Plotting

March 19, 2021

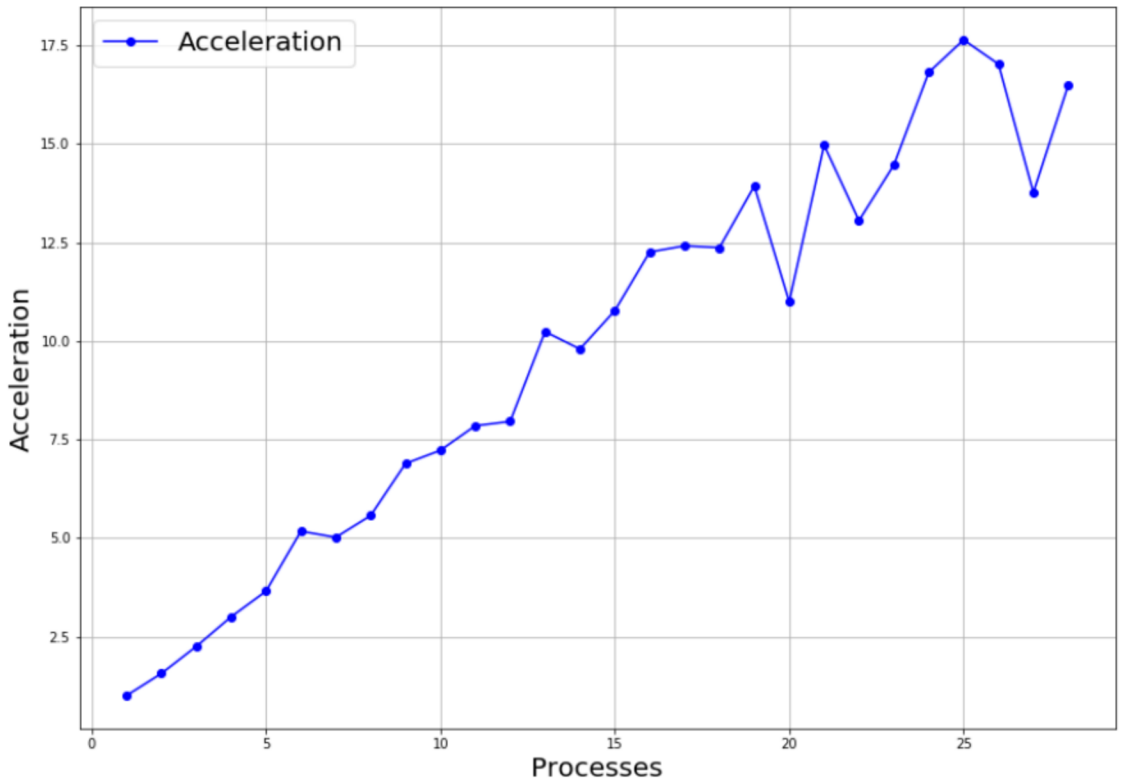
[1]:
```
import matplotlib.pyplot as plt
import pandas as pd
```

1 With Send

[16]:
```
df = pd.read_csv("./result1.txt", header=None, sep=" ")
df.rename(columns={0: 'Processes', 1: 'Result', 2: 'Time'}, inplace=True)
df['Acceleration'] = df['Time'][0] / df['Time']
print(df)
plt.figure(figsize=(14, 10))
plt.xlabel('Processes', fontsize=20)
plt.ylabel('Acceleration', fontsize=20)
plt.grid(True)
plt.title('', fontsize=20)
plt.plot(df['Processes'], df['Acceleration'], 'ob-', label='Acceleration')
plt.legend(fontsize=20, loc='best')
plt.savefig('Acceleration.jpg')
plt.show()
```

```
    Processes    Result   Time  Acceleration
0           1  3.141593  68.26      1.000000
1           2  3.141593  43.76      1.559872
2           3  3.141593  30.39      2.246134
3           4  3.141593  22.76      2.999121
4           5  3.141593  18.71      3.648316
5           6  3.141593  13.20      5.171212
6           7  3.141593  13.61      5.015430
7           8  3.141593  12.26      5.567700
8           9  3.141593   9.91      6.887992
9          10  3.141593   9.45      7.223280
10         11  3.141593   8.70      7.845977
11         12  3.141593   8.58      7.955711
12         13  3.141593   6.67     10.233883
13         14  3.141593   6.97      9.793400
14         15  3.141593   6.34     10.766562
15         16  3.141593   5.57     12.254937
16         17  3.141593   5.50     12.410909
```

```
17          18  3.141593   5.52      12.365942
18          19  3.141593   4.90      13.930612
19          20  3.141593   6.21      10.991948
20          21  3.141593   4.56      14.969298
21          22  3.141593   5.23      13.051625
22          23  3.141593   4.72      14.461864
23          24  3.141593   4.06      16.812808
24          25  3.141593   3.87      17.638243
25          26  3.141593   4.01      17.022444
26          27  3.141593   4.96      13.762097
27          28  3.141593   4.14      16.487923
```

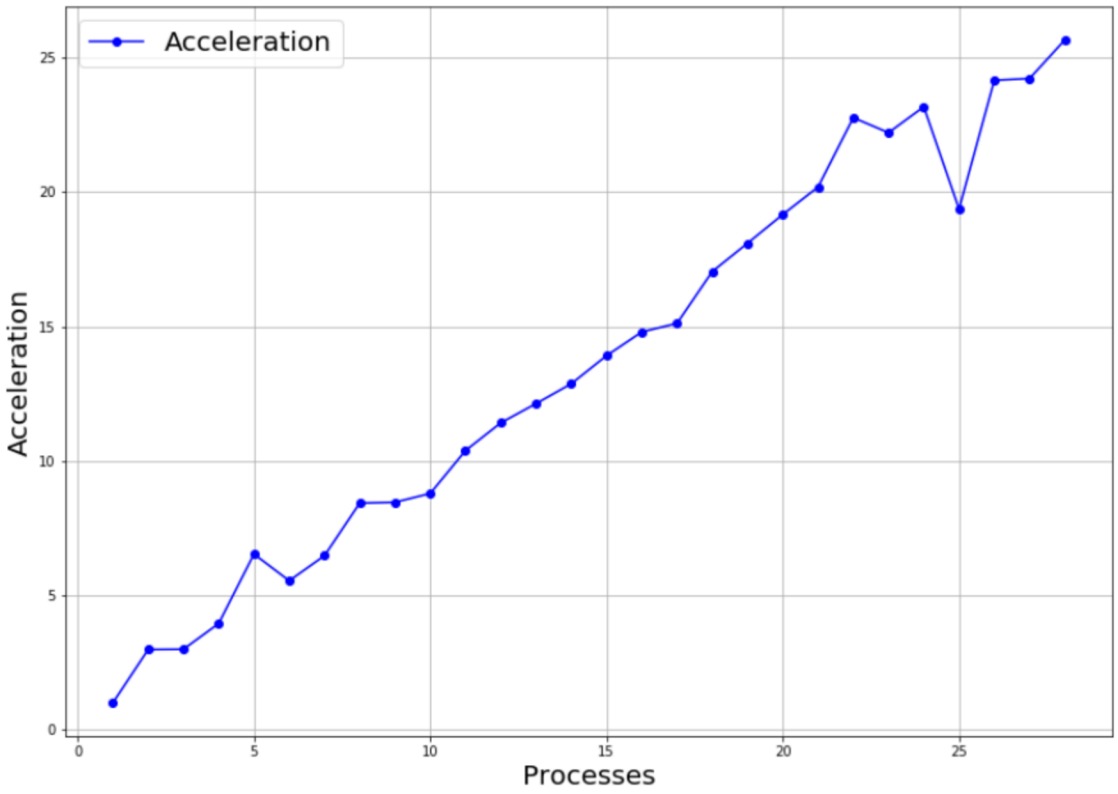


2 With Bsend

[17]:
```
df = pd.read_csv("./result2.txt", header=None, sep=" ")
df.rename(columns={0: 'Processes', 1: 'Result', 2: 'Time'}, inplace=True)
df['Acceleration'] = df['Time'][0] / df['Time']
print(df)
plt.figure(figsize=(14, 10))
plt.xlabel('Processes', fontsize=20)
plt.ylabel('Acceleration', fontsize=20)
```

```
plt.grid(True)
plt.title('', fontsize=20)
plt.plot(df['Processes'], df['Acceleration'], 'ob-', label='Acceleration')
plt.legend(fontsize=20, loc='best')
plt.savefig('Acceleration.jpg')
plt.show()
```

	Processes	Result	Time	Acceleration
0	1	3.141593	90.86	1.000000
1	2	3.141593	30.50	2.979016
2	3	3.141593	30.39	2.989799
3	4	3.141593	23.01	3.948718
4	5	3.141593	13.91	6.531991
5	6	3.141593	16.40	5.540244
6	7	3.141593	14.04	6.471510
7	8	3.141593	10.78	8.428571
8	9	3.141593	10.74	8.459963
9	10	3.141593	10.34	8.787234
10	11	3.141593	8.75	10.384000
11	12	3.141593	7.96	11.414573
12	13	3.141593	7.49	12.130841
13	14	3.141593	7.06	12.869688
14	15	3.141593	6.53	13.914242
15	16	3.141593	6.14	14.798046
16	17	3.141593	6.01	15.118136
17	18	3.141593	5.33	17.046904
18	19	3.141593	5.02	18.099602
19	20	3.141593	4.74	19.168776
20	21	3.141593	4.50	20.191111
21	22	3.141593	3.99	22.771930
22	23	3.141593	4.09	22.215159
23	24	3.141593	3.92	23.178571
24	25	3.141593	4.69	19.373134
25	26	3.141593	3.76	24.164894
26	27	3.141593	3.75	24.229333
27	28	3.141593	3.54	25.666667


Acceleration
Acceleration
Processes
0
5
10
15
20
25