

* Introduction to shell scripting (Part 1) (Lesson 15)

concepts and syntax of Bash Scripting.

* Introduction.

Till now we execute manually one by one.

```
useradd tim  
groupadd devops  
mkdir project  
touch file.txt
```

```
sudo apt docker  
docker run
```

If we have configured a server,



→ new user, installed app, started, file permissions etc.

But now, we have to run the same command



→ in same order on different server to configure it.

But now we can't configure the same commands manually one by one because we have 10 server where we have to do execute same thing.

- ✓ Avoid repetitive work

- ✓ Keep history of configuration

- ✓ Share the instructions.

- ✓ Logic and Bulk operations.

- write the commands in a file

- execute the file.

file is movable

file can shared with other teammates so that they can execute it on their server.

- Such a file with shell commands is called shell script.

- Shell script have a .sh file extension

What is a Shell?

Shell → The program that interpretes and

executes various commands that we type in the terminal

→ Translates our command that the OS kernel can understand

→ Different shell implementations

→ sh (Bourne shell) - /bin/sh
→ used to be default shell

→ Bash (Bourne again shell) - /bin/bash
→ default shell program for most unix like system

Shell vs sh vs Bash.

→ Shell and Bash terms are often used interchangeably

Bash scripting and commands

→ Bash is a shell program (command interpreter)

→ Bash is a programming language

* Shebang

Write a bash script for configuring a server.

① touch setup.sh → create a file for bash script.

all shell script files have the same .sh file extension

How does OS know which shell to use?

shebang line →

SH	Bash	ZSH
we need to tell the OS!		
#!/bin/sh	#!/bin/bash	#!/bin/zsh
↓ very first line of script.		

② vim setup.sh (press i)

③ #!/bin/bash

* Write and execute a simple script.

④ echo "Setup and configure server"
print out ← ⑤ : wg
⑥ To execute — ./setup.sh

But we don't have permission
first we need to set permission

⑦ sudo chmod u+x setup.sh

⑧ ./setup.sh
or for bash
bash setup.sh