

# Unix CHEAT SHEET

## Getting Help

**man *command*** - view the manual for *command*

## Files and directories

**pwd** - print working directory  
**ls** - view files in working directory  
**ls -l** - view files in a list  
**ls -la** - list all files in a list, including hidden files  
**cd *dir*** - change directory to *dir*  
**cd** or **cd ~** - change to home directory  
**cd /** - change to root directory  
**cd ..** - go one directory up  
**cd -** - go to the previous directory  
**rm *file*** - remove *file*  
**rm -r *dir*** - remove directory *dir*  
**rm -rf *dir*** - forcefully remove directory *dir*  
**rmdir *dir*** - remove empty directory *dir*  
**mkdir *dir*** - make directory *dir*  
**ln -s *file link*** - create a *link* to *file*  
**cp *file1 file2*** - copy *file1* to *file2*  
**cp -r *dir1 dir2*** - copies all of *dir1* into *dir2*  
**mv *file1 file2*** - rename or move *file1* to *file2*  
**cat *file*** - output contents of *file* to the terminal  
**less *file*** - view *file* (press 'q' to exit)  
**head *file*** - output the first 10 lines of *file*  
**tail *file*** - output the last 10 lines of *file*  
**tail -f *file*** - watch *file* grow, starting with the last 10 lines

## Remote Connections/File Transfers

**ssh *user@hostname*** - login to *hostname* as *user*  
**ssh -p *W user@hostname*** login to *hostname* as *user* on port *W*  
**scp *file user@hostname:/place/for/file*** - transfer *file* to *hostname* as *user*, store in */place/for/file*  
**scp *user@hostname:/some/file file*** - transfer */some/file* from *hostname* as *user* and store it as *file* on local machine

## Searching

**grep 'STRING' *file*** - searches for 'STRING' in *file*  
**grep -r 'STRING' *dir*** - search in files recursively for 'STRING' in *dir*  
***command* | grep 'STRING'** - filter for 'STRING' in the output of *command*  
**find *dir* -name 'myfile'** - search in *dir* for 'myfile'

## Archives and Extracting

**tar zxvf *file.tar.gz*** - extract *file.tar.gz*  
**tar jxvf *file.tar.bz2*** - extract *file.tar.bz2*  
**tar cf *file.tar file1 file2 file3*** - create *file.tar* that contains *file1 file2* and *file3*  
**tar czf *file.tar.gz folder*** - create *file.tar.gz* with the contents in *folder*  
**zip -r *myzip.zip folder*** - create *myzip.zip* with the contents in *folder*  
**unzip *myzip.zip*** - unzips the file *myzip.zip*

## File permissions

**chmod options file**

Options	Definition
u	owner
g	group
o	other
x	execute
w	write
r	read
+	add permission
-	remove permission
=	set permission

**chmod g+x *file*** - add group execute bit  
**chmod u-x *file*** - remove user execute bit  
**chmod o+wx *file*** - add other write and execute bit  
**chmod ugo+rx *file*** - add read, write and execute for everyone

## Command Expressions

**./** - current directory  
**./app** - runs app in your current directory  
**;** - run several commands sequentially  
**mkdir test; cd test**  
**&&** - run command only if the previous command succeeds  
**./configure && make --prefix=/home/user && make install**  
**||** - run command only if the previous one fails  
**ping www.google.com || echo "Google is down!"**  
**|** - pipe, send output of one command to another command  
**ls | sort**  
**> *file*** - write stdout to *file*  
**>> *file*** - append stdout to *file*  
**< *file*** - read *file* into stdin  
**&** - run command in background  
**xterm &** - opens a new *xterm* in background  
**`*command*`** - runs *command*, output can be used in other commands  
**export HOME=`pwd`**  
**\*** - wildcard: match zero or more characters  
**find . -name 'file.\*'**  
**?** - wildcard: match single character  
**find . -name 'file??txt'**