

UNIX : Lesson 00



Lesson Objectives

➤ Course Goals

- To understand UNIX operating system, Shell commands, Introduction to Processes, Writing simple shell scripts

➤ Course Non Goals

- NA



Pre-requisites



➤None

Intended Audience



➤ Novice Users





Day Wise Schedule

➤ **Day 1:**

Lesson 1: Introduction to UNIX Operating System

Lesson 2: UNIX file system

Lesson 3: Basic UNIX commands

➤ **Day 2:**

Lesson 4: I/O redirection and Piping

Lesson 5: Vi Editor

Lesson 6: Bash Shell

Lesson 7: Access Permissions

➤ **Day 3:**

Lesson 8: Processes and related commands

Lesson 9: Essential Commands

➤ **Day 4:**

Lesson 10: Pattern Matching Using grep, egrep, fgrep

Lesson 11: SED



Day Wise Schedule

➤ **Day 5:**

Lesson 12: Miscellaneous Commands

Lesson 13: AWK Programming

➤ **Day 6:**

Lesson 14: Introduction to shell programming

➤ **Day 7:**

Lesson 15: Arithmetic Operation and command line argument

➤ **Day 8:**

Lesson 16: Programming Construct

➤ **Day 9:**

Lesson 17: Function ,array and debugging



Day Wise Schedule

➤ **Day 10:**

Lesson 18: Database Connectivity

Lesson 19: Source Code Control System



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➤ **Lesson 1: Introduction to UNIX Operating System**

- 1.1: Operating System
- 1.2: History of Unix
- 1.3: Feature of Unix
- 1.4: Unix System Architecture
- 1.5: Log in to Unix

➤ **Lesson 2: UNIX File System**

- 2.1: File System
- 2.2: File Types
- 2.3: File Path

➤ **Lesson 3 : Basic Unix Commands**

- 3.1: Commands



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➤ **Lesson 4: I/O redirection and piping**

4.1: Redirection

4.2: Pipe

➤ **Lesson 5: Vi Editor**

5.1: Vi Editor

5.2: Input Mode Commands

5.3: Vi Editor – Save & Quit

5.4: Cursor Movement Commands

5.5: Paging Functions

5.6: Search and Repeat Commands

5.7: Vi Editor – Other Features

5.8: SED – Introduction to SED

5.9: SED Commands



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➤ **Lesson 6: Bash Shell**

- 6.1: Features of bash shell
- 6.2: Command line shortcuts
- 6.3: History
- 6.4: shells

➤ **Lesson 7: Access Permission**

- 7.1: File permission
- 7.2: Changing ownership

➤ **Lesson 8: Process related commands**

- 8.1: Process
- 8.2: ps Command
- 8.3: Suspend Process
- 8.4: Jobs in the Background
- 8.5: Killing process
- 8.6: Lowering job execution priority – nice command
- 8.7: Scheduling process



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- **Lesson 9 : Essential commands**
 - 9.1: Commands
- **Lesson 10 : Pattern Matching Using grep, egrep, fgrep**
 - 10.1: grep
 - 10.2: fgrep
 - 10.3: egrep
- **Lesson 11 : SED**
 - 11.1: SED – Introduction to SED
 - 11.2: SED Commands
- **Lesson 12 : Miscellaneous Commands**
 - 12.1: Creating alias
 - 12.2: filters
 - 12.3: Creating links
 - 12.4: Browsing file
 - 12.5: File compression
 - 12.6: Disk utility command



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➤ **Lesson 13: AWK Programming**

- 13.1: Advanced Filter - awk
- 13.2: AWK variables
- 13.3: AWK
- 13.4: Logical and Relational operators
- 13.5: Advanced Filter - awk
- 13.6: Number Processing
- 13.7: awk Command
- 13.8: BEGIN and END
- 13.9: Positional parameters and shell variable
- 13.10: Built in functions - numeric
- 13.11: If and while construct in AWK
- 13.13: Pattern Matching

➤ **Lesson 14: Introduction to shell programming**

- 14.1: Executing script
- 14.2: Variable in script
- 14.3: Quoted string



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- **Lesson 15: Arithmetic Operation and command line argument**
 - 15.1: Arithmetic operations
 - 15.2: Command substitution
 - 15.3: Command line argument

- **Lesson 16: Programming Construct**
 - 16.1: Conditional execution
 - 16.2: if else
 - 16.3: test operator
 - 16.4: loop

- **Lesson 17: Function ,array and debugging**
 - 17.1: ShellFunctions
 - 17.2: Array
 - 17.3: Debugging



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- **Lesson 18: Database connectivity**
- **Lesson 19: Source code control system**

References

- UNIX Concepts and Application; by Sumitabha Das
- The Unix Programming Environment; by Kernighan and Pike.
- UNIX Primer Plus, Third Edition; by Don Martin, Stephen Prata, Mitchell Waite, Michael Wessler, and Dan Wilson
- Advanced Unix : a programmers guide; by Stephen Prata

