BASH Programming - Introduction HOW-TO

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This article intends to help you to start programming basic-intermediate shell scripts. It does not intend to be an advanced document (see the title). I am NOT an expert nor guru shell programmer. I decided to write this because I'll learn a lot and it might be useful to other people. Any feedback will be apreciated, specially in the patch form:)

1. Introduction

- 1.1 Getting the latest version
- 1.2 Requisites
- 1.3 Uses of this document

2. Very simple Scripts

- 2.1 Traditional hello world script
- 2.2 A very simple backup script

3. All about redirection

- 3.1 Theory and quick reference
- 3.2 Sample: stdout 2 file
- 3.3 Sample: stderr 2 file
- 3.4 Sample: stdout 2 stderr
- 3.5 Sample: stderr 2 stdout
- 3.6 Sample: stderr and stdout 2 file

4. Pipes

- 4.1 What they are and why you'll want to use them
- 4.2 Sample: simple pipe with sed
- 4.3 Sample: an alternative to ls -1 *.txt

5. Variables

- 5.1 Sample: Hello World! using variables
- 5.2 Sample: A very simple backup script (little bit better)
- 5.3 Local variables

6. Conditionals

• <u>6.1 Dry Theory</u>

- 6.2 Sample: Basic conditional example if .. then
- 6.3 Sample: Basic conditional example if .. then ... else
- <u>6.4 Sample: Conditionals with variables</u>

7. Loops for, while and until

- 7.1 For sample
- <u>7.2 C-like for</u>
- 7.3 While sample
- 7.4 Until sample

8. Functions

- 8.1 Functions sample
- <u>8.2 Functions with parameters sample</u>

9. <u>User interfaces</u>

- 9.1 Using select to make simple menus
- 9.2 Using the command line

10. **Misc**

- 10.1 Reading user input with read
- 10.2 Arithmetic evaluation
- 10.3 Finding bash
- 10.4 Getting the return value of a program
- 10.5 Capturing a commands output
- 10.6 Multiple source files

11. Tables

- 11.1 String comparison operators
- 11.2 String comparison examples
- 11.3 Arithmetic operators
- 11.4 Arithmetic relational operators
- 11.5 Useful commands

12. More Scripts

- 12.1 Applying a command to all files in a directory.
- 12.2 Sample: A very simple backup script (little bit better)
- 12.3 File re-namer
- 12.4 File renamer (simple)

13. When something goes wrong (debugging)

• 13.1 Ways Calling BASH

14. About the document

- <u>14.1 (no) warranty</u>
- 14.2 Translations
- <u>14.3 Thanks to</u>
- <u>14.4 History</u>
- 14.5 More resources