```
!pip install pystan~=2.14
```

```
!pip install fbprophet
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```
!pip install fbprophet
```

```python
import pandas as pd
import matplotlib.pyplot as plt
from fbprophet import Prophet

data = pd.read_csv('/content/drive/MyDrive/Colab Notebooks/Q1/monthly-car-sales (1).csv')
print(data)
```

```
        Month  Sales
0     1960-01   6550
1     1960-02   8728
2     1960-03  12026
3     1960-04  14395
4     1960-05  14587
..        ...    ...
103   1968-08  16722
104   1968-09  14385
105   1968-10  21342
106   1968-11  17180
107   1968-12  14577

[108 rows x 2 columns]
```

```python
plt.plot(data['Month'], data['Sales'])
plt.xlabel('Date')
plt.ylabel('Value')
plt.show()
```
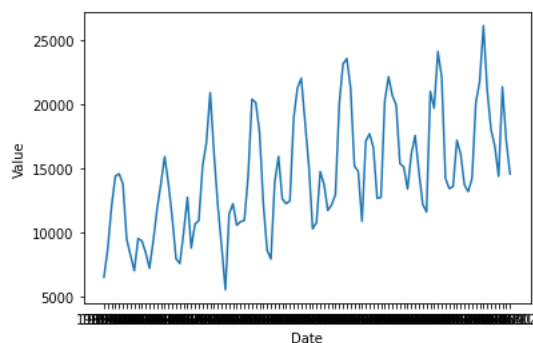


```python
test_data = data.tail(12)
train_data = data[:-12]
print(test_data)
print(train_data)
```

```
          Month  Sales
96   1968-01-01  13210
97   1968-02-01  14251
98   1968-03-01  20139
99   1968-04-01  21725
100  1968-05-01  26099
101  1968-06-01  21084
102  1968-07-01  18024
103  1968-08-01  16722
104  1968-09-01  14385
105  1968-10-01  21342
106  1968-11-01  17180
107  1968-12-01  14577
          Month  Sales
0    1960-01-01   6550
1    1960-02-01   8728
2    1960-03-01  12026
3    1960-04-01  14395
4    1960-05-01  14587
..          ...    ...
```

```
91 1967-08-01  13434
92 1967-09-01  13598
93 1967-10-01  17187
94 1967-11-01  16119
95 1967-12-01  13713

[96 rows x 2 columns]
```

```python
!pip install fbprophet
```

```python
import pandas as pd
import matplotlib.pyplot as plt
from fbprophet import Prophet

data = pd.read_csv('/content/drive/MyDrive/Colab Notebooks/Q1/monthly-car-sales (1).csv')
data['Month'] = pd.to_datetime(data['Month'])
data = data.sort_values('Month')


plt.plot(data['Month'], data['Sales'])
plt.xlabel('Date')
plt.ylabel('Value')
plt.show()

test_data = data.tail(12)
train_data = data[:-12]

test_data = test_data.rename(columns={'Month': 'ds', 'Sales': 'y'})
train_data = train_data.rename(columns={'Month': 'ds', 'Sales': 'y'})



model = Prophet()
model.fit(train_data)

forecast = model.predict(test_data)
forecast[['ds', 'yhat', 'yhat_lower', 'yhat_upper']].head()

plt.plot(test_data['ds'], test_data['y'], label='Actual')
plt.plot(forecast['ds'], forecast['yhat'], label='Predicted')
plt.xlabel('Months')
plt.ylabel('Sales')
plt.legend()
plt.show()

m = Prophet()
m.fit(train_data)
future = m.make_future_dataframe(periods=365)
forecast = m.predict(future)
```
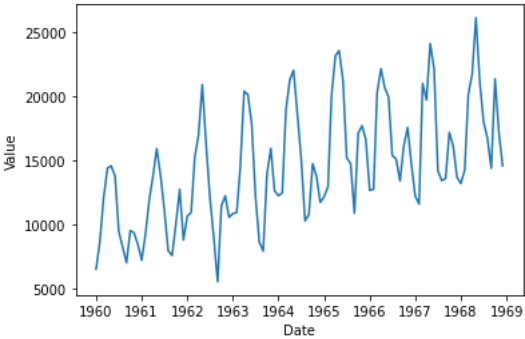
```
INFO:fbprophet:Disabling weekly seasonality. Run prophet with weekly_seasonality=True to override this.
INFO:fbprophet:Disabling daily seasonality. Run prophet with daily_seasonality=True to override this.
```



```
INFO:fbprophet:Disabling weekly seasonality. Run prophet with weekly_seasonality=True to override this.
INFO:fbprophet:Disabling daily seasonality. Run prophet with daily_seasonality=True to override this.
```

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