EXPERMINT NO : 1

1. **The greatest common factor number that divides them, exactly. It is also called the highest common factor (HCF).**
2. **The iterative process is simply a series of steps that you repeat, tweaking and improving your product with each cycle.**
3. **A prime number is a whole number greater than 1 whose only factors are 1 and itself. The first few prime numbers are 2, 3, 5, 7, 11, 13, 17, 19, 23 and 29.**
4. **The sequence of numbers in which each number in the sequence is equal to the sum of two numbers before it. The Fibonacci Sequence is given as: Fibonacci Sequence = 0, 1, 1, 2, 3, 5, 8, 13, 21, ….**
5. **Data science is a multidisciplinary approach to gaining insights from an increasing amount of data.**

EXPERMINT NO : 2

1. **statistics.mean(), statistics.median(),statistics.median_grouped(), statistics.median_high() etc.,**
2. **Mean is the average of the given numbers and is calculated by dividing the sum of given numbers by the total number of numbers.**
3. **when 'n' is odd, median = ((n + 1)/2)th data value when 'n' is even, median = Average of (n/2)th value and its next value.**
4. **$\sigma=\sqrt{1n}\sum ni=1(xi-\bar{x})2$**
5. **Data science is used for a wide range of applications, including predictive analytics, machine learning, data visualization, recommendation systems, fraud detection, sentiment analysis, and decision-making in various industries like healthcare, finance, marketing, and technology.**

EXPERMINT NO : 3

1. **NumPy can be used to perform a wide variety of mathematical operations on arrays.**
2. **Slicing is the extraction of a part of a string, list, or tuple.**
3. **An aggregate is a function where the values of multiple rows are grouped together to form a single summary value. DataFrame. aggregate() , Series. aggregate() , DataFrameGroupBy.**
4. **A universal function (or ufunc for short) is a function that operates on ndarrays in an element-by-element fashion, supporting array broadcasting, type casting, and several other standard features.**
5. **The term broadcasting describes how NumPy treats arrays with different shapes during arithmetic operations.**
6. **Data Scientists design algorithms to analyze and visualize customers' data related to their search history, interests, and previously shopped items.**

EXPERMINT NO : 4

1. **data manipulation and analysis, Pandas offers data structure and operations for powerful, flexible, and easy-to-use data analysis and manipulation.**
2. **The query() method allows you to query the DataFrame.**
3. **Series can only contain a single list with an index, whereas Dataframe can be made of more than one series or we can say that a Dataframe is a collection of series that can be used to analyze the data.**

4. **Using concat() function. In python, we can concatenate the two dataframes with the help of the concat() function of Pandas.**
5. **Indexing is used to access values present in the Dataframe using “loc” and “iloc” functions. In Numpy arrays, we are familiar with the concepts of indexing, slicing, and masking, etc.**

EXPERMINT NO : 5

1. **data processing consists of gathering and manipulating data elements to return useful, potentially valuable information.**
2. **Data transformation is the process of converting data from one format, such as a database file, XML document or Excel spreadsheet, into another.**
3. **Groupby() is a powerful function in pandas that allows you to group data based on a single column or more.**
4. **A PivotTable is especially designed for: Querying large amounts of data in many user-friendly ways.**
5. **data science often involves using data to build models that can predict future outcomes, while data analytics tends to focus more on analyzing past data to inform decisions in the present.**

EXPERMINT NO : 6

1. **Data visualization is the representation of data through use of common graphics, such as charts, plots, infographics, and even animations.**
2. **to plan or scheme secretly; form a plot; conspire. to devise or develop a literary or dramatic plot.**
3. **The matplotlib.pyplot.boxplot() provides endless customization possibilities to the box plot. The notch = True attribute creates the notch.**
4. **In a bar graph, data is represented by rectangular bars, In a line graph, data points are plotted on a graph and then connected by a line .**
5. **A scatter plot (aka scatter chart, scatter graph) uses dots to represent values for two different numeric variables.**

EXPERMINT NO : 7

1. **Is it better to use "is" or "==" for number comparison in Python.**
2. **Scatter plot.**
3. **subplots creates a figure and a grid of subplots with a single call, while providing reasonable control over how the individual plots are created.**
4. **Click on Graph.**
   Click on three dots at top right of Graph.
   Select Download.
   Select PDF Document (.pdf)
5. **Plot Area refers to the area that has a boundary (such as fencing) around it.**