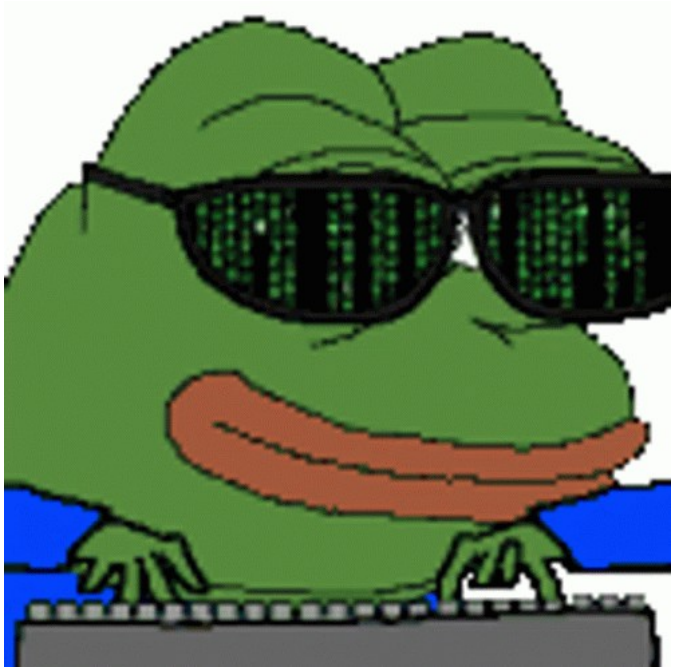
Linux Operations Basics: Part 3
Linux Command Cheat Sheet

Class:
Linux OS Operations

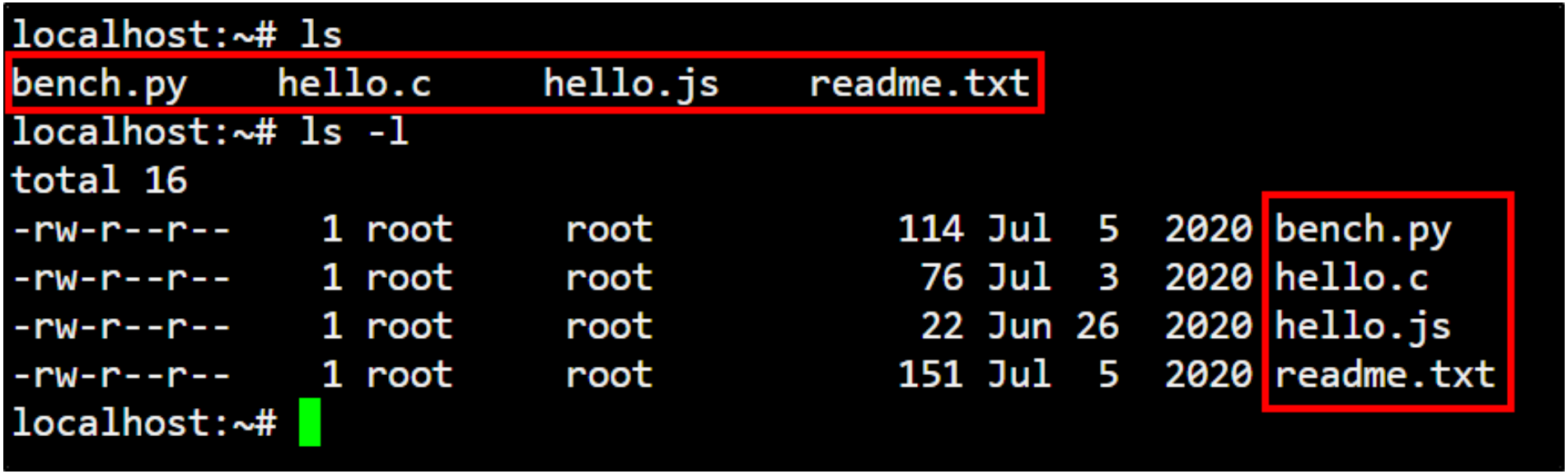
Workshop Number:
AS-LIN-03

Document Version:
1.2

Special Requirements:
None

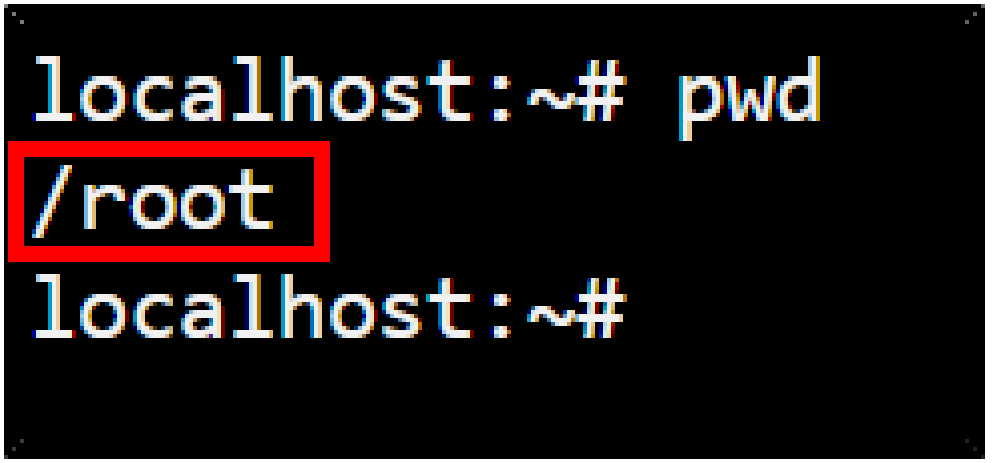


LS command: list directory contents



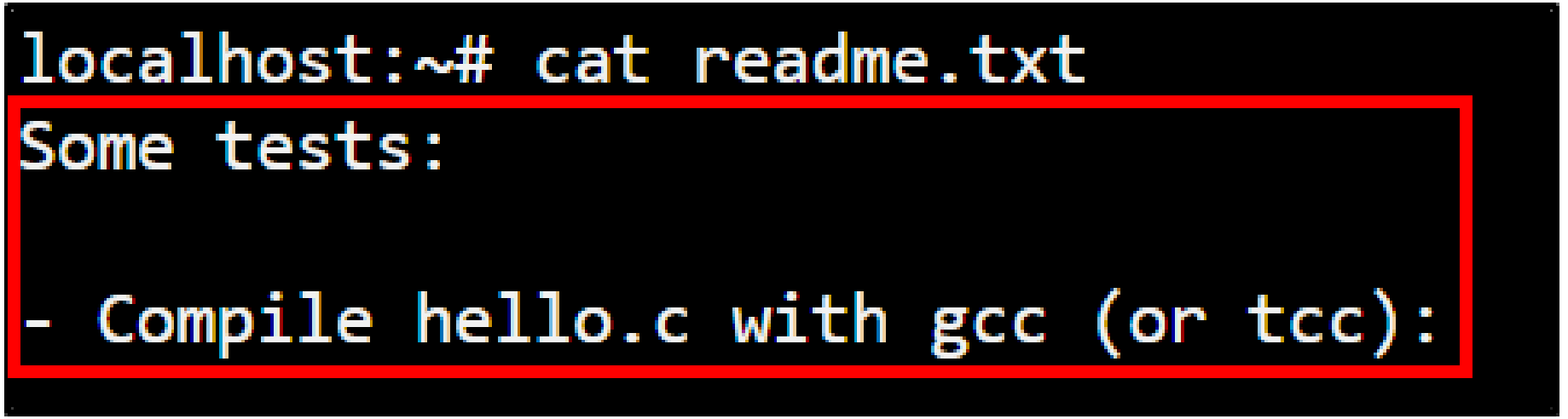
The LS command lists out the current directory's contents. It's often used with the -l switch to output in list form, or with the -a switch to output hidden files as well

PWD command:
print working directory



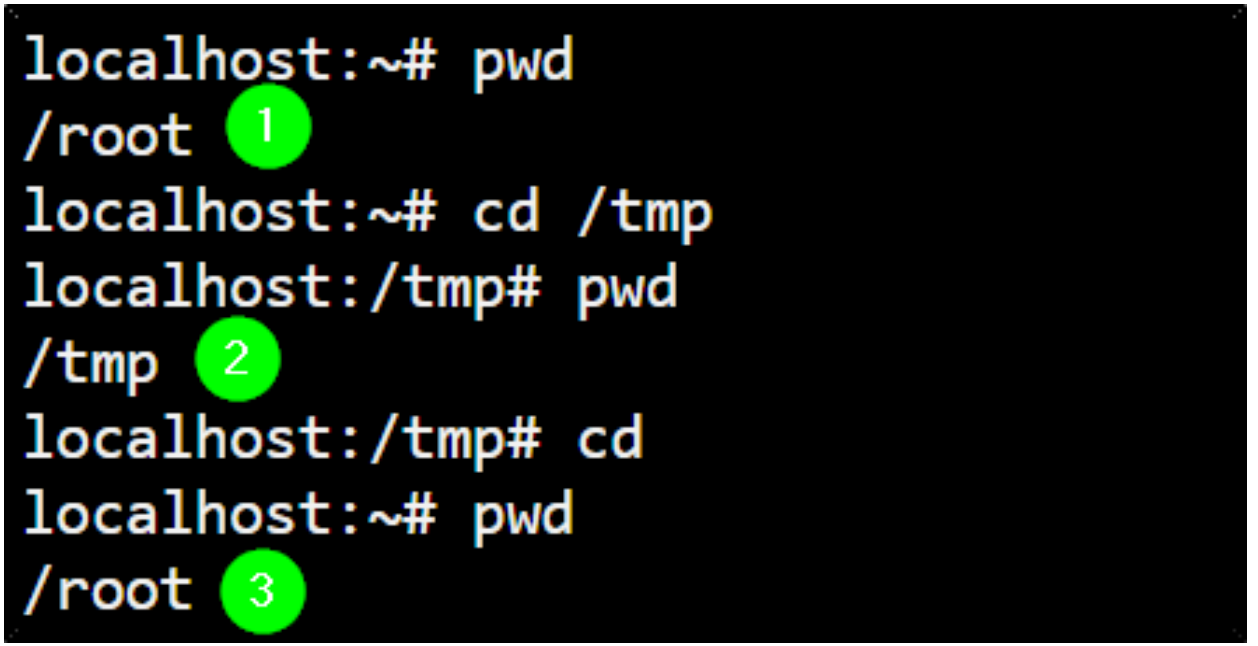
The PWD command outputs our current (working) directory. When we see a slash in front of a name in Linux, we know that's a directory name

CAT command:
read file contents



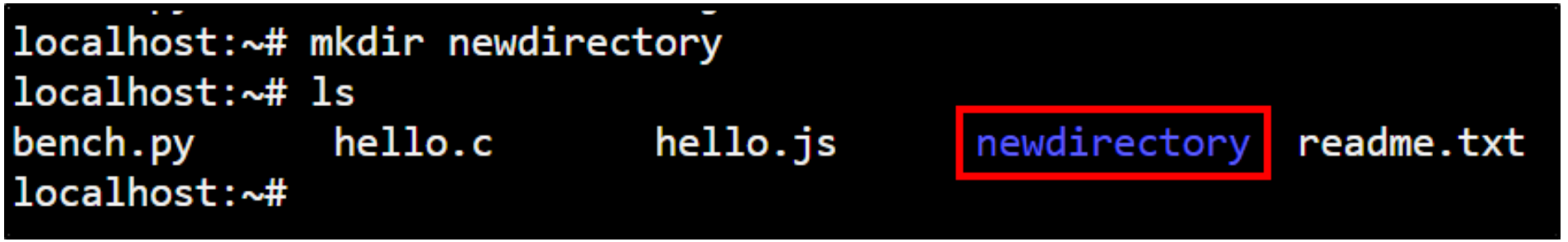
The CAT command is used to read file contents

CD command:
change working directory



The CD command is used to change our current (working) directory. If we use CD by itself, it will send us to our home directory

MKDIR command: create a new directory



The MKDIR command is used to create new directories. We usually can't create directories outside of our home directory or the /tmp directory

WGET command: download a file

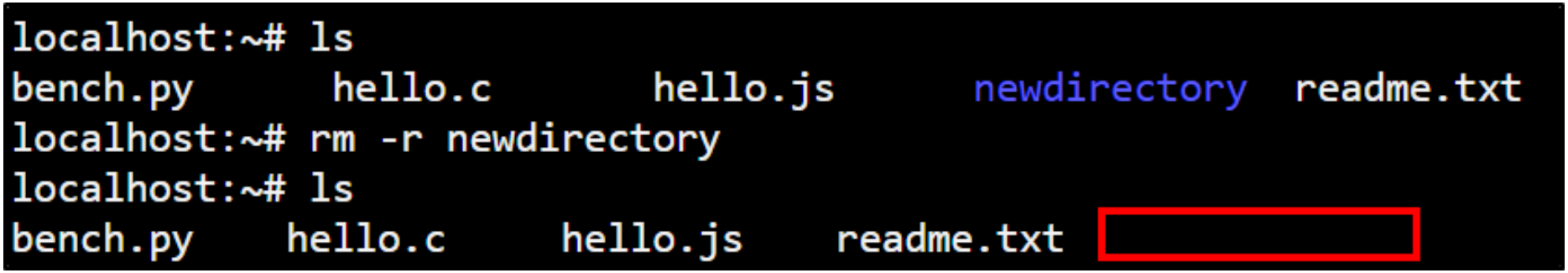
```
theshyhat-picoctf@webshell:~/obedientcat$ wget https://mercury.picoctf.net/static/217686fc11d733b80be62dcfc
fca6c75/flag
--2024-07-31 18:07:10--  https://mercury.picoctf.net/static/217686fc11d733b80be62dcfcfca6c75/flag
Resolving mercury.picoctf.net (mercury.picoctf.net)... 18.189.209.142
Connecting to mercury.picoctf.net (mercury.picoctf.net)|18.189.209.142|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 34 [application/octet-stream]
Saving to: 'flag'

flag                        100%[=======================================>]      34  --.-KB/s    in 0s

2024-07-31 18:07:10 (13.6 MB/s) - 'flag' saved [34/34]
```

The WGET command is used to download files. We usually can't download files outside of our home directories or the /tmp directory

RM command:
delete files or directories



The RM command is used to delete files or directories. Directories that aren't empty can't be deleted unless we use the -r switch.

NC command:
connect to remote server

```
nc jupiter.challenges.picoctf.org 4427
```

The NC (Netcat) command is used to connect to remote servers (other internet connected computers).

NC command:
connect to remote server

```
nc jupiter.challenges.picoctf.org 4427
```

To connect using netcat, we need to know the address of the server to connect to, and the port number.

NC command:
connect to remote server

```
nc jupiter.challenges.picoctf.org 4427
```

The NC command is similar to the SSH command, but NC is an older command.

GREP command:
delete files or directories

```
theshyhat-picoctf@webshell:~$ nc jupiter.challenges.picoctf.org 4427 | grep flag
Again, I really don't think this is a flag
Not a flag either
Not a flag either
Not a flag either
```

The GREP command is used to search for text inside of output or inside of files.

FIND command: searching for files

```
find . -name uber-secret.txt
./.secret/deeper_secrets/deepest_secrets/uber-secret.txt
```

The FIND command is used to search for files in the filesystem. One way to search is by the name of the file.

Command Piping:
passing output to another command

```
nc jupiter.challenges.picoctf.org 4427 | grep pico
```

In Linux, command piping is the process of passing the output of one command into the input of a second command.

Command Piping:
passing output to another command

```
nc jupiter.challenges.picoctf.org 4427 | grep pico
```

This is a very useful feature, because it allows commands to be chained together to achieve a lot of flexible output.