Matplotlib

Matplotlib is an python library which we used to show the data in graphically to the user. We can use this library to get more understand of given data, and we can visualise the given data in histogram, line graph and dot marker etc.

There are essentially two ways to use Matplotlib

(1) Explicity create figures and axes, and call methods on them (the "object-oriented (OO) style").

(2) Rely on pyplot to automatically create and manager the figure and axis and use pyplot functions for plotting

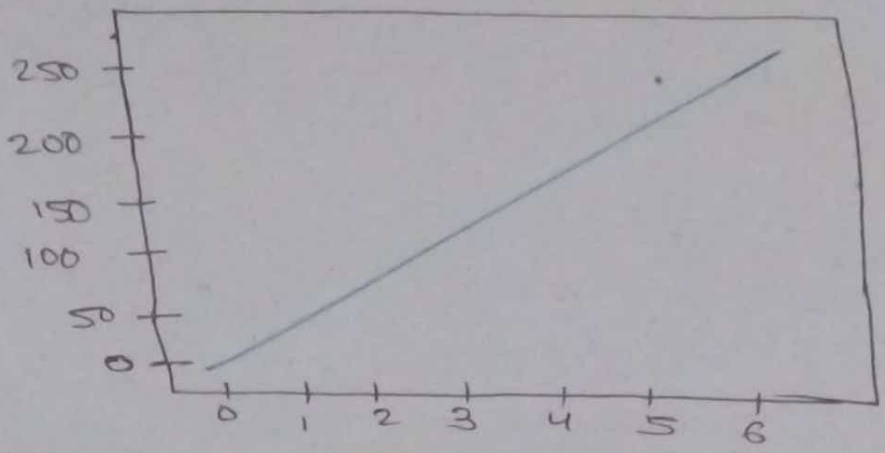
Once Matplotlib is installed, import it in your applications by adding the import module statement.

```
import matplotlib
print(matplotlib.__version__)
```

Most of the Matplotlib utilities lies under the pyplot submodule, and are usually imported under the plt alias:

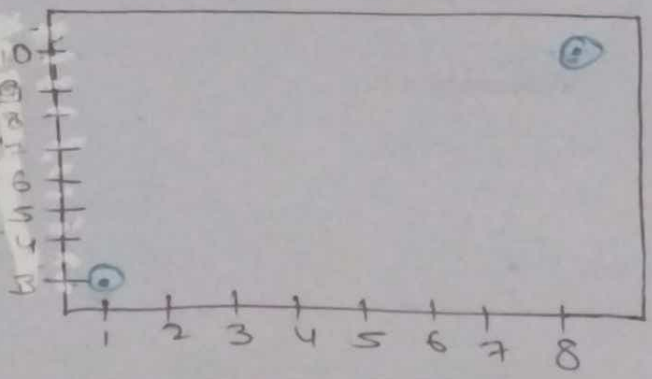
```
import matplotlib.pyplot as plt
```

```
import matplotlib.pyplot as plt
import numpy as np
xpoints = np.array([0, 6])
ypoints = np.array([0, 250])
plt.plot(xpoints, ypoints)
plt.show()
```

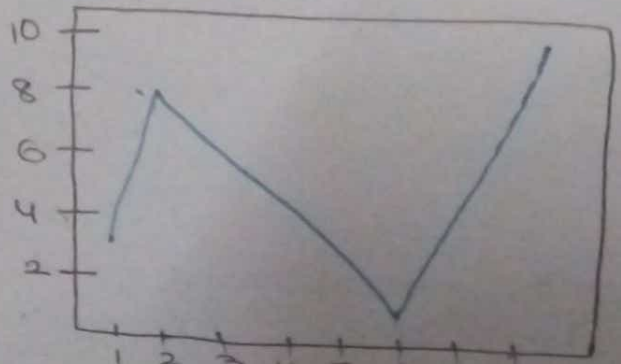


Plotting Without Line

```
xpoints = np.array([1, 8])
ypoints = np.array([3, 10])
plt.plot(xpoints, ypoints, 'o')
plt.show()
```

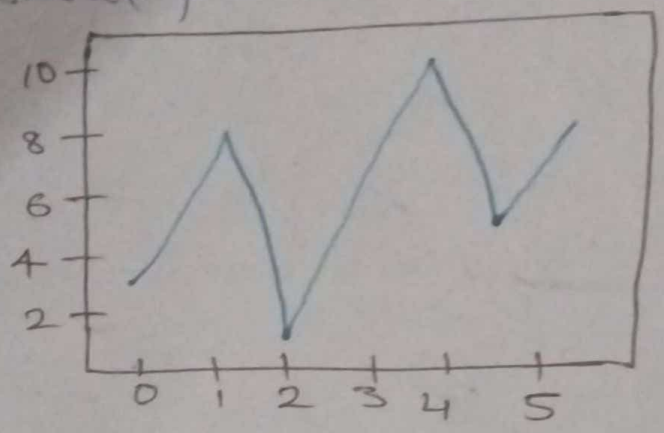



```
xpoints = np.array([1, 2, 6, 8])
ypoints = np.array([3, 8, 1, 10])
plt.plot(xpoints, ypoints)
plt.show()
```



Default x-points

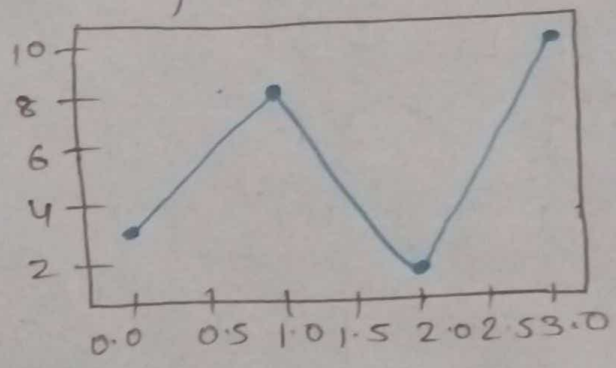
```
ypoints = np.array([3, 8, 1, 10, 5, 7])
plt.plot(ypoints)
plt.show()
```



default x value as (0, 1, 2, 3 ...)

Matplotlib Markers

```
ypoints = np.array([3, 8, 1, 10])
plt.plot(ypoints, marker = 'o')
plt.show()
```




```
plt.plot(ypoints, marker = '*')
```