

This command is used to eject the tray.

```
$ eject -t
```

This command is used to close the tray.

For extra points, write a loop that opens and closes the tray a number of times.

Finding the difference between files, patching

When multiple versions of a file are available, it is very useful when we can find the differences between files being highlighted rather than comparing two files manually. If the files are large, it is very difficult and time consuming to compare them by hand. This recipe illustrates how to generate differences between files highlighted with line numbers. When working on large files by multiple developers, when one of them has made changes and these changes need to be shown to the other, sending the entire source code to other developers manually is time consuming. Sending a difference file instead is very helpful as it consists of only lines which are changed, or added or removed and line numbers are attached with it. This difference file is called a **patch file**. We can add the changes specified in the patch file to the original source code by using the `patch` command. We can also revert the changes by patching again. Let us see how to do this.

How to do it...

The `diff` command utility is used to generate difference files.

1. To generate difference information, create the following files:

- File 1: `version1.txt`

```
this is the original text
line2
line3
line4
happy hacking !
```
- File 2: `version2.txt`

```
this is the original text
line2
line4
happy hacking !
GNU is not UNIX
```

2. Nonunified `diff` output (without the `-u` flag) will be as follows:

```
$ diff version1.txt version2.txt
3d2
<line3
6c5
> GNU is not UNIX
```

3. The unified `diff` output will be as follows:

```
$ diff -u version1.txt version2.txt
--- version1.txt 2010-06-27 10:26:54.384884455 +0530
+++ version2.txt 2010-06-27 10:27:28.782140889 +0530
@@ -1,5 +1,5 @@
this is the original text
line2
-line3
line4
happy hacking !
-
+GNU is not UNIX
```

The `-u` option is used to produce a unified output. Everyone prefers unified output, as the unified output is more readable and because it is easier to interpret the difference that is being made between two files.

In unified `diff`, the lines starting with `+` are the newly-added lines and the lines starting with `-` are the removed lines.

4. A patch file can be generated by redirecting the `diff` output to a file, as follows:

```
$ diff -u version1.txt version2.txt > version.patch
```

Now, using the `patch` command we can apply changes to any of the two files. When applied to `version1.txt`, we get the `version2.txt` file. When applied to `version2.txt`, we receive `version1.txt`.

5. To apply the patch, use the following command:

```
$ patch -p1 version1.txt < version.patch
patching file version1.txt
```

We now have `version1.txt` with the same contents as that of `version2.txt`.