

# Unix Shell Cheat Sheet

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## File & Directory Management

<code>pwd</code>	<code># Show current directory</code>
<code>ls</code>	<code># List files</code>
<code>ls -l</code>	<code># Detailed listing</code>
<code>cd /path</code>	<code># Change directory</code>
<code>cd ..</code>	<code># Go up one level</code>
<code>mkdir newdir</code>	<code># Create directory</code>
<code>rmdir olddir</code>	<code># Remove empty directory</code>
<code>cp a.txt b.txt</code>	<code># Copy file</code>
<code>mv a.txt b.txt</code>	<code># Move/Rename file</code>
<code>rm file.txt</code>	<code># Delete file</code>
<code>rm -r dir/</code>	<code># Delete directory recursively</code>
<code>touch new.txt</code>	<code># Create empty file</code>
<code>stat file.txt</code>	<code># File info (permissions, size, etc.)</code>

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## ◆ File Viewing & Editing

<code>cat file.txt</code>	<code># Show file content</code>
<code>more file.txt</code>	<code># View file (forward only)</code>
<code>less file.txt</code>	<code># View file (scroll both ways)</code>

```
head -n 5 file.txt    # First 5 lines
tail -n 5 file.txt    # Last 5 lines
wc file.txt           # Count lines, words, characters
echo "Hello"          # Print text
```

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### ◆ Permissions & Ownership

```
chmod 755 file.sh     # rwxr-xr-x
chown user file.sh    # Change owner
chgrp group file.sh   # Change group
```

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### ◆ Redirection & Pipes

```
command > out.txt     # Redirect output
command >> out.txt     # Append output
command 2> err.txt    # Redirect errors
cmd1 | cmd2           # Pipe output of cmd1 to cmd2
```

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### ◆ Search & Find

```
grep "word" file.txt  # Search in file
grep -i "word" file.txt # Case-insensitive search
find /path -name "*.sh" # Find files by name
find / -type d -name logs # Find directories
```

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### ◆ Sorting & Text Processing

```
sort file.txt         # Sort lines
uniq file.txt          # Remove duplicates
```

```
tr a-z A-Z < file.txt      # Translate to uppercase
sed 's/old/new/g' file.txt # Replace text
awk '{print $1, $3}' file  # Print specific columns
```

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### ◆ Processes & Jobs

```
ps -ef          # Show processes
top             # Live system processes
kill 1234       # Kill process by PID
jobs           # Show background jobs
bg %1          # Resume job in background
fg %1          # Resume job in foreground
nohup cmd &    # Run ignoring hangups
```

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### ◆ System Info

```
df -h          # Disk space usage
du -sh dir/    # Directory size
vmstat 5       # System performance (every
5s)
uptime         # Show load average
who            # Logged in users
uname -a       # Kernel info
```

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### ◆ Scheduling Jobs

```
crontab -e     # Edit cron jobs
# Run script at 2 AM daily
0 2 * * * /home/user/script.sh
```

at now + 5 minutes      # Schedule one-time job

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## ◆ Shell Scripting Basics

```
#!/bin/bash
echo "Hello World"      # Print
name="User"             # Variable
echo "Hello $name"
```

```
# If condition
if [ -f file.txt ]; then
    echo "File exists"
fi
```

```
# Loop
for i in 1 2 3; do
    echo $i
done
```

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## ◆ VI Editor

- **i** → Insert mode
  - **Esc** → Command mode
  - **:wq** → Save & Quit
  - **:q!** → Quit without saving
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