

Linux Shell Scripting

Month 1: Introduction to Shell Scripting and Basics

Week 1: Introduction to Shell Scripting

- Overview of shell scripting
- Different types of shells (e.g., bash, sh)
- Setting up a development environment

Week 2-3: Shell Basics and Script Structure

- Basic shell commands and syntax
- Writing and executing simple scripts
- Script structure and shebang

Week 4-5: Variables and Control Structures

- Working with variables
- Conditional statements (if, elif, else)
- Looping constructs (for, while)

Week 6: Functions and Scripting Best Practices

- Writing and using functions
- Scripting best practices
- Debugging techniques

Month 2: Advanced Shell Scripting Concepts and Applications

Week 1-2: String Manipulation and Regular Expressions

- String manipulation in shell scripts
- Introduction to regular expressions
- Using grep and sed for pattern matching

Week 3-4: File Handling and Input/Output

- Reading and writing to files
- Working with file descriptors
- Processing command-line arguments

Week 5-6: Advanced Topics and Final Project

- Working with arrays
- Handling signals and traps
- Building a complete shell script project