Linux Shell Scripting

OPENPATH
PATH TO OPENSOURCE

About Mastering Shell Scripting

Mastering Shell Scripting by **MasteringLinux | OpenPath** is a **comprehensive online training program** designed for **B.Tech, BCA, MCA, and Diploma students**. This course equips learners with **hands-on scripting skills** to automate Linux tasks, manage systems efficiently, and gain practical experience with **live industrial projects** in real-world IT environments.

With a focus on **automation, efficiency, and enterprise-ready scripting practices**, this course ensures trainees are **job-ready for roles such as Linux Engineer, DevOps Engineer, and System Administrator**.

Pre-requisites

- Basic understanding of Linux commands and file system
- Optional patch-up course for beginners available

? Program Details

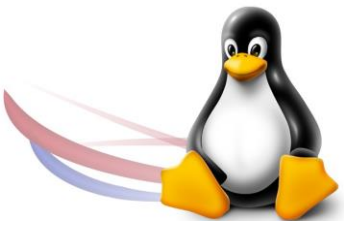
- **Duration:** 1.3 Months (Approx. 6 Weeks)
- **Course Fee:** ₹15,000 (All-Inclusive)
- **Mode:** Hybrid (Online + Practical Labs)
- **Certification:** *"Mastering Shell Scripting – Industry Ready Certification"* by **OpenPath**
- **Includes:** Live industrial projects, practical labs, real-time scripting use-cases, and dedicated job support

COURSE CURRICULUM

Introduction to Shell Scripting

205, Red Rose Building
Near Eros Corpoate Tower
49-50, Nehru Place
New Delhi -110019

M : 98100-28374
E : kvit@kvit.in
W : www.linuxsolutions.org.in



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- What is Shell & Shell Scripting
- Types of shells: Bash, Sh, Zsh, Ksh
- Script execution: CLI vs script files
- Shebang (#!/bin/bash) usage

Linux Commands & Editors for Scripting

- File & directory commands: ls, cd, mkdir, rm
- Viewing and editing files: cat, less, vi/vim
- Text processing tools: grep, cut, awk, sed
- Using VirtualBox/VMware for lab environments

Variables & Data Types

- Declaring variables and environment variables
- Special variables: $0, $1, $#, $@, $?
- String operations and arithmetic operations

Conditional Statements

- if, if-else, if-elif-else
- Nested conditions and logical operators
- Test command [ ] and [[ ]] usage

Loops in Shell Scripting

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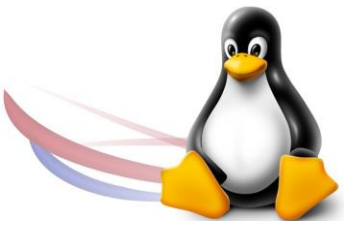

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- for, while, until loops
- Loop control: break, continue
- Practical automation examples

Functions in Shell Scripting

- Defining and calling functions
- Passing arguments and returning values
- Modular scripting practices

File & Directory Handling in Scripts

- Reading/writing files (>, >>)
- File tests and permissions
- Automating directory structure management

Advanced String & Pattern Manipulation

- String length, concatenation, substring
- Pattern matching & regular expressions
- Using grep, awk, sed in scripts

Command-line Arguments & Script Automation

- Handling $1, $2...
- Debugging scripts with set -x, set -e

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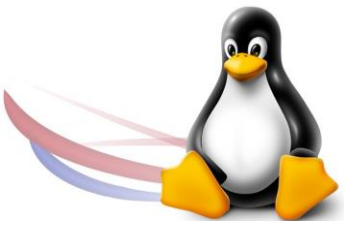

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- Error handling and exit status
- Scheduling scripts with cron and systemd-timers

Real-world Projects & Automation Labs

- Backup automation scripts
- Log monitoring and reporting scripts
- User and group management automation
- System monitoring scripts (CPU, Memory, Disk)

Best Practices & Security in Shell Scripting

- Writing readable and maintainable scripts
- Secure scripting techniques
- Commenting, documentation, and modular code

What You Will Achieve

By the end of this course, you will:

- Write and debug shell scripts for Linux system automation
- Automate repetitive tasks efficiently
- Monitor and manage Linux systems using scripts
- Be job-ready for roles like Linux Engineer, DevOps Engineer, or System Administrator

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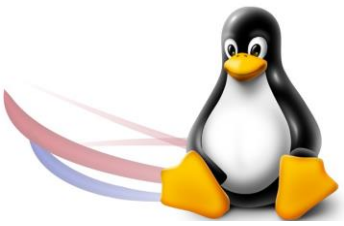

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Includes

- Live industrial projects and practical labs
- Real-time scripting use-cases
- Dedicated interview preparation and job assistance

Mr. Vikas Debnath

Founder Director, KV IT-Solutions Pvt. Ltd.

Founder, OPEN PATH

He believes that "Linux is for everyone" — and with the right guidance, anyone can master it.

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