**1. Configure SMTP in Localhost (Using Postfix)**

Install Postfix

# sudo apt update

sudo apt install postfix mailutils -y

**During installation:**

General mail configuration: Select Local only

System mail name: Use the default or set to localhost

Postfix Configuration File: /etc/postfix/main.cf

**Key settings for localhost-only mail:**

myhostname = localhost.localdomain mydomain = localhost myorigin = /etc/mailname inet\_interfaces = loopback-only inet\_protocols = ipv4 relayhost = mydestination = $myhostname, localhost.localdomain, localhost mynetworks = 127.0.0.0/8 **Restart and Test**

sudo systemctl restart postfix echo "This is a test" | mail -s "Local Mail Test" user2@localhost

# Create a User Without Sudo Privileges

Method 1: Create User Without Group sudo useradd testuser sudo passwd testuser

**Method 2: Remove Sudo Group**

sudo deluser testuser sudo

**Method 3: Clear User's Groups**

sudo usermod -G "" testuser

# Create a Global describe Command

Create Script sudo vi /usr/local/bin/describe

# Script Content

#!/bin/bash

ls

**Make Executable**

sudo chmod +x /usr/local/bin/describe

**Usage**

describe

# Automatically Extract research.\* File

Create and Compress a File (Example) touch research.txt gzip research.txt mv research.txt.gz research.gz

# Script: /usr/local/bin/extract\_research

#!/bin/bash

file\_path=$(find / -type f -name "research.\*" 2>/dev/null | head -n 1) **if [ -z "$file\_path" ]; then**

echo "No research file found."

exit 1

fi

**echo "Found file: $file\_path"**

extension="${file\_path##\*.}"

# case "$extension" in

gz) gunzip "$file\_path" echo "Uncompressed .gz file"

;; zip) unzip "$file\_path" -d "$(dirname "$file\_path")" echo "Uncompressed .zip file"

;;

bz2) bunzip2 "$file\_path" echo "Uncompressed .bz2 file"

;; xz) unxz "$file\_path" echo "Uncompressed .xz file"

;;

\*)

echo "Unsupported compression type: .$extension"

exit 1

;;

esac

**Make Executable**

sudo chmod +x /usr/local/bin/extract\_research

# Restrict User File Access Without Using chmod

Set umask to Restrict Permissions

To set default file permissions where no one has access, use umask 0777.

# For All Users (System-Wide)

Edit /etc/profile: sudo vi /etc/profile

# Add: umask 0777 For a Single User

Edit their shell config:

sudo vi /home/username/.bashrc

Add: umask 0777

# For Temporary Session

umask 0777

Note: umask 0777 creates files with no permissions for anyone. Use cautiously.

# Create a Service showtime to Log Time Every Minute

Step 1: Create the Script vi /home/username/showtime.sh **Script Content:**

#!/bin/bash while true; do date >> /home/username/showtime.log sleep 60

done

**Make executable:**

chmod +x /home/username/showtime.sh **Step 2: Create the Service File**

sudo vi /etc/systemd/system/showtime.service **Service Content:**

[Unit]

Description=Showtime Service

After=network.target

# [Service]

Type=simple

ExecStart=/home/username/showtime.sh

Restart=always

User=username

Group=username

ExecStartPre=/bin/sleep 60

RestartSec=60

**[Install]**

WantedBy=multi-user.target

# Step 3: Enable & Control the Service

sudo systemctl daemon-reload sudo systemctl enable showtime sudo systemctl start showtime sudo systemctl stop showtime sudo systemctl status showtime