

## Shell Scripting Online Training Course Content

### **Faculty: Real time and certified**

(Includes theoretical as well as practical sessions)

### **Introduction**

- Objectives
- Course Schedule
- Course Introductions
- Pre-requisites
- Bibliography
- Delegate Responsibilities
- Course Summary

### **Review of Basics - optional**

- Files
- Directories and Processes
- Displaying Directories - ls
- Getting Help - man
- Displaying Files - cat, more
- Simple Commands
- Piping - using | symbol
- Redirection - using > symbol
- Redirection - using >> symbol
- Redirecting Input - using < symbol
- Redirecting Errors
- Using /dev/null
- Foreground Jobs
- Background Jobs - &
- Stopping Jobs - kill
- Special Files - . and ..
- The Command Prompt - PS1
- Creating Aliases
- Using Aliases
- Command history
- Command Line Edit - using Arrow Keys
- Command Line Edit - using vi
- Customising the Shell

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- The Home Directory - HOME
- The Working Directory - pwd
- Changing Directories - cd
- Make Directory - mkdir
- Remove Directory - rmdir
- Interactive Copy - cp -i
- Interactive Move - mv -i
- Interactive Remove - rm -i
- Removing Directories - rm -r
- Wild Cards - File Name Generation
- Word count - wc
- Finding Files - find
- Finding Text in Files - grep, sort, cut, uniq, tr
- Changing Permissions - chmod

## Shell Programming

- Creating Shell Scripts
- Testing the Command
- Creating the Script File
- Adding Execute Permissions
- Testing the Script
- Running the Script - time
- Running the Script - dot
- Running the Script - exec
- Running the Script - ksh
- Debugging the Script
- Passing Parameters
- The read Command
- Using read in Scripts
- Choosing the Shell
- Tidying The Output
- Suppressing Input - stty

## Special Characters and Variables

- Quotation Marks
- Quoted Strings - ", '
- Escape Character - \*
- Quoted Strings - `
- Using \$(...)
- System Variables - set

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- Other Special Variables
- User Variables
- User Variables - unset
- Variables in Scripts
- Typeset Command
- Integer Variables
- Special Constructs

## Creating Menus

- Conditions - case
- Creating a Menu
- Iteration - while, until
- Holding the Output - sleep
- Holding the Output - dummy read
- Ending the Script
- Ending the Loop
- Hidden Option - forking a shell
- Trapping Interrupts - trap
- More on Interrupts
- Highlighting Text- tput
- Positioning the Cursor - backtab \b
- Korn Shell Menu

## Selection

- Conditional Testing
- Testing File Attributes
- Testing File Permissions
- Multiple Tests - Nested ifs
- Multiple Tests - elsif
- The NOT Condition
- Multiple Conditions in One Test
- Testing Strings
- Using Square Brackets
- Avoiding Null Input
- Testing Numbers
- More on case
- Displaying Variables
- Placing Spaces
- Testing Commands

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## Iteration, Looping

- Computations - let
- Iteration - while, until
- Infinite Loop
- Iteration - for
- More than 9 Parameters - shift

## Sub-scripts and Functions

- Local and Global Variables
- Sub-scripts
- Export Command
- Exit Status
- Aliases
- Functions
- Useful Functions
- Return Status
- Manipulating Functions
- Functions in Scripts

## Advanced Commands

- Debugging - set
- Setting - set
- Merging Files - join
- Merging Files - paste, basename and dirname
- Job Control - jobs
- Regular Expressions
- Global Regular Expression Printer - grep
- Expression grep - egrep
- Fast grep - fgrep
- Computations - expr
- Computations – bc, eval Command,
- Argument Processing
- getopt Command
- Using Arrays

## Advanced Edit – vi & sed

- vi - Mapping Key Combinations
- Mapping Control Keys

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- Using Abbreviations
- Editing Many Files
- Regular Expressions
- Global Insert
- Here document,
- Batch Stream Editor - sed, sed delete, -d, sed print, -p, sed suppress, -n, sed quit, -q, sed file, -f, sed Multiple Input, sed
- Find and Replace
- sed Example

## Text File Processing - awk

- The awk Programming Tool
- Pattern Matching
- Regular Expressions
- Comparison Patterns
- Compound Patterns
- Range Patterns
- Special Patterns
- Built-in Functions
- Troubleshooting awk Scripts
- Passing Parameters
- Using Contains
- printf Function
- Computations
- Functions
- substr
- length
- Action Statements
- Control Flow Statements
- Arrays
- Arrays with for Loops
- awk Examples