```
/Users/meijiaojiao/opt/anaconda3/envs/RunToEnd/bin/python "/Users/meijiaojiao/Desktop/New Evolution/data_mining.py"
      iterations  mutation_rate  ...  range_mutation  crossover_probability
0             50          0.001  ...              20                    0.5
1             50          0.001  ...              20                    0.9
2             50          0.001  ...              80                    0.5
3             50          0.001  ...              80                    0.9
4             50          0.001  ...              20                    0.5
...          ...            ...  ...             ...                    ...
6139       10000          0.200  ...              80                    0.9
6140       10000          0.200  ...              20                    0.5
6141       10000          0.200  ...              20                    0.9
6142       10000          0.200  ...              80                    0.5
6143       10000          0.200  ...              80                    0.9

[6144 rows x 7 columns]


This is the result for Badlwin(F1)
                  Baldwin1        Baldwin2  ...      Baldwin6143     Baldwin6144
F1 Times1     96677.443864   113249.655768  ...   110300.770956    32722.081058
   Times2    102459.162473    82492.346398  ...    90276.614546    84838.580995
   Times3     97424.228737   113970.620863  ...   110552.587152    70724.041524
   Times4    111378.272859   110679.130976  ...   107120.663020    70992.126104
   Times5    109366.320311    90558.226833  ...   101658.132553    66799.445796
   Times6     95247.681415   102783.927427  ...   108198.353185    50024.584796
   Times7    125643.370140   106488.240608  ...   103815.170711    61562.893930
   Times8    113132.684877   101918.346752  ...    87137.336641    52449.413968
   Times9     99580.442547    94898.761054  ...    90133.719104    86057.672563
   Times10   101138.931558   101186.372447  ...   108506.786120    50985.053293

[10 rows x 6144 columns]


This is the result:max_min_std_mean for Badlwin(F1)
                0               1       ...            6142            6143
Max   125643.370140   113970.620863   ...   110552.587152    86057.672563
Min    95247.681415    82492.346398   ...    87137.336641    32722.081058
Std    11003.472125    11461.852855   ...     9720.893006    18900.147031
```

```
 Mean    98764.850959    94319.265326   ...    94239.303907  58833.522668

[4 rows x 6144 columns]


 This is min index for the four rows
 Max      5827
 Min      5697
 Std      5827
 Mean     5313
 dtype: int64


 This is min value for the four rows
 Max      162.400755
 Min       49.726447
 Std       33.746590
 Mean     111.016016
 dtype: float64


 This is min combiantion for the four rows
 ['iterations', 'mutation_rate', 'local_search', 'num_individuals', 'm_range', 'range_mutation', 'crossover_probability']
 [10000.0, 0.1, 2.0, 50.0, 5.0, 80.0, 0.9]
 [10000.0, 0.08, 2.0, 50.0, 5.0, 20.0, 0.9]
 [10000.0, 0.1, 2.0, 50.0, 5.0, 80.0, 0.9]
 [10000.0, 0.02, 2.0, 50.0, 5.0, 20.0, 0.9]


 This is max index for the four rows
 Max       450
 Min       324
 Std      3781
 Mean      324
 dtype: int64


 This is max value for the four rows
```

```
 Max      137571.325437
 Min      109502.046678
 Std       36029.883232
 Mean     110994.154538
 dtype: float64


 This is max combiantion for the four rows
 [50.0, 0.06, 2.0, 50.0, 5.0, 80.0, 0.5]
 [50.0, 0.04, 2.0, 50.0, 75.0, 20.0, 0.5]
 [3000.0, 0.1, 2.0, 50.0, 75.0, 20.0, 0.9]
 [50.0, 0.04, 2.0, 50.0, 75.0, 20.0, 0.5]

 Process finished with exit code 0
```