

**WELCOME TO:**  
**MODULE 5**

**LINUX SYSTEM**  
**ADMINISTRATION**

# Linux File Editor

- A text editor is a program which enables you to create and manipulate data (text) in a Linux file
- There are several standard text editors available on most Linux systems
  - **vi** - Visual editor
  - **ed** - Standard line editor
  - **ex** - Extended line editor
  - **emacs** - A full screen editor
  - **pico** - Beginner's editor
  - **vim** - Advance version of vi
- Our editor = vi (available in almost every Linux distribution)

# Introduction to vi Editor

- vi supplies commands for:

- Inserting and deleting text
- Replacing text
- Moving around the file
- Finding and substituting strings
- Cutting and pasting text

- Most common keys:

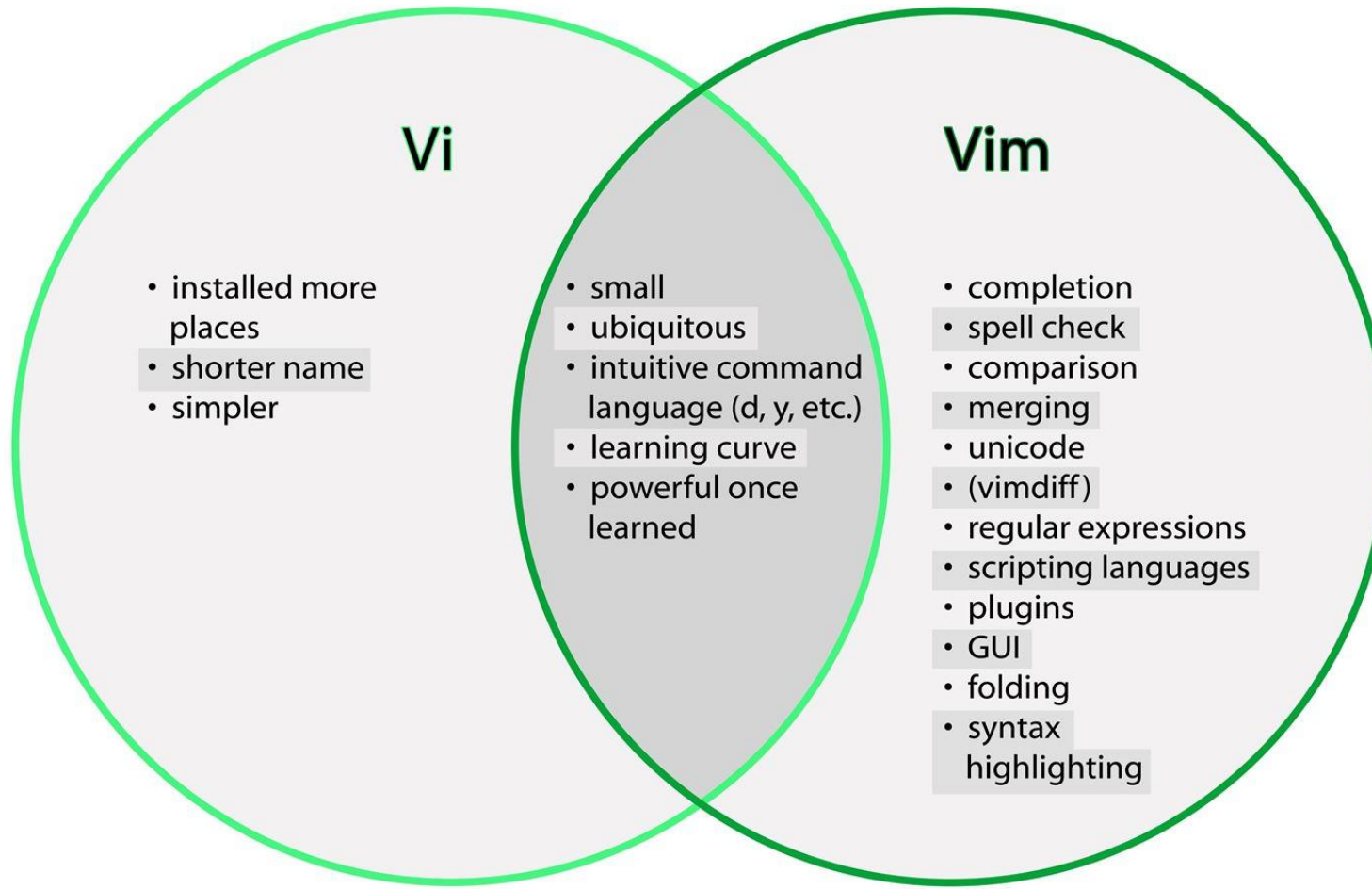
- `i` - insert
- `Esc` - Escape out of any mode
- `r` - replace
- `d` - delete
- `:q!` - quit without saving
- `:wq!` - quit and save

# Difference Between vi and vim Editor



- As far as functionality is concerned, both editors work in the same manner. Which editor you choose is a matter of personal choice. Some people recommend learning the vim editor instead of the vi editor. Due to added features, learning and using vim editor is much easier than the vi editor.
- Since vim is based on the vi, when you will learn how to use the vim editor, you will automatically learn how to use the vi editor.
- vim has all the features as vi with some excellent addition
- There's also a comprehensive help system and lots of customization options available.

# Difference Between vi and vim Editor



# “vim” Interactive Learning Tools



- There are many websites that offer free vim interactive training:
  - <https://www.openvim.com/>
  - <http://www.vimgenius.com>
  - <https://vim-adventures.com/> (Games)

# “sed” Command

- Replace a string in a file with a newstring
- Find and delete a line
- Remove empty lines
- Remove the first or n lines in a file
- To replace tabs with spaces
- Show defined lines from a file
- Substitute within vi editor
- And much more...

# User Account Management

## Commands

- `useradd`
- `groupadd`
- `userdel`
- `groupdel`
- `usermod`

## Files

- `/etc/passwd`
- `/etc/group`
- `/etc/shadow`

## Example:

```
useradd -g superheros -s /bin/bash -c "user description" -m -d  
/home/spiderman spiderman
```



# The /etc/login.def File

- The chage command – per user

- **Example**

```
chage [-m mindays] [-M maxdays] [-d lastday] [-I inactive] [-E  
expiredate] [-W warndays] user
```

- File = /etc/login.def

- PASS\_MAX\_DAYS 99999
  - PASS\_MIN\_DAYS 0
  - PASS\_MIN\_LEN 5
  - PASS\_WARN\_AGE 7



# The chage Command

- The chage command – per user

- **Example**

```
chage [-d lastday] [-m mindays] [-M maxdays] [-W warndays] [-I  
inactive] [-E expiredate] user
```



- d = 3. **Last password change (lastchanged)** : Days since Jan 1, 1970 that password was last changed
- m = 4. **Minimum** : The minimum number of days required between password changes i.e. the number of days left before the user is allowed to change his/her password
- M = 5. **Maximum** : The maximum number of days the password is valid (after that user is forced to change his/her password)
- W = 6. **Warn** : The number of days before password is to expire that user is warned that his/her password must be changed
- I = 7. **Inactive** : The number of days after password expires that account is disabled
- E = 8. **Expire** : days since Jan 1, 1970 that account is disabled i.e. an absolute date specifying when the login may no longer be used.

# Switch Users and sudo Access

## Commands

- `su - username`
- `sudo command`
- `visudo`

## File

- `/etc/sudoers`

# Monitor Users

- who
- last
- w
- finger
- id

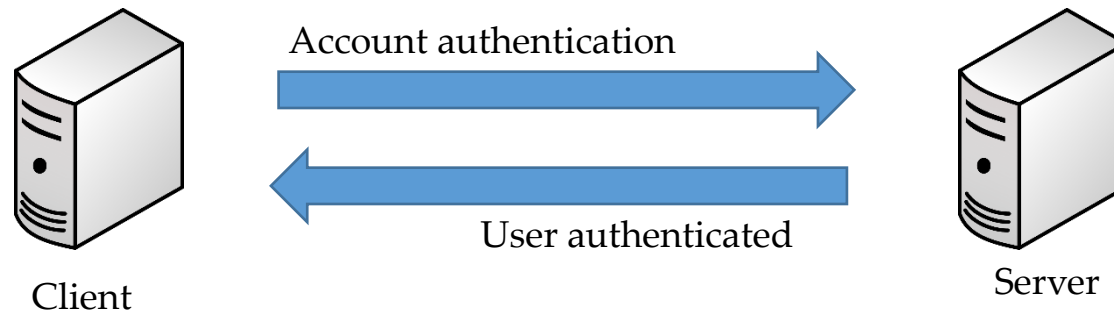
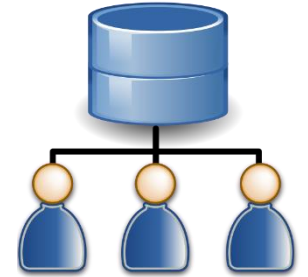
# Talking to Users



- users
- wall
- write

# Linux Account Authentication

- Types of Accounts
  - Local accounts
  - Domain/Directory accounts



- Windows = Active Directory
- Linux = LDAP?