

Unit 6: Python Libraries

1. What are Python libraries?

👉 Pre-written code modules that provide additional functionality.

2. Why are libraries used in Python?

👉 To simplify complex tasks and save development time.

3. Name some popular Python libraries

👉 NumPy, Pandas, Matplotlib, SciPy

4. What is NumPy?

👉 Library used for numerical computing.

5. What is NumPy array?

👉 Multidimensional array used for fast computations.

6. Difference between list and NumPy array?

👉 List → slower, supports mixed types

👉 NumPy array → faster, same data type

7. Why NumPy is faster?

👉 Uses optimized C-based implementation.

8. What is shape of array?

👉 Dimensions of array

9. What is indexing in NumPy?

👉 Access elements using index

10. What is Pandas?

👉 Library used for data manipulation and analysis.

11. What is Series in Pandas?

👉 One-dimensional labeled data structure.

12. What is DataFrame?

👉 Two-dimensional table (rows and columns).

13. How to read data in Pandas?

👉 `read_csv()`, `read_excel()`

14. How to select data in Pandas?

👉 Using `loc[]` and `iloc[]`

15. What is data cleaning?

- 👉 Handling missing or incorrect data.
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16. What is Matplotlib?

- 👉 Library used for data visualization.

17. What is a plot?

- 👉 Graphical representation of data.

18. Types of plots in Matplotlib?

- 👉 Line plot, bar chart, histogram, pie chart

19. What is plt.plot()?

- 👉 Used to create line graph

20. What is plt.show()?

- 👉 Displays the graph
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21. What is data visualization?

- 👉 Representing data using graphs for better understanding.

22. Why visualization is important?

- 👉 Helps in analysis and decision making.
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23. What is difference between NumPy and Pandas?

- 👉 NumPy → numerical arrays
- 👉 Pandas → structured data (tables)

24. What is difference between Pandas and Matplotlib?

- 👉 Pandas → data handling
 - 👉 Matplotlib → data visualization
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25. Can we use NumPy with Pandas?

- 👉 Yes

26. Which library is used for plotting graphs?

- 👉 Matplotlib

27. Which library is best for large data handling?

- 👉 Pandas