

10a) Write a Python program to draw Time Series using Plotly Libraries.

```
import pandas as pd
import yfinance as yf
import datetime
from datetime import date, timedelta
today = date.today()
d1 = today.strftime("%Y-%m-%d")
end_date = d1
d2 = date.today() - timedelta(days=365)
d2 = d2.strftime("%Y-%m-%d")
start_date = d2
data = yf.download('AAPL',
                  start=start_date,
                  end=end_date,
                  progress=False)
print(data.head())
```

	Open	High	Low	Close	Adj Close
Date					
2023-02-21	150.199997	151.300003	148.410004	148.479996	147.691666
2023-02-22	148.869995	149.949997	147.160004	148.910004	148.119385
2023-02-23	150.089996	150.339996	147.240005	149.399994	148.606781
2023-02-24	147.110001	147.190002	145.720001	146.710007	145.931076
2023-02-27	147.710007	149.169998	147.449997	147.919998	147.134644

	Volume
Date	
2023-02-21	58867200
2023-02-22	51011300
2023-02-23	48394200
2023-02-24	55469600
2023-02-27	44998500

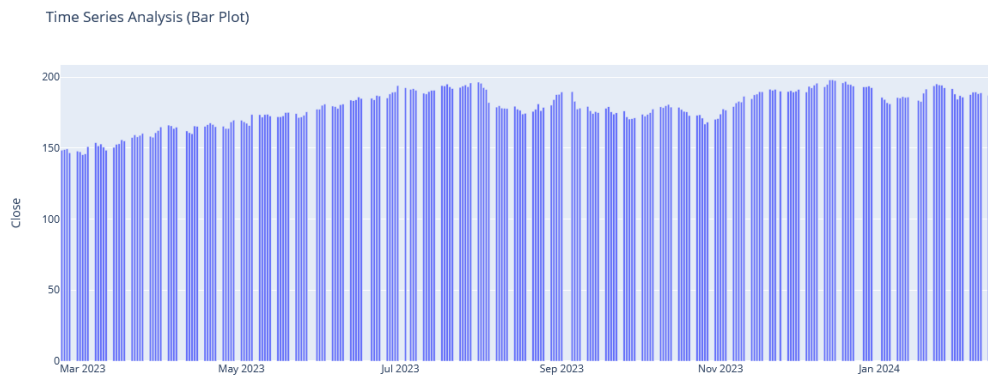
```
import plotly.express as px
figure = px.line(data, x = data.index,
                y = "Close",
                title = "Time Series Analysis(Line Plot)")
figure.show()
```



```
import plotly.graph_objects as go
figure = go.Figure(data=[go.Candlestick(x = data.index,
                                       open = data["Open"],
                                       high = data["High"],
                                       low = data["Low"],
                                       close = data["Close"])]])
figure.update_layout(title =
    "Time Series Analysis (Candlestick Chart)",
    xaxis_rangeslider_visible = False)
figure.show()
```



```
figure = px.bar(data, x = data.index,
                y = "Close",
                title = "Time Series Analysis (Bar Plot)" )
figure.show()
```

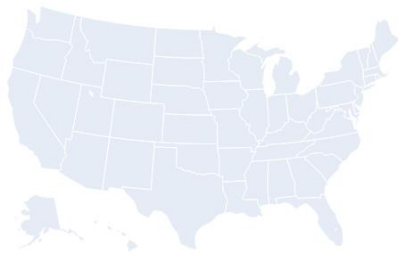


10b) Write a Python program for creating Maps using Plotly Libraries

```
import plotly
import plotly.express as px

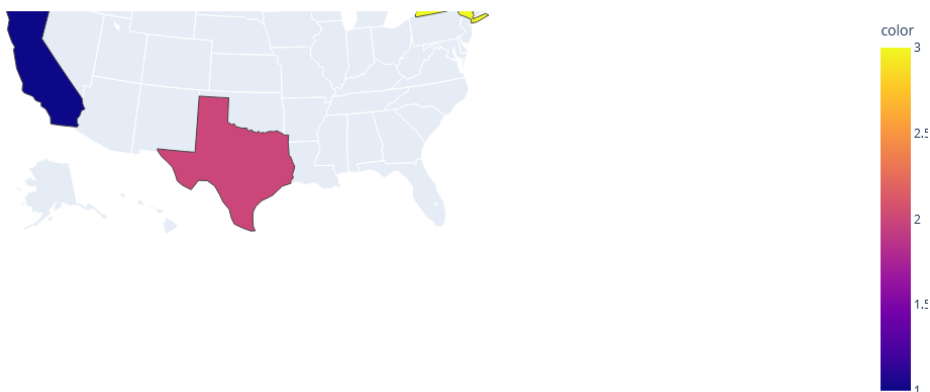
fig = px.choropleth(locationmode="USA-states",
                    color=[9], scope="usa")

fig.show()
```



```
#code for representing states of USA
#pass list of states in locations
#list will have two-letter abbreviations of states
fig = px.choropleth(locations=["CA", "TX", "NY"],
                    locationmode="USA-states",
                    color=[1,2,3], scope="usa")

fig.show()
```



```
#import libraries
import pandas as pd
import plotly.express as px

#import data
data = pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/master/2011_us_ag_exports.csv')

# create choropleth map for the data
# color will be the column to be color-coded
# locations is the column with spatial coordinates
fig = px.choropleth(data, locations='code',
                    locationmode="USA-states",
                    color='total exports',
                    scope="usa")

fig.show()
```

