```
In [34]: experiment = pd.DataFrame(shining_jackvase)
```

```
In [35]: experiment
```

```
Out[35]: Void_ratio Pore_water_pressure
```

	Void_ratio	Pore_water_pressure
0	0.6	-1
1	0.5	-2
2	0.4	-3
3	0.3	-4

```
In [43]: n = pd.Series([45, 43, 42], index=['1st hr', '2nd hr', '3rd hr', ])
```

```
In [44]: C = pd.Series([30, 30, 30], index=['1st hr', '2nd hr', '3rd hr'])
```

```
In [45]: data = { 'porosity': n, 'cohesion': C }
```

```
In [46]: df = pd.DataFrame(data)
```

```
In [47]: df
```

```
Out[47]:
```

	porosity	cohesion
1st hr	45	30
2nd hr	43	30
3rd hr	42	30

```
In [48]: print("Size :", df.size)
print("Shape :", df.shape)
print("Dimension :", df.ndim)
print("Index Type :", type(df.index))
```

```
Size : 6
Shape : (3, 2)
Dimension : 2
Index Type : <class 'pandas.core.indexes.base.Index'>
```

```
In [49]: idx = df.index
```

```
In [50]: print("First element of index :", idx[-1])
```

```
First element of index : 3rd hr
```

```
In [51]: print("First two elements of index:", idx[:2])
```

```
First two elements of index: Index(['1st hr', '2nd hr'], dtype='object')
```

```
In [53]: Dwelling_Beauty_parameters = {'Parameters': ['Overall Height', 'Maximum Body w', 'Touch Sensitivity': [65, 75, 55, 60, 80, 85, 70, 72], 'Break Se
```

```
In [54]: parameters = pd.DataFrame(Dwelling_Beauty_parameters)
```

```
In [55]: parameters
```

Out[55]:

	Parameters	Aesthetic value	Touch Sensitivity	Break Sensitivity
0	Overall Height	100.0	65	60
1	Maximum Body width	61.8	75	55
2	Neck Height	30.9	55	70
3	Mouth Diameter	48.6	60	68
4	Base Diameter	61.8	80	50
5	Handle Curvature	38.2	85	65
6	Phoenix Flow Pattern	100.0	70	58
7	Colour Luminosity Gradient	61.8	72	60

In [56]: `parameters['Average'] = parameters[['Aesthetic value', 'Touch Sensitivity', 'E`

In [57]: `parameters`

Out[57]:

	Parameters	Aesthetic value	Touch Sensitivity	Break Sensitivity	Average
0	Overall Height	100.0	65	60	75.000000
1	Maximum Body width	61.8	75	55	63.933333
2	Neck Height	30.9	55	70	51.966667
3	Mouth Diameter	48.6	60	68	58.866667
4	Base Diameter	61.8	80	50	63.933333
5	Handle Curvature	38.2	85	65	62.733333
6	Phoenix Flow Pattern	100.0	70	58	76.000000
7	Colour Luminosity Gradient	61.8	72	60	64.600000

In [58]: `parameters.T`

Out[58]:

	0	1	2	3	4	5	
Parameters	Overall Height	Maximum Body width	Neck Height	Mouth Diameter	Base Diameter	Handle Curvature	Phoenix Fl Pattern
Aesthetic value	100.0	61.8	30.9	48.6	61.8	38.2	100
Touch Sensitivity	65	75	55	60	80	85	
Break Sensitivity	60	55	70	68	50	65	
Average	75.0	63.933333	51.966667	58.866667	63.933333	62.733333	76

In [60]: `third_row = parameters.iloc[2]`

In [61]: `third_row`

Out[61]:

	Parameters	Neck Height
Aesthetic value		30.9
Touch Sensitivity		55
Break Sensitivity		70
Average		51.966667
Name:	2, dtype:	object

In [62]: `parameters.iloc[:2, :2]`

Out[62]:

	Parameters	Aesthetic value
0	Overall Height	100.0
1	Maximum Body width	61.8

In [63]: `parameters.loc[:, ['Parameters', 'Aesthetic value']]`

Out[63]:

	Parameters	Aesthetic value
0	Overall Height	100.0
1	Maximum Body width	61.8

In [64]: `filtered = parameters['Average']>60`

In [65]: `result = parameters[filtered]`

In [66]: `result`

Out[66]:

	Parameters	Aesthetic value	Touch Sensitivity	Break Sensitivity	Average
0	Overall Height	100.0	65	60	75.000000
1	Maximum Body width	61.8	75	55	63.933333
4	Base Diameter	61.8	80	50	63.933333
5	Handle Curvature	38.2	85	65	62.733333
6	Phoenix Flow Pattern	100.0	70	58	76.000000
7	Colour Luminosity Gradient	61.8	72	60	64.600000

In []:

In []:

In []: