Python and Scientific Python Lab

Experiment – 4 : Curve Plotting

I | **Pre Lab Questions**

1. What is the use of numpy packages in Curve plotting?

Soln. NumPy is a python library used for working with arrays. It also has functions for working in domain of linear algebra, fourier transform, and matrices.

2. List the operation of Command linspace with an example.

Soln. The numpy.linspace() function returns number spaces evenly cont interval.
numpy.linspace(0, 2, 10).

3. How to animate a function in Python environment?

Soln. Matplotlib library of python is a plotting tool used to plot graphs of functions or figures. It can also be used as an animation tool too.

4. What is the use of arrange() function?

Soln. The arrange() function is used to get evenly spaced values within a given interval. Values are generated within the half-open interval [Start, Stop]

5. How to plot Multiple functions in a single plot?

Soln. We can plot multiple graphs of different functions in a single plot using the Matplotlib library.
We can set different Colours for each function output to differentiate

II. Post Lab Questions

1. Give the command to place legend inside, outside and bottom of the curve.

Soln. Using the mathplotlib library of python, we can achieve the requirements. The "legend()" property helps in placing the legends on the various graph position.

For Inside

legend ([["x", "t"]]);

For outside

legend (bbox_to_anchor = (1.04, 1), loc = " upper left");

For bottom.

legend (loc = " lower left");

2. What is the use of subplot command?

Soln. subplot() function adds subplot to a current figure at the specified grid position.

3. How to plot more than 2 functions in a graph?

Soln. The mathplotlib library can be used to plot multiple functions in a single graph. We can specify a color to differentiate the graph of each function.