

# Linux Command Lesson Plan for AWS (Adithya Sasi)

## Week 1: Basics of Linux and Navigation

### Commands:

- pwd - Print working directory
- ls - List directory contents
- cd - Change directory
- mkdir, rmdir - Create/remove directories
- touch - Create empty files
- echo - Output text
- cat, less - View file contents

### Use Cases:

- Navigate EC2 file system
- Create directories for organizing app files or logs

### Tasks:

- Create a directory called 'aws-practice'
- Inside it, create subfolders: scripts, logs, notes
- Create a text file 'readme.txt' and write "Hello AWS" using echo
- Use cat and less to read it

## Week 2: File Operations and Permissions

### Commands:

- cp, mv, rm - Copy, move, delete files
- chmod, chown - Change file permissions and ownership
- stat - File information

### Use Cases:

- Modify permissions for shell scripts or config files

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- Backup and organize files

### Tasks:

- Copy 'readme.txt' to notes/
- Move 'readme.txt' to logs/
- Delete a dummy file from logs/
- Change permissions of a file to executable (chmod +x)

## Week 3: User and Process Management

### Commands:

- whoami, id - Check user info
- adduser, passwd - Add users and change passwords
- top, ps, kill - Monitor and manage processes

### Use Cases:

- Monitor EC2 performance
- Manage users or roles on a Linux server

### Tasks:

- Create a new user called 'developer'
- Use top to see CPU/memory usage
- Use ps to find and kill a dummy process

## Week 4: Networking and Package Management

### Commands:

- curl, wget - Fetch data from URLs
- ping, netstat, ss - Network diagnostics

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- apt, yum - Install software

### Use Cases:

- Check internet connectivity of EC2
- Install and configure server software

### Tasks:

- Ping google.com to test connectivity
- Install 'htop' using apt or yum
- Use curl to fetch a web page

## Week 5: Searching, Archiving, and Scheduling

### Commands:

- grep - Search text in files
- find, locate - Search files
- tar, zip, unzip - Archive and compress files
- crontab - Schedule tasks

### Use Cases:

- Schedule backups, logs
- Search logs for debugging
- Archive deployments or code versions

### Tasks:

- Create a .tar.gz archive of 'aws-practice'
- Schedule a cron job that appends the date to log.txt every minute
- Use grep to search for a word in readme.txt

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### Week 6: Shell Scripting Introduction

#### Concepts:

- #!/bin/bash, variables, if, for, functions
- Use commands in scripts

#### Use Cases:

- Automate deployment, log rotation, monitoring

#### Tasks:

- Write a script that creates a backup of aws-practice
- Write a script that checks if a service is running

### Bonus Tips

- Use man or --help to learn about any command: man ls
- Combine commands using pipes | and logical operators && / ||