Basics

1.Python

Python is a simple and powerful programming language used for automation, backend development, data handling, and AI. It is known for easy syntax and rich libraries.

2.HTML

HTML structures a webpage using elements like headings, paragraphs, buttons, and images.

3.CSS

CSS styles the webpage, controlling layout, colors, fonts, and spacing.

4.React JS

React is a JavaScript library used to build fast, dynamic user interfaces using reusable components.

5.**Git & GitHub**

- Git : A version control system used to track code changes.
- GitHub:A cloud platform where code repositories are stored and shared.

6.Basic Git Commands

- git checkout – Switch between branches.
- git push – Upload local commits to GitHub.
- git branch – View or create branches.
- git fetch – Download updates from the remote repository.

7.API Concepts

- Payload:The data sent with an API request, usually in JSON format.
- Postman:A tool used to send API requests like GET and POST for testing.

API

A system that allows two applications to communicate and exchange data.

POST Method:Used to send data to a server.

GET Method:Used to retrieve data from a server.

FastAPI

A modern Python framework used to build fast APIs with automatic documentation.

6.Virtual Environment

An isolated Python workspace where project-specific libraries are installed without affecting the global system.

7.pip install

A command used to install Python packages.

8.Database Topics

Relational Database:Databases where data is stored in connected tables (rows and columns).

Normalization:Organizing database tables to reduce redundancy and improve consistency.

9.CRUD

Basic database operations: Create, Read, Update, Delete.

10.AI and Data Libraries

- NumPy:Used for numerical operations and working with arrays.
- Pandas:Used for dataset handling, table operations, and data analysis.
- Matplotlib:Used for creating graphs and visualizations like line charts, bar graphs, and pie charts.