

Creado por:

Isabel Maniega

Serie Temporales

Usaremos para realizar este tipo de gráficos la obtención de datos de dos librerías de Bolsa, como son Quandl y Yfinance

Quandl

<https://data.nasdaq.com/tools/python>

In [1]:

pip install quandl

In [2]:

import quandl

In [3]:

Vamos a extraer las cotizaciones de Google en las mencionadas
Año 2015-2016-2017-2018
formato: Año-Mes-Día

In [8]:

data = quandl.get("WIKI/GOOGL", start_date="2015-01-01", end_date="2018-12-31")

In [9]:

5 primeras filas
data.head()

Out[9]:

	Open	High	Low	Close	Volume	Ex-Dividend	Split Ratio	Adj. Open	Adj. High	Adj. Low	Adj. Close	Adj. Volume
Date												
2015-01-02	532.60	535.8000	527.88	529.55	1327870.0	0.0	1.0	532.60	535.8000	527.88	529.55	1327870.0
2015-01-05	527.15	527.9899	517.75	519.46	2059119.0	0.0	1.0	527.15	527.9899	517.75	519.46	2059119.0
2015-01-06	520.50	521.2100	505.55	506.64	2731813.0	0.0	1.0	520.50	521.2100	505.55	506.64	2731813.0
2015-01-07	510.95	511.4900	503.65	505.15	2345875.0	0.0	1.0	510.95	511.4900	503.65	505.15	2345875.0
2015-01-08	501.51	507.5000	495.02	506.91	3662224.0	0.0	1.0	501.51	507.5000	495.02	506.91	3662224.0

In [10]:

data.tail()

Out[10]:

	Open	High	Low	Close	Volume	Ex-Dividend	Split Ratio	Adj. Open	Adj. High	Adj. Low	Adj. Close	Adj. Volume
Date												
2018-03-21	1092.57	1108.70	1087.21	1094.00	1990515.0	0.0	1.0	1092.57	1108.70	1087.21	1094.00	1990515.0
2018-03-22	1080.01	1083.92	1049.64	1053.15	3418154.0	0.0	1.0	1080.01	1083.92	1049.64	1053.15	3418154.0
2018-03-23	1051.37	1066.78	1024.87	1026.55	2413517.0	0.0	1.0	1051.37	1066.78	1024.87	1026.55	2413517.0
2018-03-26	1050.60	1059.27	1010.58	1054.09	3272409.0	0.0	1.0	1050.60	1059.27	1010.58	1054.09	3272409.0
2018-03-27	1063.90	1064.54	997.62	1006.94	2940957.0	0.0	1.0	1063.90	1064.54	997.62	1006.94	2940957.0

In [12]:

column = data[["Close"]]
column

Out[12]:

	Close
Date	
2015-01-02	529.55
2015-01-05	519.46
2015-01-06	506.64
2015-01-07	505.15
2015-01-08	506.91
...	...
2018-03-21	1094.00
2018-03-22	1053.15
2018-03-23	1026.55
2018-03-26	1054.09
2018-03-27	1006.94

813 rows × 1 columns

In [13]:

Podemos obtener los datos directamente de la columna que nos interesa mediante (.)Numero columna: GOOGL.4
df = quandl.get("WIKI/GOOGL.4", start_date="2015-01-01", end_date="2018-12-31")
df

Out[13]:

	Close
Date	
2015-01-02	529.55
2015-01-05	519.46
2015-01-06	506.64
2015-01-07	505.15
2015-01-08	506.91
...	...
2018-03-21	1094.00
2018-03-22	1053.15
2018-03-23	1026.55
2018-03-26	1054.09
2018-03-27	1006.94

813 rows × 1 columns

In [14]:

type(df)

Out[14]:

pandas.core.frame.DataFrame

In [15]:

type(column)

Out[15]:

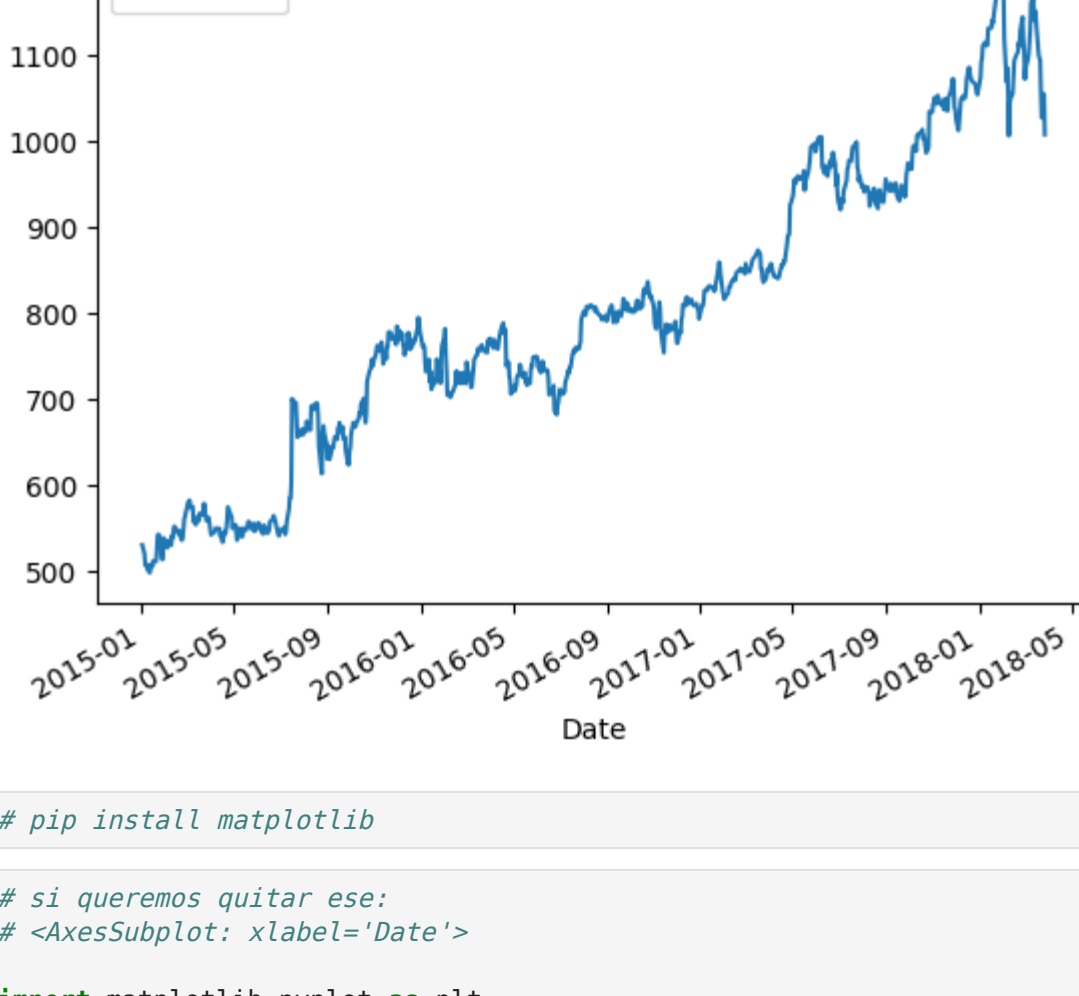
pandas.core.frame.DataFrame

In [16]:

df.plot()

Out[16]:

<AxesSubplot: xlabel='Date'>



In [18]:

pip install matplotlib


In [19]:

si queremos quitar ese:
<AxesSubplot: xlabel='Date'>

import matplotlib.pyplot as plt

In [20]:


column.plot()
plt.show()



In [21]:

Si queremos añadir un titulo y unos ejes

column.plot(title="Gráfica de cotización de Google",
 xlabel="Fecha",
 ylabel="Cotización en \$ USD")
plt.show()



Yfinance: Yahoo Finance

<https://pypi.org/project/yfinance/>

In [1]:

pip install yfinance

In [3]:

import yfinance as yf

In [6]:

df_y = yf.download("GOOGL", "2015-1-1", "2018-12-31")
[*****100%*****] 1 of 1 completed

In [7]:

type(df_y)

Out[7]:

pandas.core.frame.DataFrame

In [8]:

df_y.head()

Out[8]:

	Open	High	Low	Close	Adj Close	Volume
Date						
2015-01-02	26.629999	26.790001	26.393999	26.477501	26.477501	26480000
2015-01-05	26.357500	26.399500	25.887501	25.973000	25.973000	41182000
2015-01-06	26.025000	26.060499	25.277500	25.332001	25.332001	54456000
2015-01-07	25.547501	25.574499	25.182501	25.257500	25.257500	46918000
2015-01-08	25.075500	25.375000	24.750999	25.345501	25.345501	73054000

In [9]:

df_y.tail()

Out[9]:

	Open	High	Low	Close	Adj Close	Volume
Date						
2018-12-21	51.602001	51.883499	49.059502	49.562500	49.562500	104656000
2018-12-24	49.216000	50.605999	48.882999	49.233501	49.233501	36360000
2018-12-26	49.899502	52.422501	49.632500	52.392502	52.392502	46318000
2018-12-27	51.310001	52.667000	50.349998	52.645000	52.645000	45996000
2018-12-28	52.974998	53.211498	52.099998	52.334000	52.334000	34398000

In [10]:

column = df_y[["Close"]]
column.head()

Out[10]:

	Close
Date	
2015-01-02	26.477501
2015-01-05	25.973000
2015-01-06	25.332001
2015-01-07	25.257500
2015-01-08	25.345501

In [11]:

column.tail()

Out[11]:

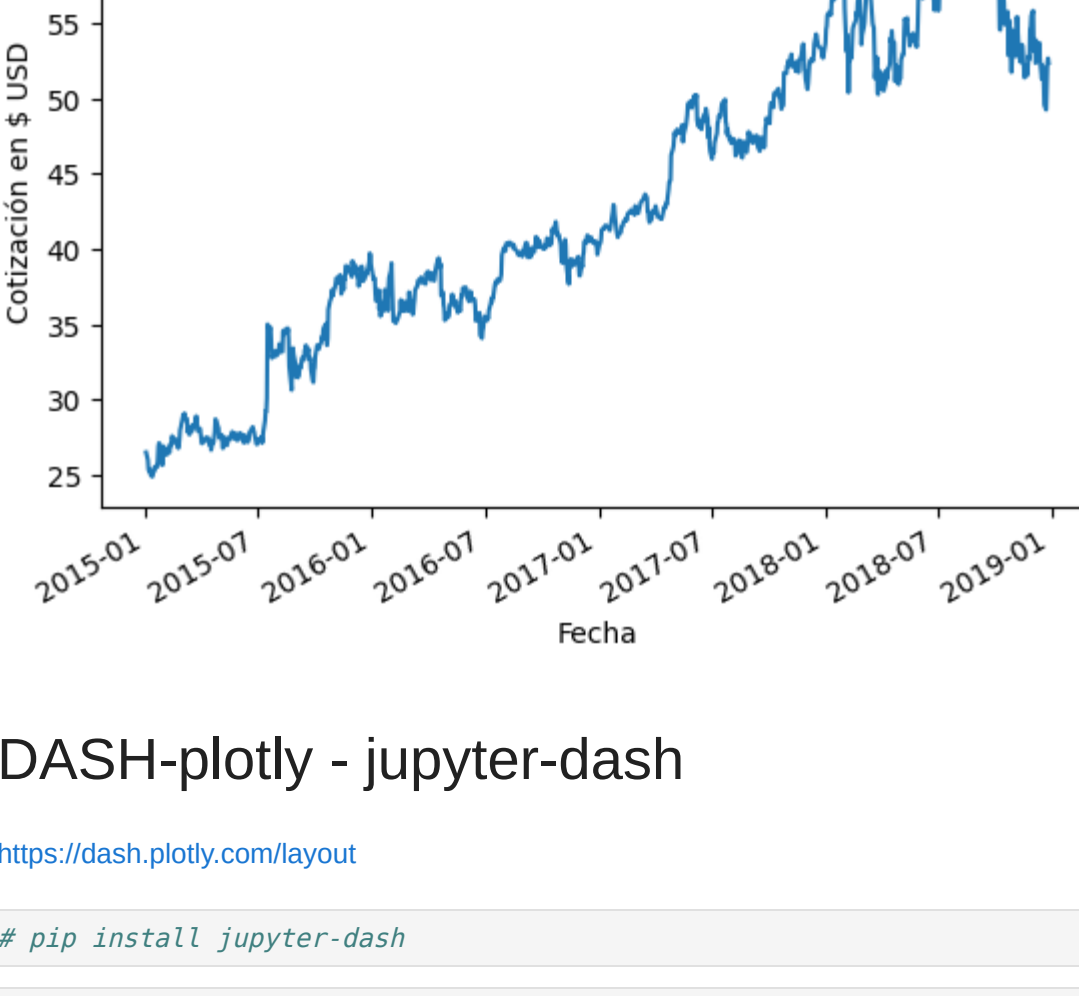
	Close
Date	
2018-12-21	49.562500
2018-12-24	49.233501
2018-12-26	52.392502
2018-12-27	52.645000
2018-12-28	52.334000

In [12]:

import matplotlib.pyplot as plt

In [13]:

column.plot(title="Gráfica de cotización de Google",
 xlabel="Fecha",
 ylabel="Cotización en \$ USD")
plt.show()



DASH-plotly - jupyter-dash

<https://dash.plotly.com/layout>

In [15]:

pip install jupyter-dash

In [17]:

pip install dash

In [1]:

from jupyter_dash import JupyterDash
from dash import dcc
from dash import html
from dash.dependencies import Input, Output
import plotly.express as px

In [3]:

df = quandl.get("WIKI/GOOGL.4", start_date="2015-01-01", end_date="2018-12-31")


figure = px.line(df, title="Cotización de Google: Enero 2015 - Diciembre de 2018")

In [5]:

app = JupyterDash(__name__)
app.layout = html.Div(children=[
 html.H1(children="Aplicación con DASH para Mercados Financieros"),
 dcc.Graph(figure=figure)
])

if __name__ == "__main__":
 app.run_server(mode="inline")

Aplicación con DASH para Mercados Financieros



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Isabel Maniega