# Automated Backup System using Shell Script and Cron

**1. Objective**

To automate the process of backing up user-specified directories using a Bash script with `tar`, and schedule it using `cron` with timestamped archive filenames.

**2. Technologies Used**

- Shell Scripting (Bash)  
- tar (for archiving)  
- cron (for task scheduling)  
- Linux OS

**3. Features**

- Backs up specific directories defined by the user.  
- Automatically creates archive files with date/time stamps.  
- Runs automatically every day at 10:10 AM (or as configured).  
- Optionally deletes backups older than 7 days to save disk space.  
- Logs each backup operation for tracking success or failure.

**4. Script Code**

#!/bin/bash  
  
# Directories to back up  
SOURCE\_DIRS="/home/yourusername/Documents /home/yourusername/Pictures"  
  
# Destination directory  
DEST\_DIR="/home/yourusername/backups"  
  
# Create backup folder if not exists  
mkdir -p "$DEST\_DIR"  
  
# Get current timestamp  
TIMESTAMP=$(date +"%Y-%m-%d\_%H-%M-%S")  
  
# Backup file name  
BACKUP\_FILE="$DEST\_DIR/backup\_$TIMESTAMP.tar.gz"  
  
# Create backup  
tar -czf "$BACKUP\_FILE" $SOURCE\_DIRS  
  
# Optional: Delete backups older than 7 days  
find "$DEST\_DIR" -type f -name "\*.tar.gz" -mtime +7 -delete  
  
# Log the result  
echo "Backup completed at $TIMESTAMP: $BACKUP\_FILE"

**5. Cron Job Configuration**

To schedule the script at 10:10 AM every day, use:  
  
10 10 \* \* \* /home/yourusername/backup.sh >> /home/yourusername/backup.log 2>&1  
  
To open the crontab:  
crontab -e

**6. How to Verify the Backup**

- Navigate to the destination folder and check .tar.gz files.  
- Use `tar -tzf backup\_xxx.tar.gz` to list contents.  
- Optionally extract with `tar -xzf` to verify the archive.

**7. Outcome / Result**

The system successfully automates regular backups of key directories with minimal user intervention. It ensures data safety, saves time, and supports recovery in case of accidental deletion.

**8. Screenshots**

- Backup folder with .tar.gz files

A screenshot of a computer

AI-generated content may be incorrect.

- Crontab configuration

A computer screen shot of a black screen

AI-generated content may be incorrect.