Batch Scripting Intensive Course

Duration: 16hrs

Day 1: Batch Scripting Fundamentals

Session 1: Introduction & Setup

1. **Introduction to Batch Scripting**
    - What is a Batch File?
    - Use cases & real-world applications
    - History and relevance today
2. **Prerequisites & Tools Setup**
    - Windows CMD basics
    - Using Notepad / Notepad++
    - File extensions and execution

Session 2: Basic Syntax & Output

3. **Using ECHO to Print Output**
    - Syntax and examples
    - ECHO ON vs ECHO OFF
4. **Using @ Symbol**
    - Suppressing command display
    - @ECHO OFF pattern

Session 3: Variables & Comments

5. **Using Variables**
    - Defining and using %VAR%
    - Dynamic variables
6. **Commenting in Batch**
    - REM and :: usage
7. **Environment Variables**
    - SET, SETX, %PATH%, etc.
    - Accessing predefined variables

Session 4: Strings and Arithmetic

8. **String Handling and Concatenation**
    - Concatenate strings
    - Substring extraction
9. **Mathematical Expressions with SET /A**
    - Basic arithmetic
    - Using variables in expressions

Session 5: User Input & Command-line Args

10. **Taking Input from User**

- SET /P examples

11. **Command Line Arguments**

- %1, %2, %*
- Validating argument count

Session 6: Basic Functions with GOTO

12. **Creating Functions using Labels**
13. **GOTO and EXIT /B Explanation**
14. **Passing Arguments via CALL**

Day 2: Logic, Looping, Scope, and Logging

Session 1: Scope and Control Statements

15. **Creating Local Scope with SETLOCAL**

- Difference between local and global variables

16. **IF Statements**

- Comparisons, string and number checks

17. **ELSE Statements and Nested Logic**

- Combining with IFs, nested conditions

Session 2: Looping & Iteration

18. **FOR Loop Variants**

- Looping through ranges, files, command output
- Tokens and Delims

19. **Using IF ERRORLEVEL**

- Error handling strategies
- Return codes from executed commands

Session 3: Logging and Real-World Scripting

20. **Creating and Writing to Log Files**

- >, >>, redirection basics
- Logging errors and timestamps
- Output to log and console simultaneously

21. **Practical Script: Build a Full Example**

- Collect user input
- Perform logic and loops
- Write logs
- Error handling and argument passing