```
In [1]: import numpy as np
```

```
In [2]: x=np.array([[1,2],[3,4]])
        y=np.array([[5,2],[7,9]])
        print(np.dot(x,y))

        [[19 20]
         [43 42]]
```

```
In [3]: #matplotlib
```

```
In [4]: pip install matplotlib

        Requirement already satisfied: matplotlib in c:\users\deepak kumar\anaconda3\lib\site-packages (3.5.1)
        Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\deepak kumar\anaconda3\lib\site-packages (from mat
        plotlib) (1.3.2)
        Requirement already satisfied: packaging>=20.0 in c:\users\deepak kumar\anaconda3\lib\site-packages (from matpl
        otlib) (21.3)
        Requirement already satisfied: cycler>=0.10 in c:\users\deepak kumar\anaconda3\lib\site-packages (from matplotl
        ib) (0.11.0)
        Requirement already satisfied: pyparsing>=2.2.1 in c:\users\deepak kumar\anaconda3\lib\site-packages (from matp
        lotlib) (3.0.4)
        Requirement already satisfied: numpy>=1.17 in c:\users\deepak kumar\anaconda3\lib\site-packages (from matplotli
        b) (1.21.5)
        Requirement already satisfied: python-dateutil>=2.7 in c:\users\deepak kumar\anaconda3\lib\site-packages (from
        matplotlib) (2.8.2)
        Requirement already satisfied: pillow>=6.2.0 in c:\users\deepak kumar\anaconda3\lib\site-packages (from matplot
        lib) (9.0.1)
        Requirement already satisfied: fonttools>=4.22.0 in c:\users\deepak kumar\anaconda3\lib\site-packages (from mat
        plotlib) (4.25.0)
        Requirement already satisfied: six>=1.5 in c:\users\deepak kumar\anaconda3\lib\site-packages (from python-dateu
        til>=2.7->matplotlib) (1.16.0)
        Note: you may need to restart the kernel to use updated packages.
```
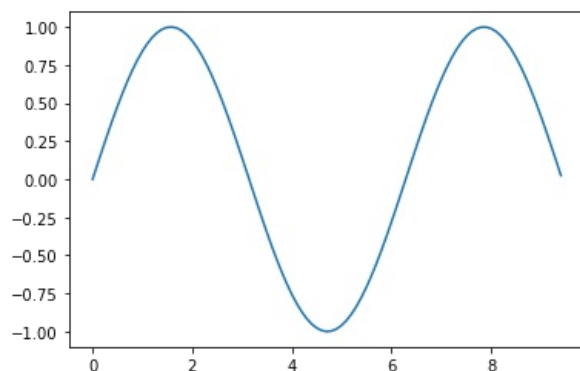
```
In [5]: import numpy as np
        import matplotlib.pyplot as plt
```
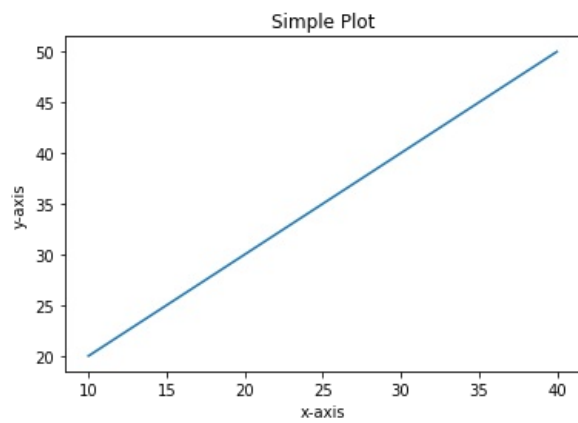
```
In [6]: import numpy as np
        import matplotlib.pyplot as plt

        x=np.arange(0,3*np.pi,0.1)
        y=np.sin(x)

        plt.plot(x,y)
        plt.show()
```
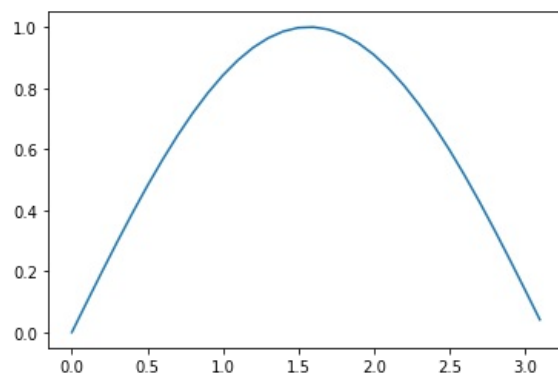


```
In [7]: import matplotlib.pyplot as plt
            # initializing the data
        x = [10, 20, 30, 40]
        y = [20, 30, 40, 50]
            # plotting the data
        plt.plot(x, y)
            # Adding the title
        plt.title("Simple Plot")
            # Adding the labels
        plt.ylabel("y-axis")
        plt.xlabel("x-axis")
        plt.show()
```

Simple Plot

```python
import numpy as np
import matplotlib.pyplot as plt

x=np.arange(0,np.pi,0.1)
y=np.sin(x)

plt.plot(x,y)
plt.show()
```
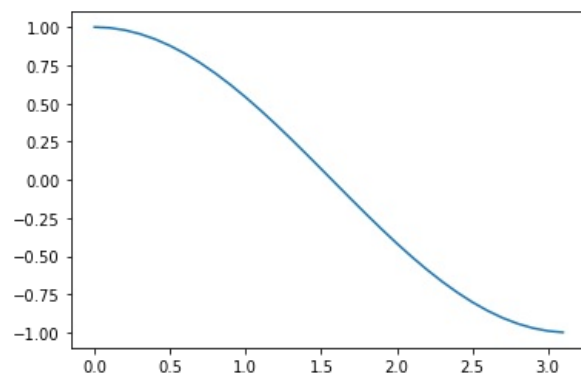
```python
import numpy as np
import matplotlib.pyplot as plt

x=np.arange(0,np.pi,0.1)
y=np.cos(x)

plt.plot(x,y)
plt.show()
```
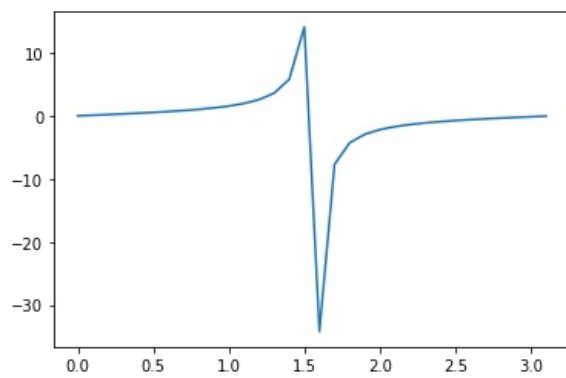
```python
import numpy as np
import matplotlib.pyplot as plt

x=np.arange(0,np.pi,0.1)
y=np.tan(x)

plt.plot(x,y)
plt.show()
```
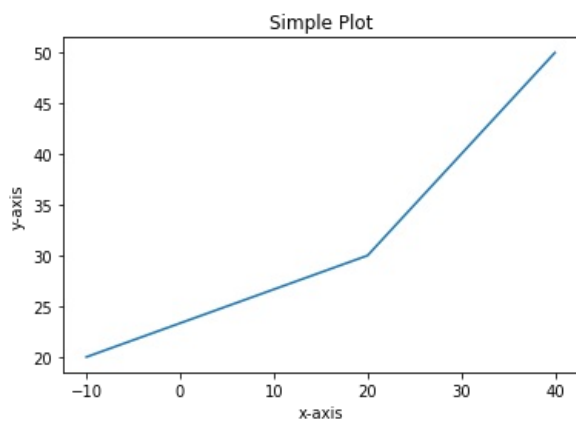
```
In [11]: import matplotlib.pyplot as plt
         x = [-10, 20, 30, 40]
         y = [20, 30, 40, 50]

         plt.plot(x, y)

         plt.title("Simple Plot")

         plt.ylabel("y-axis")
         plt.xlabel("x-axis")
         plt.show()
```
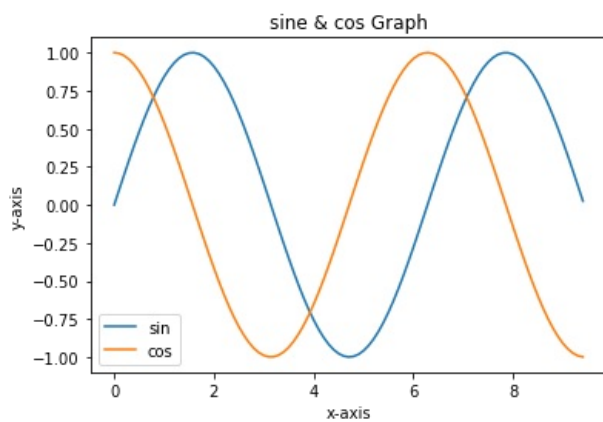


```
In [12]: x=np.arange(0,3*np.pi,0.1)
         sin=np.sin(x)
         cos=np.cos(x)
         plt.plot(x,sin)
         plt.plot(x,cos)

         plt.xlabel('x-axis')
         plt.ylabel('y-axis')
         plt.title('sine & cos Graph')
         plt.legend(['sin','cos'])

         plt.show()
```



```
In [13]: pip install pandas
```

```
Requirement already satisfied: pandas in c:\users\deepak kumar\anaconda3\lib\site-packages (1.4.2)
Requirement already satisfied: numpy>=1.18.5 in c:\users\deepak kumar\anaconda3\lib\site-packages (from pandas)
(1.21.5)
Requirement already satisfied: python-dateutil>=2.8.1 in c:\users\deepak kumar\anaconda3\lib\site-packages (fro
m pandas) (2.8.2)
Requirement already satisfied: pytz>=2020.1 in c:\users\deepak kumar\anaconda3\lib\site-packages (from pandas)
(2021.3)
Requirement already satisfied: six>=1.5 in c:\users\deepak kumar\anaconda3\lib\site-packages (from python-dateu
til>=2.8.1->pandas) (1.16.0)
Note: you may need to restart the kernel to use updated packages.
```

In [ ]: `import pandas as pd`