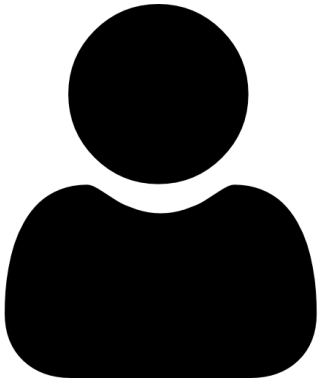
Welcome to Day 3



Linux User Management

Day 3 - Part 1

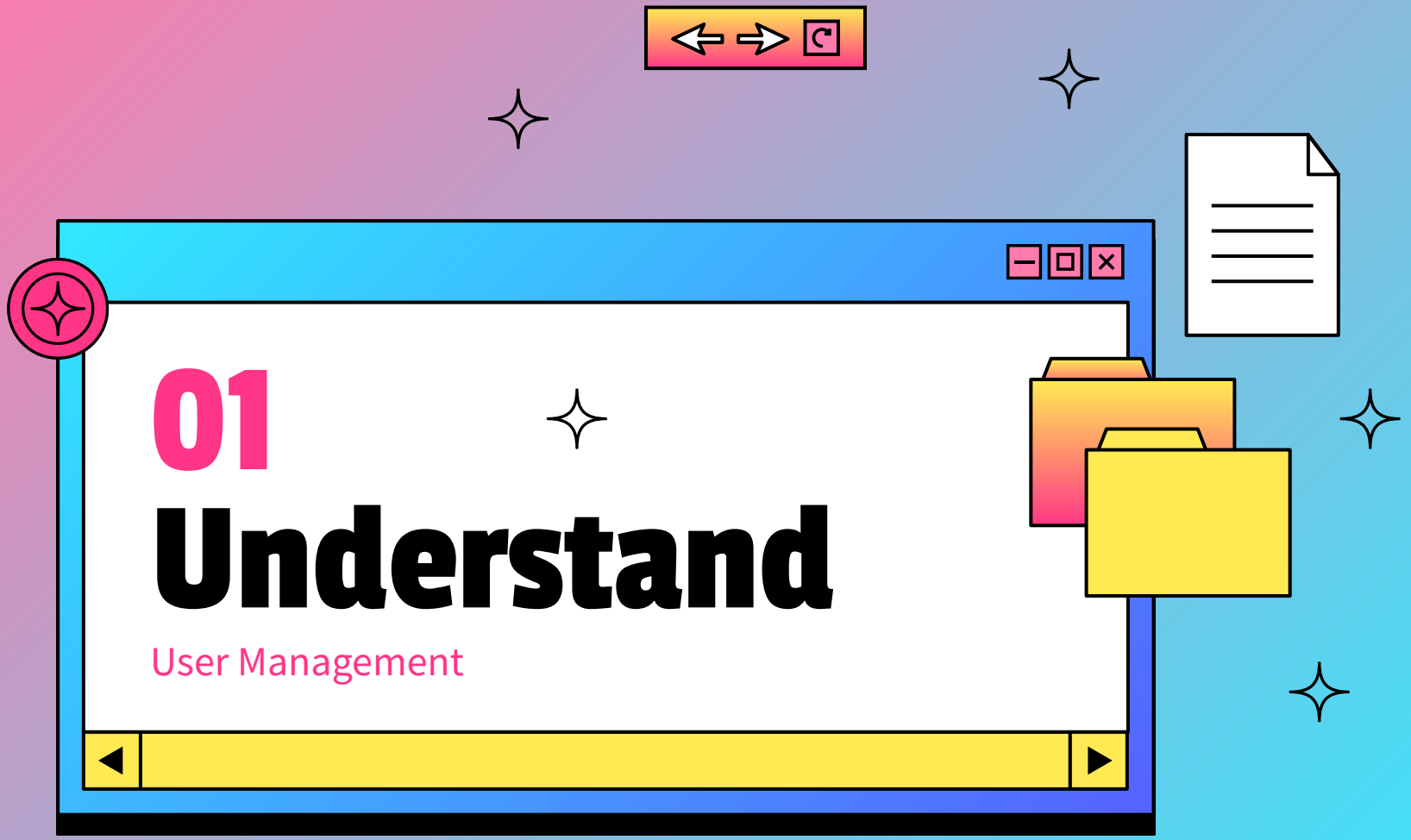
- Understanding User Management
  - /etc path understanding
- Managing Users
  - Adding Users
  - Modifying Users
  - Deleting Users
- Managing Groups
  - Adding groups
  - Adding users to groups
  - Deleting Groups

Day 3 - Part 2

- Understanding File Permissions
  - Ownership
  - Permissions
- Viewing Permissions
- File Permissions
  - Changing Permissions
  - Changing Ownership
  - Changing Group Ownership

Day 3 - Part 3

- Text Editors
  - Nano
    - Nano Structure
    - Nano commands
  - Vim
    - Vim Structure
    - Vim Commands


01
Understand
User Management

User Management

User management in Linux is essential for maintaining system security and organizing access control. Every user has unique credentials and permissions to interact with the system.

Key Concepts

- **User Accounts:** Individual entities with specific permissions and ownership rights.
- **User IDs (UIDs):** Unique identifiers assigned to each user.

Password Management: Handled via /etc/passwd and /etc/shadow files.

- /etc/passwd: Contains user account information.
- /etc/shadow: Stores encrypted password information and password aging policies.

Cat /etc/shadow - cat/etc/passwd

Super User Structure

Sudo command -[options] [name]

Super user do


02
Managing
Users

2.1 Add User Structure

Sudo useradd [username]

Sudo passwd [password]

2.2 Modify User Structure

Sudo usermod -l [newusername] [oldusername]

2.3 Delete User Structure

Sudo userdel [username]


03
Managing
Groups

Key Concepts

- **Groups:** Logical collections of users.
- **Primary Group:** The default group assigned to a user.
- **Secondary Group:** Additional groups a user is a member of

Group IDs (GIDs): Unique identifiers for groups.

Group Management File: /etc/group

Cat /etc/group

3.1 Add Group Structure

Sudo groupadd [groupname]

Sudo passwd [password]

3.2 Add User to group

Sudo usermod -aG [groupname] [username]

3.3 Delete group Structure

Sudo groupdel [groupname]

Example

Adding a new group 'engineers'
sudo groupadd engineers

Adding user 'john' to the 'engineers' group
sudo usermod -aG engineers john

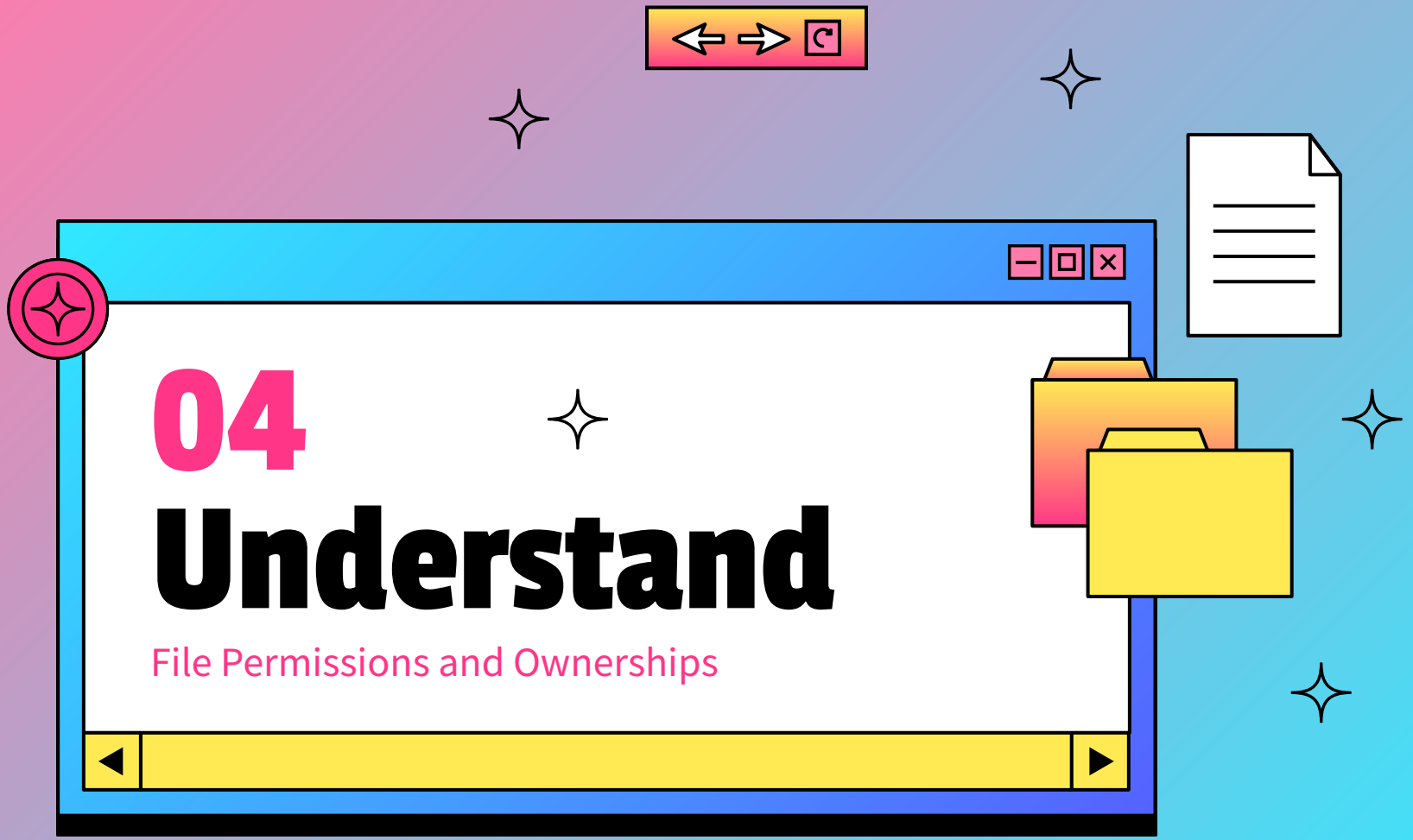
Verifying group membership for 'john'
groups john

Deleting the 'engineers' group
sudo groupdel engineers

5 Minute Break

Day 3 - Part 2

- Understanding File Permissions
  - Ownership
  - Permissions
- Viewing Permissions
- File Permissions
  - Changing Permissions
  - Changing Ownership
  - Changing Group Ownership


04
Understand
File Permissions and Ownerships

File Ownership

User (u)

The owner of the file.

Group (g)

Users who are part of the file's group.

Others (o)

Everyone else.

File Permissions

Write (w)

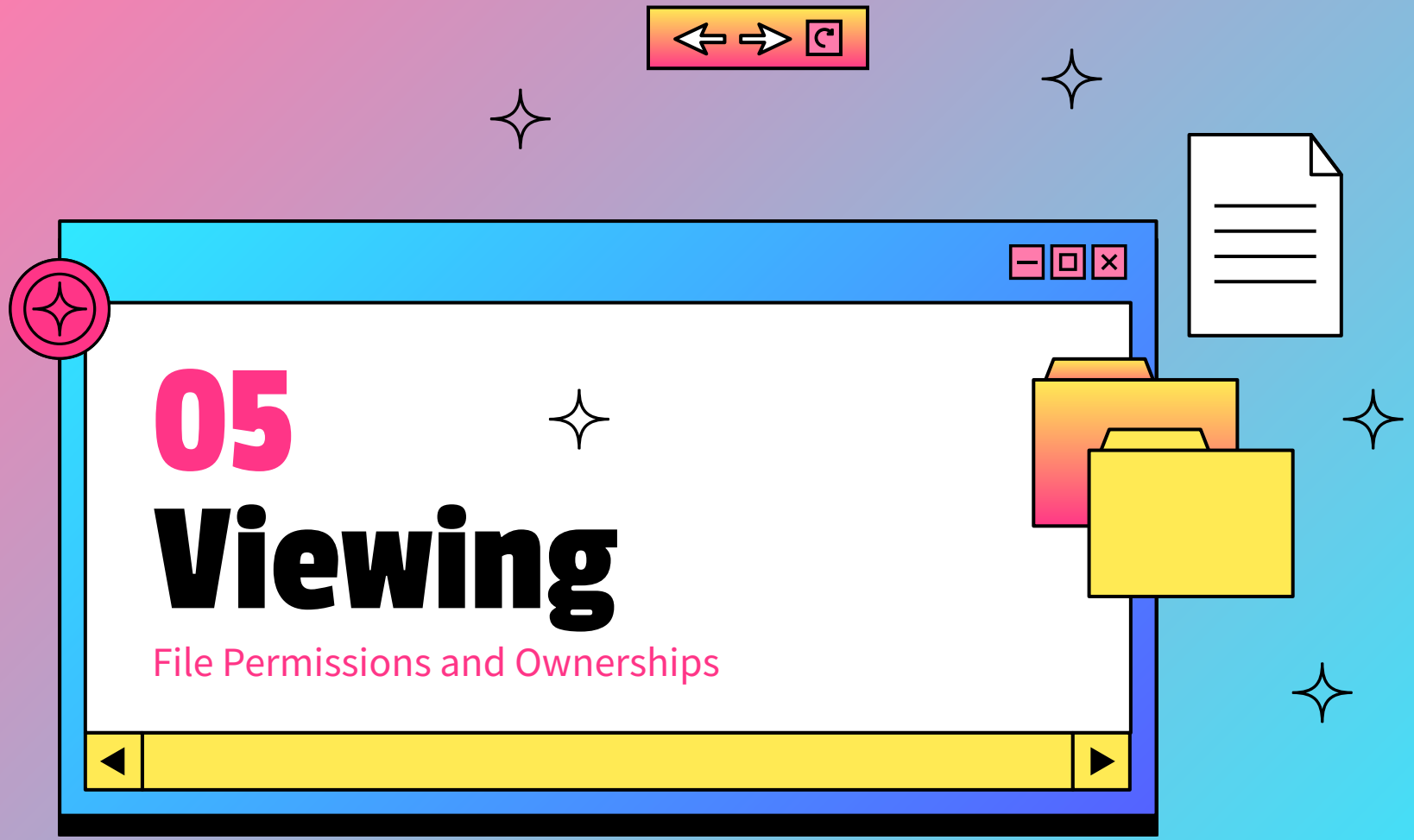
Permission to modify the file

Read (r)

Permission to read the file.

Execute (x)

Permission to execute the file as a program.


05
Viewing
File Permissions and Ownerships

Structure

Ls -f filename

Displaying a string that will break into:

First Character

- for a regular file, d for a directory

next 3 characters

represent the owner's permissions.

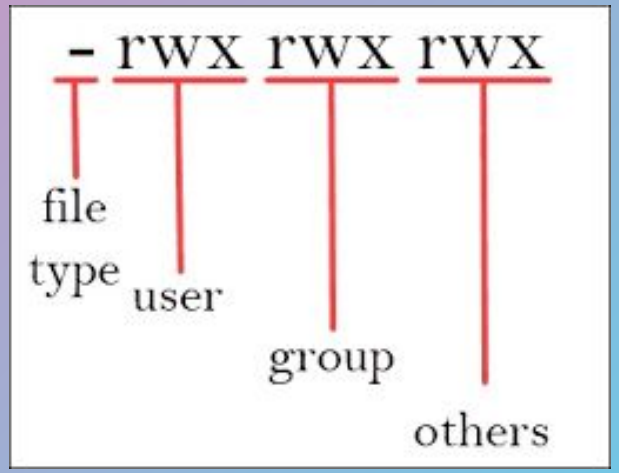
following 3 characters

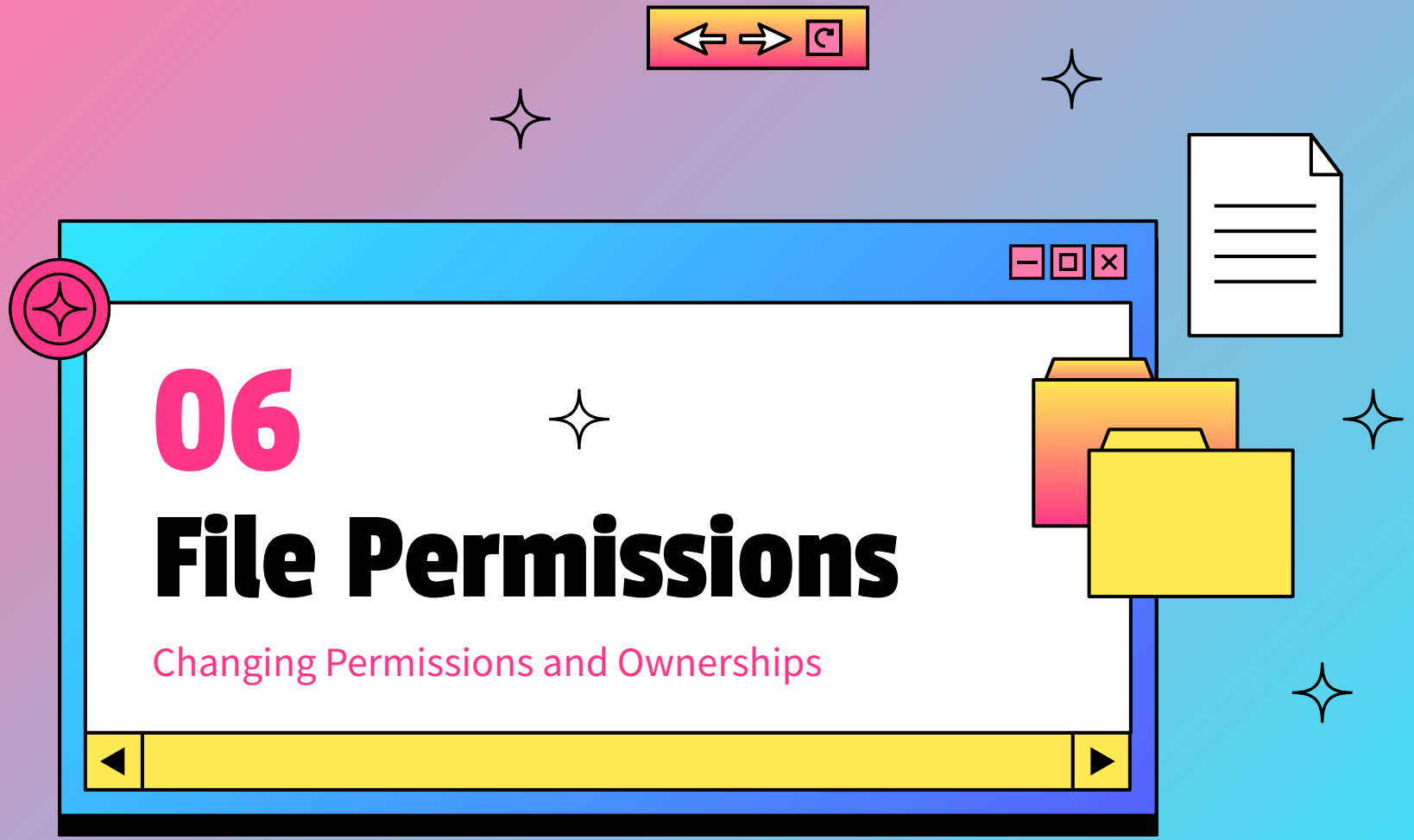
represent the group's permissions.

last 3 characters

represent the others' permissions.

Result of a string as follows:




06
File Permissions
Changing Permissions and Ownerships


6.1
Permissions
Changing Permissions (chmod)

Structure

chmod [ownership]+- [permission]

Symbolic Mode

1) chmod u+rwx filename

Adds read, write, and execute permissions to the owner

2) chmod g-w filename

Removes write permission from the group

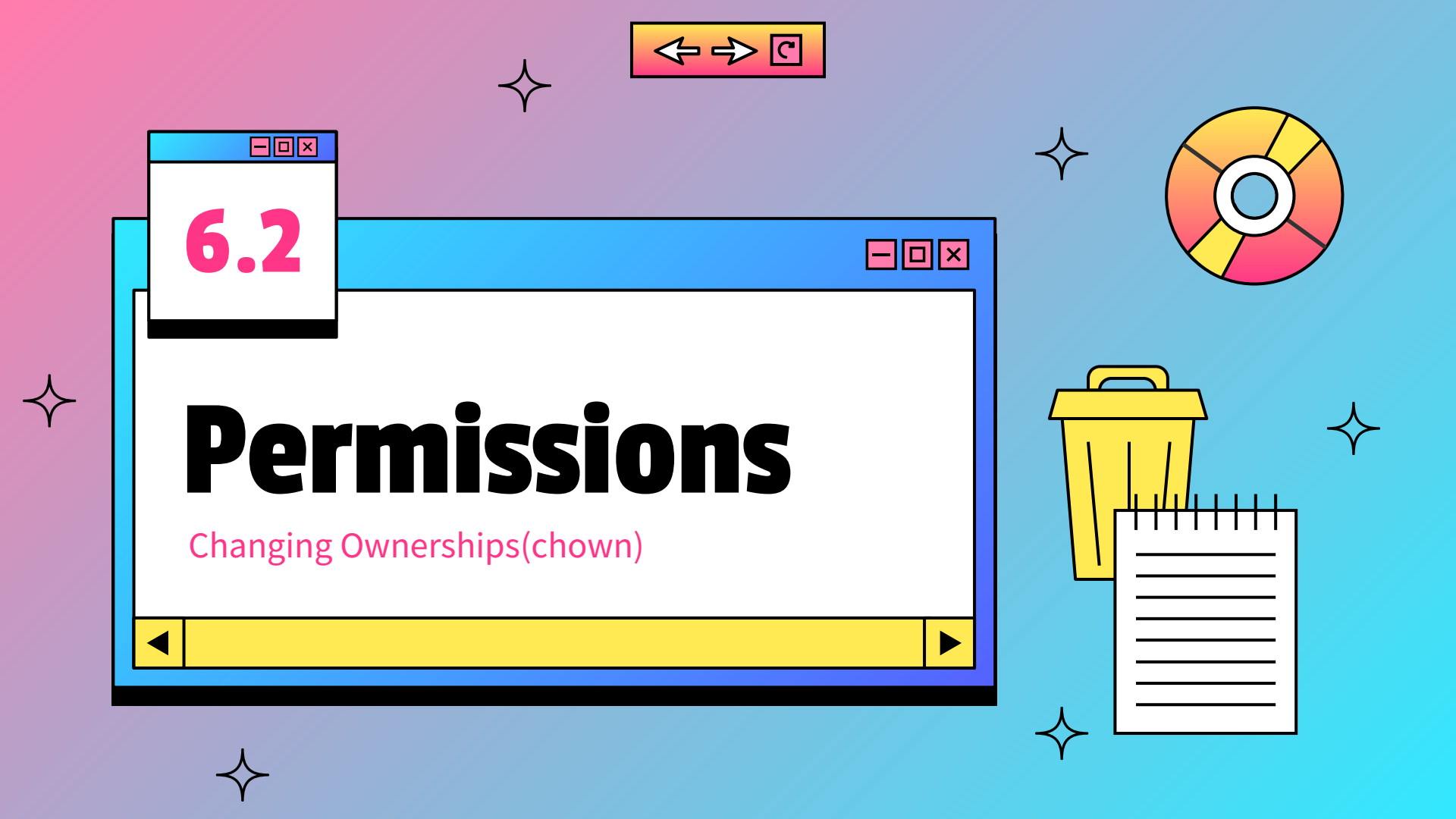
3) chmod o+x filename

Adds execute permission to others

Numeric Mode

Permission	Value
---	0
--x	1
-w-	2
-wx	3
r--	4
r-x	5
rw-	6
rwx	7

Example on Numeric method:
chmod 755 filename


6.2
Permissions
Changing Ownerships(chown)

User Structure

sudo chown newowner filename

Group Structure

sudo chown :newgroup filename

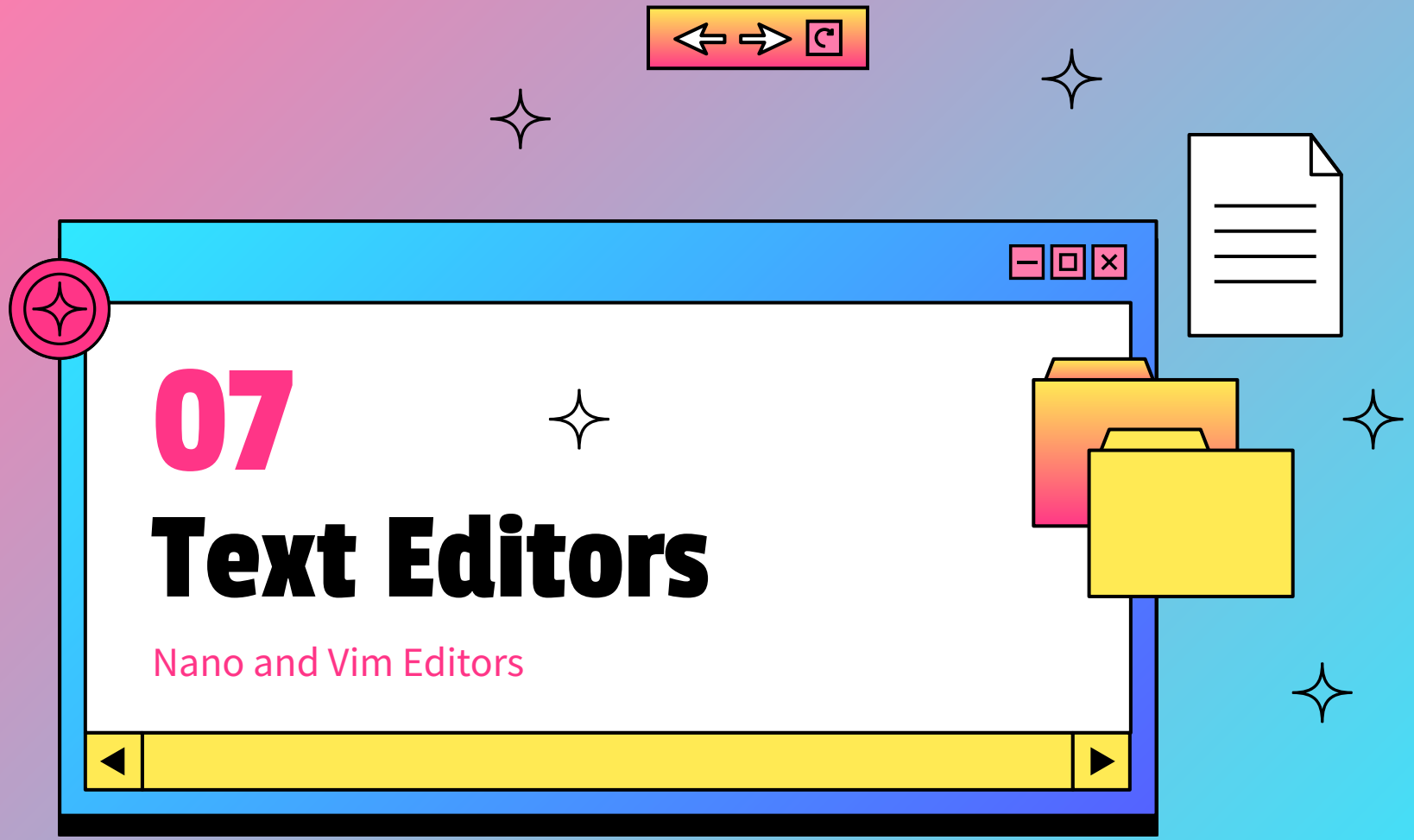
User & Group Structure

sudo chown newowner:newgroup filename

5 Minute Break

Day 3 - Part 3

- Text Editors
  - Nano
    - Nano Structure
    - Nano commands
  - Vim
    - Vim Structure
    - Vim Commands


07
Text Editors
Nano and Vim Editors

7.1

Nano

Text Editor

Nano Structure

Nano filename

Nano Commands

Save

Ctrl + o

Exit

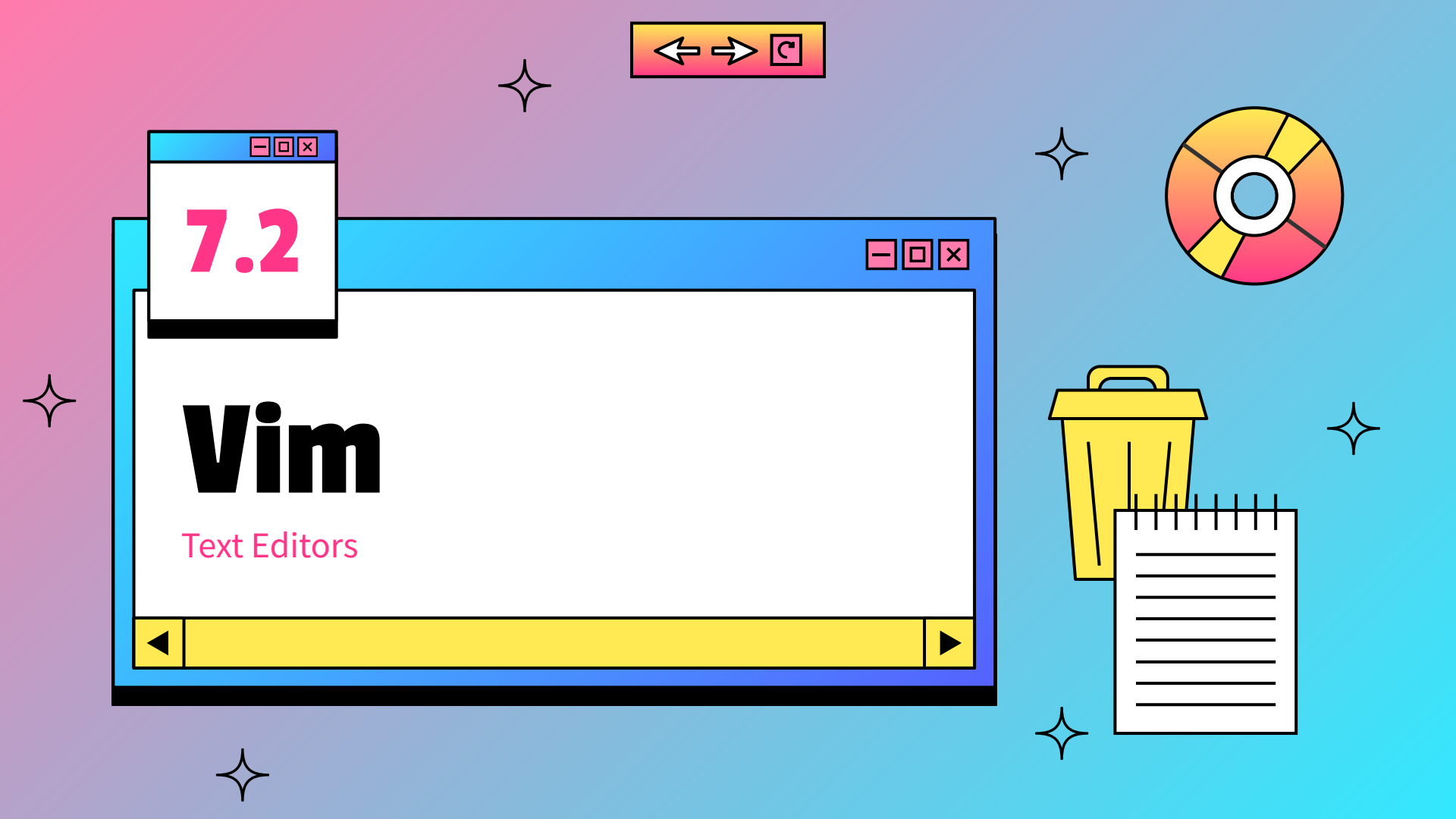
Ctrl + x

Cut

Ctrl + k

Paste

Ctrl + u


7.2
Vim
Text Editors

Vim Structure

Vim filename

Vim Commands

:wq

Save and exit

:q!

Exit without saving

dd

Delete a line

yy

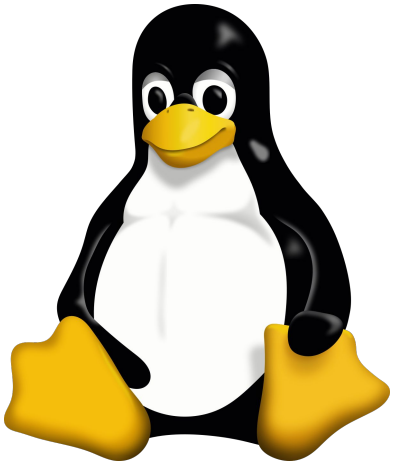
Copy a line

p

Paste a line

Q/A Session

Thank you !



End of Day 3!

By Maya Mnaizel