

# Redirection

[coursera.org/learn/linux-for-developers/supplement/84iol/redirection](https://coursera.org/learn/linux-for-developers/supplement/84iol/redirection)

File descriptors:

- **0 = stdin**
- **1 = stdout**
- **2 = stderr**

**less < file** same as **less file** or **less 0 < file**

**foo > file** ; redirect **stdout** (same as **foo 1 > file**)

**foo 2 > file** ; redirect **stderr**

**foo >> file** ; append **stdout** to **file**

**foo >& file** or **foo > file 2>&1**;

sends **stdout** and **stderr** to a file, but **foo >>& file** does not work ; you have to do **foo >> file 2>&1**

Note that **foo > file 2>&1** is not the same as **foo 2>&1 > file**; the order of arguments is important.

A nice non-portable trick you can use in Linux is to take advantage of the device nodes:

`/dev/stdin`

`/dev/stdout`

`/dev/stderr`

```
$ foo > /dev/stderr
```