

Batch Scripting: Variables, Loops & Logging

2 Days

16 HOURS

21

MODULES

36

TOPICS

LEARNING OBJECTIVES

- Explain what a batch file is and identify common use cases
- Apply ECHO and the @ symbol to control command output
- Define and use variables, including environment variables
- Implement string concatenation and arithmetic with SET /A
- Build functions using labels, GOTO, EXIT /B and CALL
- Apply IF, ELSE and nested conditional logic
- Implement FOR loop variants for ranges, files and command output
- Develop scripts that log output and handle errors with ERRORLEVEL

21 Modules, 36 Topics

DAY 1 Batch Scripting Fundamentals

01

Introduction to Batch Scripting

TOPICS

What is a Batch File? · Use cases & real-world applications · History and relevance today

02

Prerequisites & Tools Setup

TOPICS

Windows CMD basics · Using Notepad / Notepad++ · File extensions and execution

03

Using ECHO to Print Output

TOPICS

Syntax and examples · ECHO ON vs ECHO OFF

04

Using @ Symbol

TOPICS

Suppressing command display · @ECHO OFF pattern

05

Using Variables

TOPICS

Defining and using %VAR% · Dynamic variables

06

Commenting in Batch

TOPICS

REM and: : usage

07

Environment Variables

TOPICS

SET, SETX, %PATH%, etc. · Accessing predefined variables

08

String Handling and Concatenation

TOPICS

Concatenate strings · Substring extraction

09

Mathematical Expressions with SET /A

TOPICS

Basic arithmetic · Using variables in expressions

10

Taking Input from User

TOPICS

SET /P examples

11

Command Line Arguments

TOPICS

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

12

Creating Functions Using Labels

13

GOTO and EXIT /B Explanation

14

Passing Arguments via CALL

DAY 2 Logic, Looping, Scope, and Logging

15

Creating Local Scope with SETLOCAL

TOPICS

Difference between local and global variables

16

IF Statements

TOPICS

Comparisons, string and number checks

17

ELSE Statements and Nested Logic

TOPICS

Combining with IFs, nested conditions

18

FOR Loop Variants

TOPICS

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

19

Using IF ERRORLEVEL

TOPICS

Error handling strategies · Return codes from executed commands

20

Creating and Writing to Log Files

TOPICS

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

21

Practical Script: Build a Full Example

TOPICS

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

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

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