

Unix Shell: Loops, Functions & Interrupt Traps

Learn to write Unix shell scripts using variables, loops, functions and interrupt traps for automated, interactive tasks.

2 Days

DURATION

12

MODULES

45

TOPICS

14

HANDS-ON EXERCISES

COURSE OVERVIEW

This course covers Unix command review before moving into writing, naming and executing shell scripts. It addresses variables, integer arithmetic, reading run-time data and conditional execution with if and test, along with Korn, Bash and POSIX syntax variations. It then covers loop constructs, case-based multi-branch decisions, functions and function libraries, interrupt signals and trapping, and additional features such as exec commands, includes, arrays and here documents.

WHO THIS COURSE IS FOR

Shell Script Developers

System Administrators

Unix Users

Automation Engineers

Support Engineers

LEARNING OBJECTIVES

- Identify basic Unix commands for files and directories
- Create and execute shell scripts
- Assign and access environment and local variables
- Apply integer arithmetic using expr and (()) notation
- Handle run-time data with the read command and arguments
- Implement conditional execution using if and test
- Apply while, until and for loop constructs
- Configure interrupt signal trapping in scripts

12 Modules, 45 Topics

DAY 1**01**

Unix Command Review

TOPICS

- Basic Unix commands
- General commands
- File and directory handling commands
- Filename generation and regular expressions characters
- I/O Redirection features
- Other commands

02

Getting Started

TOPICS

What is a shell script? · Development guidelines · Creating and editing shell scripts · Naming and storing shell scripts · Executing shell scripts

Exercise**03**

Using Variables

TOPICS

Environment variables · Local variables · Assigning values to variables · Assessing variable values · Using quotes · Delimiting variable names · Echo control sequences

Exercise**04**

Integer Arithmetic

TOPICS

Using the `expr` command · Using the `(( ))` notation

Exercise**05**

Handling Run Time Data

TOPICS

The `read` command · Command line arguments

2 Exercises**06**

Conditional Execution

TOPICS

The `if` statement · The `test` command

Exercise**07**

Additional Korn, Bash & POSIX Syntax

TOPICS

Other test notations · Default and substitute variables · Exit status codes

Exercise

08

3 Exercises

Loop Constructs

TOPICS

The while loop · The until loop · The for loop ·
The while true and until false loops · Loop
control commands

09

Exercise

Multi-Branch Decisions

TOPICS

The case statement · Menu driven applications

10

Exercise

Functions

TOPICS

What is a function? · Syntax · Examples · Creating a
Function Library

11

Exercise

Interrupt Handling

TOPICS

Interrupt signals · Trapping interrupts

12

Exercise

Additional Features and Facilities

TOPICS

The exec commands · The includes notation · More about loops · Arrays · Here Documents

HANDS-ON EXERCISES

Practise What You Learn

#	MODULE	ACTIVITY
02	Getting Started	Write a simple shell script
03	Using Variables	Add variables to a script
04	Integer Arithmetic	Add integer arithmetic to a shell script
05	Handling Run Time Data	■ Writing a generic shell script ■ Writing an interactive shell script
06	Conditional Execution	Adding validation to previous scripts
07	Additional Korn, Bash & POSIX Syntax	Exercise

#	MODULE	ACTIVITY
08	Loop Constructs	■ Enhancing the previously written scripts ■ Writing a script to copy files using a 'for' loop ■ Writing a script to generate numbers with the 'while' loop
09	Multi-Branch Decisions	Developing and writing a menu system
10	Functions	Add a function to a script
11	Interrupt Handling	Adding traps to the menu script
12	Additional Features and Facilities	Create a here script

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

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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