**G. H. RAISONI COLLEGE OF ENGG., NAGPUR**

**(An Autonomous Institute)**

**Department of Computer Science & Engg.**



**Date: 31-08-2021**

**Practical Subject: Skill Development-2 [BCSP318]**

**Session: 2021-22**

**Student Details:**

| **Roll Number** | 44 |
| --- | --- |
| **Name** | Anand Suralkar |
| **Semester** | 9th |
| **Section** | A |
| **Batch** | CSE |

**Practical Details: Practical Number-6;**

| Practical Aim | Perform the analysis of various dataset and  plot histogram on it |
| --- | --- |
| Theory & Syntax | Matplotlib is an amazing visualization library in Python for 2D plots of arrays. Matplotlib is a multi-platform data visualization library built on NumPy arrays and designed to work with the broader SciPy stack. It was introduced by John Hunter in the year 2002.  One of the greatest benefits of visualization is that it allows us visual access to huge amounts of data in easily digestible visuals. Matplotlib consists of several plots like line, bar, scatter, histogram etc.  Installation :python -mpip install -U matplotlib  Windows, Linux and macOS distributions have matplotlib and most of its dependencies as wheel packages. Run the following command to install matplotlib package :  Plot a histogram.  Compute and draw the histogram of x. The return value is a tuple (n, bins, patches) or ([n0, n1, ...], bins, [patches0, patches1, ...]) if the input contains multiple data. See the documentation of the weights parameter to draw a histogram of already-binned data.  Multiple data can be provided via x as a list of datasets of potentially different length ([x0, x1, ...]), or as a 2D ndarray in which each column is a dataset. Note that the ndarray form is transposed relative to the list form.  Masked arrays are not supported.  The bins, range, weights, and density parameters behave as in numpy.histogram. |
| Program | from matplotlib import pyplot as plt  import numpy as np  a=np.array([22,87,5,43,56,73,55,54,11,20,51,579,31,27])  fig , ax=plt.subplots(figsize=(5,8))  ax.hist(a,bins=[0,25,50,75,100])  plt.show() |
| Output |  |
| Conclusion | Performed the analysis of various dataset and  plot histogram on it using matplotlib in python |