**Functions**

1. Read the data and transform date time

import pandas as pd

unrate = pd.read\_csv('unrate.csv')

unrate['DATE'] = pd.to\_datetime(unrate['DATE'])

print(unrate.head(12))

1. Pyplot module from matplotlib for Line chart

import matplotlib.pyplot as plt

plt.plot()

plt.show()

# Assigned first 12 rows to a variable just for easy reference.

first\_twelve = unrate[0:12]

plt.plot(first\_twelve['DATE'], first\_twelve['VALUE'])

plt.show()

# We can rotate the x-axis tick labels by 90 degrees so they don't overlap. The xticks() function within pyplot lets you customize the behavior of the x-axis ticks.

plt.plot(first\_twelve['DATE'], first\_twelve['VALUE'])

plt.xticks(rotation=90)

plt.show()

1. Adding axis labels and a title.

plt.plot(first\_twelve['DATE'], first\_twelve['VALUE'])

plt.xticks(rotation=90)

plt.xlabel('Month')

plt.ylabel('Unemployment Rate')

plt.title('Monthly Unemployment Trends, 1948')

plt.show()

1. Manually creating a figure

fig = plt.figure()

##  To add a new subplot to an existing figure, use [Figure.add\_subplot](http://matplotlib.org/api/figure_api.html" \l "matplotlib.figure.Figure.add_subplot). This will return a new Axes object, which needs to be assigned to a variable:

axes\_obj = fig.add\_subplot(nrows, ncols, plot\_number)

import matplotlib.pyplot as plt

fig = plt.figure()

ax1 = fig.add\_subplot(2,1,1)

ax2 = fig.add\_subplot(2,1,2)

plt.show()