

Shell Scripting Tutorial

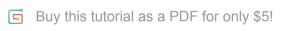
A Bourne Shell Programming
/ Scripting Tutorial for
learning about using the Unix
shell. Learn Linux / Unix shell
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Shell Scripting Tutorial







1. Introduction

Purpose Of This Tutorial

This tutorial is written to help people understand some of the basics of **shell script** programming (aka **shell scripting**), and hopefully to introduce some of the possibilities of simple but powerful programming available under the Bourne shell. As such, it has been written as a basis for one-on-one or group tutorials and exercises, and as a reference for subsequent use.

Getting The Most Recent Version Of This Tutorial

You are reading Version 2.1b, last updated 11th February 2018.

The most recent version of this tutorial is always available at:

https://www.shellscript.sh. Always check there for the latest copy. (If you are reading this at some different address, it is probably a copy of the real site, and therefore may be out of date).

A Brief History of sh

Steve Bourne wrote the Bourne shell which appeared in the Seventh Edition Bell Labs Research version of Unix.

Many other shells have been written; this particular tutorial concentrates on the Bourne and the Bourne Again shells.

Other shells include the Korn Shell (ksh), the C Shell (csh), and variations such as tcsh.

This tutorial does *not* cover those shells.

Audience

This tutorial assumes some prior experience; namely:

- Use of an interactive Unix/Linux shell
- Minimal programming knowledge use of variables, functions, is useful background knowledge
- Understanding of some Unix/Linux commands, and competence in using some of the more common ones. (*Is, cp, echo,* etc)

 Programmers of ruby, perl, python, C, Pascal, or any programming language (even BASIC) who can maybe read shell scripts, but don't feel they understand exactly how they work.

You may want to review some of the feedback that this tutorial has received to see how useful you might find it.

Typographical Conventions Used in This Tutorial

Significant words will be written in *italics* when mentioned for the first time.

Code segments and script output will be displayed as monospaced text. Command-line entries will be preceded by the Dollar sign (\$). If your prompt is different, enter the command:

```
PS1="$ "; export PS1
```

Then your interactions should match the examples given (such as ./my-script.sh below).

Script output (such as "Hello World" below) is displayed at the start of the line.

```
$ echo '#!/bin/sh' > my-script.sh
$ echo 'echo Hello World' >> my-script.sh
$ chmod 755 my-script.sh
$ ./my-script.sh
Hello World
$
```

Entire scripts will be shown with a gray background, and include a reference to the plain text of the script, where available:

my-script.sh

```
#!/bin/sh
# This is a comment!
echo Hello World # This is a comment, too!
```

Note that to make a file executable, you must set the eXecutable bit, and for a shell script, the Readable bit must also be set:

```
$ chmod a+rx my-script.sh
$ ./my-script.sh
```

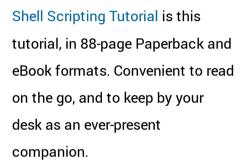


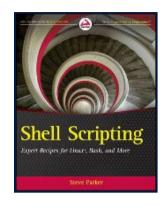
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My Shell Scripting books, available in Paperback and eBook formats.







Shell Scripting: Expert Recipes for Linux, Bash and more is my 564-page book on Shell Scripting. The first half explains the features of the shell; the second half has real-world shell scripts, organised by topic, with detailed discussion of each script.

CONTACT

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