TASK 2

Make a list of any 6 libraries of Python with their functionality in brief.

A library is a collection of modules. To write a python program we need to import the libraries accordingly.

1. **NumPy:**
   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.
   NumPy was created in 2005 by Travis Oliphant.
   It is an open source project and you can use it freely.
   NumPy stands for Numerical Python. It provides high-performance multidimensional array objects and tools to work with the arrays.
   NumPy is an efficient container of generic multi-dimensional data.

   To install NumPy:
   pip install numpy

2. **Pandas:**
   Pandas stand for Python Data Analysis Library.
   Pandas is free to use and an open source library, making it one of the most widely used data science libraries in the world.
   It is designed for easy data manipulation, reading, aggregation, and visualization.
   It provides essential data structures like series, dataframes, and panels which help in manipulating data sets and time series.

   To install Pandas:
   pip install pandas

3. **Pytorch:**
   PyTorch is a Python-based scientific computing package that uses the power of graphics processing units.
   One of the key reasons behind PyTorch's success is it is completely Pythonic and one can build neural network models effortlessly.
   The workflow of PyTorch is as close as you can get to python's scientific computing library – numpy.
   PyTorch provides a framework for us to build computational graphs as we go, and even change them during runtime.

   To install Pytorch:
   pip install pytorch

4. **Matplotlib:**
   Matplotlib helps with data analysing, and is a numerical plotting library.
   Histogram, bar plots, scatter plots, area plot to pie plot, Matplotlib can depict a wide range of visualizations.
   This library helps us to build multiple plots at a time.
   We can use Matplotlib to manipulate different characteristics of figures as well

To install Matplotlib:
pip install matplotlib

5. **SciPy:**
   SciPy is a scientific computation library that uses NumPy underneath.
   SciPy stands for Scientific Python.
   It provides more utility functions for optimization, stats and signal processing.
   Like NumPy, SciPy is open source so we can use it freely.

   To install SciPy:
   pip install scipy

6. **Tensorflow:**
   TensorFlow is an open source software library for high performance numerical computation.
   TensorFlow is an open source software library for numerical computation using dataflow graphs.
   Nodes in the graph represents mathematical operations, while graph edges represent multi-dimensional data arrays communicated between them.
   The flexible architecture allows you to deploy computation to one or more CPUs or GPUs in a desktop, server, or mobile device with a single API.

   To install Tensorflow:
   Pip install tensorflow