Module : Coding Basics

Objective: Build a strong foundation in programming concepts and syntax, preparing students for advanced topics.

1. Introduction to Coding

- What is programming and why it matters
- How computers understand instructions
- Common programming languages & career paths
- Overview of development tools (IDEs, compilers, interpreters)

2. Python Basics

- Installing Python & setting up the environment
- Variables, data types, and operators
- Input/Output operations
- Conditional statements (if, else, elif)
- Loops (for, while)
- Functions & basic problem solving

3. Java Basics

- Installing Java & IDE setup
- Structure of a Java program
- Variables, data types, and operators
- Conditional statements
- Loops & functions (methods)
- Basic OOP concepts (Classes & Objects)

4. JavaScript Basics

- Setting up JavaScript in the browser and VS Code
- Variables, data types, and operators
- Conditional statements
- Loops & functions
- Introduction to DOM manipulation

5. 1-on-1 Personal Guidance

- Personalized learning plan based on progress
- Doubt-solving sessions
- Career/learning roadmap discussion