### Lab 1 - Data PreProcessing

### 1. Standard Scalar

## **Output:**

```
Name: Jiya Hona
Symbol: 29097/078
Original Data:
   StudentID Math Science English
                     65
         1
              78
                                80
1
          2
               88
                       75
                                85
2
          3
               60
                       50
                                55
3
          4
               90
                       78
                                92
          5
               55
                       48
                                58
Standard Scaled Data:
   StudentID
                 Math Science English
0
          1 0.228347 -0.036002 0.171299
          2 1.074075 0.864059 0.579153
1
2
          3 -1.293964 -1.386094 -1.867972
3
          4 1.243221 1.134077 1.150149
          5 -1.716829 -1.566106 -1.623260
```

### 2. Min-Max

# **Output:**

```
Name: Jiya Hona
Symbol: 29097/078
Original Data:
   StudentID Math Science English
                       65
         1
               78
                                80
1
          2
               88
                       75
                                85
2
          3
               60
                       50
                                55
                       78
                                92
3
          4
               90
          5
               55
                       48
                                58
Normalized Scores (Min-Max Scaler):
   StudentID Math Science
                                 English
0
          1 0.657143 0.53125 0.675676
1
          2 0.942857 0.84375 0.810811
          3 0.142857 0.06250 0.000000
3
          4 1.000000 0.93750 1.000000
4
          5 0.000000 0.00000 0.081081
```