

Linux Week Day 3: Intro to Scripting

Reuse

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What's a script?

A text file that gets run with some interpreter

Scripts start with a 'shebang' which tells the kernel what program to run the script with.

hello.sh

```
#!/bin/sh  
echo Hello world!
```

hello.py

```
#!/bin/python3  
print("Hello world!")
```

Permissions

To keep you from accidentally running something dangerous, files need permission to be run as programs.

Permission can be given with `chmod`.

```
> chmod +x hello.sh
```

Path

The path is a list of folders the shell looks in to find programs

You can see it with `echo $PATH`

These work

```
> ls  
> ./hello.sh  
> PATH=. hello.sh
```

But these don't

```
> hello.sh  
> PATH=. ls
```

A silly aside

What will these 'scripts' do?

silly_a

```
#!/bin/rm  
:)
```

silly_b

```
#!/bin/nano  
Hello!
```

silly_c

```
#!/bin/cat  
Meow
```

For loops

Run commands for each element in a list

```
for x in a b c  
do echo $x  
done
```

Interpolation

Use the output of a command as an arguments of another

```
> echo "I'm" $(whoami)  
> cat $(ls)
```


Arguments

The arguments of a script can be referred to with \$0, \$1 etc.

```
swap.sh
```

```
#!/bin/sh  
echo $2 $1
```

```
> ./swap.sh left right  
right left
```

Example

loop.sh

```
for file in $(ls)
do echo $file
done
```

Tips for making scripts

Figure out what commands you will need for what you want

Read the help page and manual page (run `man [COMMAND]`) for these commands to see what options you will need to set

Test the pieces in the terminal before putting it all together