LESSON 4

script.sh

```
if [[ -f "$1" ]]; then
  echo "found"
fi
```




if · case · [[ ]]

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# BASH & ZSH SCRIPTING

LESSON 4

## Conditionals and Exit Codes

Exit status, test and [[ ]], if/elif/else, case, && and ||

# Exit Codes



terminal

```
$ ls /etc > /dev/null; echo $?
0
$ ls /nope; echo $?
ls: cannot access '/nope': No such file or directory
2
$ grep -q root /etc/passwd && echo "found"
```

- Every command returns an exit code. Zero means success and anything else means failure. …
- Your scripts should follow the same rule: exit zero when all is well, and exit one or more …

01

# Tests with [[ ]]



| Test | True when |
| --- | --- |
| `[[ -f "$file" ]]` | file exists |
| `[[ -d "$dir" ]]` | folder exists |
| `[[ -z "$name" ]]` | string is empty |
| `[[ $n -gt 10 ]]` | number greater than 10 |
| `[[ $f == *.log ]]` | name ends in .log |

- Double square brackets test a condition. Dash f checks a file exists, dash d a folder, and …
- Numbers use dash eq, dash lt and dash gt, while strings use equals equals and can match …

02

# if, elif and else



check.sh

```
if [[ -z "$1" ]]; then
    echo "usage: $0 FILE" >&2; exit 1
elif [[ ! -f "$1" ]]; then
    echo "no such file: $1" >&2; exit 2
else
    echo "$1 has $(wc -l < "$1") lines"
fi
```

- The if statement runs a command or test and checks its exit code. Finish with fi, which is …
- Here the script refuses to run without an argument, then checks whether the file exists …

03

# case for Many Choices



service.sh

```
case "$1" in
    start)   echo "Starting..." ;;
    stop)    echo "Stopping..." ;;
    status)  systemctl status myapp ;;
    *)       echo "usage: $0 {start|stop|status}"; exit 1 ;;
esac
```

- case compares one value against several patterns, which is cleaner than a long chain of elif.
- It is perfect for menus and for start, stop and status commands in service scripts. Each …

04

# && and || Shortcuts



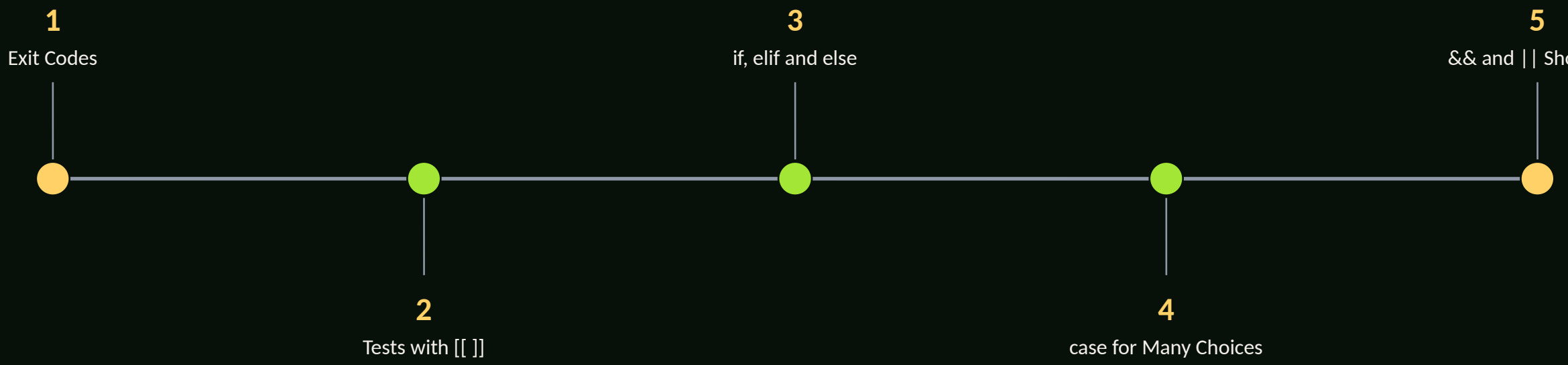
shortcuts.sh

```
mkdir -p backup && cd backup
ping -c1 -W1 8.8.8.8 > /dev/null || echo "no internet"
[[ -f config.ini ]] || { echo "missing config" >&2; exit 1; }
```

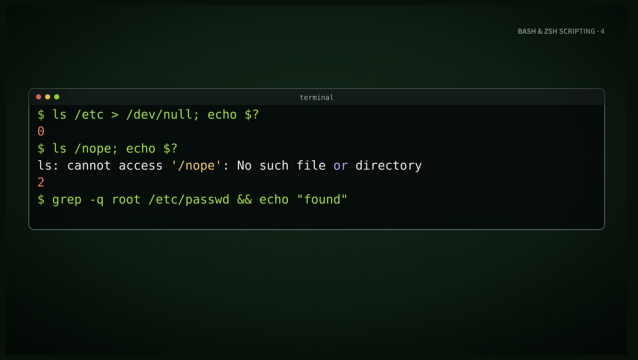
- Double ampersand runs the next command only if the first one succeeded. Double bar runs it …
- mkdir dash p backup and and cd backup, or grep dash q root or echo missing: short and …

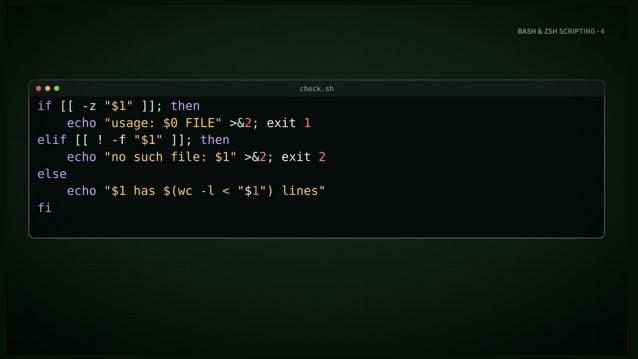
05

# Lesson Map


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Exit Codes
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Tests with [[ ]]
3
if, elif and else
4
case for Many Choices
5
&& and || Shortcuts

# Sources and Further Reading



Thank you for watching

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