USER MANAGEMENT - LINUX NOTES (CHEAT SHEET)

1. USERS AND GROUPS

- A user is an account used to log into a Linux system.

- A group is a collection of users with shared permissions.

- Every user has:

- UID (User ID)

- GID (Group ID)

- Home directory

- Shell

- Primary group: default group of the user.

- Secondary groups: additional groups user belongs to.

2. ROOT USER

- The superuser with UID 0.

- Has unrestricted access to the system.

- Can install software, manage users, change system files.

- Commands requiring admin:

- sudo command

- su - : switch to root

- Dangerous actions must be executed carefully.

3. /etc/passwd FILE

- Stores basic user account information.

- Format: username:password_placeholder:UID:GID:comment:home:shell

Example:

user1:x:1001:1001:User Name:/home/user1:/bin/bash

Fields:

- username: login name

- x: password stored in /etc/shadow

- UID: user ID

- GID: primary group ID

- comment: description

- home: home directory

- shell: default shell

4. /etc/shadow FILE

- Stores encrypted user passwords.

- Only root can read it.

Format:

username:encrypted_password:last_change:min:max:warn:inactive:expire

Password field:

- ! or * : account locked

- Empty: no password

Useful for security and password policies.

5. /etc/group FILE

- Stores group information.

Format: groupname:password_placeholder:GID:user_list

Example:

developers:x:1002:alice,bob

Fields:

- groupname: name of group

- x: password placeholder (rarely used)

- GID: group ID

- user_list: members of the group

6. USER MANAGEMENT TOOLS

Common commands:

- useradd username : create user

- userdel username : delete user

- usermod options username : modify user

- passwd username : set or change password

- groupadd groupname : create group

- groupdel groupname : delete group

- gpasswd -a user group : add user to group

- gpasswd -d user group : remove user from group

- id username : show UID, GID, and groups

- whoami : show current user

- groups username : list groups of user