

Shell Scripting with Bash

A First Look at Shell Scripts

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Overview

- What is a shell script?
- Creating a script
- Choosing a name
- Setting permissions
- Running your script

Creating a Script

- **A script:**
 - A text file containing code
 - To be run by an interpreter
 - In this course, the interpreter will be bash
 - Will run each command in the file in order
- **Choose a good text editor**
 - Emacs, vi
 - Linux: Kate, gedit
 - Mac OS: TextWrangler

Executable permissions

- **Use chmod command:**
 - "chmod u+x filename"
 - "chmod a+x filename" to make it executable for everyone
 - "chmod a-x filename" to remove the permission
- **For more about permissions:**
 - <http://goo.gl/3TcY73>

Calling the script

- **If the script is not on your PATH:**
 - Include the directory when calling it
 - ./hw
 - /home/reindert/hw
- **If the script is on your path**
 - Just call it like a regular command
- **Tip: make a bin folder in your home**
 - Put your scripts in there
 - Add it to your path
 - `PATH="$PATH:~/bin"`

Shebang

- **Shebang line:**
 - First line of file
 - Starts with #!
 - Specifies which interpreter should run the code
 - Specify options for interpreter
- **Bash scripts:**
 - `#!/bin/bash`
- **Other systems than Linux or Mac OS**
 - May have bash in a different location
 - `#!/usr/bin/env bash`
 - This will find bash on the user's PATH
 - Cannot give options
 - Result depends on the user's configuration

Naming your script

- **Don't name your script "test", "if", or "ls"**
 - Conflicts with existing commands
- **Does a command with the same name exist?**
 - Use "type"

Summary

- **Shell Script**
 - A file containing commands
 - Executed by your shell
- **Naming your script**
- **Don't forget to set permissions**
 - `chmod u+w`
- **Shebang**
 - First line
 - `#!/bin/bash`
- **Use comments**
 - Comments start with `#`
- **Add script to your PATH**
- **Or call it with a full pathname**