In [1]:
```
#reading the data
import pandas as  pd
stock_data= pd.read_csv("NFLX_dataset.csv")
```

In [2]:
```
stock_data.head()
```

Out[2]:

	Date	Open	High	Low	Close	Adj Close	Volume
0	2018-02-05	262.000000	267.899994	250.029999	254.259995	254.259995	11896100
1	2018-02-06	247.699997	266.700012	245.000000	265.720001	265.720001	12595800
2	2018-02-07	266.579987	272.450012	264.329987	264.559998	264.559998	8981500
3	2018-02-08	267.079987	267.619995	250.000000	250.100006	250.100006	9306700
4	2018-02-09	253.850006	255.800003	236.110001	249.470001	249.470001	16906900

In [3]:
```
stock_data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1009 entries, 0 to 1008
Data columns (total 7 columns):
 #   Column     Non-Null Count  Dtype  
---  ------     --------------  -----  
 0   Date       1009 non-null   object 
 1   Open       1009 non-null   float64
 2   High       1009 non-null   float64
 3   Low        1009 non-null   float64
 4   Close      1009 non-null   float64
 5   Adj Close  1009 non-null   float64
 6   Volume     1009 non-null   int64  
dtypes: float64(5), int64(1), object(1)
memory usage: 55.3+ KB
```

In [ ]:
```

```

In [4]:
```
stock_data.isna().sum()
```

Out[4]:
```
Date         0
Open         0
High         0
Low          0
Close        0
Adj Close    0
Volume       0
dtype: int64
```

In [5]:
```
stock_data.describe()
```

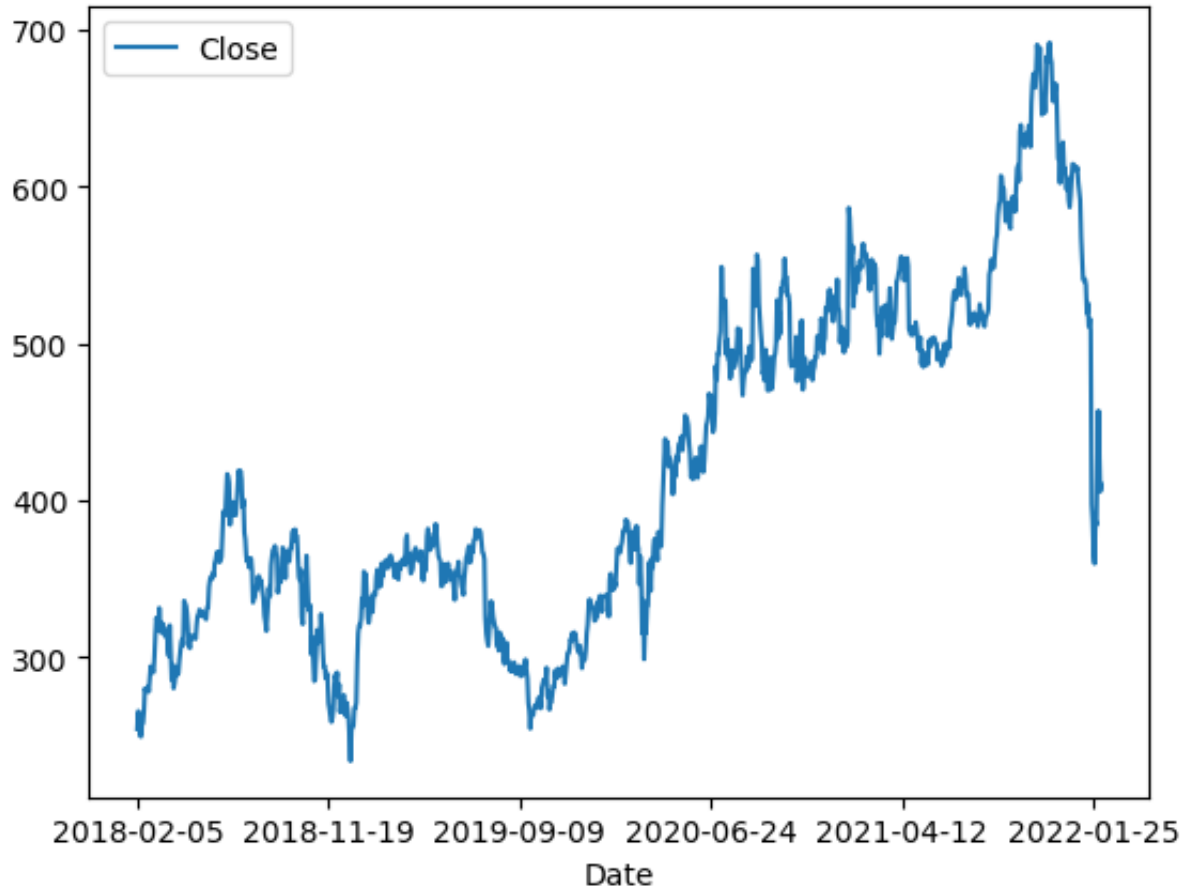
Out[5]:

	Open	High	Low	Close	Adj Close	Volume
count	1009.000000	1009.000000	1009.000000	1009.000000	1009.000000	1.009000e+03
mean	419.059673	425.320703	412.374044	419.000733	419.000733	7.570685e+06
std	108.537532	109.262960	107.555867	108.289999	108.289999	5.465535e+06
min	233.919998	250.649994	231.229996	233.880005	233.880005	1.144000e+06
25%	331.489990	336.299988	326.000000	331.619995	331.619995	4.091900e+06
50%	377.769989	383.010010	370.880005	378.670013	378.670013	5.934500e+06
75%	509.130005	515.630005	502.529999	509.079987	509.079987	9.322400e+06
max	692.349976	700.989990	686.090027	691.690002	691.690002	5.890430e+07

In [ ]:

In [6]:
```
stock_data.plot(x="Date" , y="Close")
```

Out[6]:
```
<Axes: xlabel='Date'>
```



In [ ]:

input and output data

In [8]:
```
input_data =stock_data.drop(columns = ["Date", "Close", "Adj Close"])
output_data =stock_data["Close"]
```

In [9]:
```
print (input_data)
```

```
            Open        High         Low    Volume
0     262.000000  267.899994  250.029999  11896100
1     247.699997  266.700012  245.000000  12595800
2     266.579987  272.450012  264.329987   8981500
3     267.079987  267.619995  250.000000   9306700
4     253.850006  255.800003  236.110001  16906900
...          ...         ...         ...       ...
1004  401.970001  427.700012  398.200012  20047500
1005  432.959991  458.480011  425.540009  22542300
1006  448.250000  451.980011  426.480011  14346000
1007  421.440002  429.260010  404.279999   9905200
1008  407.309998  412.769989  396.640015   7782400

[1009 rows x 4 columns]
```

In [10]:
```
print (output_data)
```

```
0       254.259995
1       265.720001
2       264.559998
3       250.100006
4       249.470001
           ...
1004    427.140015
1005    457.130005
1006    429.480011
1007    405.600006
1008    410.170013
Name: Close, Length: 1009, dtype: float64
```

In [11]:
```
print(input_data.shape)
print (output_data.shape)
```

```
(1009, 4)
(1009,)
```

In [ ]:
```

```

Model test (allocation datas test,train)

In [14]:
```
from sklearn.model_selection import train_test_split
input_data_train , input_data_test , output_data_train , output_data_test
```

In [15]:
```
print(input_data_train.shape)
print(output_data_train.shape)
print(input_data_test.shape)
print(output_data_test.shape)
```

```
(706, 4)
(706,)
(303, 4)
(303,)
```

In [ ]:

In [16]:
```
from sklearn.ensemble import RandomForestRegressor
model = RandomForestRegressor()
```

In [ ]:

Model fit (train)

In [17]:
```
model.fit(input_data_train, output_data_train)
```

Out[17]:
```
RandomForestRegressor()
```

In [ ]:

In [18]:
```
stock_predicted = model.predict(input_data_test)
```

In [ ]:

In [20]:
```
from sklearn import metrics
from sklearn.metrics import mean_absolute_error , mean_squared_error , r2
```

In [22]:
```
print("Mean Absolute Error:" , (metrics.mean_absolute_error(stock_predict
print("Mean Squared Error:" , (metrics.mean_squared_error(stock_predicted
print("R2 Score:" , (metrics.r2_score(stock_predicted, output_data_test))
```

```
Mean Absolute Error: 3.726773300330027
Mean Squared Error: 27.154408192727296
R2 Score: 0.9976892154581344
```

test model our own way

In [28]:
```
print(input_data_test.tail(3))
input_random = input_data_test.tail(3)
input_random
```

```
            Open        High         Low    Volume
804   550.539978  551.979980  539.510010   3209100
401   291.160004  297.170013  282.660004  12320200
92    387.720001  393.160004  386.500000   6824800
```

Out[28]:

	Open	High	Low	Volume
804	550.539978	551.979980	539.510010	3209100
401	291.160004	297.170013	282.660004	12320200
92	387.720001	393.160004	386.500000	6824800

In [29]:
```
print(output_data_test.tail(3))
```

```
804    546.539978
401    287.989990
92     390.399994
Name: Close, dtype: float64
```

In [31]:
```
stock_predit_test = model.predict(input_random)
stock_predit_test
```

Out[31]:
```
array([545.18429814, 290.31500409, 388.85430311])
```

In [ ]:

In [ ]: