UNIX: Introduction-Level 1

Course Length: 2 Days

Course description

Overview: Students will learn the basic skills necessary to understand the structure of the UNIX operating system and to use the available utilities and commands to manage their personal file structures in the UNIX C Shell.

Prerequisites: The Logical Operations PC Literacy course or equivalent knowledge.

Delivery method: Instructor-led, group-paced, classroom-delivery learning model with structured hands-on activities.

Benefits: Students will learn how to log in and out of UNIX, use the Mail utility and Talk utility, use the UNIX filing system, manage files, secure files and directories, create new utilities, work with the vi editor, and write shell scripts.

Target student: Students enrolling in this course should understand the basic concepts involved in working with computers. For example, they should be familiar with such terms as computer memory, operating system, data and program files, and the relationships between files and directories. They should also be familiar with the components that make up the computer, including input, output, and storage devices. No prior knowledge of the UNIX operating system is assumed.

What's next: *UNIX: Introduction Level* 1 is the first course in this series. Students who want to learn advanced features can take *UNIX: Introduction Level 2*.

Performance-based objectives

Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Understand the basic feature available in UNIX, and briefly understand its history and evolution.
- Log in and log out, change their password, and understand some basic UNIX commands and the UNIX command syntax: *command -option argument.*
- Use the mail utility and the talk utility.
- Understand full paths, partial paths, current working directory, and the concept of home directory.
- Create directories, copy and move files, and remove files and directories.
- Secure files and directories by the use of permissions.
- Combine several UNIX utilities to create new utilities that accomplish specific tasks.
- Create and edit a vi file.
- Create "custom" commands that can be run from the prompt.

Course content

Lesson 1: Overview of the UNIX operating system
- UNIX features and benefits
- UNIX history and evolution
- UNIX standardization
- The structure of UNIX

Lesson 2: Establishing communication
- Starting the UNIX session
- Using basic UNIX commands
- Understanding the UNIX command syntax
- Using the UNIX "help" facility: the manual pages

Lesson 3: Multiuser Communications
- UNIX Mail
- The interactive "talk" program

Lesson 4: Introduction to the filing system
- Examining UNIX files and directories
- Moving through the file system
- Using full and partial paths
- Understanding current and parent directories

Lesson 5: File management
- Creating directories
- Copying files and directories
- Moving and renaming files and directories
- Removing files and directories
- Using shell metacharacters

Lesson 6: UNIX permissions
- Understanding permissions
- File permissions
- Directory permissions

Lesson 7: Redirection, filters, and pipes
- Exploring standard input, standard output, and standard error
- Using filters
- Using pipes

Lesson 8: Using the vi editor
- Creating a vi file
- Editing a vi file
- Working with database files
- Advanced vi techniques

Lesson 9: Introduction to shell scripts
- Creating a shell script
- Examining a database with a shell script

Appendices
- Glossary
- Shell/Mail command summary
- Metacharacter and special-character reference
- vi editor command summary
- UNIX quick reference