**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