Multiple plots: Takeaways

Syntax

- Creating a figure using the pyplot module:

```
fig = plt.figure()
```

- Adding a subplot to an existing figure with 2 plots and 1 column, one above the other:
    - Returns a new Axes object, which needs to be assigned to a variable:

```
ax1 = fig.add_subplot(2, 1, 1)

ax2 = fig.add_subplot(2, 1, 2)
```

- Generating a line chart within an Axes object:

```
ax1.plot(unrate['DATE'][:12], unrate['VALUE'][:12])

ax2.plot(unrate['DATE'][12:24], unrate['VALUE'][12:24])
```

- Changing the dimensions of the figure with the figsize parameter (width x height):

```
fig = plt.figure(figsize=(12, 5))
```

- Specifying the color for a certain line using the c parameter:

```
plt.plot(unrate[0:12]['MONTH'], unrate[0:12]['VALUE'], c='red')
```

- Creating a legend using the pyplot module and specifying its location:

```
plt.legend(loc="upper left")
```

- Setting the title for an Axes object:

```
ax.set_title('Unemployment Trend, 1948')
```

Concepts

- A figure acts as a container for all of our plots and has methods for customizing the appearance and behavior for the plots within that container.
- Pyplot uses the following when we create a single plot:
    - A container for all plots was created (returned as a Figure object.)
    - A container for the plot was positioned on a grid (the plot returned as an Axes object.)
    - Visual symbols were added to the plot (using the Axes methods.)

- With each subplot, matplotlib generates a coordinate grid that was similar to the one we generated using the plot() function:
    - The x-axis and y-axis values ranging from 0.0 to 1.0.
    - No gridlines.
    - No data.

Resources

- Methods to Specify Color in Matplotlib
- Lifecycle of a Plot