Feature Scaling Technique - Min Max Scaler

In [3]:

```python
# Loading the pandas library
import pandas as pd
```

In [5]:

```python
# Loading the dataset
heart_df = pd.read_csv("heart.csv")
```

In [7]:

```python
heart_df.head()
```

Out[7]:

	age	sex	cp	trestbps	chol	fbs	restecg	thalach	exang	oldpeak	slope	ca	thal	target
0	63	1	3	145	233	1	0	150	0	2.3	0	0	1	1
1	37	1	2	130	250	0	1	187	0	3.5	0	0	2	1
2	41	0	1	130	204	0	0	172	0	1.4	2	0	2	1
3	56	1	1	120	236	0	1	178	0	0.8	2	0	2	1
4	57	0	0	120	354	0	1	163	1	0.6	2	0	2	1

In [9]:

```python
# Storing all the input column in separate dataframe
X = heart_df.drop(columns = ['target'])
```

In [11]:

```python
X.head()
```

Out[11]:

	age	sex	cp	trestbps	chol	fbs	restecg	thalach	exang	oldpeak	slope	ca	thal
0	63	1	3	145	233	1	0	150	0	2.3	0	0	1
1	37	1	2	130	250	0	1	187	0	3.5	0	0	2
2	41	0	1	130	204	0	0	172	0	1.4	2	0	2
3	56	1	1	120	236	0	1	178	0	0.8	2	0	2
4	57	0	0	120	354	0	1	163	1	0.6	2	0	2

In [13]:

```python
# loading the Min-Max-Scaler Class
from sklearn.preprocessing import MinMaxScaler
```

In [14]:

```python
# Creating the object
mm = MinMaxScaler()
```

In [17]:

```python
# Applying the fit function
mm.fit(X)
```

Out[17]:

```
▾ MinMaxScaler
MinMaxScaler()
```

In [19]:

```python
# Applying the transform function
X_new = mm.transform(X)
```

In [21]:

```python
# Checking the transformed data
pd.DataFrame(X_new)
```

Out[21]:

	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0.708333	1.0	1.000000	0.481132	0.244292	1.0	0.0	0.603053	0.0	0.370968	0.0	0.00	0.333333
1	0.166667	1.0	0.666667	0.339623	0.283105	0.0	0.5	0.885496	0.0	0.564516	0.0	0.00	0.666667
2	0.250000	0.0	0.333333	0.339623	0.178082	0.0	0.0	0.770992	0.0	0.225806	1.0	0.00	0.666667
3	0.562500	1.0	0.333333	0.245283	0.251142	0.0	0.5	0.816794	0.0	0.129032	1.0	0.00	0.666667
4	0.583333	0.0	0.000000	0.245283	0.520548	0.0	0.5	0.702290	1.0	0.096774	1.0	0.00	0.666667
...	...	...	...	...	...	...	...	...	...	...	...	...	...
298	0.583333	0.0	0.000000	0.433962	0.262557	0.0	0.5	0.396947	1.0	0.032258	0.5	0.00	1.000000
299	0.333333	1.0	1.000000	0.150943	0.315068	0.0	0.5	0.465649	0.0	0.193548	0.5	0.00	1.000000
300	0.812500	1.0	0.000000	0.471698	0.152968	1.0	0.5	0.534351	0.0	0.548387	0.5	0.50	1.000000
301	0.583333	1.0	0.000000	0.339623	0.011416	0.0	0.5	0.335878	1.0	0.193548	0.5	0.25	1.000000
302	0.583333	0.0	0.333333	0.339623	0.251142	0.0	0.0	0.786260	0.0	0.000000	0.5	0.25	0.666667

303 rows × 13 columns

In [10]:

```
!jupyter nbconvert --to webpdf --allow-chromium-download Week3_Lab1.ipynb
```