Recovering Deleted Inodes on an Ext2 Filesystem

Accidentally deleted some files? Or accidentally put a space into rm -rf ./ , This is how to (hopefully) recover those files. Firstly stop using the filesystem that the files were on)you could overwrite them), and follow the instructions below. It's free to do, but can be a bit of a hassle, but then you should have been more careful!

DO NOT TRY THIS WHILST THE FILESYSTEM IS IN USE!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
IF IT IS YOUR ROOT FILESYSTEM, REBOOT USING A LIVECD!!!!!!!!!!!!!!!!!!!!!!

Right, now you've unmounted the filesystem or rebooted into Knoppix (or similar) and we've got the big scary warning out of the way. As you know, files are stored in Inodes, and those are what we are aiming to recover. Keep in mind that this job is a major pain in the ass! Depending on what you have deleted it may be far easier to recover from a recent backup. If not then continue on

Open a console, and as root run

debugfs -w /dev/partition # (e.g. debugfs /dev/hdb3)
lsdel # Will show the deleted Inodes
cd /dir/that/you/deleted/files/from
ls -d # Shows Inode usage, deleted inodes shown in < >
mi <inodenumber> # leave all options as default except deleted time, set to 0 and set links to 1
quit

Reboot the system – but leave liveCD in
reboot
e2fsck -fy /dev/partition # (e.g. e2fsck -fy /dev/hdb3)
mount /dev/partition /mnt/mountpoint # (e.g. mount /dev/hdb3 /mnt/hdb3)
cd /mnt/hdb3/lost+found
ls # Shows all the recovered Inodes
All will need renaming unless you happen to like Inodes references
cp * /dir/that/you/deleted/files/from
reboot # Take out the CD to re-enter your normal OS

The files should all be there, if not then you overwrote some of them by using the PC after you deleted the files. Sorry, but it happens!

Hopefully this has helped, for me it was a lesson on reading and interpreting guides, rather than Monkey see, Monkey do. A website I was following instructions from said to run the command

*rm -rf ~ /**

and I thought nothing of it, until I had run it and wondered if the space could be interpreted as meaning erase everything from my home dir upwards and then try and erase the entire filesystem. Hit Ctrl-C quickly enough to avoid totalling the system but lost a lot of files all the same. Whilst this can recover from your mistake, double check all commands before you run them (and run regular backups)