Logging into the console

Where the Raspbian operating system is configured to not automatically start the graphical desktop, your Raspberry Pi will start up with the boot messages then display a login prompt where you must enter a username and password to proceed.

The Raspbian system is supplied configured with a single default user named "pi" whose login password is "raspberry". These can therefore be used at the login prompt to access the system at its Command-Line Interface (CLI). This is known as the "console" – historically describing the keyboard and monitor combination from the days before the mouse and graphical desktop. When a login attempt succeeds, a colorful user command prompt appears where you can enter commands to interact with the system.

1 Start up your Raspberry Pi and watch the boot process until a login prompt appears – type **pi** then hit Return

2 When the password prompt appears, type **raspberry** then hit Return – see the user prompt appear after system info

```
raspberrypi login: pi
Password:
Last login: Sun Mar 27 15:36:22 EEST 2016 on tty1
Linux raspberrypi 4.1.18-v7+ #846 SMP Thu Feb 25 14:22:53 GMT 2016 armv7l

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
pi@raspberrypi:~ $
```

The Raspberry Pi user prompt contains several components describing your username **pi**, machine name **raspberrypi** and current file location **~** (tilde – an alias for the **/home/pi** directory). You can confirm your current location on the filesystem at any time by entering the command **pwd** (print working directory).

3 At the user prompt, type **pwd** then hit Return – see the current directory appear then another user prompt

```
pi@raspberrypi ~ $ pwd
/home/pi
pi@raspberrypi ~ $
```

…cont'd

You can discover the contents of the current directory by entering the command **ls** (list sorted). This displays a list of folders and files within the current directory, but not hidden system files. Like most Linux commands, "switches" can be added after the command to change how they respond. So with the **ls** command, adding a **-a** switch will display all content, including system files.

4   At the user prompt, type **ls** then hit Return – see the current directory contents appear

```
pi@raspberrypi ~ $ ls
Desktop  python_games
pi@raspberrypi ~ $
```

5   Now, at the user prompt, type **ls -a** then hit Return – see the current directory contents including system files

```
pi@raspberrypi ~ $ ls -a
.               .bashrc   Desktop    python_games
..              .cache    .gvfs      .thumbnails
.bash_history   .config   .local     .Xauthority
.bash_logout    .dbus     .profile   .xsession-errors
pi@raspberrypi ~ $
```

You can clear past command results using the **clear** command and discover switches available for any command, plus what they achieve, using the **man** command followed by the command name, e.g. **man ls** to display the switches for the **ls** command.

It is important to recognize that Linux is designed as a multi-user system, so regular users cannot perform all tasks – some can only be performed by the system administrator ("root" or "superuser"). But for convenience you can temporarily assume superuser status to do something with the **sudo** command, for example to close Raspberry Pi with the **shutdown** command. This accepts a **-h** (halt) switch or a **-r** (reboot) switch, followed by a number indicating a delay in minutes, or zero for no delay.

6   Finally, at the user prompt, type **sudo shutdown -h 0** then hit Return – see the system close down immediately

```
pi@raspberrypi ~ $ sudo shutdown -h 0
```

Hot tip

Switches can be combined, so that **ls -al** is equivalent to **ls -a -l** as both will display all content in long format.

Hot tip

Notice that system content names are prefixed by a period, and onscreen the directories are blue color.

Hot tip

The system remembers your past commands – use the up and down arrow keyboard keys to scroll through them at the user prompt then hit Return to re-run your chosen past command.