Matplotlib

1. **Basic Plotting:**
    - **plt.plot()**: Create line plots.
    - **plt.scatter()**: Create scatter plots.
    - **plt.bar()**: Create bar plots.
    - **plt.hist()**: Create histograms.
    - **plt.pie()**: Create pie charts.
    - **plt.boxplot()**: Create boxplots.
    - **plt.errorbar()**: Add error bars to a plot.
2. **Axes and Labels:**
    - **plt.xlabel()**, **plt.ylabel()**: Set the labels for the x and y axes.
    - **plt.title()**: Set the title of the plot.
    - **plt.legend()**: Add a legend to the plot.
    - **plt.grid()**: Add a grid to the plot.
    - **plt.xlim()**, **plt.ylim()**: Set the limits of the x and y axes.
3. **Annotation and Text:**
    - **plt.text()**: Add text to the plot.
    - **plt.annotate()**: Annotate a specific point in the plot.
4. **Figure and Subplots:**
    - **plt.figure()**: Create a new figure.
    - **plt.subplot()**: Create subplots within a figure.
    - **plt.subplots()**: Create multiple subplots in a single call.
5. **Color and Style:**
    - **plt.color()**: Set the color of the plot elements.
    - **plt.linestyle()**, **plt.marker()**: Set the line style and marker style.
    - **plt.plot(..., label='label')**: Specify labels for the legend.
6. **Saving and Displaying Plots:**
    - **plt.show()**: Display the plot.
    - **plt.savefig()**: Save the plot to a file (e.g., PNG, PDF).
7. **Customizing Ticks and Tick Labels:**
    - **plt.xticks()**, **plt.yticks()**: Customize the tick locations.
    - **plt.tick_params()**: Customize various aspects of ticks and tick labels.
8. **3D Plots (with mplot3d toolkit):**
    - **from mpl_toolkits.mplot3d import Axes3D**: Import the 3D plotting toolkit.
    - **ax = plt.axes(projection='3d')**: Create a 3D subplot.
9. **Colormaps and Colorbars:**
    - **plt.cm**: Access predefined colormaps.
    - **plt.colorbar()**: Add a colorbar to the plot.
10. **Miscellaneous:**
    - **plt.style.use()**: Set the style of the plot.
    - **plt.close()**: Close a figure.
    - **plt.tight_layout()**: Adjust subplot parameters for better layout.