

[544] Deploying on Linux

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Learning Objectives

- navigate a Linux file system
- operate within a Linux shell
- automate repeated tasks
- chain multiple Linux programs together into a pipeline
- redirect process output to a file

A Shell: the most helpful program?

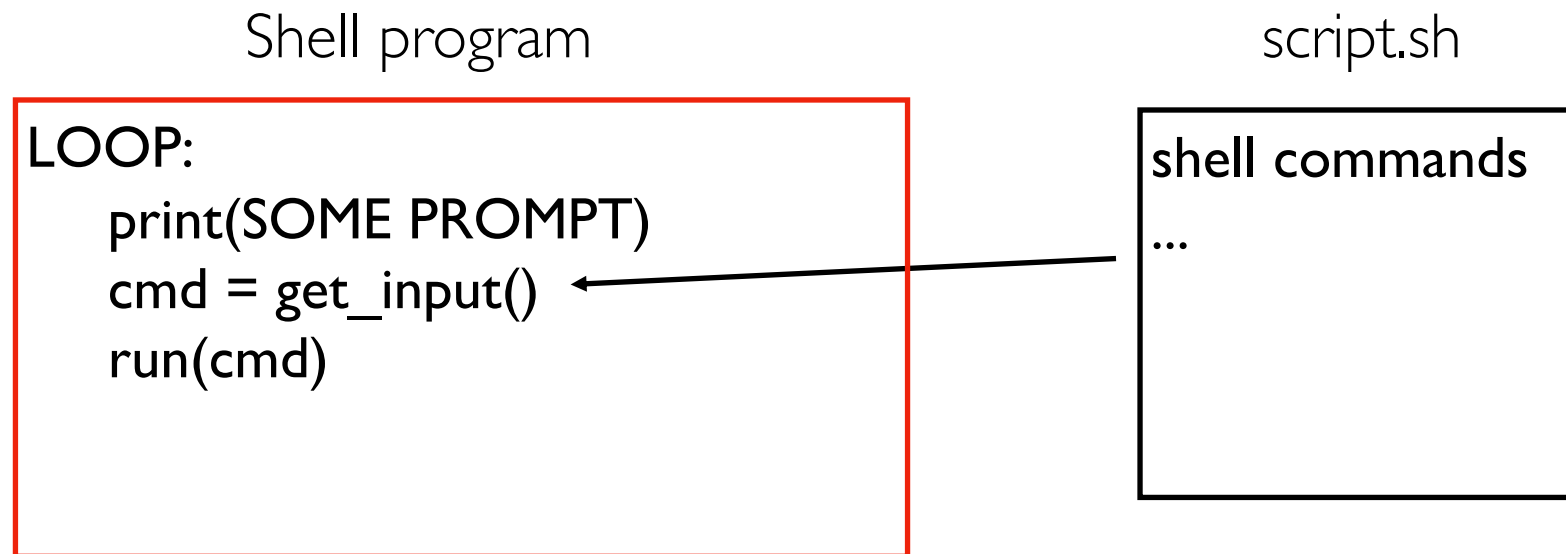
Shell program

LOOP:

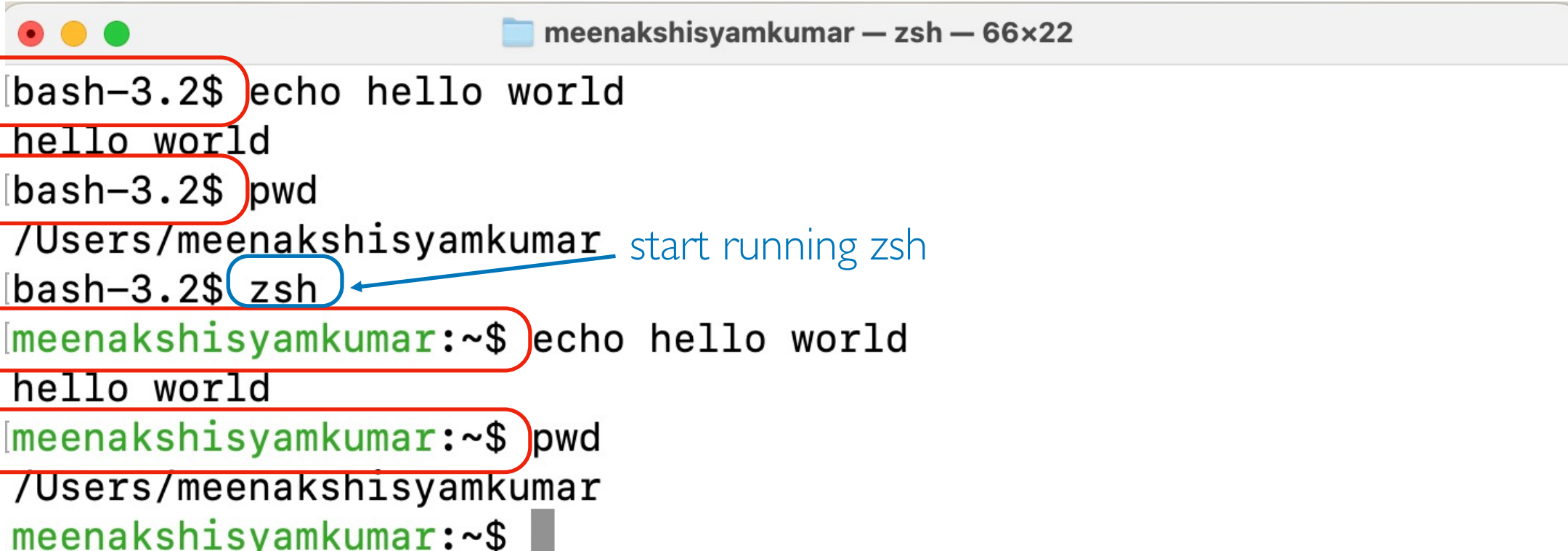
```
print(SOME PROMPT)
cmd = get_input()
run(cmd)
```



If you can type it, you can automate it.



You can start running a shell inside a shell



The image shows a terminal window titled "meenakshisyamkumar — zsh — 66x22". The terminal content is as follows:

```
[bash-3.2$] echo hello world
hello world
[bash-3.2$] pwd
/Users/meenakshisyamkumar
[bash-3.2$] zsh
[meenakshisyamkumar:~$] echo hello world
hello world
[meenakshisyamkumar:~$] pwd
/Users/meenakshisyamkumar
meenakshisyamkumar:~$
```

Annotations:

- Red arrows point from the text "bash prompt" to the first two prompts: `[bash-3.2$]` and `[bash-3.2$]`.
- Red arrows point from the text "zsh prompt" to the last two prompts: `[meenakshisyamkumar:~$]` and `[meenakshisyamkumar:~$]`.
- A blue arrow points from the text "start running zsh" to the `zsh` command in the third line.

SSH: Secure Shell

running on
my laptop

meenakshisyamkumar — meenakshisyamkumar@instance-1: ~ — ssh meenakshisyamkumar@34.71.75.41 — 87x33

```
meenakshisyamkumar:~$ hostname
Meenakshis-MacBook-Air.local
meenakshisyamkumar:~$ ssh meenakshisyamkumar@34.71.75.41
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-1019-gcp x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/pro

System information as of Thu Jan 25 18:57:00 UTC 2024

System load:  0.0               Processes:            105
Usage of /:   7.9% of 24.05GB   Users logged in:     0
Memory usage: 11%              IPv4 address for ens4: 10.128.0.3
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
```

running on
my VM

```
Last login: Thu Jan 25 18:57:01 2024 from 172.220.116.84
meenakshisyamkumar@instance-1:~$ hostname
instance-1
meenakshisyamkumar@instance-1:~$
```