DataScribe 0.1

In [1]:
```
#Dependencies

import matplotlib.pyplot as plt
import numpy as np
import datetime
from math import *
import operator
import statistics
import random
```

In [2]:
```
#Modules

from process_csv import Process_CSV
from grammar import Constructor, parse
```

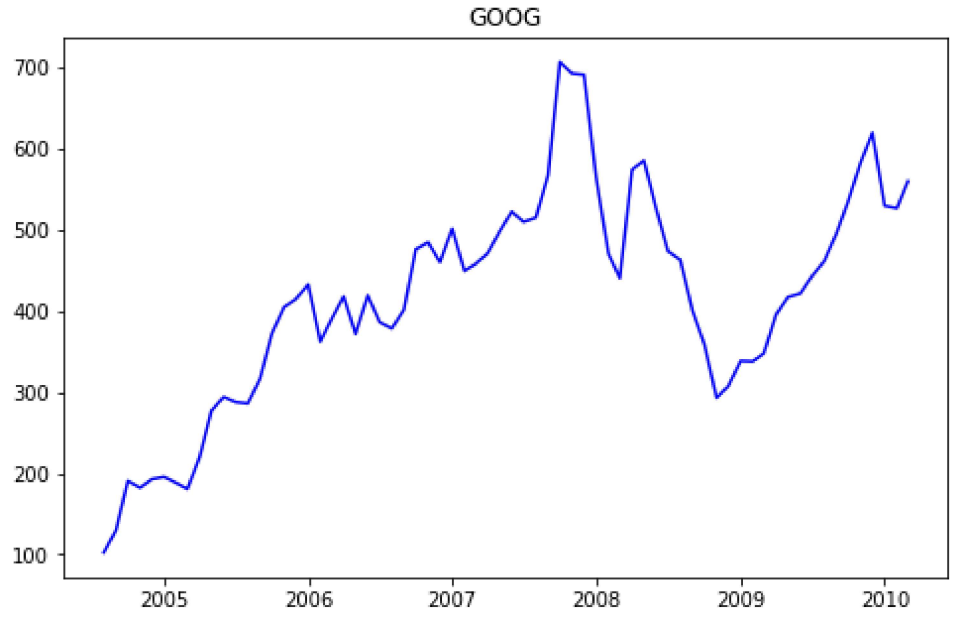
Process CSV

In [3]:
```
data = Process_CSV('stocks.csv')
data.labels_row = False
data.set_axis("x",1,'datetime','%b %d %Y')
data.set_axis("y",2,'float', None)
data.variable_col = 0
```

Data Frame

In [4]:
```
data_frame = data.transform()
AAPL = data_frame[0]
AMZN = data_frame[1]
GOOG = data_frame[2]
IBM = data_frame[3]
MSFT = data_frame[4]
```

In [5]:
```
GOOG.visualize()
```

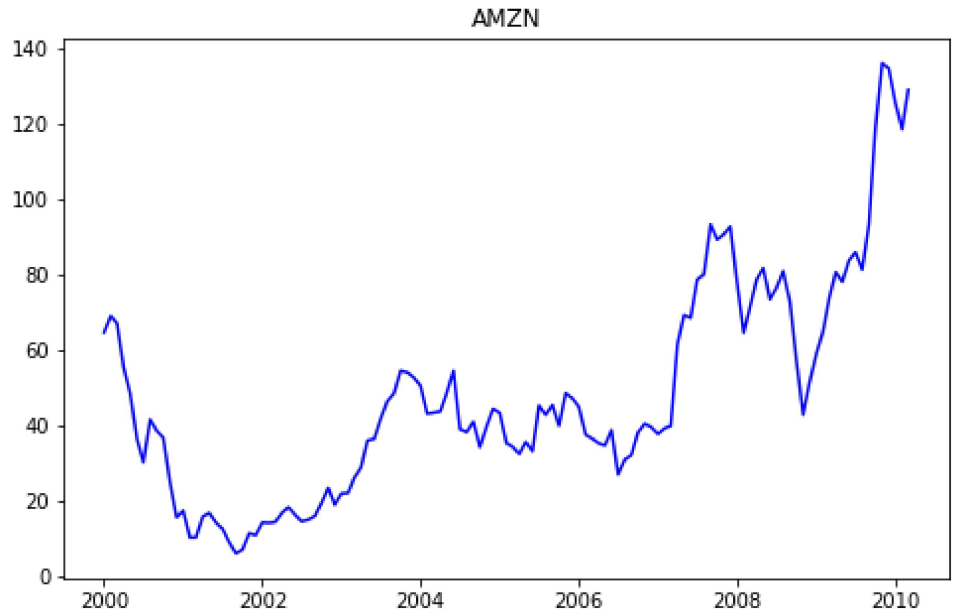


In [28]:
```
print(Constructor(GOOG).get_string)
```

From **2004 to 2007** , GOOG rose sharply from $102 to $693.

On the contrary, between **2007 & 2010** , there was a marginal decrease of 19%. During this period, GOOG declined to $292.96 by Nov 2008 but increased back to $619.98 by Dec 2009.

In [7]:
```
AMZN.visualize()
```

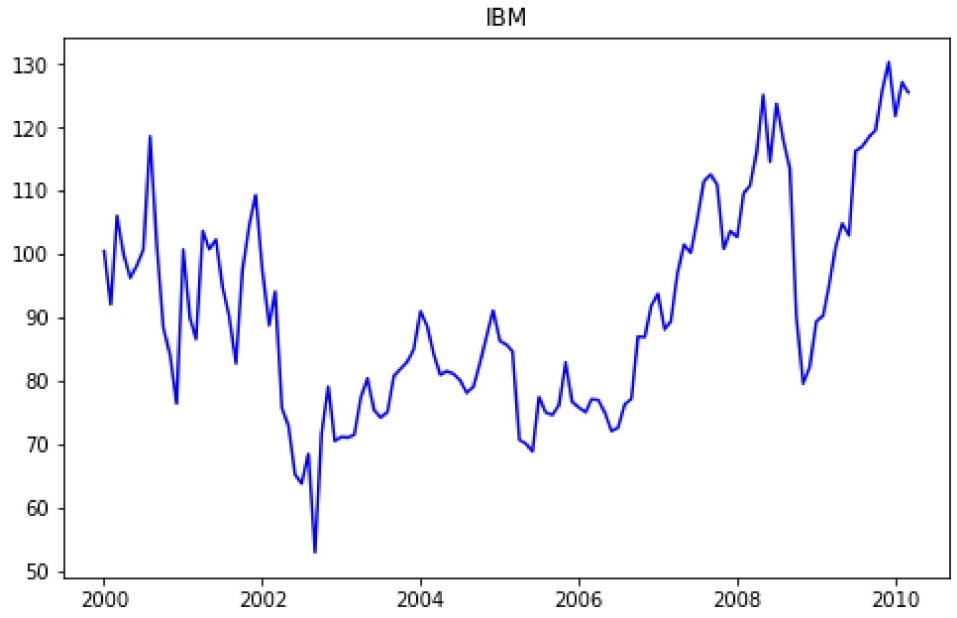


In [22]:
```
print(Constructor(AMZN).get_string)
```

AMZN depleted non-uniformly from $64 to $38 from **2000 to 2006** , after decreasing to a minimum of $5.97 in Sep 2001.

However, between **2006 & 2010** , AMZN suddenly increased from $38 to $128, except for a steep decrease to $42.7 in Nov 2008.

In [9]:
```
IBM.visualize()
```

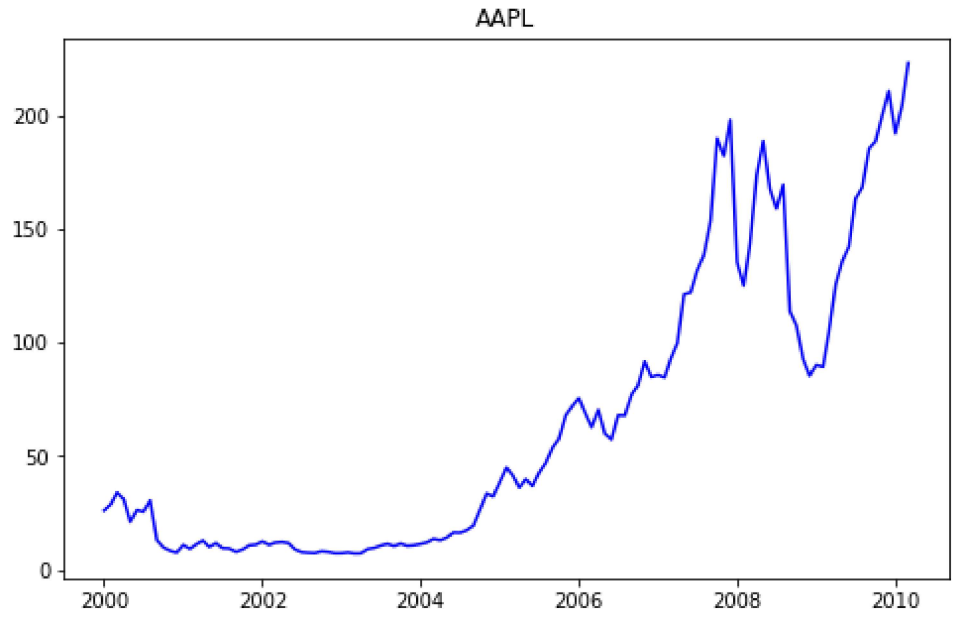


In [10]:
```
print(Constructor(IBM).get_string)
```

During the period **2000 - 2002** , there was a slight decrease of 29%, with IBM reaching its maximum value of $118.62 in Aug 2000 and minimum value of $53.01 in Sep 2002.

However, from **2002 to 2010** , there was a considerable rise from $70 to $125, although IBM reduced to $79.65 in Nov 2008.

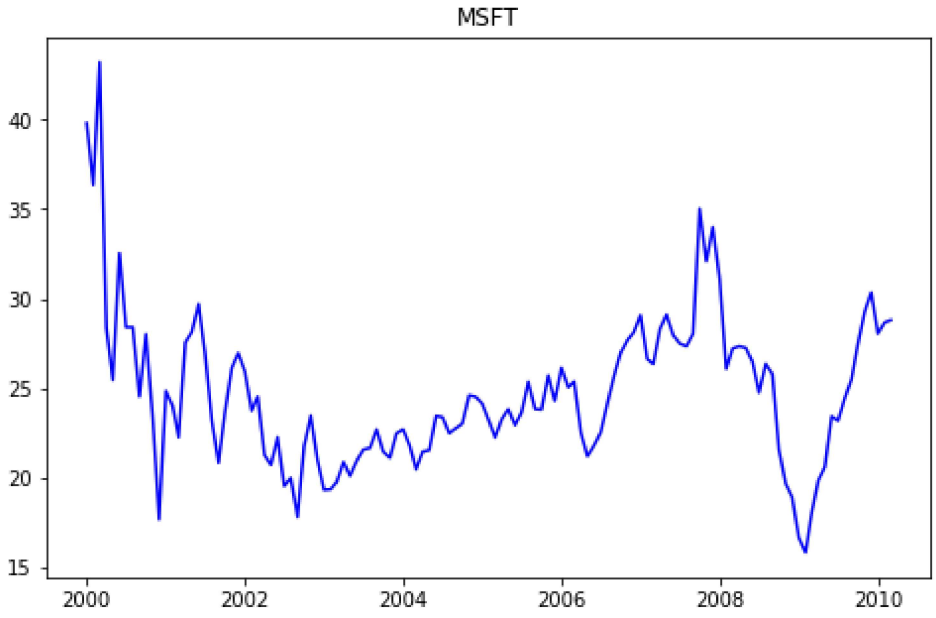
In [11]:
```
AAPL.visualize()
```



In [12]:
```
print(Constructor(AAPL).get_string)
```

AAPL considerably rose by 619% between **2000 & 2010** . During this period, AAPL escalated slightly to a value of $38.45 by Jan 2005, and further continued to rise to a value of $223.02 by Mar 2010, except for a steep fall to $85.35 in Dec 2008.

In [13]:
```
MSFT.visualize()
```



In [14]:
```
print(Constructor(MSFT).get_string)
```

After decreasing to a minimum of $17.65 in Dec 2000, MSFT decreased marginally from $39 to $27 during the period **2000 - 2001** .

On the contrary, there was a slight increase from $27 to $28 during the period **2001 - 2010** , except for a sudden reduction to $15.81 in Feb 2009.