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# UX001 - Course Presentation

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- **UX001 - Course Presentation**
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  - Prerequisites
    - Hardware
    - Software
    - Internet
  - Training Program
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## Prerequisites

### Hardware

- A computer running either MacOS, Linux, Windows™ or Solaris™ ,
- QWERTY US Keyboard,
- 4 GB of RAM,
- Headphones,
- A mic (optional).

## Software

- Web Chrome version 72+ or
- Microsoft Edge version 79+ or
- Firefox version 65+.

## Internet

- A fast, **direct** (no proxy or VPN), Internet connection (4G minimum),

## Training Program

- **LCE400 - Course Presentation**
  - Prerequisites
    - Hardware
    - Software
    - Internet
  - Training Program
- **LCE401 - File Hierarchy System**
  - Linux File Hierarchy System
  - File Types
  - The mount Command
  - The /etc/fstab file
    - Understanding the /etc/fstab file
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  - Unix File Systems
    - Superblock
    - Inodes
    - Data Blocks
    - Hard (Physical) Links

- Soft (Symbolic) Links

- **LCE402 - The Visual Editor**

- Presentation
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  - 1.2 - Creating a new file with VI
  - 1.3 - Opening a file in read-only mode using view
  - 1.4 - Opening a file in read-write mode using VI
- LAB #2 - The set Command
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  - 2.2 - Turning on line numbering using set
- LAB #3 - Moving around within the file
  - 3.1 - Commands
- LAB #4 - Inserting Text
  - 4.1 - Commands
  - 4.2 - Inserting text
- LAB #5 - Searching for Text
  - 5.1 - Commands
  - 5.2 - Searching for and replacing text
- LAB #6 - Deleting Text
  - 6.1 - Commands
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- LAB #7 - Copy, Cut and Paste
  - 7.1 - Commands
  - 7.2 - Copying, Cutting and pasting text
- LAB #8 - Configuring a Personalised Interface

- **LCE403 - Help and Documentation**

- Help on external commands
- Help on built-in commands
- The man command
  - Command Line Switches
- The apropos command
  - Command Line Switches

- The makewhatis and whatis Commands under RHEL/CentOS 6
  - Command Line Switches
- The mandb and whatis commands with RHEL/CentOS 7
  - Command Line Switches
- The info command
  - Command Line Switches

- **LCE404 - Basic Shell Commands and Text Manipulation Tools**

- LAB #1 - Use of Basic Shell Commands
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  - 1.2 - The date command
  - 1.3 - The who Command
  - 1.4 - The df Command
  - 1.5 - The free Command
  - 1.6 - The whoami Command
  - 1.7 - The pwd Command
  - 1.8 - The cd Command
  - 1.9 - The ls Command
  - 1.10 - The lsof Command
  - 1.11 - The touch Command
  - 1.12 - The echo Command
  - 1.13 - The cp Command
  - 1.14 - The file Command
  - 1.15 - The cat Command
  - 1.16 - The mv Command
  - 1.17 - The mkdir Command
  - 1.18 - The rmdir Command
  - 1.19 - The rm Command
  - 1.20 - The sort Command
  - 1.21 - The more Command
  - 1.22 - The less Command
  - 1.23 - The find Command
  - 1.24 - The su Command
  - 1.25 - The updatedb and locate Commands

- 1.26 - The whereis Command
- 1.27 - The which Command
- 1.28 - The uptime Command
- 1.29 - The w Command
- 1.30 - The uname Command
- 1.31 - The du Command
- 1.32 - The clear Command
- 1.33 - The exit Command
- 1.34 - The logout Command
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- LAB #2 - Switches and Arguments
- LAB #3 - Regular Expressions
  - BREs
  - EREs
- Manipulating Text Files
  - Text-search Utilities
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    - The egrep Command
    - The fgrep Command
    - LAB #4 - Using grep, egrep and fgrep
  - The Stream EDitor SED
    - LAB #5 - Using sed
  - The Text Processor AWK
    - Presentation
    - Field Separation
    - Conditions
      - A regular expression applied to a record
      - A regular expression applied to a field
      - Comparisons
      - Logical Operators
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- Awk Scripts
- The printf function
- Control Statements
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  - 7.2 - The unexpand Command
  - 7.3 - The cut Command
  - 7.4 - The uniq Command
  - 7.5 - The tr Command
  - 7.6 - The paste Command
  - 7.7 - The split Command
  - 7.8 - The diff Command
  - 7.9 - The cmp Command
  - 7.10 - The patch Command
  - 7.11 - The strings Command
  - 7.12 - The comm Command
  - 7.13 - The head Command
  - 7.14 - The tail Command
- LAB #8 - Use the grep, tr and cut commands to extract your IPv4 address from the output of ifconfig
- LAB #9 - Use the grep, awk and sed commands to extract your IPv4 address from the output of ip

- **LCE405 -Command Line Interface**

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  - Internal And External Commands
  - Aliases
  - The Prompt
  - The history Command

- The TAB key
- Metacharacters
- Protecting Metacharacters
- Exit Status
- Redirections
- Pipes
- Command Substitution
- Conditional Command Execution
- Environment Variables
  - Principal Variables
  - Internationalisation and Localisation
  - Special Variables
  - The env Command
- Bash Shell Options
  - noclobber
  - noglob
  - nounset
- Basic Shell Scripting
  - Execution
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  - The test Command
  - The **expression** Command
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- **LCE503 - Managing File Permissions**

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    - Octal Mode
    - The umask Command
  - 1.2 - Changing the Owner or the Group with chown and chgrp
    - The chown Command
    - The chgrp Command
- LAB #2 - Advanced Unix Permissions
  - 2.1 - SUID/SGID bit
  - 2.2 - Inheritance Flag
  - 2.3 - Sticky bit
- LAB #3 - Extending Linux Permissions using ACLs and Attributes
  - 3.1 - ACLs
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- **LCE504 - Managing Disks and Filesystems**

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- Peripherals
- Partitions
- Partitioning
  - LAB #1 - Partitioning your Disk with the fdisk Command
  - LAB #2 - Modifier les Drapeaux des Partitions avec fdisk
- Logical Volume Manager (LVM)
  - LAB #3 - Linear Logical Volumes
    - Physical Volumes (PV)
    - Volume Groups (VG) and Physical Extents (PE)
    - Logical Volumes (LV)
  - LAB #4 - Grow a Volume
  - LAB #5 - Snapshots
  - LAB #6 - Deleting Volumes
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- LAB #10 - Managing Meta-data
- Journaled Filesystems
  - Ext3
    - Managing Ext3
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- **LCE507 - Process Management**

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  - The pstree Command
  - The top Command
  - The fg, bg and jobs Commands
  - The wait Command
  - The nice Command
  - The renice Command
  - The nohup Command
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- **LCE513 - Managing the Network**

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  - 1.2 - Name Resolution
  - 1.3 - Adding a Second IP Address to a Profile
  - 1.4 - The hostname Command
  - 1.5 - The ip Command
  - 1.6 - Manually Activating and Disactivating a Device
  - 1.7 - Static Routing
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    - Disactivating/Activating Internal Routing on a Server
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  - 2.2 - The netstat Command
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- LAB #3 - SSH
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  - 3.2 - Configuring the Server
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  - 3.4 - SCP
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