LESSON 6

```
script.sh
greet() {
  local name="$1"
  echo "Hi $name"
}
```



Functions & $@

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BASH & ZSH SCRIPTING

LESSON 6

Functions and Arguments

$1, $@, $#, shift, local variables and return codes

Script Arguments

terminal

```
$ cat args.sh
echo "script: $0"
echo "first:  $1"
echo "count:  $#"
for a in "$@"; do echo "- $a"; done

$ ./args.sh one "two words" three
script: ./args.sh
first:  one
count:  3
```

- Words after the script name become positional parameters: dollar one, dollar two, and so …
- Dollar hash is the number of arguments, and quoted dollar at is all of them, each kept as a …

01

Defining Functions

greet.sh

```
greet() {
    local name="$1"
    local time="${2:-day}"
    echo "Good $time, $name!"
}

greet Mariam morning      # Good morning, Mariam!
greet Ahmad               # Good day, Ahmad!
```

- Write a name, parentheses and a body in braces. Call it like any command, with arguments …
- Inside the function, dollar one and dollar at are the function's own arguments, not the …

02

local Variables



- Variables in a shell function are global unless you say local. Without local, a function …
- Make local the habit for every variable inside a function.

03

Returning Values

return.sh

```
is_root() { [[ $EUID -eq 0 ]]; }          # exit code only
to_upper() { echo "${1^^}"; }             # returns text

if is_root; then echo "running as root"; fi
name=$(to_upper "mariam")                 # MARIAM
```

- return in Bash sets an exit code from zero to 255, it does not return data. To return text, ...
- Use return codes for yes or no answers, so the function works directly inside if.

04

shift and Option Loops

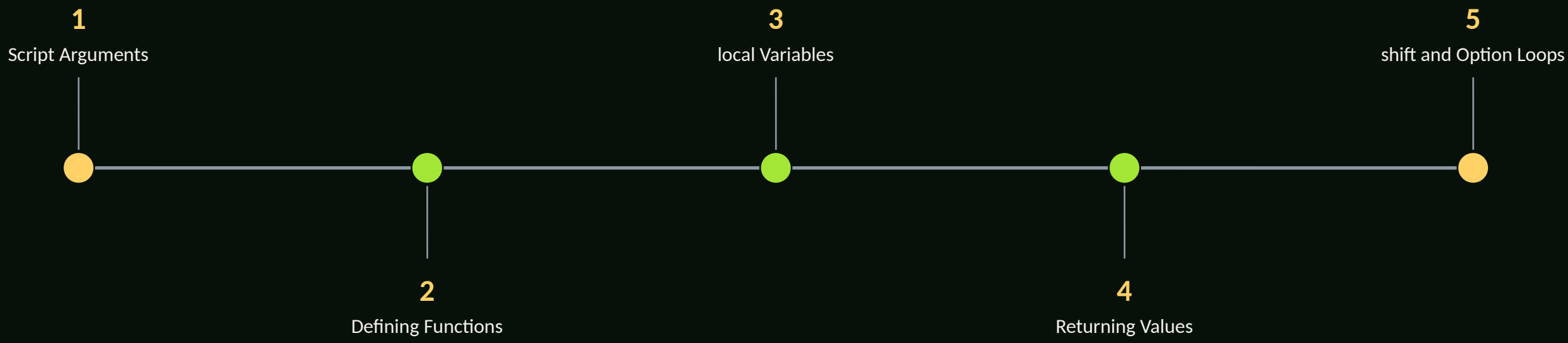
options.sh

```
verbose=0
while [[ $# -gt 0 ]]; do
    case "$1" in
        -v|--verbose) verbose=1 ;;
        -h|--help)    echo "usage: $0 [-v] FILE"; exit 0 ;;
        *)            file="$1" ;;
    esac
    shift
done
```

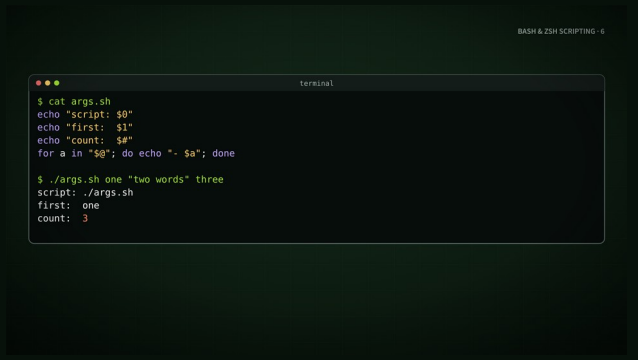
- shift removes dollar one and moves every argument down by one. In a while loop it lets you …
- For larger tools, getopts parses short options for you, which we will use in the automation …

05

Lesson Map


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Defining Functions
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local Variables
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Returning Values
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shift and Option Loops

Sources and Further Reading





Thank you for watching

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