

## Linux Command Notes

### Navigating Directories

- **Change directory to home:** `cd` or `cd ~`
  - **Move to root directory:** `cd /`
  - **Move up one level:** `cd ..`
  - **Move up two levels:** `cd ../../`
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### User Management

#### Switching Users

- **Switch to root user:** `sudo -i`
- **Switch to a regular user:** `su username`

#### Creating Users

- **Create a new user:** `adduser username`
- **Create a user and set a password manually:**
  - `useradd username`
  - `sudo passwd username`
- **Create a user with a home directory and bash shell:** `useradd -m -s /bin/bash username`

#### Listing Users

- **List all users:** `cat /etc/passwd` or `getent passwd`
- **Find the root user:** `head -1 /etc/passwd`
- **Find the recently created users:** `tail -5 /etc/passwd`

#### Deleting Users

- **Delete a user:** `userdel username`
- **Delete a user and their home directory:** `userdel -r username`
- **View user details:** `id username`

#### Granting Sudo Privileges

- **Make a user a sudoer:** `visudo` (from root)
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### Group Management

- **Create a new group:** `groupadd groupname`
- **List all groups:** `cat /etc/group`, `getent group`

- **View the first group in the list:** `head -1 /etc/group`
- **View the last few created groups:** `tail -5 /etc/group`
- **Delete a group:** `groupdel groupname`

### Managing Users in Groups

- **Add a user to a group:** `usermod -aG groupname username`
  - **Remove a user from a group:** `gpasswd -d username groupname`
  - **List users in a specific group:** `grep groupname /etc/group`
  - **Check if a group exists:** `getent group <groupname>`
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## File Permissions

### Checking Permissions

- **Check default directory permissions:** `sudo ls -ld /username`
- **Check file permissions:** `ls -l`

### Changing Ownership and Permissions

- **Change file owner:** `sudo chown username filename`
- **Change group ownership of a file:** `sudo chgrp devops /home/aws/f1.txt`

### Advanced File Permissions (ACL)

- **Install ACL:** `sudo apt-get install acl`
  - **Modify ACL permissions:** `setfacl -m u:username:permissions filename`
    - Example: `setfacl -m g:morning_batch:r-- calculator.txt`
  - **Check ACL permissions:** `getfacl calculator.txt`
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## File Compression & Extraction

### Using TAR

- **Create a tar archive:** `tar cf archive.tar file1 file2`
  - Example: `tar cf calculator.tar calculator.txt file1.txt`
- **Extract a tar archive:** `tar -xf archive.tar`

### Using ZIP

- **Create a zip file:** `zip archive.zip file1 file2`
- **Extract a zip file:** `unzip archive.zip`

### Using GZIP

- **Create a gzipped file:** `gzip filename`
    - Example: `gzip zipfile.zip` → Produces `zipfile.zip.gz`
  - **Extract a gzipped file:** `gzip -d filename`
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### **Uploading Videos and Images**

*(No specific commands were provided, but SCP, rsync, or cloud-based tools like AWS S3, Google Drive CLI, or FTP can be used.)*