Digital Assignement-2

Partha Pratim Gogoi 24BCE0554

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

In [17]:
```
data = {
        'weight(gm)':[random.uniform(40000, 150000) for i in range(40)],
        'height(ft)':[random.uniform(4.5, 7) for i in range(40)]
        }
body_data = pd.DataFrame(data)

weights = body_data["weight(gm)"]
mean_weight = sum(weights) / 40

print(body_data)
```

```
       weight(gm)  height(ft)
0    42985.874226    4.550817
1    96034.323042    4.700211
2    42475.612986    4.631268
3    51300.401252    5.203436
4   105138.488065    6.969530
5    87380.791502    6.858008
6    92231.977372    5.286915
7   110315.682656    5.429491
8   102058.000845    6.248392
9   129210.059497    6.085318
10   78725.218553    6.996896
11   93432.641253    5.060421
12   49015.775482    5.069046
13   63883.555158    4.916447
14  101069.876362    6.181847
15   80621.330914    4.984113
16   99569.673105    6.956841
17   71270.554517    6.525858
18   67078.173292    6.059183
19  113344.950677    5.932142
20   94687.568252    5.365291
21  115943.739250    6.831915
22   93530.586654    6.060407
23  148141.306771    6.573148
24   68134.222127    6.687904
25  100968.480399    6.368978
26  149255.595509    6.153135
27   82529.581403    6.031003
28   84225.464454    6.514642
29   66909.313539    5.527446
30  116418.679529    6.005074
31   56268.887994    6.482471
32  128488.715804    6.695716
33   87816.784737    4.554313
34  148471.186634    4.522319
35   95884.583622    5.050780
36   51836.673764    6.180078
37   91727.733981    6.205138
38   93256.838542    6.396981
39   93458.667527    6.285160
```

In [24]:
```
# min-max normalisation
weight_MinMax_norm = (weights - weights.min())/(weights.max() - weights.min())
body_data["min-max normalisation"] = weight_MinMax_norm
print(body_data)
```

```
       weight(gm)  height(ft)  min-max normalisation
0    42985.874226    4.550817               0.004779
1    96034.323042    4.700211               0.501580
2    42475.612986    4.631268               0.000000
3    51300.401252    5.203436               0.082645
4   105138.488065    6.969530               0.586841
5    87380.791502    6.858008               0.420539
6    92231.977372    5.286915               0.465971
7   110315.682656    5.429491               0.635326
8   102058.000845    6.248392               0.557992
9   129210.059497    6.085318               0.812273
10   78725.218553    6.996896               0.339479
11   93432.641253    5.060421               0.477215
12   49015.775482    5.069046               0.061249
13   63883.555158    4.916447               0.200486
14  101069.876362    6.181847               0.548738
15   80621.330914    4.984113               0.357237
16   99569.673105    6.956841               0.534689
17   71270.554517    6.525858               0.269666
18   67078.173292    6.059183               0.230404
19  113344.950677    5.932142               0.663695
20   94687.568252    5.365291               0.488968
21  115943.739250    6.831915               0.688033
22   93530.586654    6.060407               0.478132
23  148141.306771    6.573148               0.989565
24   68134.222127    6.687904               0.240294
25  100968.480399    6.368978               0.547789
26  149255.595509    6.153135               1.000000
27   82529.581403    6.031003               0.375107
28   84225.464454    6.514642               0.390989
29   66909.313539    5.527446               0.228823
30  116418.679529    6.005074               0.692481
31   56268.887994    6.482471               0.129175
32  128488.715804    6.695716               0.805517
33   87816.784737    4.554313               0.424622
34  148471.186634    4.522319               0.992654
35   95884.583622    5.050780               0.500178
36   51836.673764    6.180078               0.087667
37   91727.733981    6.205138               0.461249
38   93256.838542    6.396981               0.475569
39   93458.667527    6.285160               0.477459
```