Linux Command Reference

This document provides a quick reference for commonly used Linux commands.

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1. ls

- **Purpose:** List files and directories.
- **Examples:**

```
ls            # List files
ls -l         # Detailed list
ls -a         # Include hidden files
```

2. cd

- **Purpose:** Change directory.
- **Examples:**

```
cd /home/user/Documents  # Go to Documents
cd ..                    # Go up one directory
cd ~                     # Go to home directory
```

3. pwd

- **Purpose:** Print working directory.
- **Example:**

```
pwd
# Output: /home/user/Documents
```

4. mkdir

- **Purpose:** Create directory.
- **Examples:**

```
mkdir myfolder          # Create 'myfolder'
mkdir -p parent/child   # Create nested directories
```

5. rm

- **Purpose:** Remove files or directories.
- **Examples:**

```
rm file.txt              # Remove a file
rm -r folder             # Remove folder recursively
```

6. cp

- **Purpose:** Copy files or directories.
- **Examples:**

```
cp file1.txt file2.txt   # Copy file1.txt to file2.txt
cp -r folder1 folder2    # Copy folder recursively
```

7. mv

- **Purpose:** Move or rename files/directories.
- **Examples:**

```
mv oldname.txt newname.txt   # Rename file
mv file.txt /path/to/dest/   # Move file
```

8. cat

- **Purpose:** View or concatenate files.
- **Examples:**

```
cat file.txt              # Display content
cat file1.txt file2.txt   # Combine contents
```

9. tail

- **Purpose:** View last lines of a file.
- **Examples:**

```
tail file.txt            # Last 10 lines
tail -n 20 file.txt      # Last 20 lines
tail -f file.txt         # Follow updates
```

10. head

- **Purpose:** View first lines of a file.
- **Examples:**

```
head file.txt              # First 10 lines
head -n 5 file.txt         # First 5 lines
```

11. grep

- **Purpose:** Search for patterns in files.
- **Examples:**

```
grep "hello" file.txt      # Find 'hello'
grep -i "hello" file.txt   # Case-insensitive
grep -r "hello" /path      # Recursive search
```

12. find

- **Purpose:** Search files or directories.
- **Examples:**

```
find /home/user -name "*.txt"    # Find .txt files
find . -type d -name "test*"     # Find directories starting with 'test'
```

13. chmod

- **Purpose:** Change permissions.
- **Examples:**

```
chmod 755 file.sh      # rwx for owner, rx for others
chmod +x script.sh     # Add execute permission
```

14. chown

- **Purpose:** Change owner and group.
- **Examples:**

```
chown user file.txt          # Change owner
chown user:group file.txt    # Change owner and group
chown -R user:group folder   # Recursive change
```

This reference can be used as a quick guide while working in Linux environments.