Linux and ROS Cheat Sheet

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Variable Declaration $VARIABLE stands for a variable whose name is VARIABLE. For example, $FILE means a file named FILE.
sudo sudo means super user do, elevated right granted

System Info

env	print environment variables
date	print system date and time
cal	print current month calendar
uptime	print system uptime
w	print online users
whoami	print current user
finger $USER	print information about $USER
uname -a	print kernel information
cat /proc/cpuinfo	print cpu information
cat /proc/meminfo	print memory information
man $COMMAND	print user manual of $COMMAND
df	print disk usage
du	print directory space usage
free	print memory and swap usage
whereis $APP	print locations of $APP
which $APP	print print executable file of $APP

Compression

tar cf $FILE.tar $FILES	convert $FILES into $FILE.tar
tar xf $FILE.tar	extract files from $FILE.tar
tar czf $FILE.tar.gz $FILES	compress $FILES into $FILE.tar.gz using Gzip
tar xfz $FILE.tar.gz	extract files from $FILE.tar.gz using Gzip
gzip $FILE	compress $FILE and rename it as $FILE.gz
gzip -d $FILE.gz	decompress $FILE.gz back to $FILE

Network

ip address	print all internet protocol addresses
ping $HOST	ping $HOST and print results
whois $DOMAIN	print information about $DOMAIN
dig $DOMAIN	print DNS of $DOMAIN
dig -x $HOST	reverse lookup $HOST
wget $FILE	download $FILE

Terminator

Ctrl+Alt+T	launch a new terminal
Ctrl+C	kill the current process
Ctrl+Z	suspend the current process
fg	resume the suspended process in foreground
bg	resume the suspended process in background
Ctrl+D	log out of the current session
Ctrl+W	erase one word in the current line
Ctrl+U	erase the whole current line
Ctrl+R	reverse search in the previous commands
!!	execute the last command
exit	log out of the current session
Ctrl+Shift+E	split the window vertically vertically
Ctrl+Shift+O	split the window horizontally

Package

apt-get update	synchronize package index files from sources
apt-get upgrade	install latest versions of installed packages
apt-get install $PACKAGE	install $PACKAGE
dpkg -i $PACKAGE.deb	install a Debian package $PACKAGE.deb
./configure	configure building settings
make	build the program from source code
make install	install the program

Secure Shell (SSH)

ssh $USER @ $HOST	connect to $HOST as $USER
ssh $IP_ADDRESS	connect to $IP_ADDRESS
ssh -p $PORT $USER @ $HOST	connect to $HOST on $PORT as $USER
ssh-copy-id $USER @ $HOST	add the key to $HOST as $USER

TODO

ubuntu mono font for commands
tab auto-completion
tar explanation

File Commands

ls	list contents of files and directories
ls -a	list hidden files and directories
cd $DIR	change working directory to $DIR
cd	change working directory to home
mkdir $DIR	create a directory named $DIR
pwd	print working directory
rm $FILE	remove $FILE
rm -r $DIR	remove $DIR
rm -f $FILE	force remove $FILE
rm -rf $DIR	force remove $DIR
cp $FILE1 $FILE2	copy $FILE1 to $FILE2
cp -r $DIR1 $DIR2	copy $DIR1 to $DIR2
mv $FILE1 $FILE2	move $FILE1 to $FILE2
ln -s $FILE $LINK	create symbolic link $LINK to $FILE
touch $FILE	create $FILE
cat $FILE	view content of $FILE
cat > $FILE	write input into $FILE
more $FILE	print contents of $FILE
head $FILE	print the first 10 lines of $FILE
tail $FILE	print the last 10 lines of $FILE