Secure deleting

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Any windows user knows that when you delete a file it goes in to the recycle bin, when you empty the recycle bin it is gone.

But what exactly happens ?
The file itself is not removed, the link (that says where the OS can find the file) is removed. This means that anyone who does a raw scan of your harddrive can see the complete file, even when it is deleted. As long as it isn't overwritten.

This means when you accidently deleted a file, you still can recover it.
Some of you who have worked with DOS might remember undelete. This is a small program that is included with dos (so all users of windows 95,98,... can use it) that scan directories for deleted files and let you recover them.

There are other programs that do the same:

* Directory snoop from Briggs Software

. (windows)

* Final data great software

, does a lot more than just undelete, lets you recover bad partitions, ... (windows)

Ok, but what is secure delete ?
Well, secure delete is, deleting the file ina a way it can't be recovered. Usually by overwritten it a few times.

But, there is always a but. It is never complete erased(deleted).
I don't have to tell you that computer work in the binary system (0 and 1). So do they store there data. Now when you overwrite data it changes the value (from 1 back to 0).
The problem is that with magnetic data (hard disks, floppy-disks, magnetic tapes) the center of the data place is put back to 0, but not the sides. So anyone who can read the sides can read the original data.
The more you overwrite the data the harder it gets to recover the data. But it is still possible, if you are really good.

Now on floppy disk you can't securely delete data. The position of the head (the part of a diskstation that read and writes) changes to hard. This means that the "sides" will be more readable.
On hard disk you can make it pretty difficult to read the "sides". Overwrite the data at least 8 times.

Here is some software that secure delete data.

* Anonymizer Digital Shredder

* shred (linux)

If you want more information on secure deleting check out these pages.
Secure Deletion of Data from Magnetic and Solid-State Memory tutorial by Peter Gutmann