In [ ]:

```
# Raw Package
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

#Data Source
import yfinance as yf
import yahoo_fin.stock_info as si

#Data viz


import plotly.graph_objs as go

df = []
df2 = []
df3 = []
df4 = []
df5 = []
df6 = []

S_P = si.tickers_sp500()

K =  S_P[0:200];
for i in K:

    data = yf.download(tickers= i , period='1d', interval='1d')
    df.append(data)

    data2 = yf.download(tickers= i , period='1mo', interval='1d')
    today = data2['Close'][-1]
    yesterday = data2['Close'][-2]
    daily = (today - yesterday)/yesterday *100
    df3.append(daily);

    data3 = yf.download(tickers= i , period='1mo', interval='1wk')
    thisweek = data3['Close'][-2]
    lastweek = data3['Close'][-3]
    weekly = (thisweek-lastweek)/lastweek *100
    df4.append(weekly);

    # #30day
    data4 = yf.download(tickers= i , period='3mo', interval='1mo')
    thismonth = data4['Close'][-2]
    lastmonth = data4['Close'][-3]
    monthly = (thismonth-lastmonth)/lastmonth*100
    df5.append(monthly);


    data5 = yf.download(tickers= i , period='1d', interval='1h')
    thishour = data5['Close'][-1]
    lasthour = data5['Close'][-2]
    hourly = (thishour-lasthour)/lasthour*100
    df6.append(hourly);


for j in K:
    income = si.get_income_statement(j);
    df2.append(income.loc["grossProfit"][0]);


result = pd.concat(df, ignore_index=True)
result.insert(loc=0, column='SYMBOL', value=K)
result['Gross Profit'] = df2
result['percentage_chng_24h'] = df3
result['percentage_chng_7d'] = df4
result['percentage_chng_30d'] = df5
result['percentage_chng_1h'] = df6
result.to_csv('/Users/simrahshaik/Downloads/stocks.csv')

# hj = result.to_csv('sto.csv')
# hj
# result['Close']


#--------------------------------------------------------------------------------------

# data = yf.download(tickers= 'FB' , period='1mo', interval='1d')

# today = data['Close'][-1]
# yesterday = data['Close'][-2]
# daily = (today - yesterday)/yesterday *100 # daily percentage change
# daily


#--------------------------------------------------------------------------------------
# #7day
# data2 = yf.download(tickers= 'FB' , period='1mo', interval='1wk')
# thisweek = data2['Close'][-1]
# lastweek = data2['Close'][-2]
# weekly = (thisweek-lastweek)/lastweek *100
# # weekly


#--------------------------------------------------------------------------------------
# #30day
# data3 = yf.download(tickers= 'FB' , period='3mo', interval='1mo')
# thismonth = data3['Close'][-3]
# lastmonth = data3['Close'][-2]
# monthly = (thismonth-lastmonth)/lastmonth*100
# monthly


#--------------------------------------------------------------------------------------
# #1hr

# data4 = yf.download(tickers= 'FB' , period='1d', interval='1h')
# thishour = data4['Close'][-2]
# lasthour = data4['Close'][-1]
# hourly = (thishour-lasthour)/lasthour*100
# hourly
```

In [3]:

```
df = pd.read_csv("stocks.csv")

print('Shape of data: {}'.format(df.shape))
print(df.describe())
```

```python
by_price = df.sort_values('Open', ascending = False)
print()
display(by_price.iloc[:1])
print('Amazon is most expensive share in SP500')
print()
print('These are 5 tickers with highest gross profit in SP500')
by_gross_profit = df.sort_values('Gross Profit', ascending = False)
display(by_gross_profit.iloc[:5])
```

```
Shape of data: (200, 13)
       Unnamed: 0         Open         High          Low        Close  \
count  200.000000   199.000000   199.000000   199.000000   199.000000   
mean    99.500000   215.968612   217.922504   213.495145   215.276432   
std     57.879185   367.969997   372.422192   364.173663   366.334437   
min      0.000000    12.380000    12.450000    12.335000    12.390000   
25%     49.750000    69.372501    70.174999    68.340000    69.584999   
50%     99.500000   119.290001   120.605003   118.360001   120.349998   
75%    149.250000   227.674995   231.514999   226.247498   228.985001   
max    199.000000  3537.000000  3593.879883  3525.820068  3545.679932   

         Adj Close        Volume  Gross Profit  percentage_chng_24h  \
count   199.000000  1.990000e+02  2.000000e+02           199.000000   
mean    215.276432  4.006747e+06  9.277782e+09             0.171592   
std     366.334437  9.071650e+06  1.900405e+10             1.626213   
min      12.390000  5.670000e+04 -5.536000e+09            -4.263141   
25%      69.584999  7.589345e+05  1.996500e+09            -0.603412   
50%     120.349998  1.619150e+06  4.169500e+09             0.209446   
75%     228.985001  3.094260e+06  7.474200e+09             0.815688   
max    3545.679932  8.381550e+07  1.528360e+11            14.281919   

       percentage_chng_7d  percentage_chng_30d  percentage_chng_1h  
count          182.000000           150.000000          200.000000  
mean             0.604671             3.121747            0.047943  
std              2.908179             5.915501            0.249904  
min             -9.802341           -13.989924           -0.644219  
25%             -1.053994             0.082693           -0.120030  
50%              0.346023             2.431388            0.044298  
75%              2.580314             5.864156            0.207520  
max             11.312091            28.340937            0.776214  
```

	Unnamed: 0	SYMBOL	Open	High	Low	Close	Adj Close	Volume	Gros
34	34	AMZN	3537.0	3593.879883	3525.820068	3545.679932	3545.679932	2546886.0	152757

```
Amazon is most expensive share in SP500

These are 5 tickers with highest gross profit in SP500
```

	Unnamed: 0	SYMBOL	Open	High	Low	Close	Adj Close	Volume
3	3	AAPL	150.369995	151.880005	149.429993	150.000000	150.000000	55958623.0
34	34	AMZN	3537.000000	3593.879883	3525.820068	3545.679932	3545.679932	2546886.0
54	54	BAC	47.259998	47.389999	46.904999	47.049999	47.049999	35335506.0
100	100	CMCSA	53.450001	53.730000	53.240002	53.380001	53.380001	9970298.0
70	70	BRK-B	286.600006	286.839996	284.295013	284.670013	284.670013	3219074.0

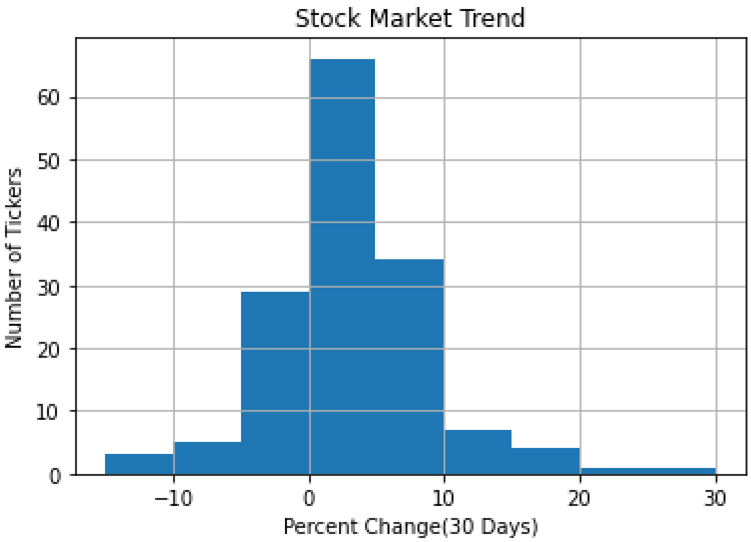
In [6]:

```
print('Shows the direction of the stock market index S&P 500')
print('Most of the stocks increased 0% to 5% or 6% to 10% in 30 days')
bins_list= [-15,-10,-5,0,5,10,15,20,25,30]
df.hist(column='percentage_chng_30d', bins=bins_list)
plt.xlabel('Percent Change(30 Days)')
plt.ylabel('Number of Tickers')
plt.title('Stock Market Trend')
```

```
Shows the direction of the stock market index S&P 500
Most of the stocks increased 0% to 5% or 6% to 10% in 30 days
```

Out[6]:

```
Text(0.5, 1.0, 'Stock Market Trend')
```



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