EXPERIMENT 2

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AIM:

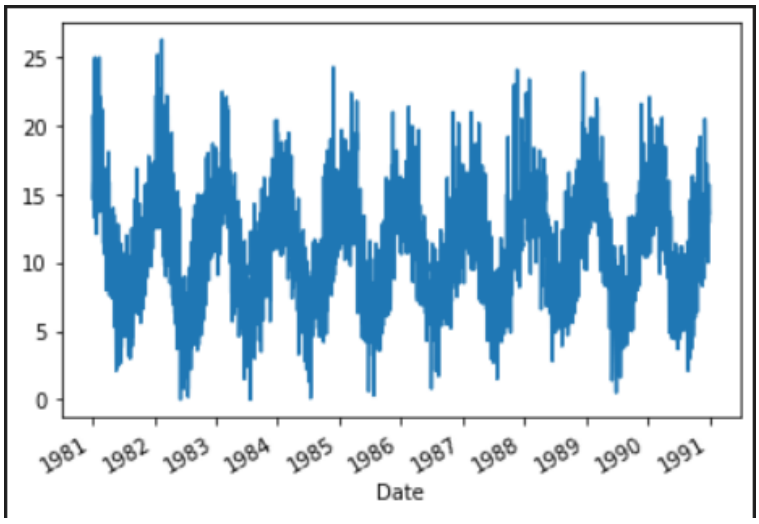
To implement programs for visualizing time series data.

STEPS TO IMPLEMENT:

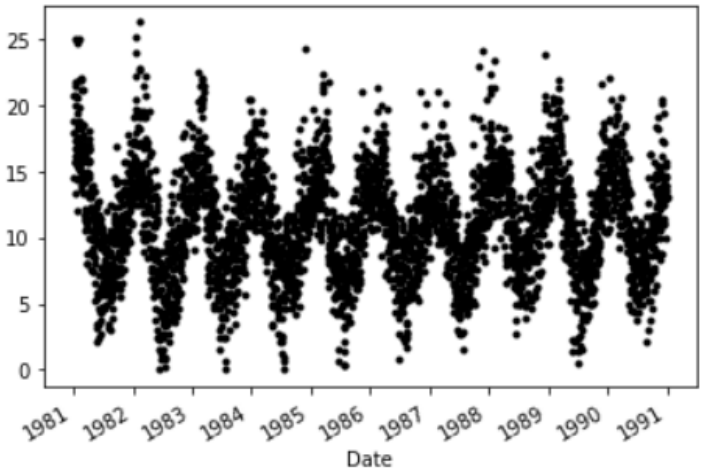
```
from pandas import read_csv
from matplotlib import pyplot
series = read_csv('C:/Users/exam/Downloads/daily-min-temperatures.csv', header=0,
index_col=0, parse_dates=True, squeeze=True)
print(series.head())
```

```
Date
1981-01-01    20.7
1981-01-02    17.9
1981-01-03    18.8
1981-01-04    14.6
1981-01-05    15.8
Name: Temp, dtype: float64
```

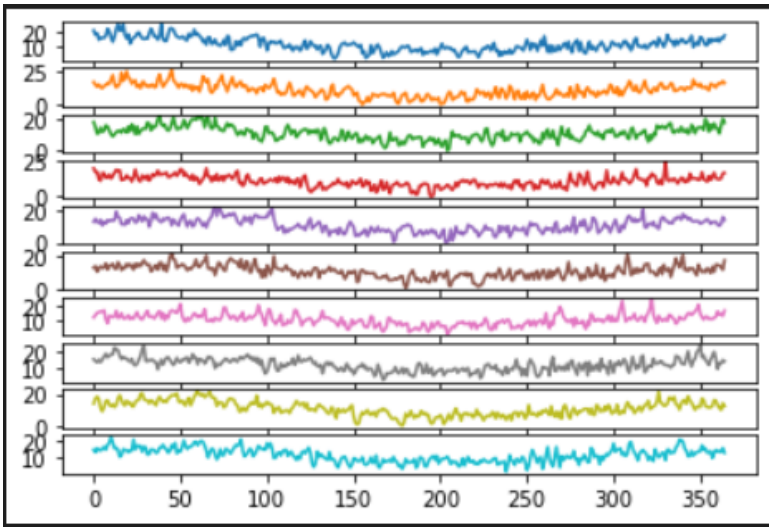
```
from matplotlib import pyplot
series = read_csv('C:/Users/exam/Downloads/daily-min-temperatures.csv', header=0,
index_col=0, parse_dates=True, squeeze=True)
series.plot()
pyplot.show()
```



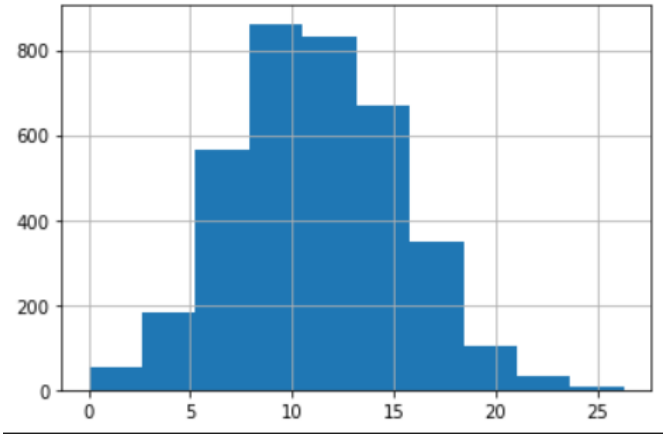
```
from pandas import read_csv
from matplotlib import pyplot
series = read_csv('C:/Users/exam/Downloads/daily-min-temperatures.csv', header=0,
index_col=0, parse_dates=True, squeeze=True)
series.plot(style='k.')
pyplot.show()
```



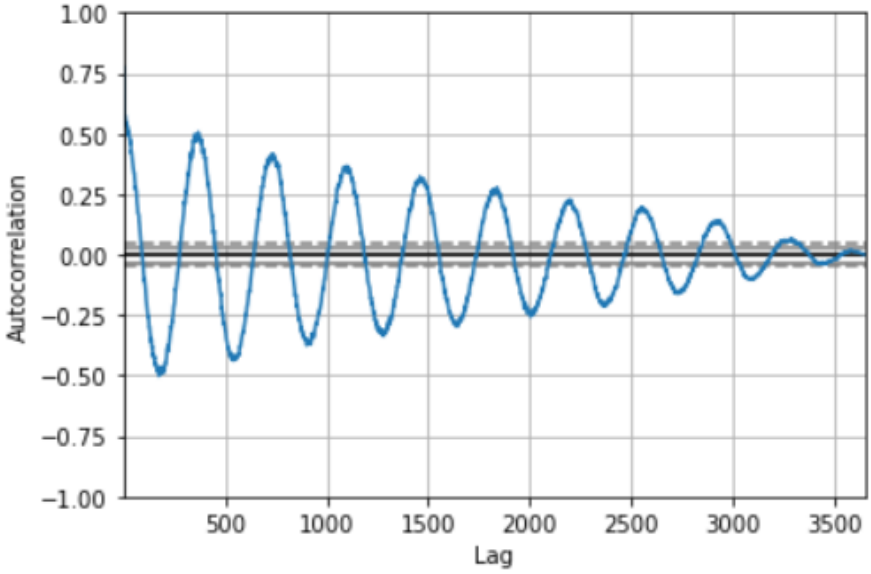

```
from pandas import read_csv
from pandas import DataFrame
from pandas import Grouper
from matplotlib import pyplot
series = read_csv('C:/Users/exam/Downloads/daily-min-temperatures.csv', header=0,
index_col=0, parse_dates=True, squeeze=True)
groups = series.groupby(Grouper(freq='A'))
years = DataFrame()
for name, group in groups:
    years[name.year] = group.values
years.plot(subplots=True, legend=False)
pyplot.show()
```



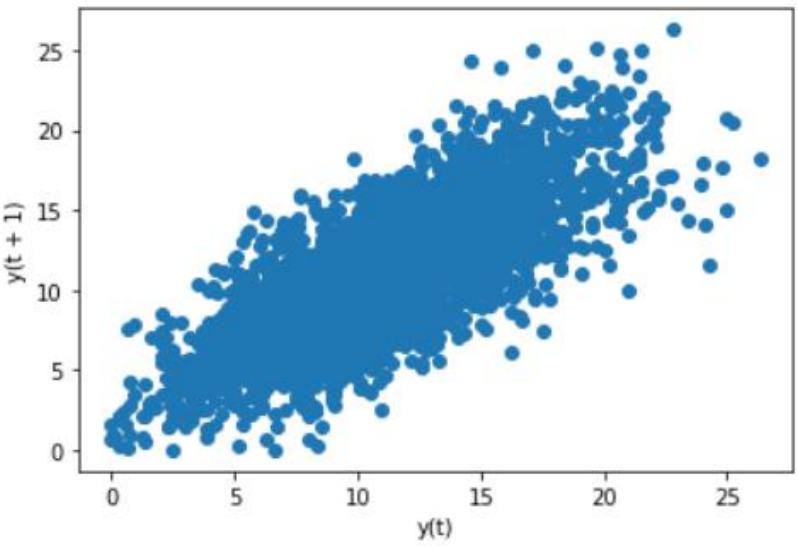

```
from pandas import read_csv
from matplotlib import pyplot
series = read_csv('C:/Users/exam/Downloads/daily-min-temperatures.csv', header=0,
index_col=0, parse_dates=True, squeeze=True)
series.hist()
pyplot.show()
```



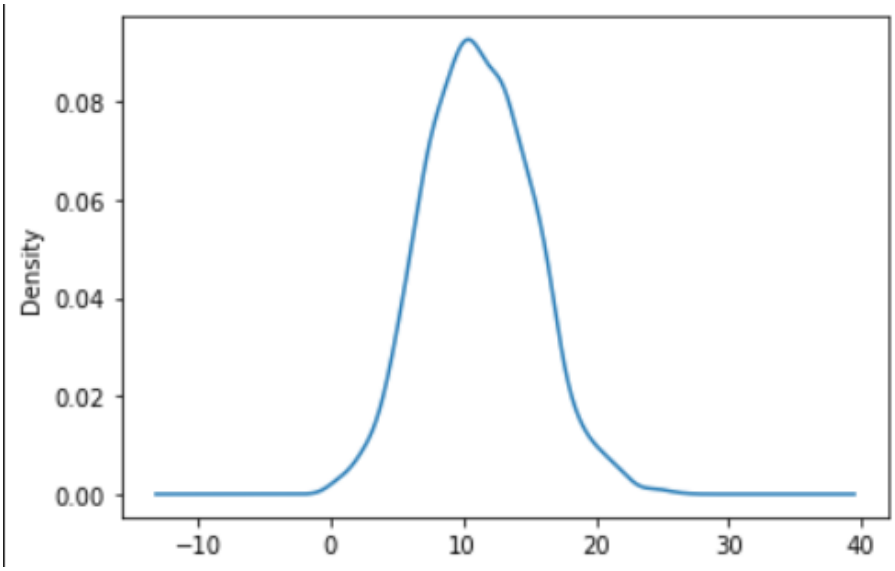

```
from pandas import read_csv
from matplotlib import pyplot
from pandas.plotting import autocorrelation_plot
series = read_csv('C:/Users/exam/Downloads/daily-min-temperatures.csv', header=0,
index_col=0, parse_dates=True, squeeze=True)
autocorrelation_plot(series)
pyplot.show()
```




```
from pandas import read_csv
from matplotlib import pyplot
from pandas.plotting import lag_plot
series = read_csv('C:/Users/exam/Downloads/daily-min-temperatures.csv', header=0,
index_col=0, parse_dates=True, squeeze=True)
lag_plot(series)
pyplot.show()
```



```
from pandas import read_csv
from matplotlib import pyplot
series = read_csv('C:/Users/exam/Downloads/daily-min-temperatures.csv', header=0,
index_col=0, parse_dates=True, squeeze=True)
series.plot(kind='kde')
pyplot.show()
```



RESULT:

The program to implement programs for visualizing time series data. was executed successfully.