```python
import matplotlib.pyplot as plt
import matplotlib as pl
import pandas as pd
import datetime
#====== Read the excel file data=================================================
data=pd.read_csv('Apple_Stock.csv')

#======To make sure reading is correct============================================
print(data)

#======Convert array of dates to list so we could change the date format=======
date=data['Date'].tolist()

##=====Mean=======================================================================
m= pd.DataFrame.mean(data['Adj Close'])
print (m)

#======Set the date format ======================================================
date2= [datetime.datetime.strptime(d,'%m/%d/%Y').date() for d in date]

#======Apply the date format to x axis ==========================================
plt.gca().xaxis.set_major_formatter(pl.dates.DateFormatter('%m/%d/%Y'))

#======Plot the figure ==========================================================
plt.plot(date2,data['Adj Close'],color='blue', label='Stocks')
plt.axhline(y=m, color='green', linestyle='-', label='Prices Mean')

plt.title('Apple Stock')
plt.grid(axis='both')
plt.legend(loc='upper right')
plt.ylabel('Adj Close (Price)')
plt.xlabel('Date')
plt.savefig('AppleStockProof.png')
```

```
420  1/12/2011     342.95
421  1/11/2011     340.18
422  1/10/2011     340.99
423   1/7/2011     334.68
424   1/6/2011     332.30
425   1/5/2011     332.57
426   1/4/2011     329.87
427   1/3/2011     328.16

[428 rows x 2 columns]
====Apple Prices Mean====
446.059485981
```

```
420  1/12/2011     616.87
421  1/11/2011     616.01
422  1/10/2011     614.21
423   1/7/2011     616.44
424   1/6/2011     613.50
425   1/5/2011     609.07
426   1/4/2011     602.12
427   1/3/2011     604.35

[428 rows x 2 columns]
====Google Prices Mean====
588.559579439
```

Figure 1 Advanced libraries : Matplotlib . Google vs Apple stocks

The bellow results show that Apple is better to invest on , because their stocks are going up in high rate, while google approximately have similar pattern.

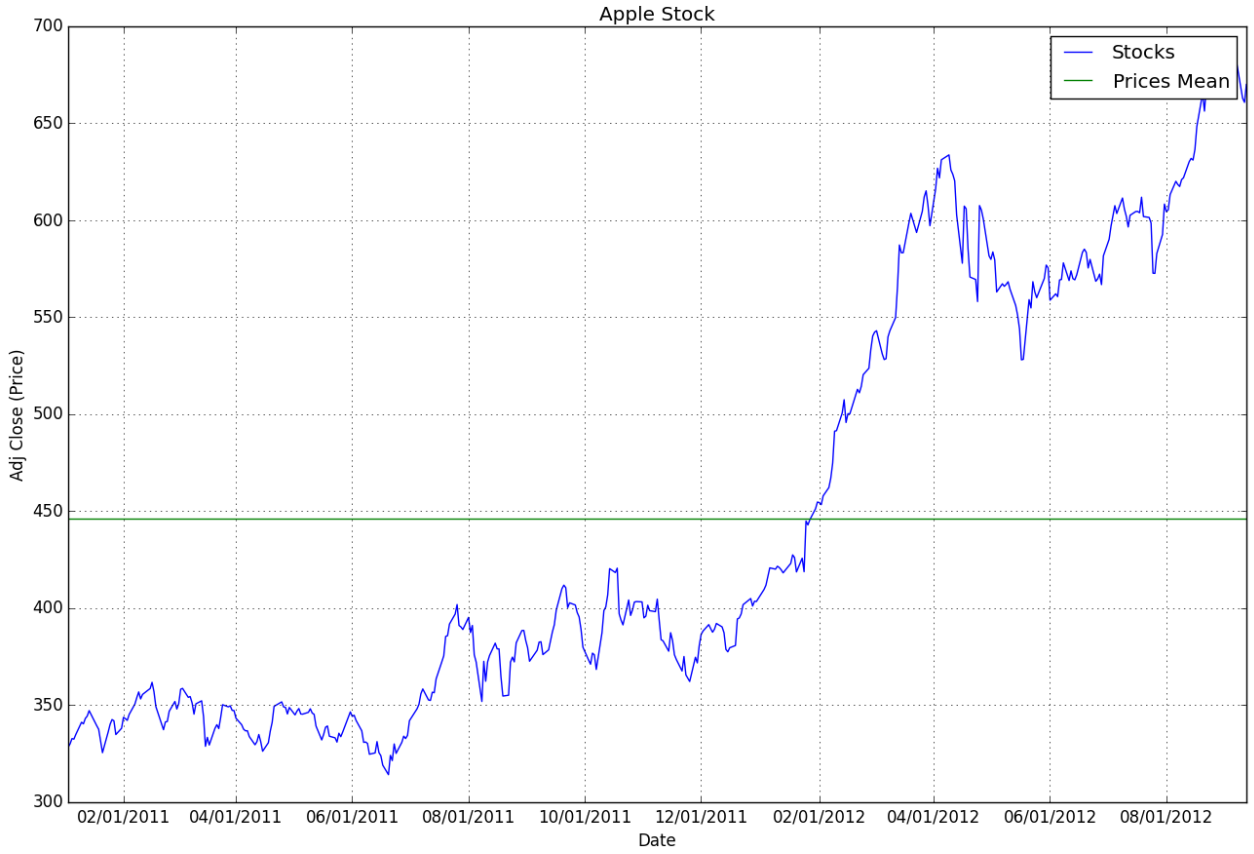

Figure 2 Apple stocks proof

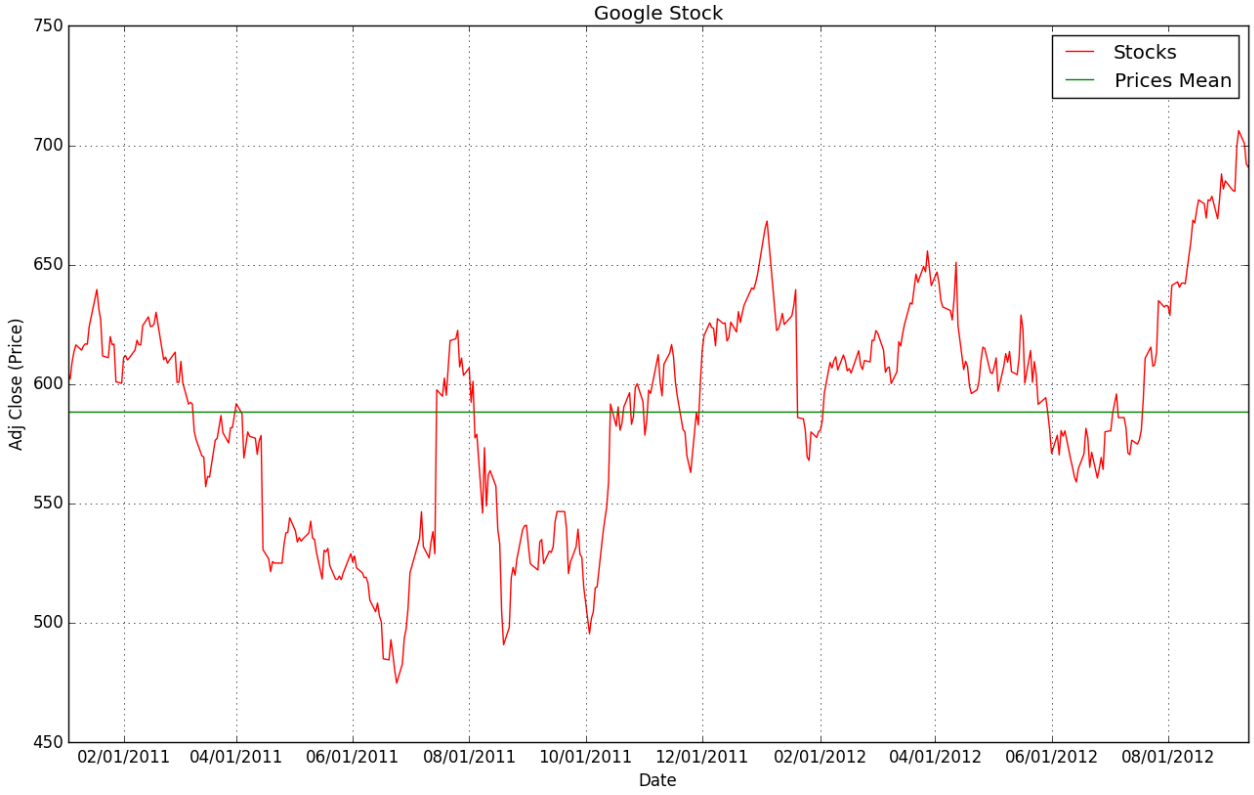

Figure 3 Google stocks proof