In [1]:
```
import matplotlib.pylab as plt
import pandas as pd
```

Google stock data

In [2]:
```
### 1 Google stock
g_stock=pd.read_csv("C:\\Users\\Lenovo\\OneDrive\\Desktop\\GOOG Stock dat
```

Out[2]:

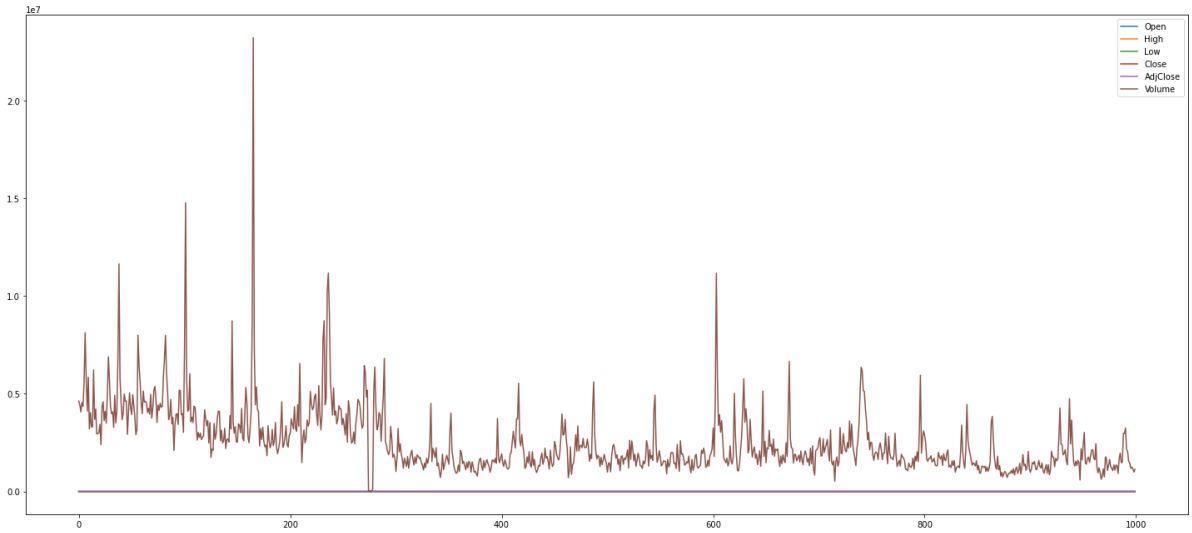
	Date	Open	High	Low	Close	AdjClose	Volume
0	25-02-2013	399.652008	402.695587	393.769043	393.908539	393.908539	4625071
1	26-02-2013	396.015625	396.488861	390.735443	393.589722	393.589722	4421511
2	27-02-2013	395.916016	400.872437	394.077911	398.396698	398.396698	4067389
3	28-02-2013	399.054260	401.988251	399.019379	399.104065	399.104065	4548586
4	01-03-2013	397.410400	402.062958	396.588501	401.589752	401.589752	4367108
...	...	...	...	...	...	...	...
995	06-02-2017	799.700012	801.669983	795.250000	801.340027	801.340027	1184500
996	07-02-2017	803.989990	810.500000	801.780029	806.969971	806.969971	1241200
997	08-02-2017	807.000000	811.840027	803.190002	808.380005	808.380005	1155300
998	09-02-2017	809.510010	810.659973	804.539978	809.559998	809.559998	989700
999	10-02-2017	811.700012	815.250000	809.780029	813.669983	813.669983	1135000

1000 rows × 7 columns

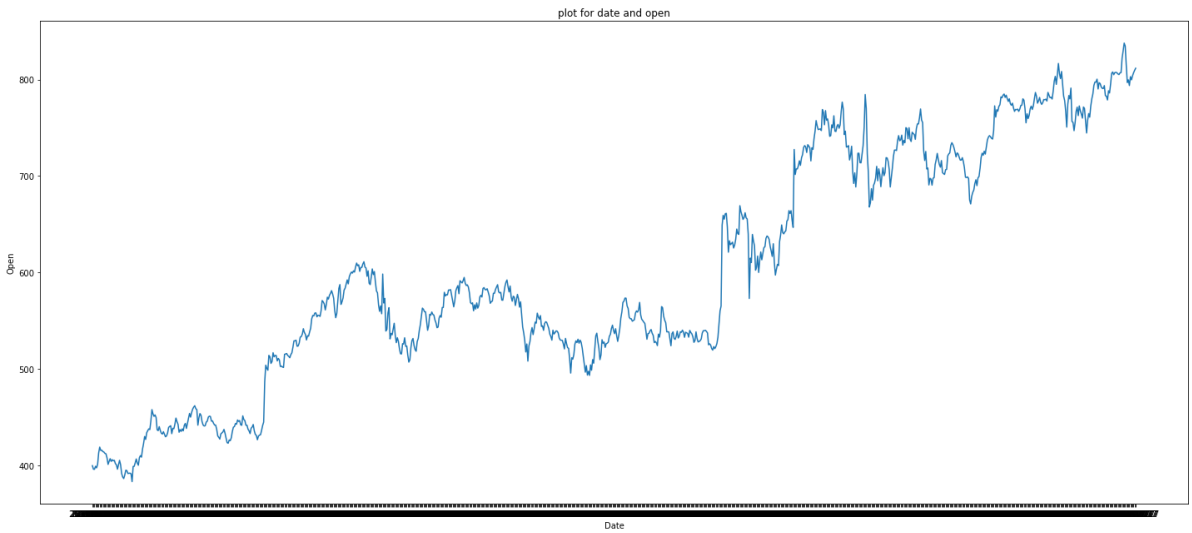
In [3]:
```
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
columns = ['Date','Open','High','Low','Close','AdjClose','Volume']

g_stock.plot()
```

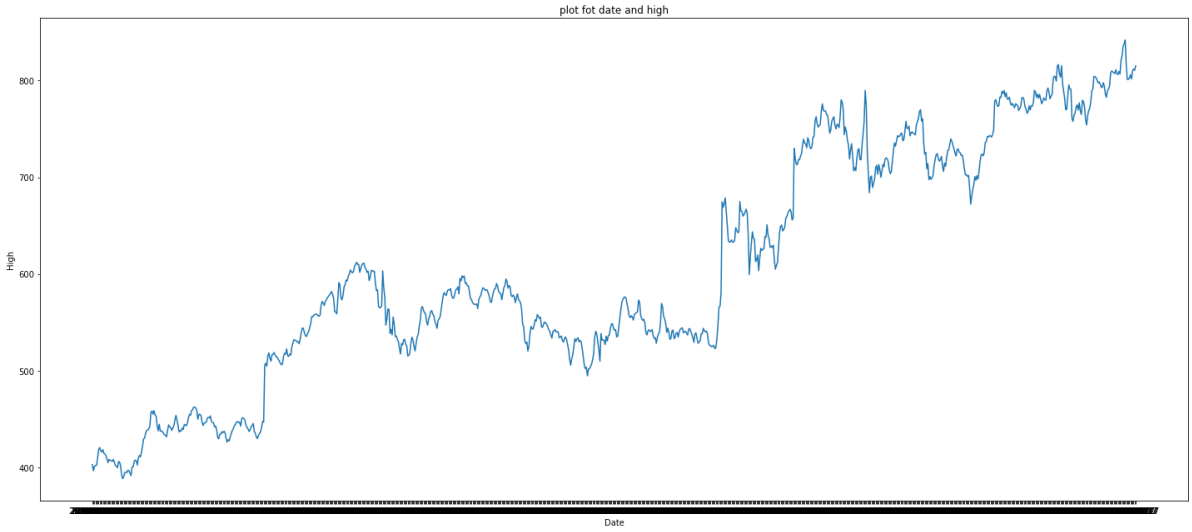
Out[3]: <AxesSubplot:>



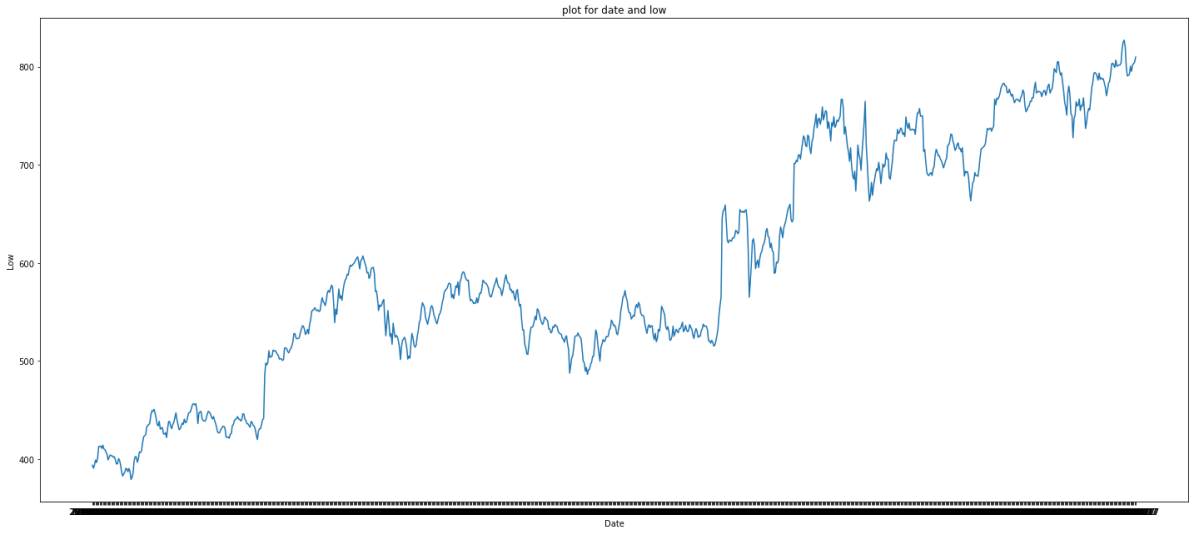
In [4]:
```
plt.plot(g_stock.Date,g_stock.Open)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("Date")
plt.ylabel("Open")
plt.title("plot for date and open")
```



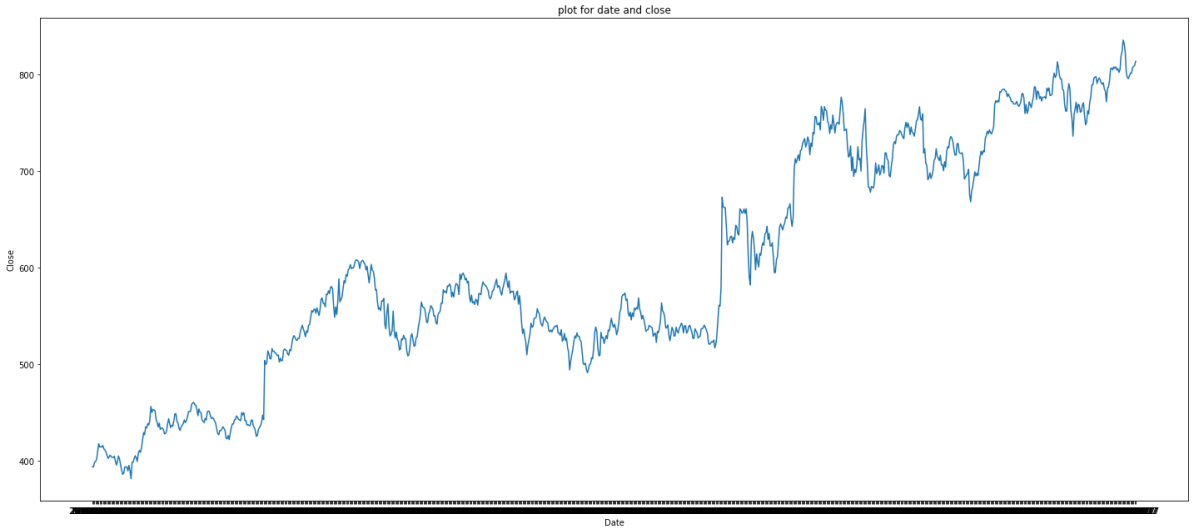
In [5]:
```
plt.plot(g_stock.Date,g_stock.High)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("Date")
plt.ylabel("High")
plt.title("plot fot date and high")
```



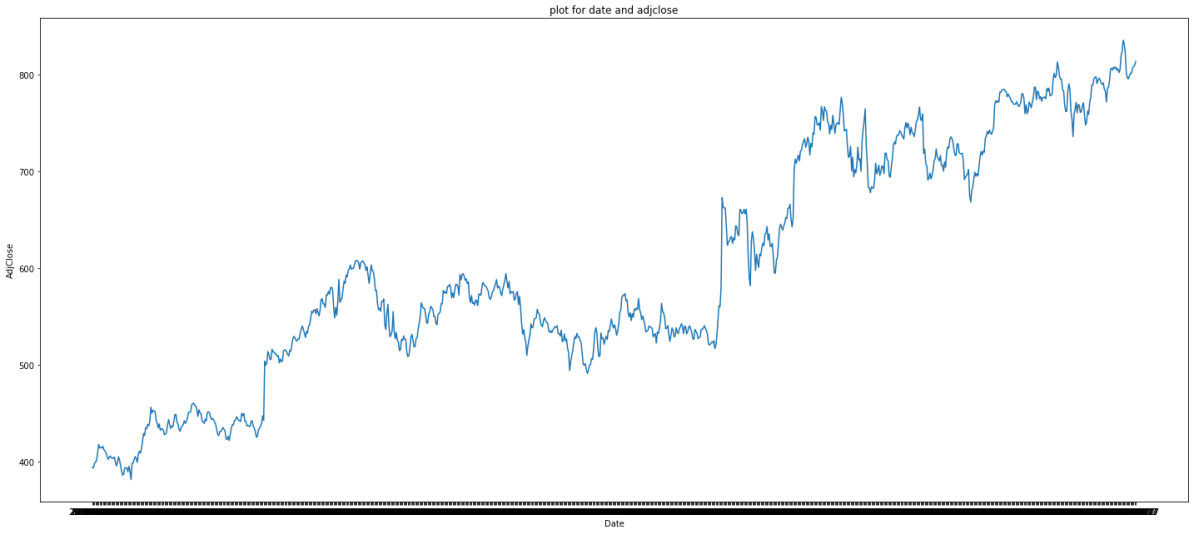
In [5]:
```
plt.plot(g_stock.Date,g_stock.Low)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("Date")
plt.ylabel("Low")
plt.title("plot for date and low")
```



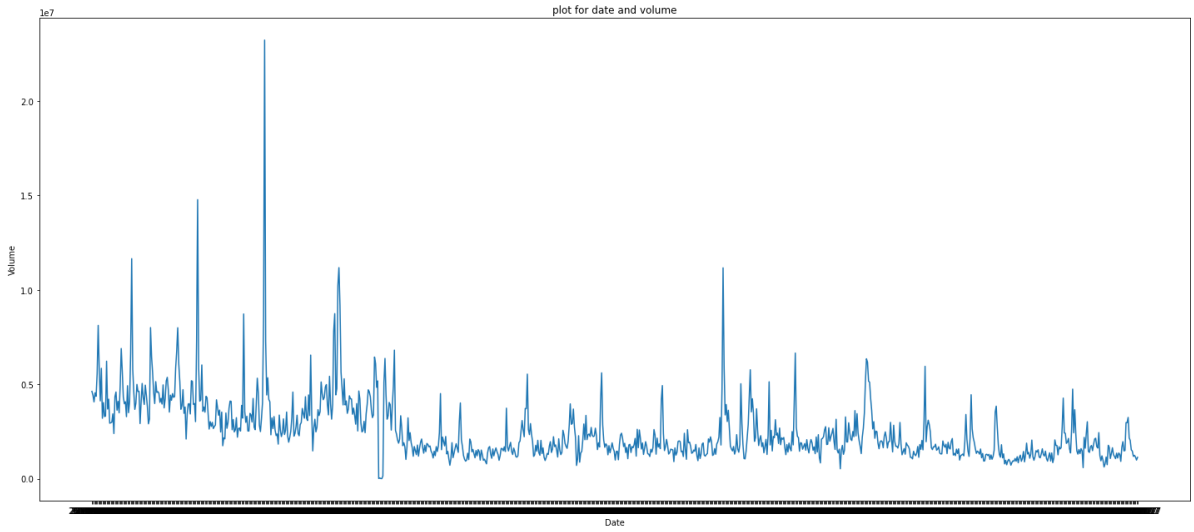
In [6]:
```
plt.plot(g_stock.Date,g_stock.Close)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("Date")
plt.ylabel("Close")
plt.title("plot for date and close")
```



In [7]:
```
plt.plot(g_stock.Date,g_stock.AdjClose)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("Date")
plt.ylabel("AdjClose")
plt.title("plot for date and adjclose")
```

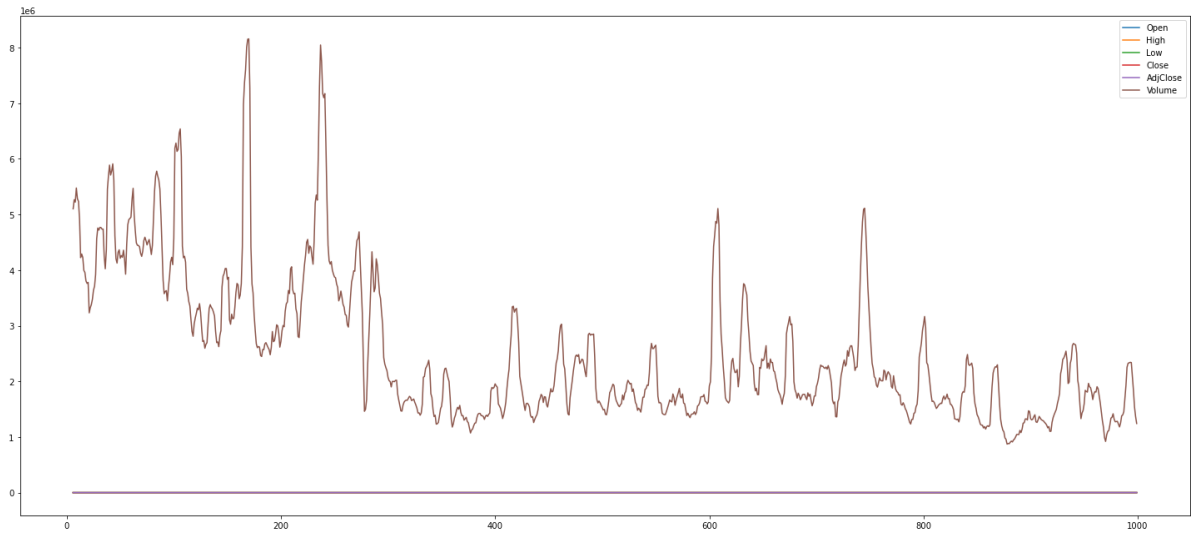


In [8]:
```
plt.plot(g_stock.Date,g_stock.Volume)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("Date")
plt.ylabel("Volume")
plt.title("plot for date and volume")
```



In [42]:
```
rol=g_stock.rolling(window=7).mean()
```

Out[42]: <AxesSubplot:>



stock data

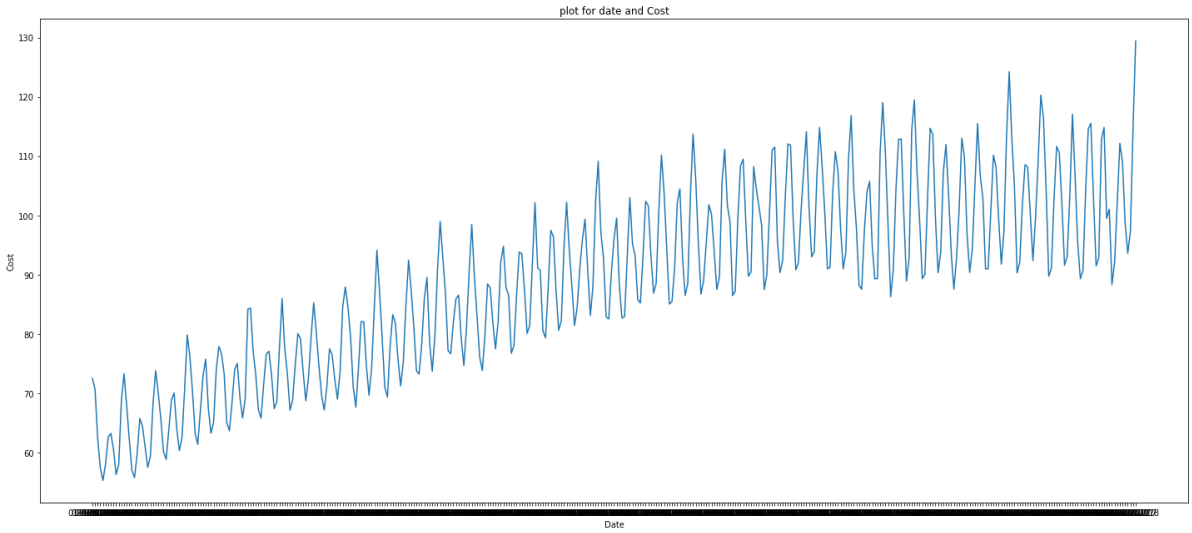
In [10]:
```
s_data=pd.read_csv("C:\\Users\\Lenovo\\OneDrive\\Desktop\\Stock_Data.csv"
```

Out[10]:

	DATE	Cost
0	01-01-1985	72.5052
1	02-01-1985	70.6720

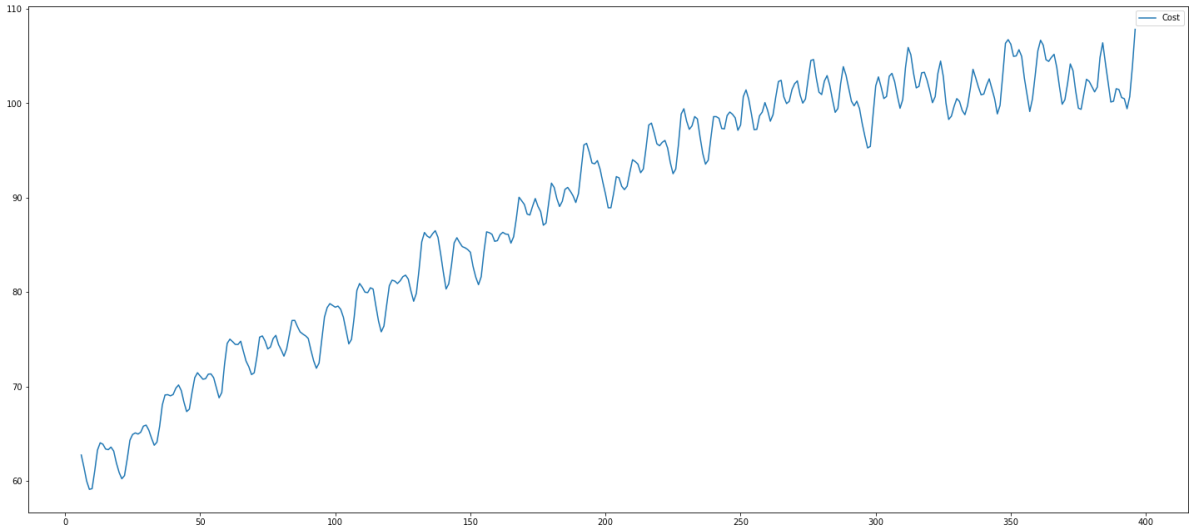
	DATE	Cost
2	03-01-1985	62.4502
3	04-01-1985	57.4714
4	05-01-1985	55.3151
...	...	...
392	09-01-2017	98.6154
393	10-01-2017	93.6137
394	11-01-2017	97.3359
395	12-01-2017	114.7212
396	01-01-2018	129.4048

In [11]:
```
plt.plot(s_data.DATE,s_data.Cost)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("Date")
plt.ylabel("Cost")
plt.title("plot for date and Cost")
```



In [41]:
```
rol=s_data.rolling(window=7).mean()
```

Out[41]: <AxesSubplot:>



Beer sales

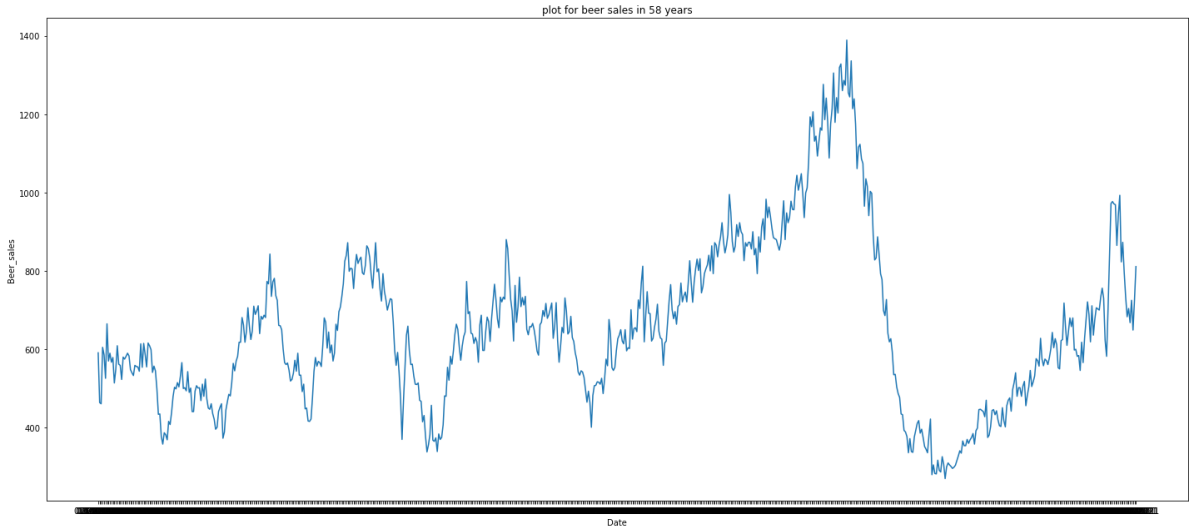
In [13]:
```
Beer=pd.read_csv("C:\\Users\\Lenovo\\OneDrive\\Desktop\\beer_sales.csv")
Beer
```

Out[13]:

	Date	Beer_Sale
0	01-01-1963	591
1	02-01-1963	464
2	03-01-1963	461
3	04-01-1963	605
4	05-01-1963	586
...	...	...
703	08-01-2021	668
704	09-01-2021	725
705	10-01-2021	649
706	11-01-2021	725
707	12-01-2021	811

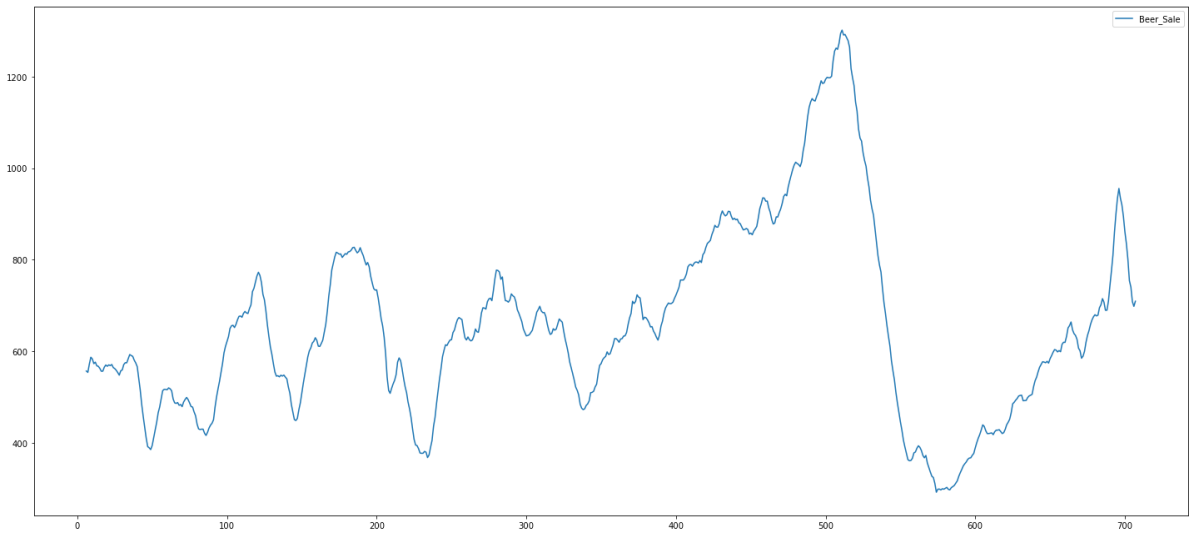
708 rows × 2 columns

In [14]:
```
plt.plot(Beer.Date,Beer.Beer_Sale)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("Date")
plt.ylabel("Beer_sales")
plt.title("plot for beer sales in 58 years")
```



In [40]:
```
rol=Beer.rolling(window=7).mean()
```

Out[40]: <AxesSubplot:>



- Marker yield_1

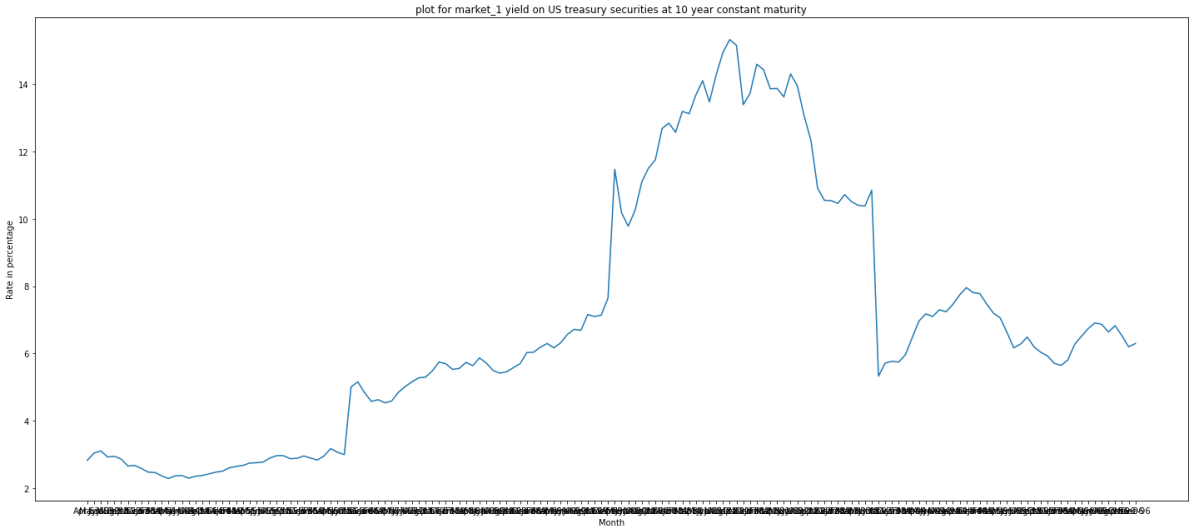
In [16]:
```
market_1=pd.read_csv("C:\\Users\\Lenovo\\OneDrive\\Desktop\\Market_1.csv"
```

Out[16]:

	Month	Rate
0	Apr-53	2.83
1	May-53	3.05

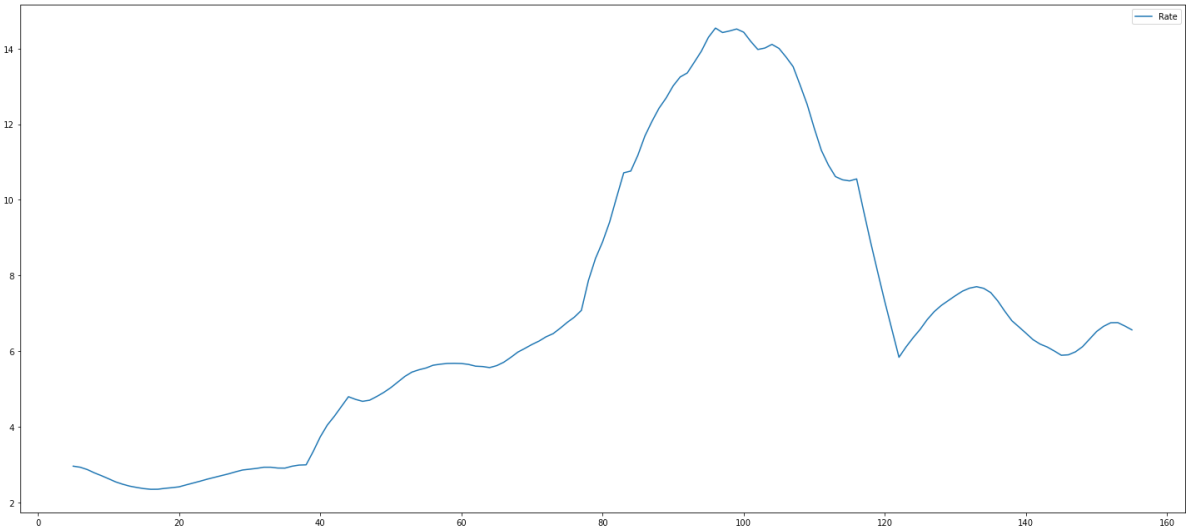
	Month	Rate
2	Jun-53	3.11
3	Jul-53	2.93
4	Aug-53	2.95
...	...	...
151	Aug-96	6.64
152	Sep-96	6.83
153	Oct-96	6.53
154	Nov-96	6.20
155	Dec-96	6.30

In [17]:
```
plt.plot(market_1.Month,market_1.Rate)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("Month")
plt.ylabel("Rate in percentage")
plt.title("plot for market_1 yield on US treasury securities at 10 year c
```



In [39]:
```
rol=market_1.rolling(window=6).mean()
```

Out[39]: <AxesSubplot:>



- Market yield_2

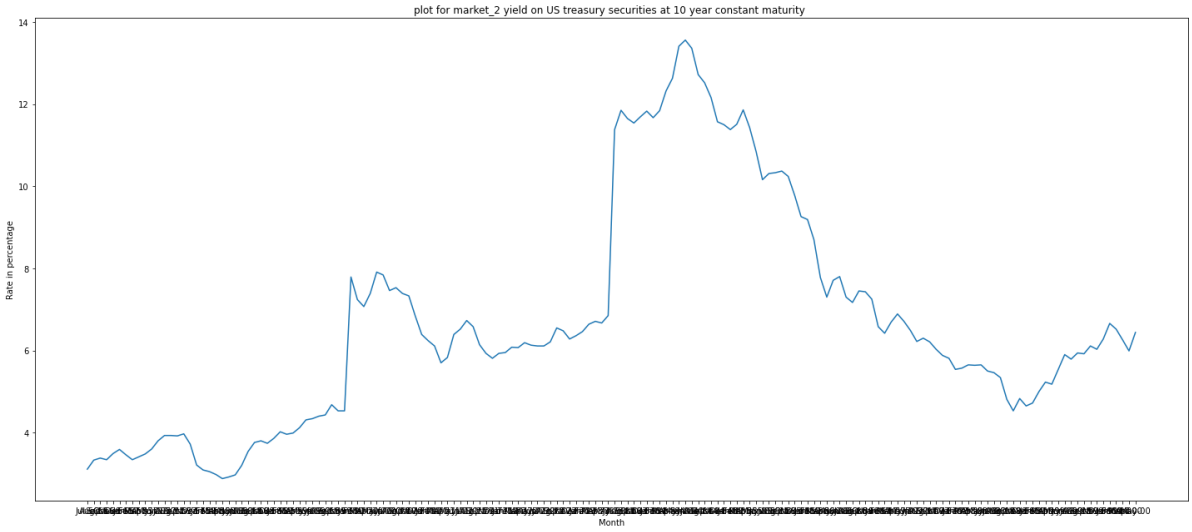
In [19]:
```
market_2=pd.read_csv("C:\\Users\\Lenovo\\OneDrive\\Desktop\\Market_2.csv"
```

Out[19]:

	Month	Rate
0	Jul-56	3.11
1	Aug-56	3.33
2	Sep-56	3.38
3	Oct-56	3.34
4	Nov-56	3.49
...	...	...
159	Jan-00	6.66
160	Feb-00	6.52
161	Mar-00	6.26
162	Apr-00	5.99
163	May-00	6.44

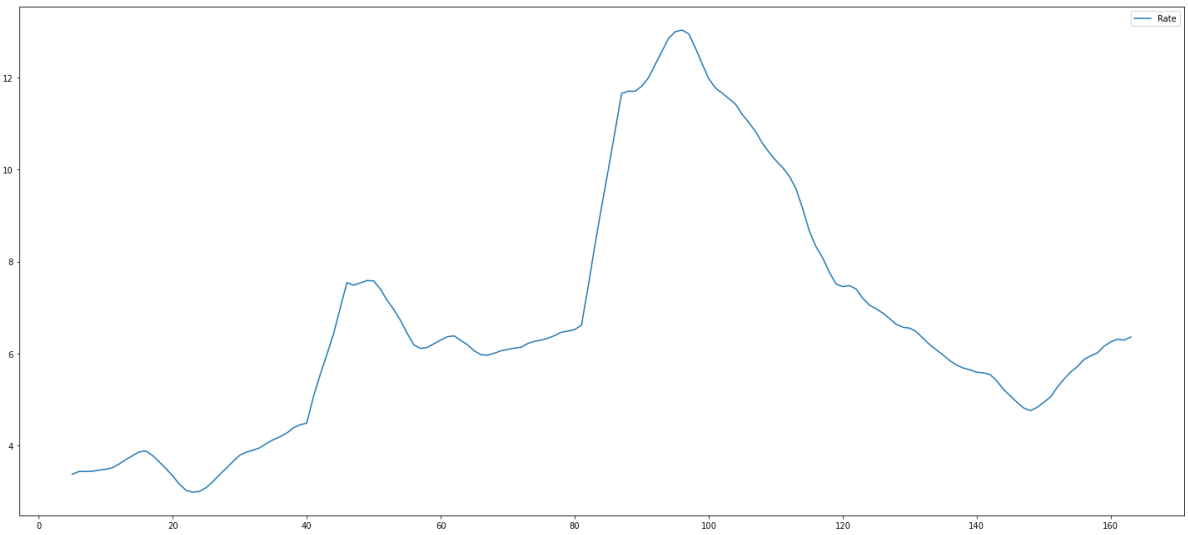
164 rows × 2 columns

In [20]:
```
plt.plot(market_2.Month,market_2.Rate)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("Month")
plt.ylabel("Rate in percentage")
plt.title("plot for market_2 yield on US treasury securities at 10 year c
```



In [38]:
```
rol=market_2.rolling(window=6).mean()
```

Out[38]: <AxesSubplot:>



- chemical Process Viscosity

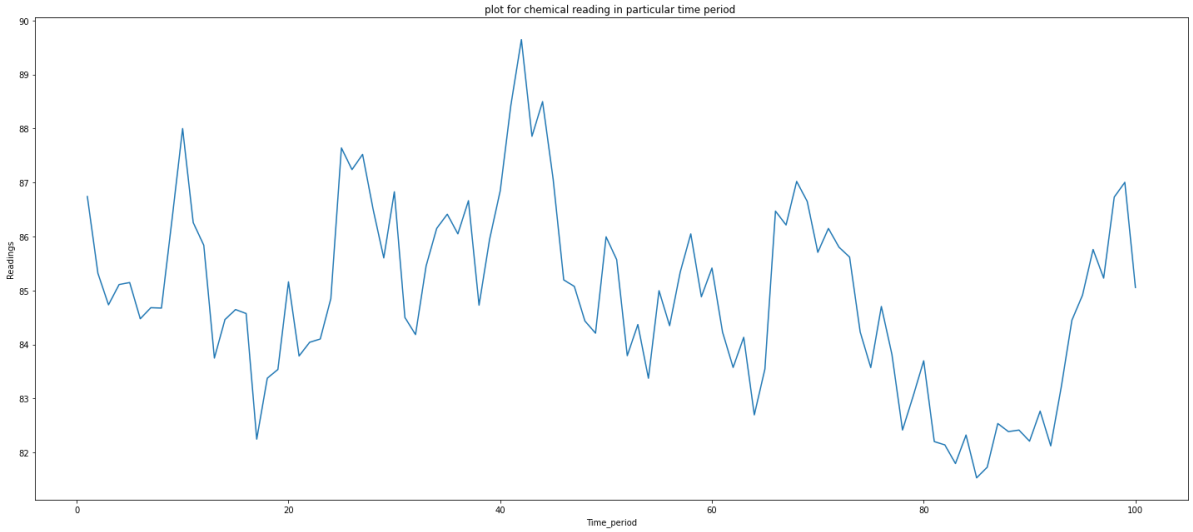
In [22]:
```
chemical=pd.read_csv("C:\\Users\\Lenovo\\OneDrive\\Desktop\\chemical_visc
```

Out[22]:

	Time_period	Reading
0	1	86.7418
1	2	85.3195

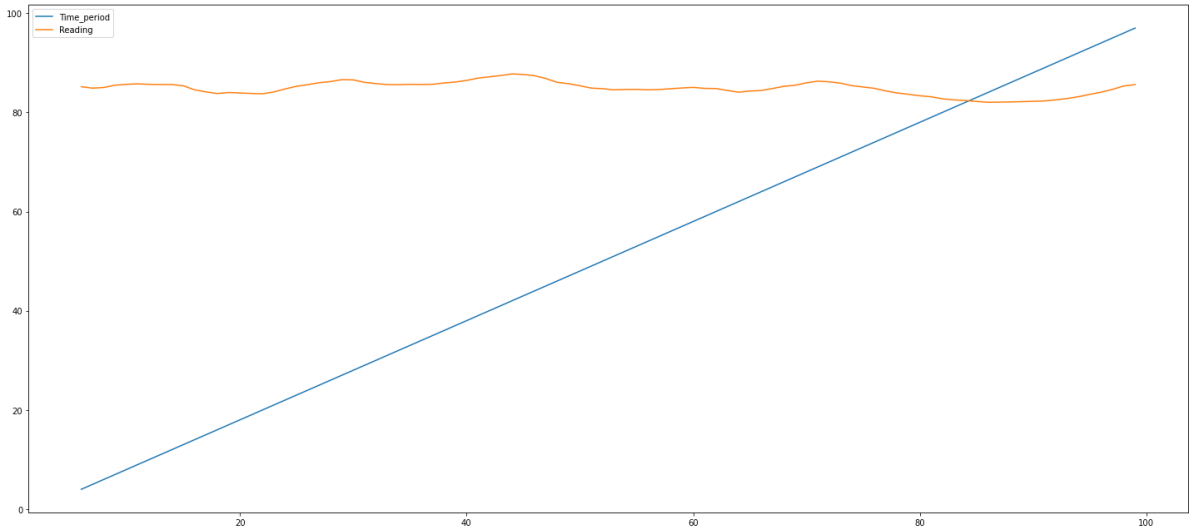
	Time_period	Reading
2	3	84.7355
3	4	85.1113
4	5	85.1487
...	...	...
95	96	85.7609
96	97	85.2302
97	98	86.7312
98	99	87.0048
99	100	85.0572

In [23]:
```
plt.plot(chemical.Time_period,chemical.Reading)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("Time_period")
plt.ylabel("Readings")
plt.title("plot for chemical reading in particular time period ")
```



In [35]:
```
rol=chemical.rolling(window=7).mean()
```

Out[35]: <AxesSubplot:>



- pharmaceutical product sales

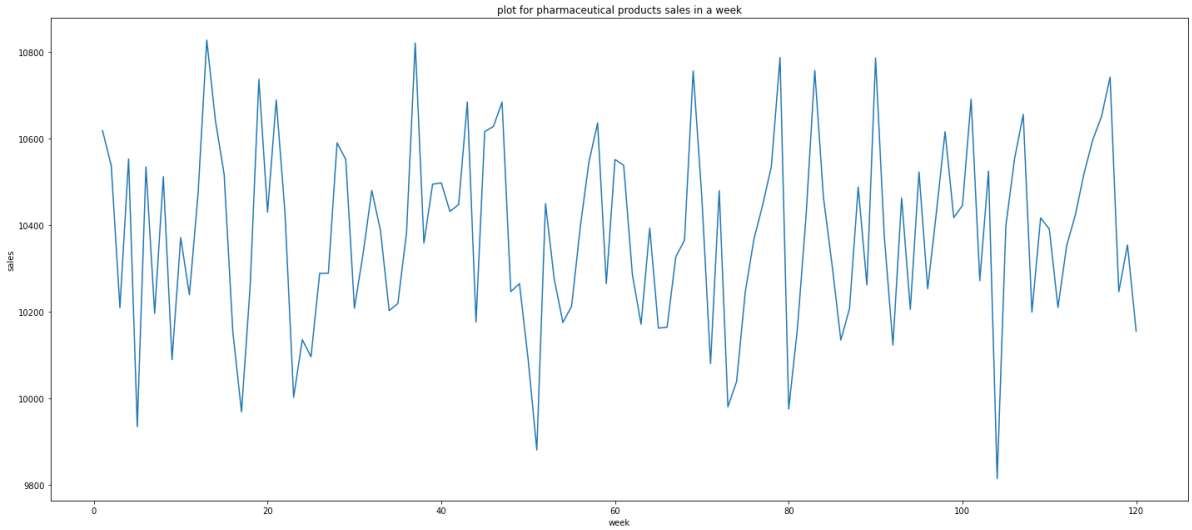
In [25]:
```
pharma=pd.read_csv("C:\\Users\\Lenovo\\OneDrive\\Desktop\\pharma_sale.csv
```

Out[25]:

	week	sales
0	1	10618.1
1	2	10537.9
2	3	10209.3
3	4	10553.0
4	5	9934.9
...	...	...
115	116	10650.0
116	117	10741.6
117	118	10246.0
118	119	10354.4
119	120	10155.4

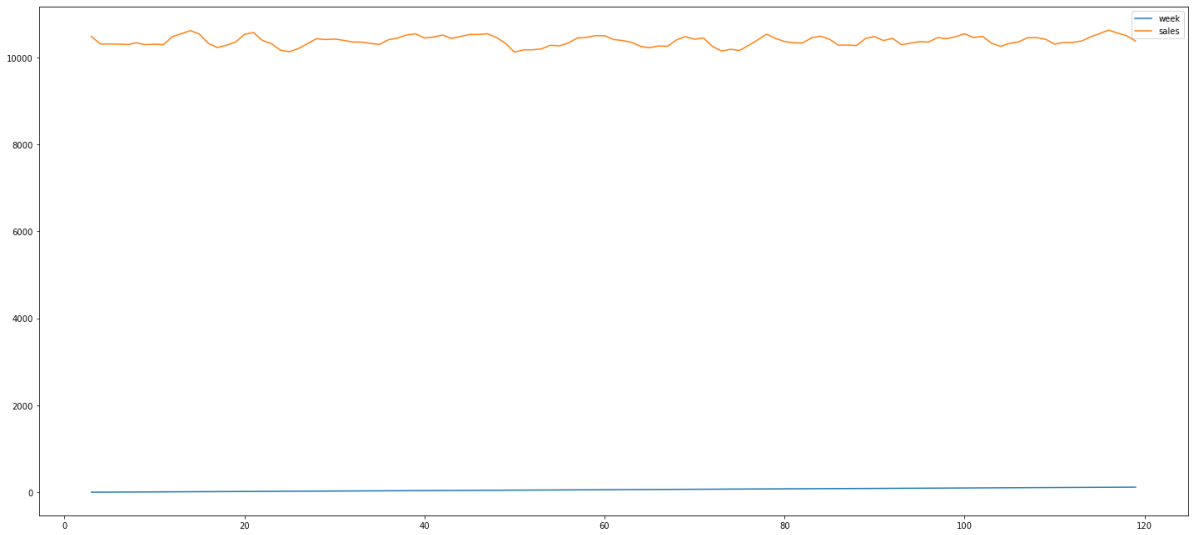
120 rows × 2 columns

In [26]:
```
plt.plot(pharma.week,pharma.sales)
plt.rcParams["figure.figsize"] = [20,9]
plt.rcParams["figure.autolayout"] = True
plt.xlabel("week")
plt.ylabel("sales")
plt.title("plot for pharmaceutical products sales in a week")
```



In [34]:
```
rol=pharma .rolling(window=4).mean()
```

Out[34]: <AxesSubplot:>



In [ ]: