Dav - Walkthrough

In this machine, the challenger has to upload a file to the web server via the command line to get a shell. Then perform privilege escalation to get the root flag.

Objective: Gain the root shell of the target machine & find the root flag.

Penetration Methodologies:

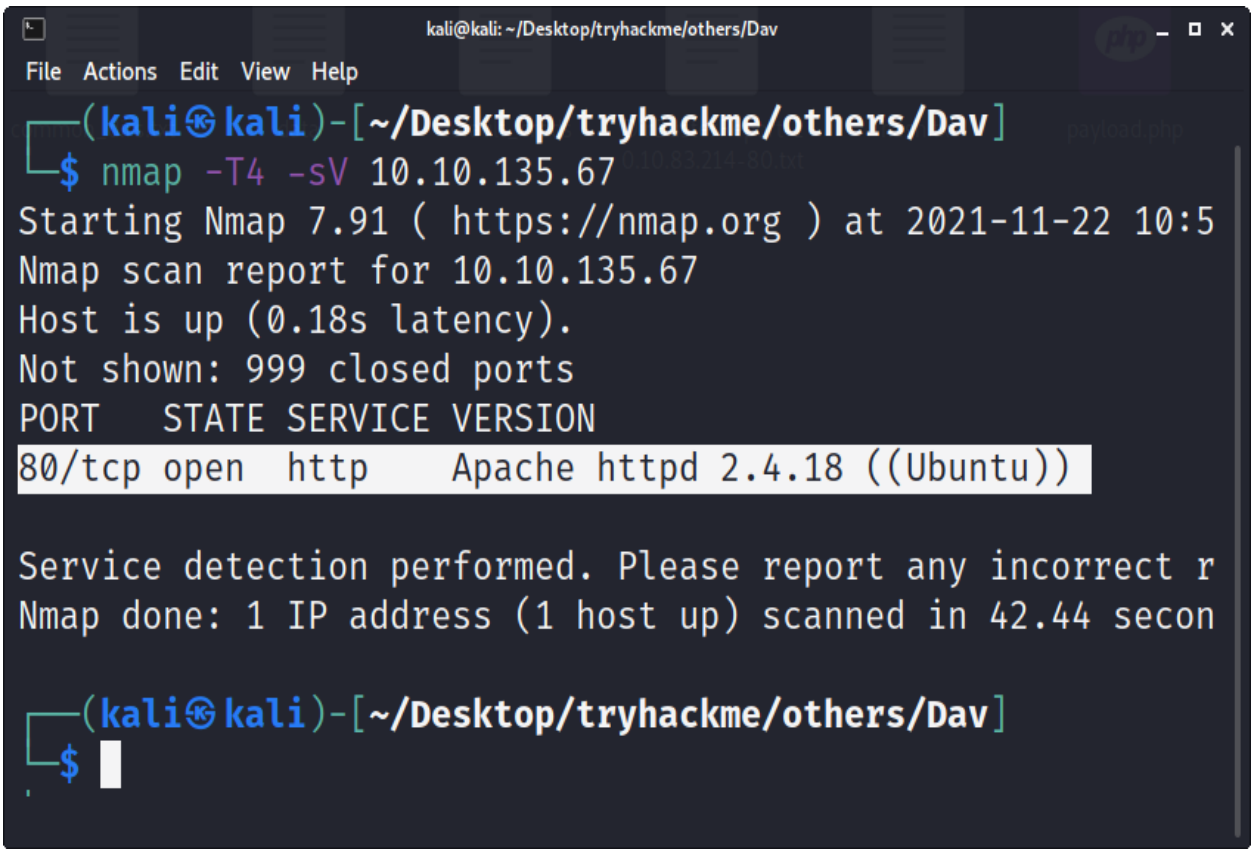
- Reconnaissance
- Scanning
- Exploitation
- Privilege Escalation

Tools Used:

nmap, firefox, dirbuster, burp suite, curl, netcat

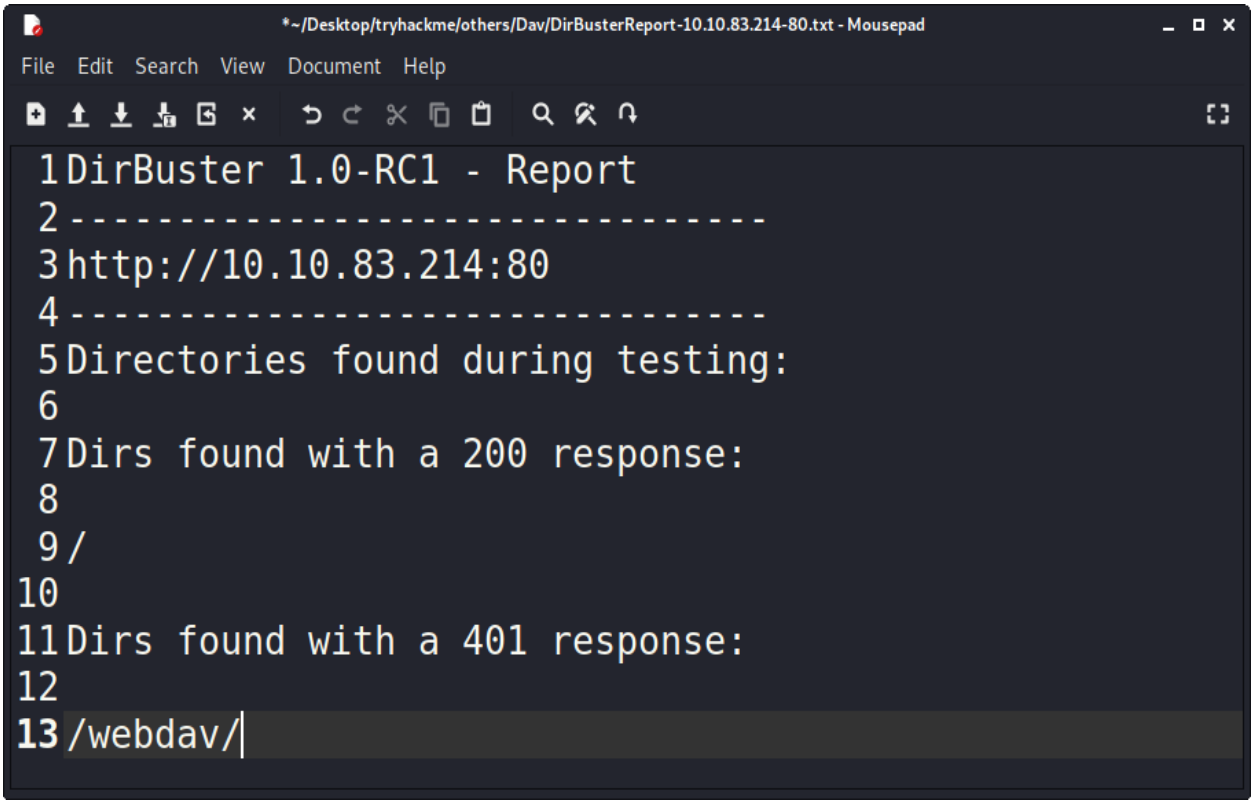
Scanning

After connecting with the machine on TryHackMe, I started **nmap** scan to check the open ports and services.

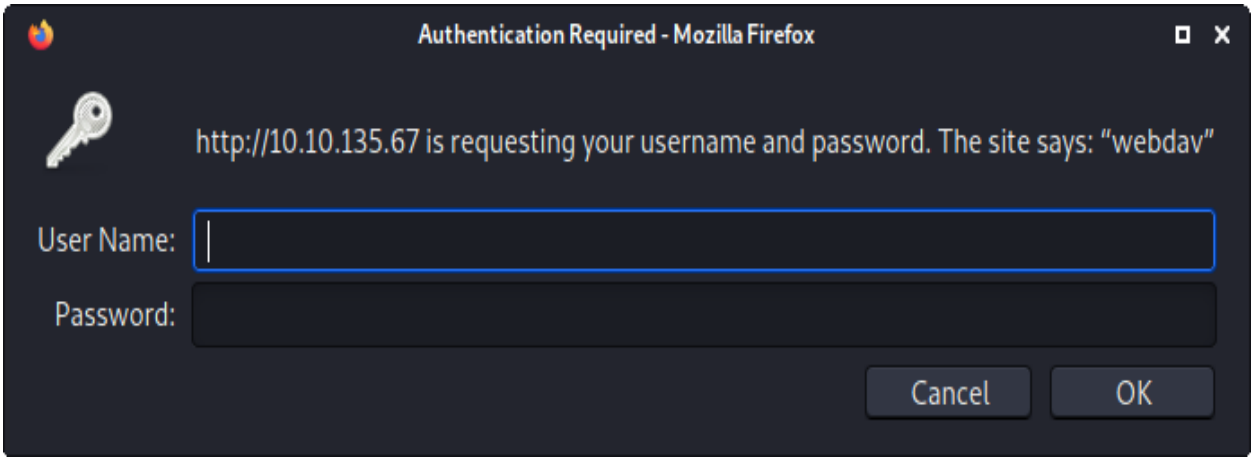


Port 80 was opened. Then I opened the url**: http://10.10.135.67:80** in the **firefox** and found the apache default webpage. I found nothing in the source code. Then I launched **dirbuster** to discover any hidden directories.

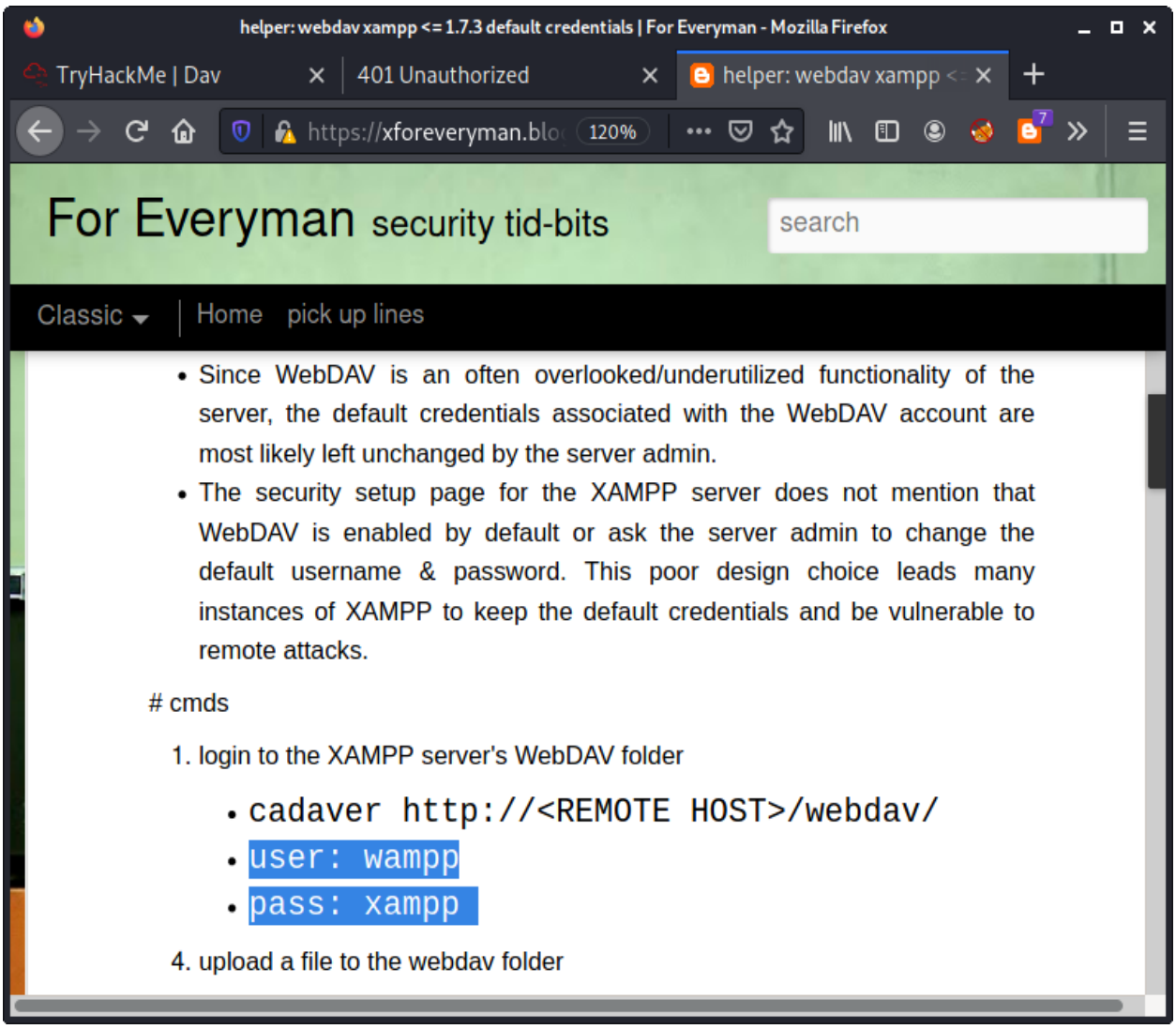
Reconnaissance



I found an interesting directory named **/webdav/**. Then I opened the directory in the firefox. it was protected with http basic authentication.



So, I searched for default credentials related to webdav. I **found the default credentials** on a website.

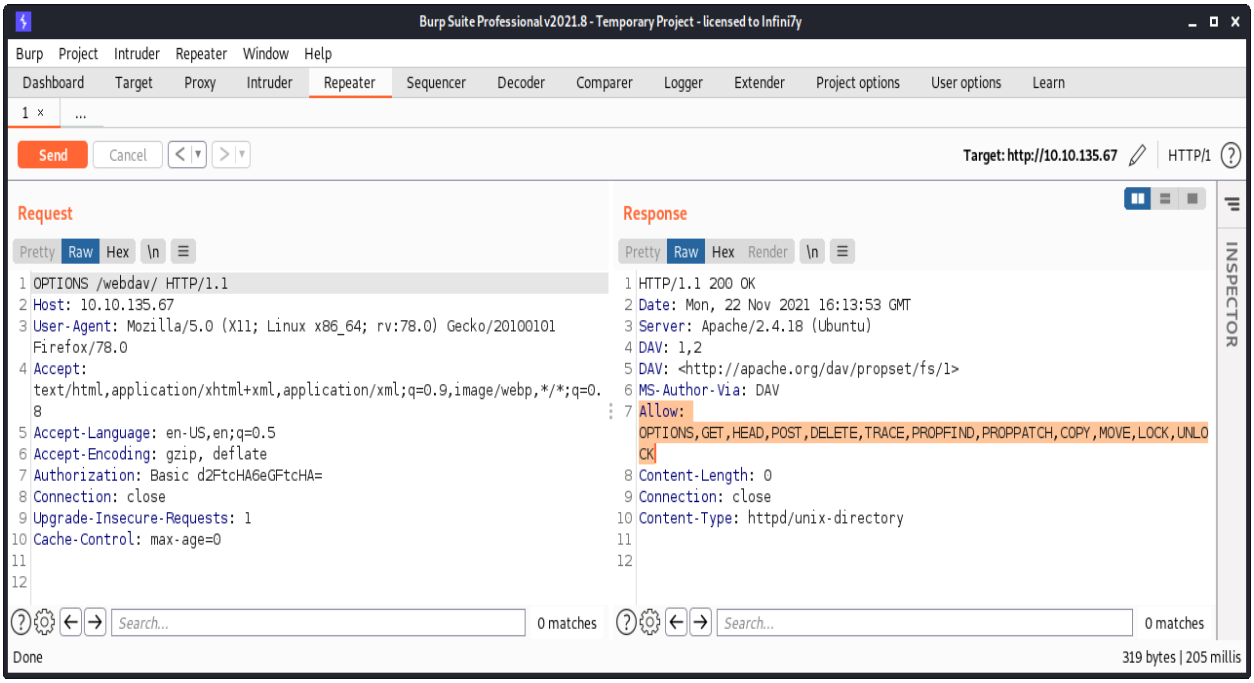


Exploitation

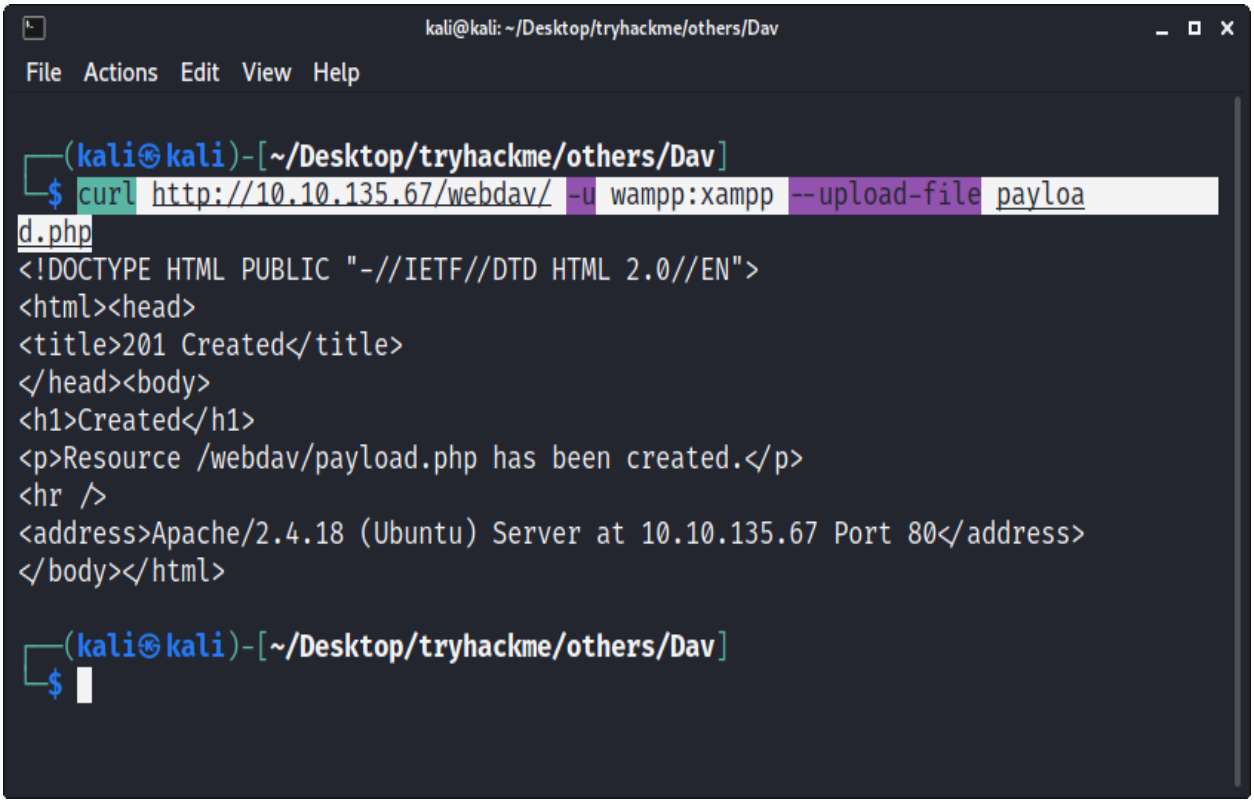
Then I put these credentials in the authentication panel and I was redirected to a webpage which had a hash encrypted username-password file. I tried to decrypt the hash & found that it was the same one that I used to authenticate.

then I captured a request in the **burp suite** and found the allowed request methods by using the OPTIONS request method.

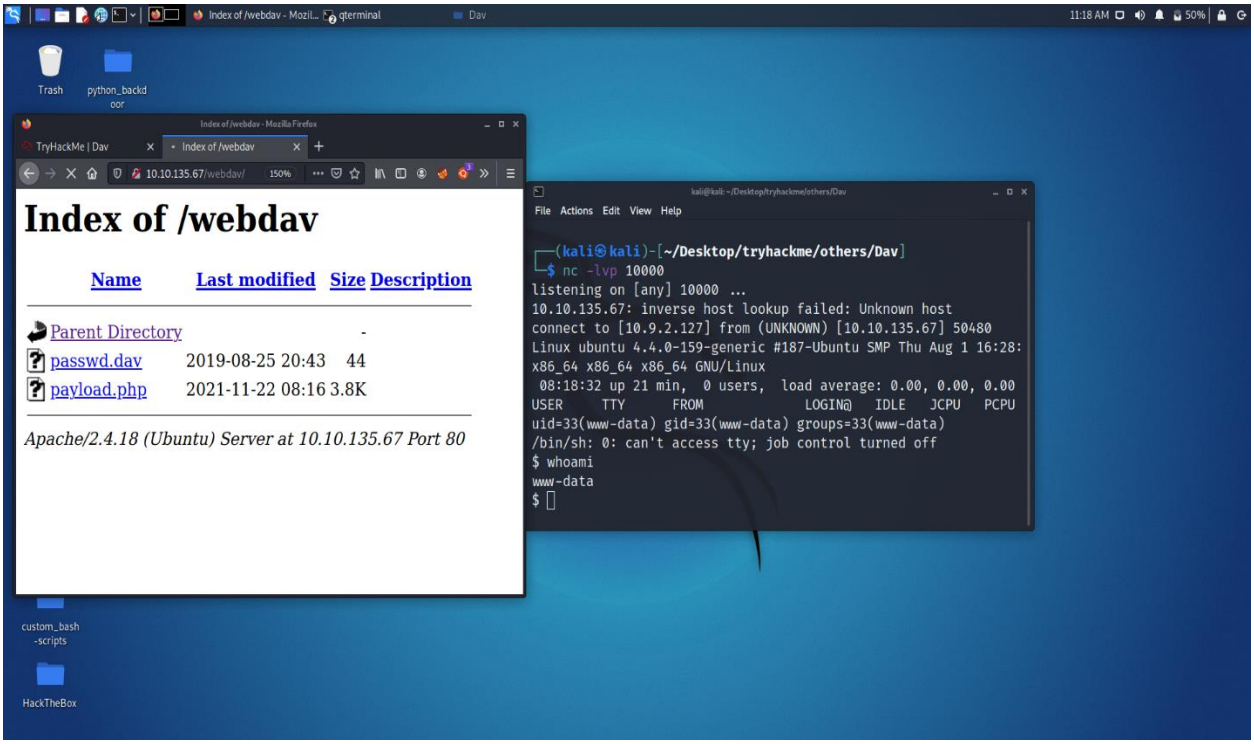
I found that **copy & move methods were allowed**, which meant that I can upload a file onto the web server.



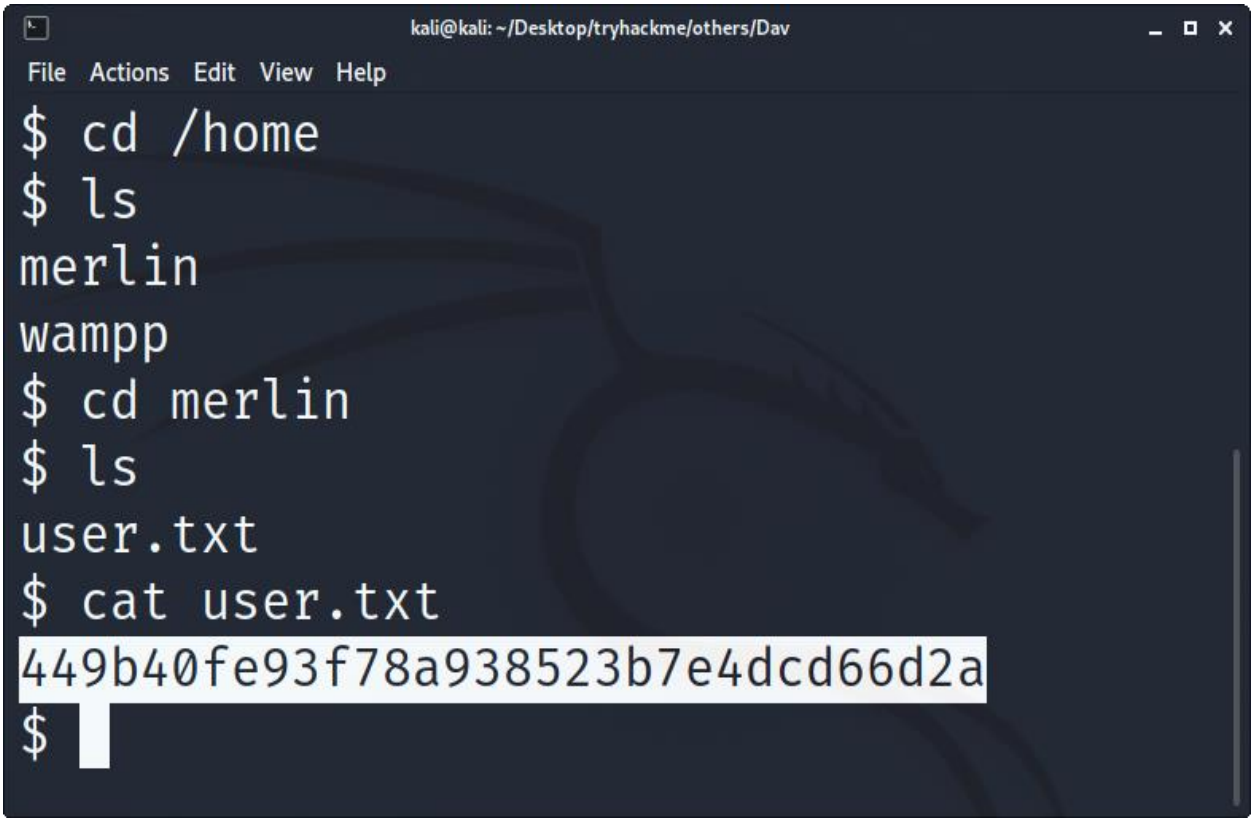
Then I used **curl http://10.10.135.67/webdav/ -u wampp:xampp –upload-file payload.php** to upload a php reverse shell payload.



Then I started a **netcat listener** and when I clicked the payload on webpage, I **got the shell of user www-data**.



Then in the **/home/merlin/user.txt** file, I **found the user flag**.



Privilege Escalation

Then I used **sudo -l** and found that I was able to run /bin/cat command with root permissions.

```
kali@kali: ~/Desktop/tryhackme/others/Dav
File  Actions  Edit  View  Help
Matching Defaults entries for www-data on ubu
ntu:
    env_reset, mail_badpass, secure_path=/usr
/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/
bin\:/sbin\:/bin\:/snap/bin

User www-data may run the following commands
on ubuntu:
    (ALL) NOPASSWD: /bin/cat
$
```

Then I used command **sudo -u root /bin/cat /root/root.txt** **and got the root flag.**

```
kali@kali: ~/Desktop/tryhackme/others/Dav
File  Actions  Edit  View  Help
Matching Defaults entries for www-data on ubu
ntu:
    env_reset, mail_badpass, secure_path=/usr
/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/
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User www-data may run the following commands
on ubuntu:
    (ALL) NOPASSWD: /bin/cat
$ sudo -u root /bin/cat /root/root.txt
101101ddc16b0cdf65ba0b8a7af7afa5
$
```