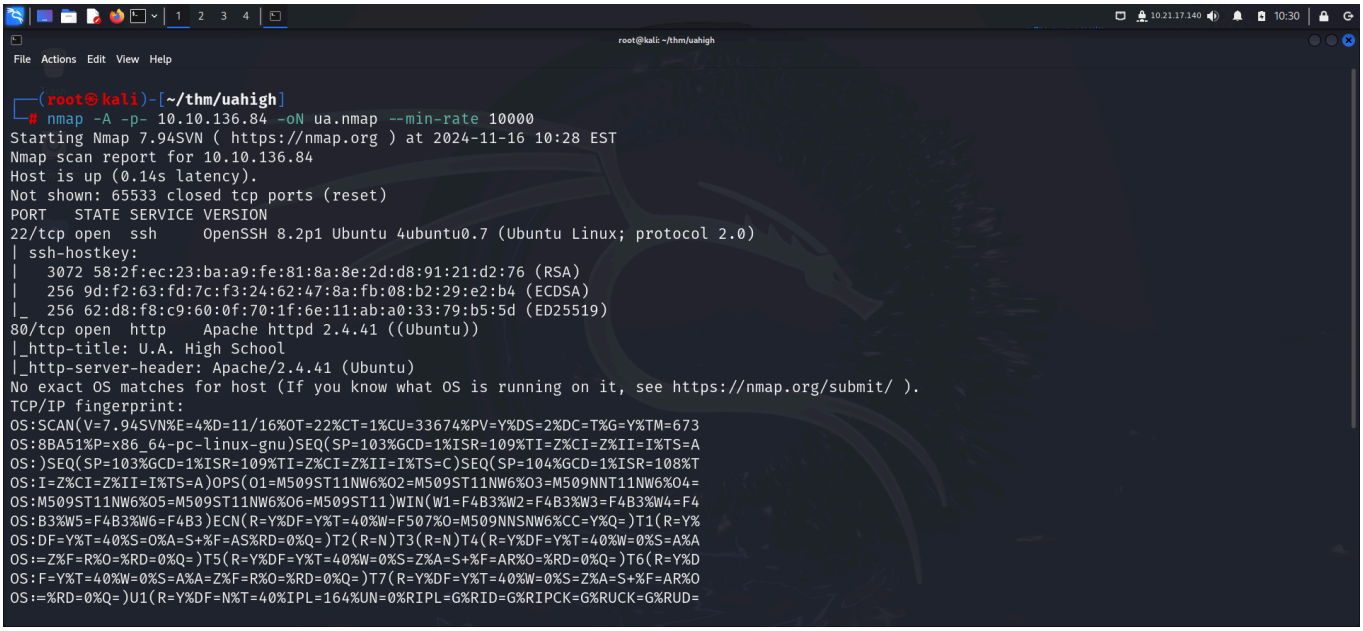
UA HIGH SCHOOL

Link to machine : https://tryhackme.com/room/yueiua

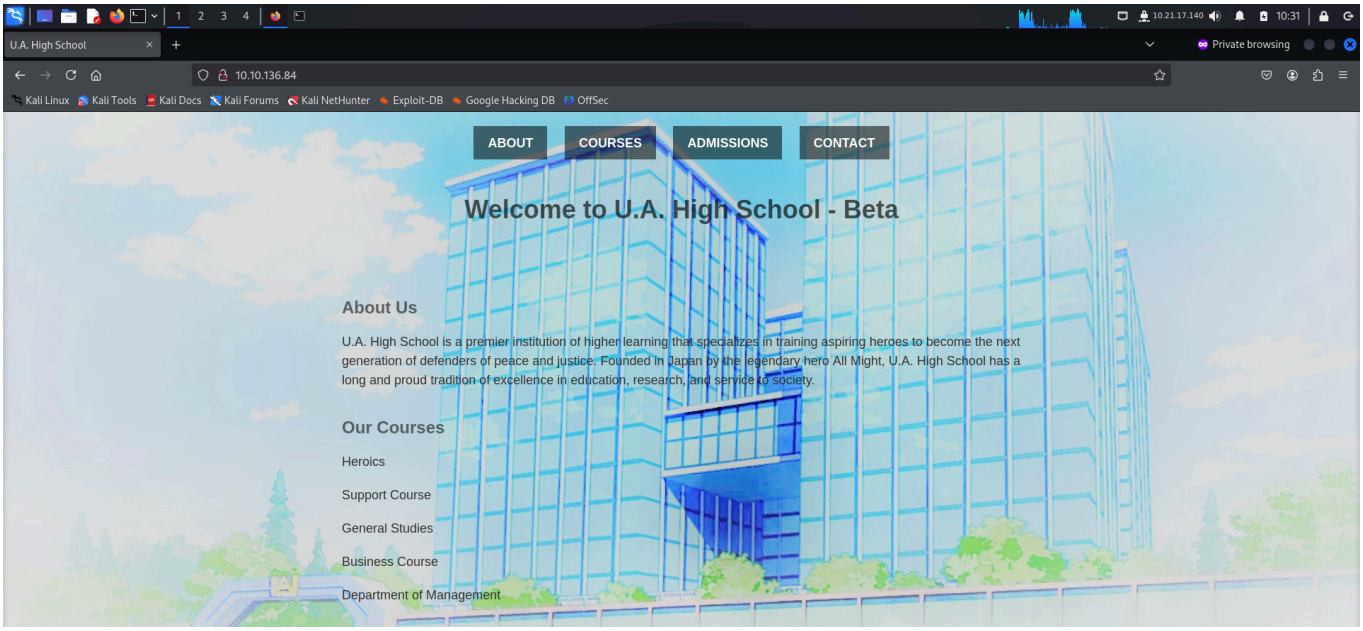
RECONNAISSANCE

I performed an **nmap** aggressive scan to find open ports and the services running on them.

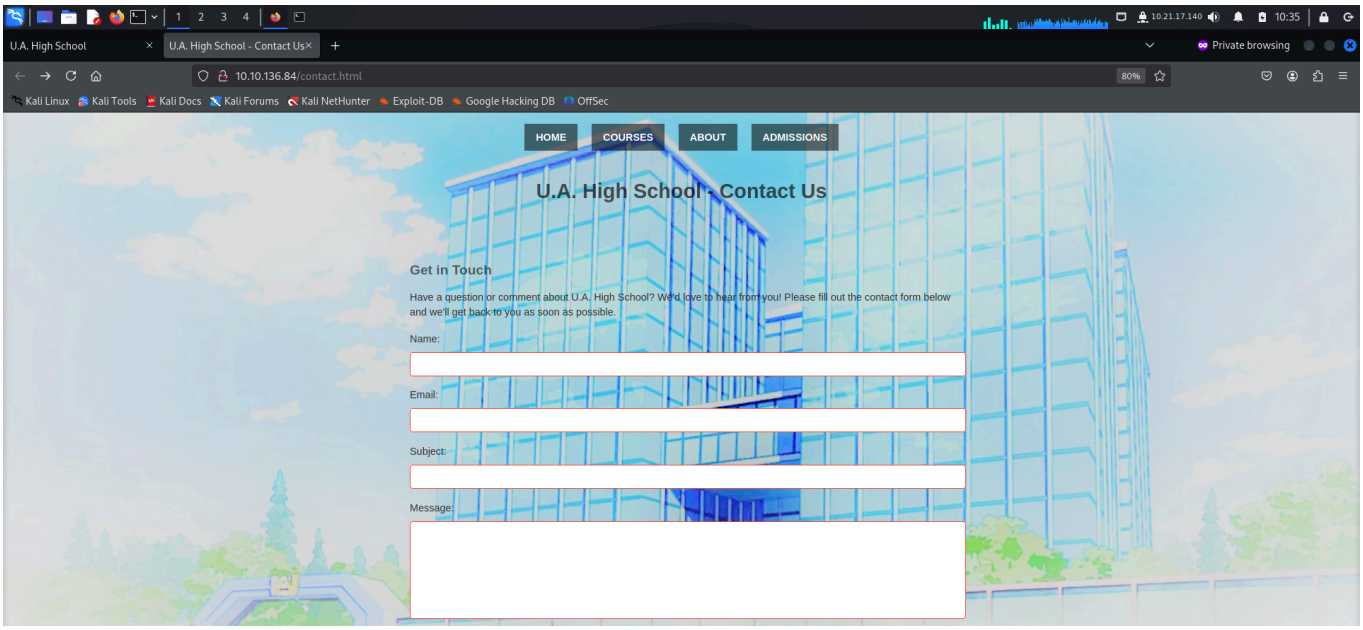


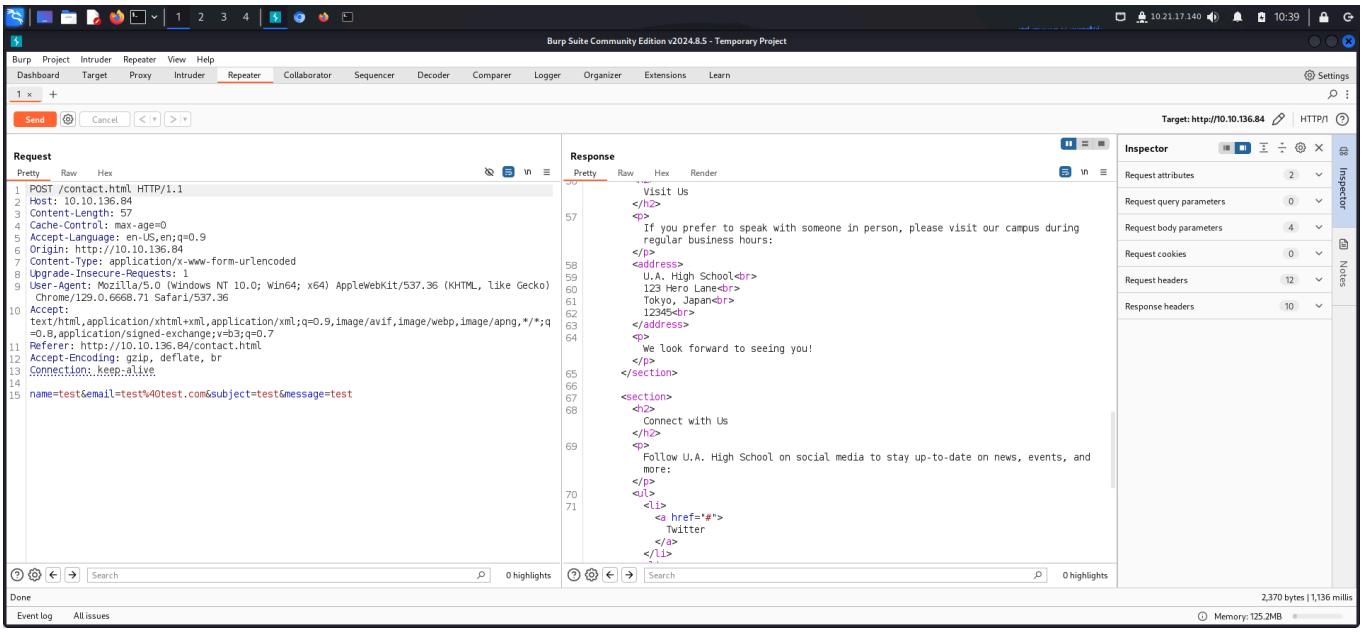
FOOTHOLD

The **nmap** scan revealed a web application running so I accessed it through my browser.

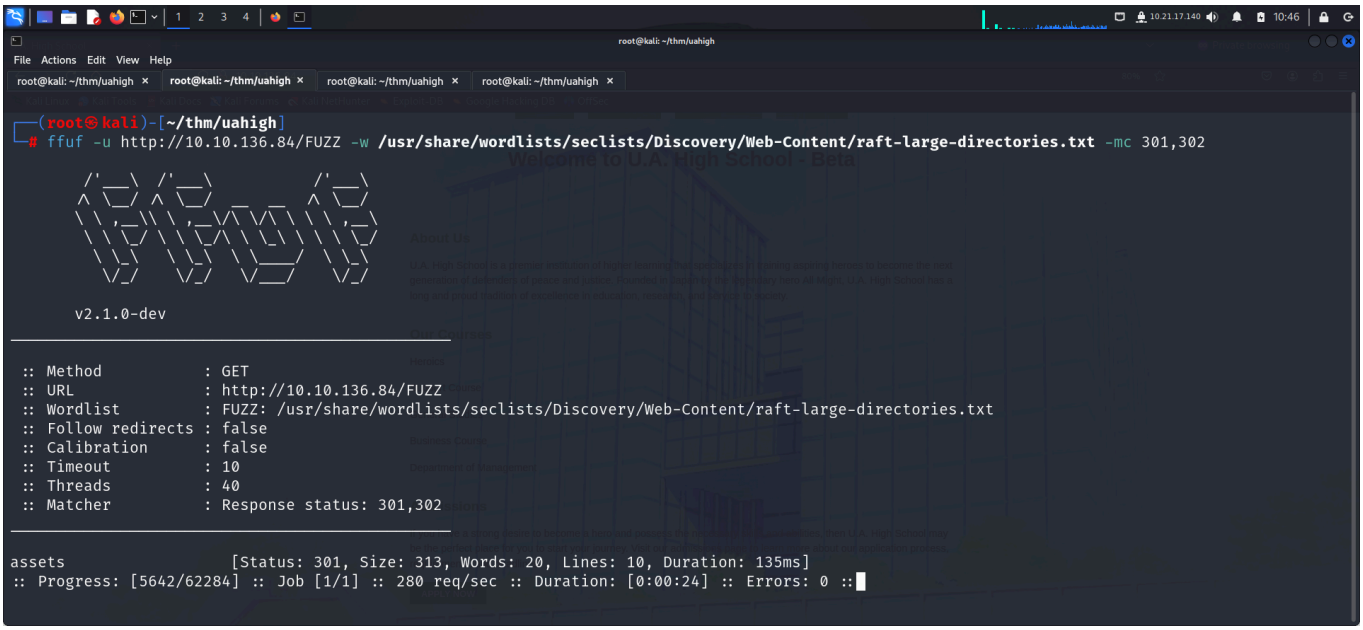


There was a form field so I analyzed the server response by entering test data.



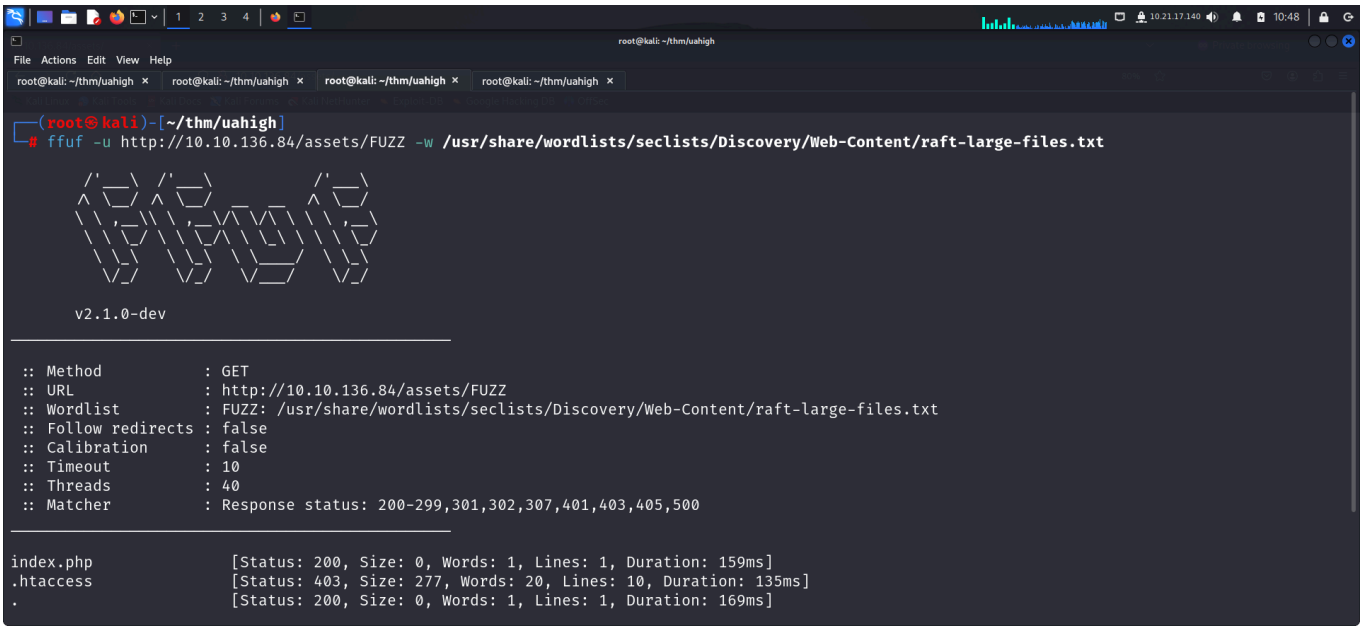


I then used **ffuf** to find hidden directories on the web app.



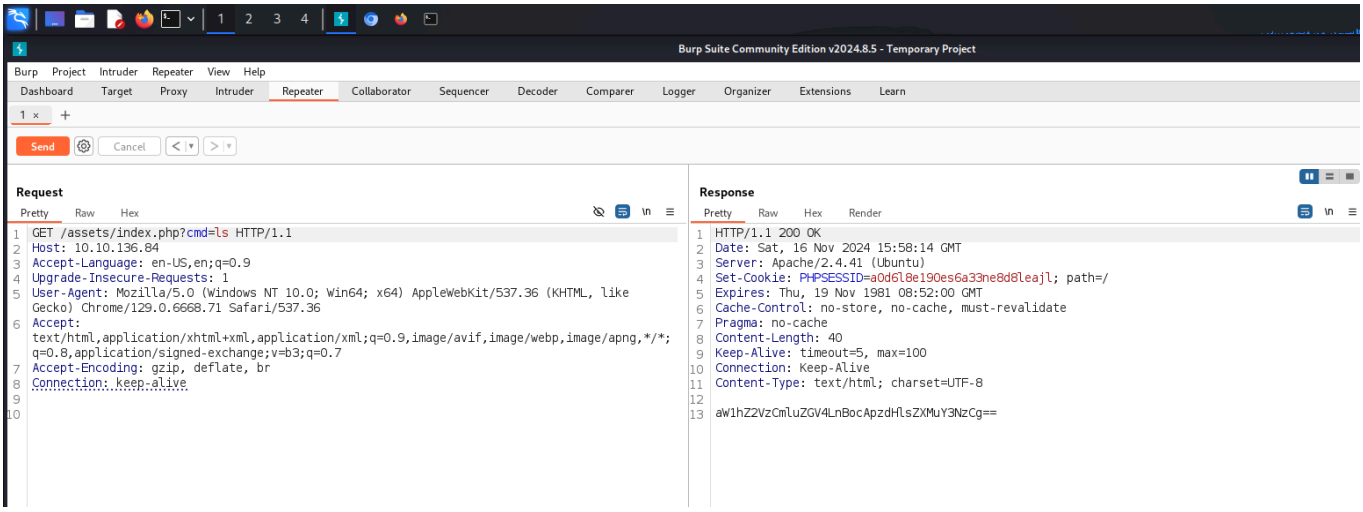
I accessed the newly discovered directory but found nothing.

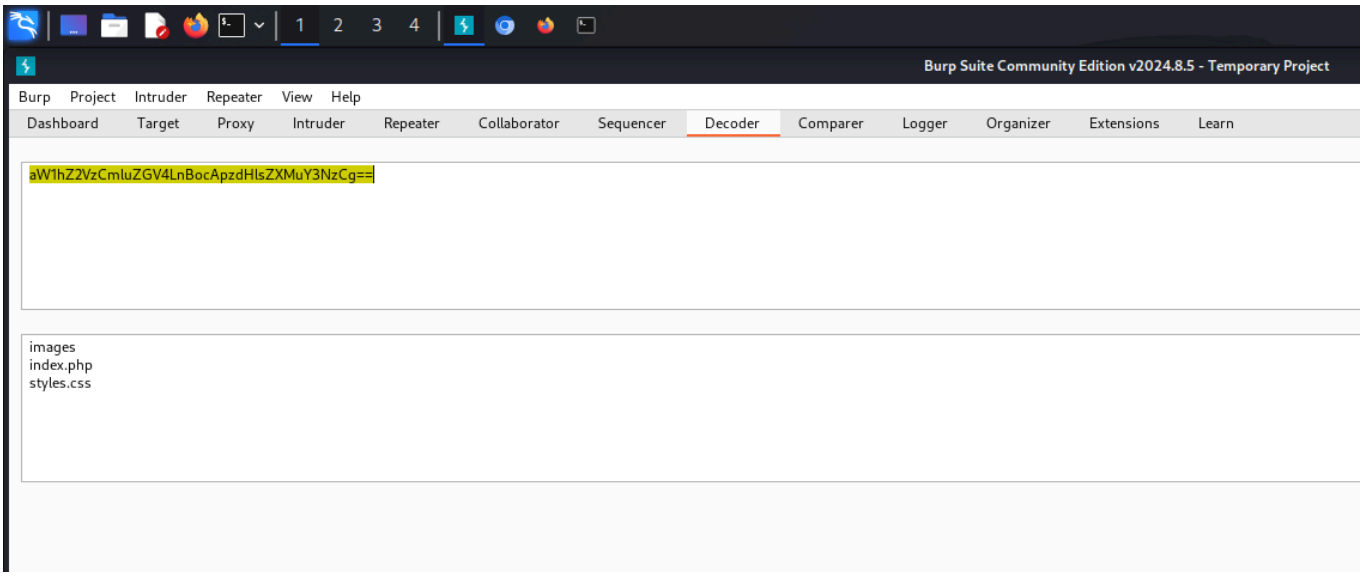
I then found hidden files using **ffuf**.



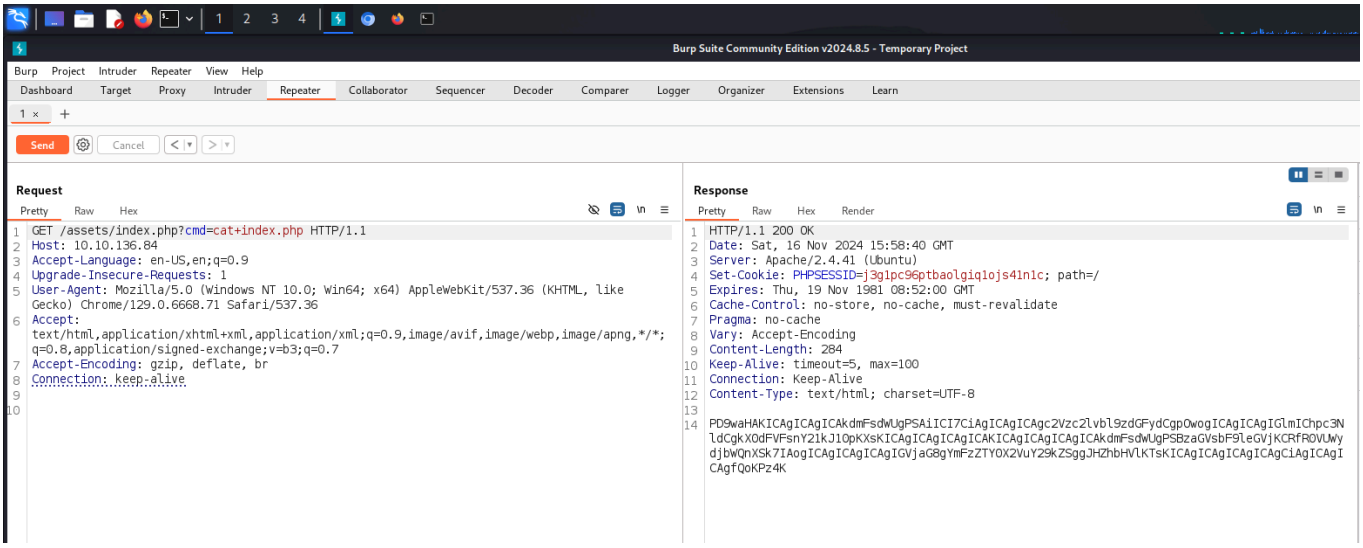
I accessed the files and found nothing at first. However, when I tried passing command through common variables on *index.php*, I received a url base64 encoded response.

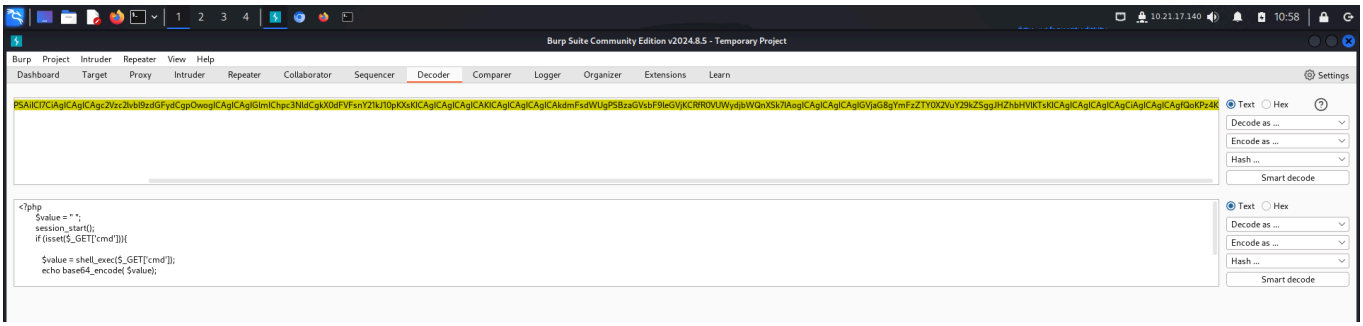
aW1hZ2VzCmluZGV4LnBocApzdHlsZXMuY3NzCg==



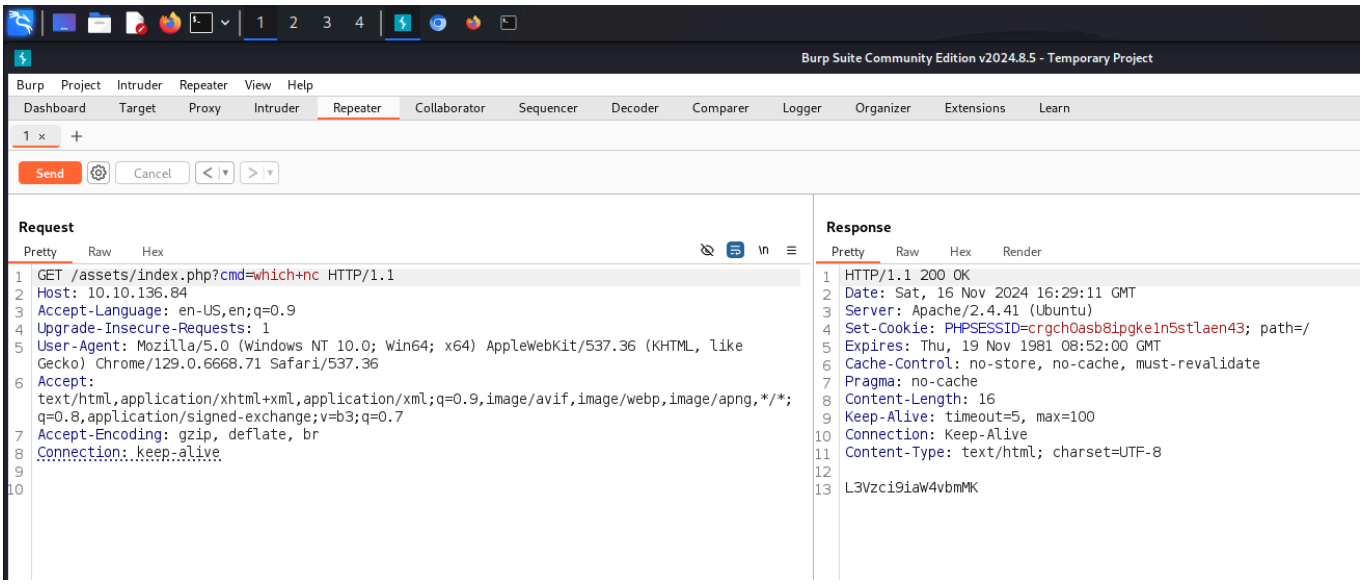


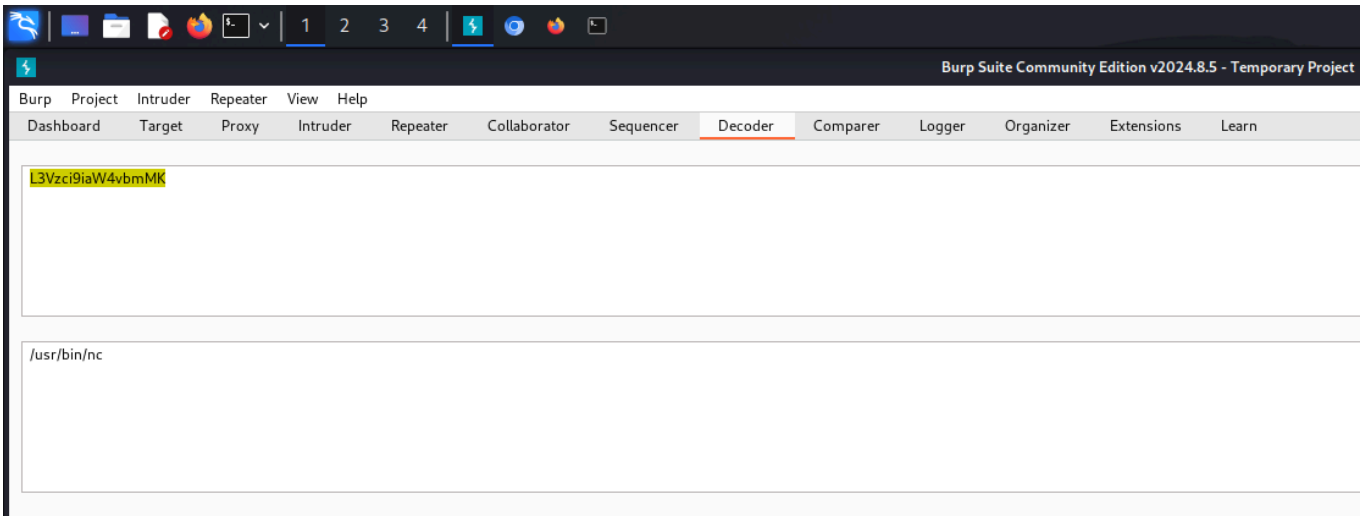
Hence, I was able to execute os commands on the target. I viewed the source code of *index.php* using this.



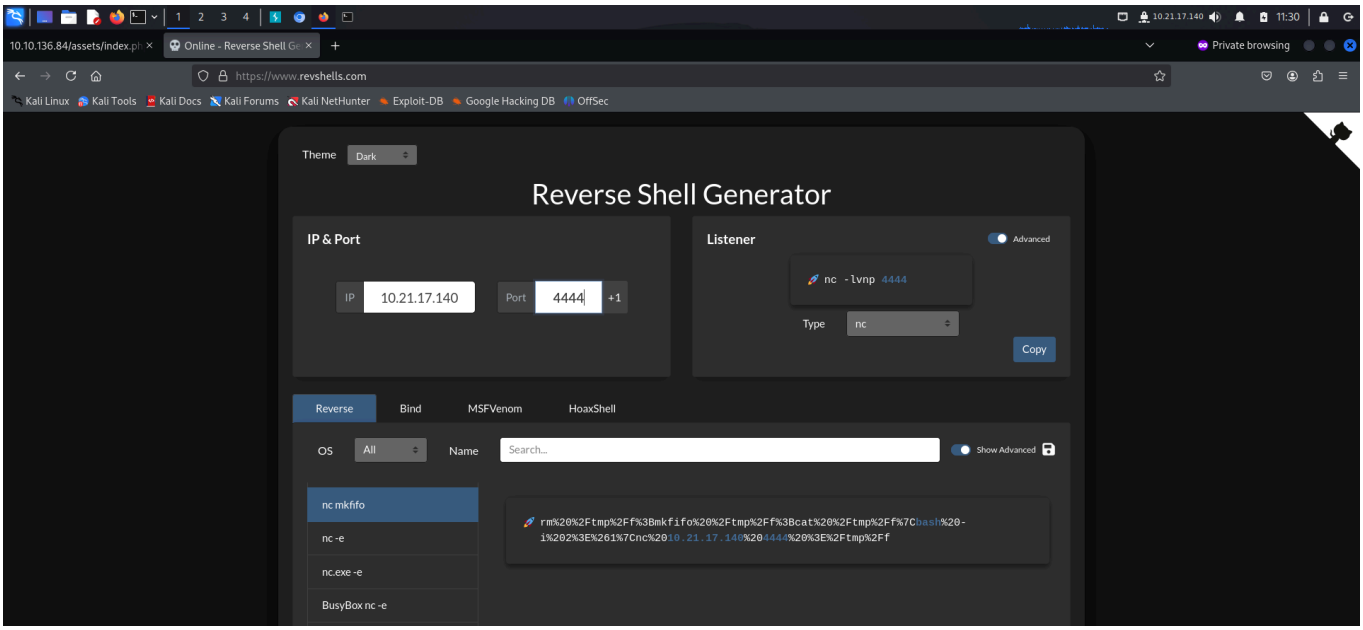


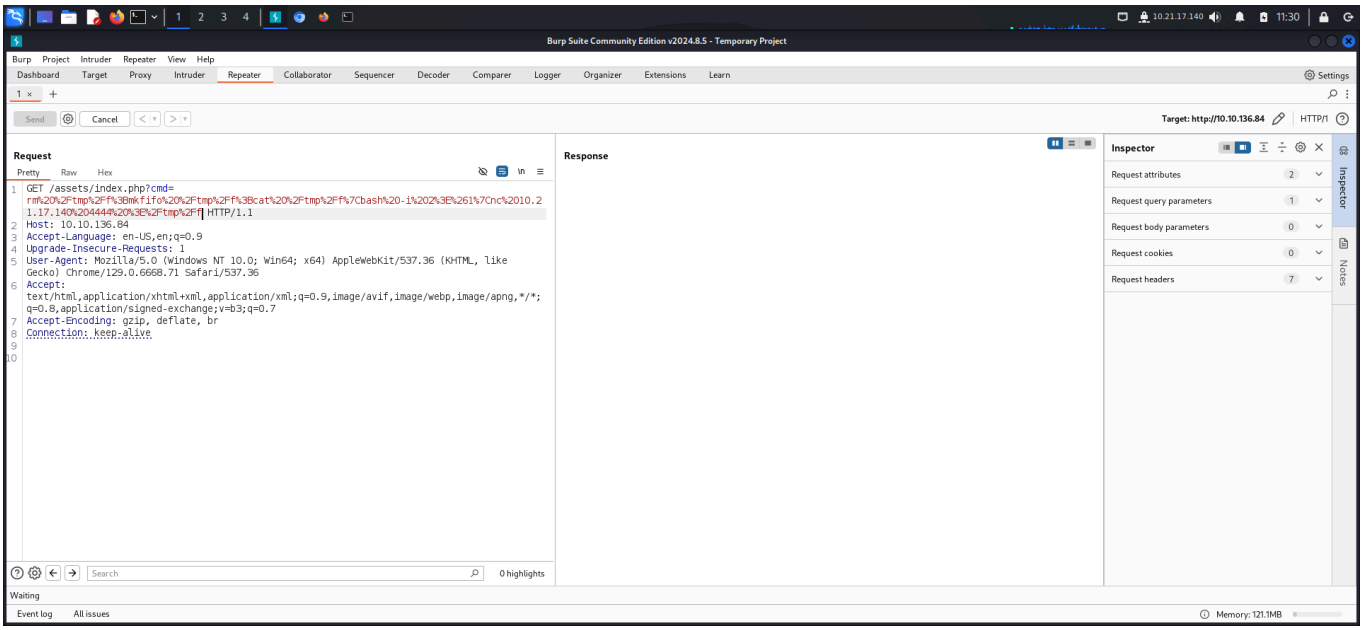
I then checked if the machine had **netcat** so that I could try and initiate a reverse shell connection.



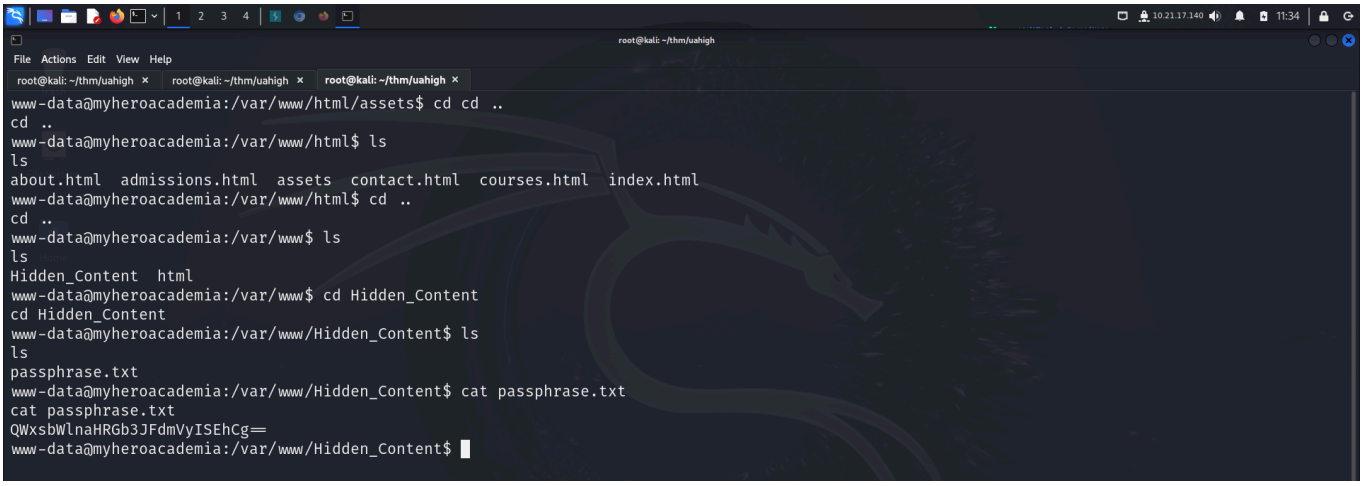


I then visited **revshells** and copied an **nc mkfifo** command to get a reverse shell. Upon execution, I received a shell on my **netcat** listener.

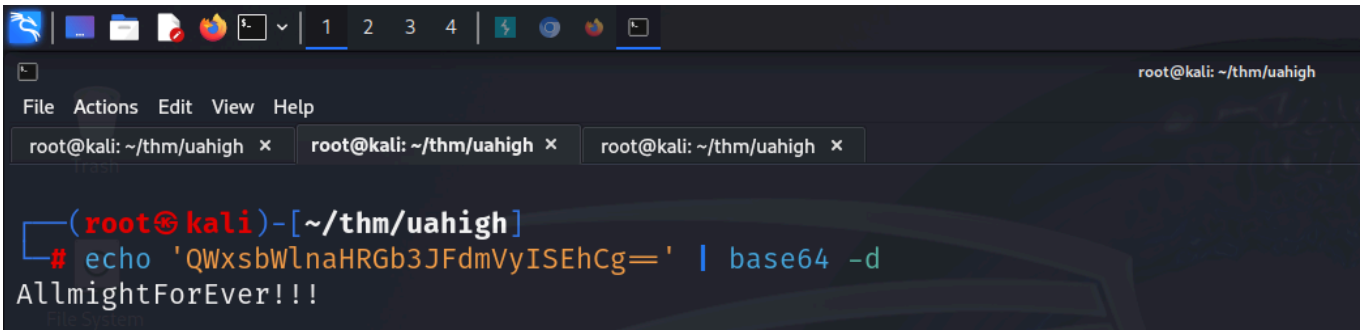




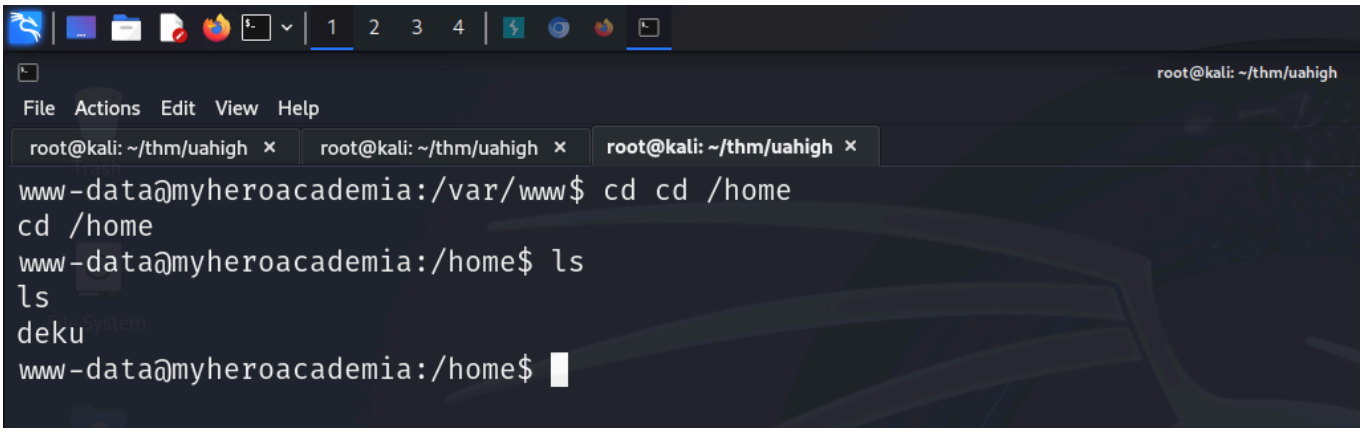
After spawning a pty shell, I found a passphrase that was base64 encoded.



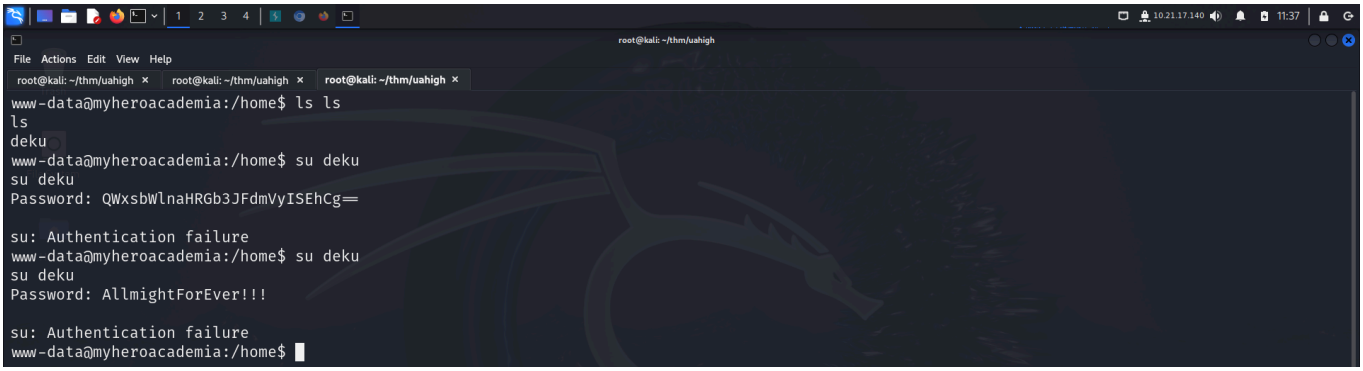
Decoding it revealed a password.



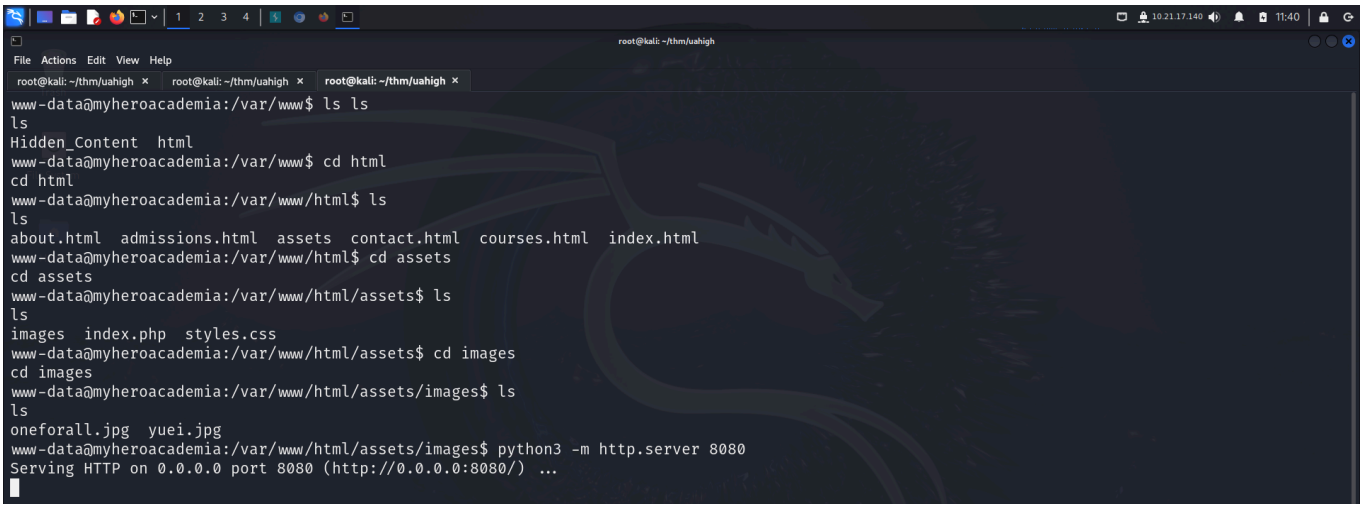
I found the user from the */home* directory and tries switching to it using the password.



However, I failed.



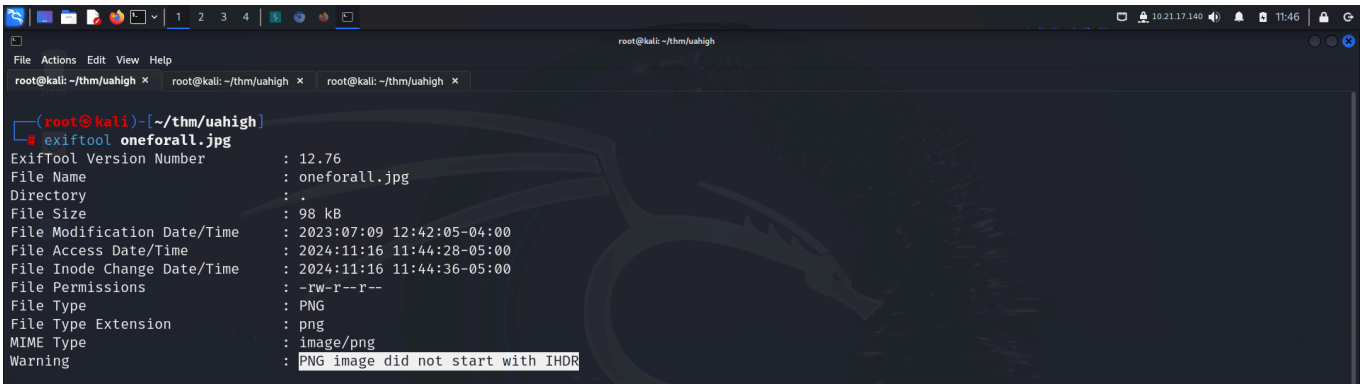
I then looked deeper and found some images inside the *assets* directory.

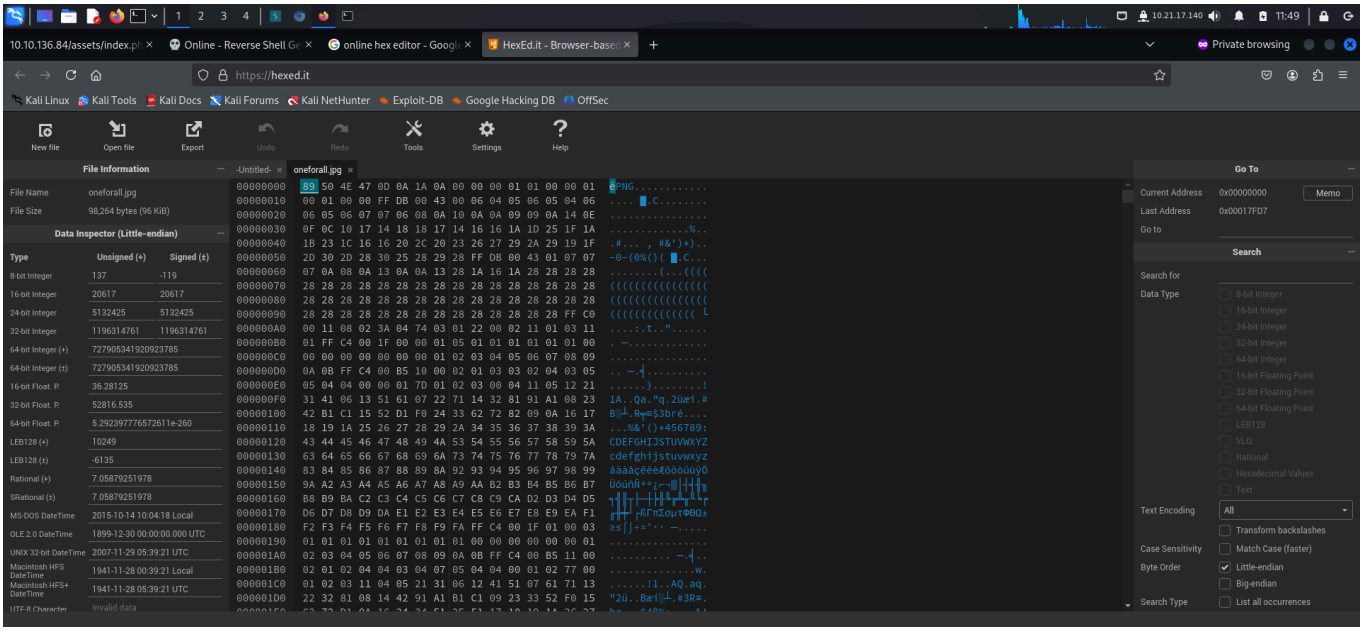


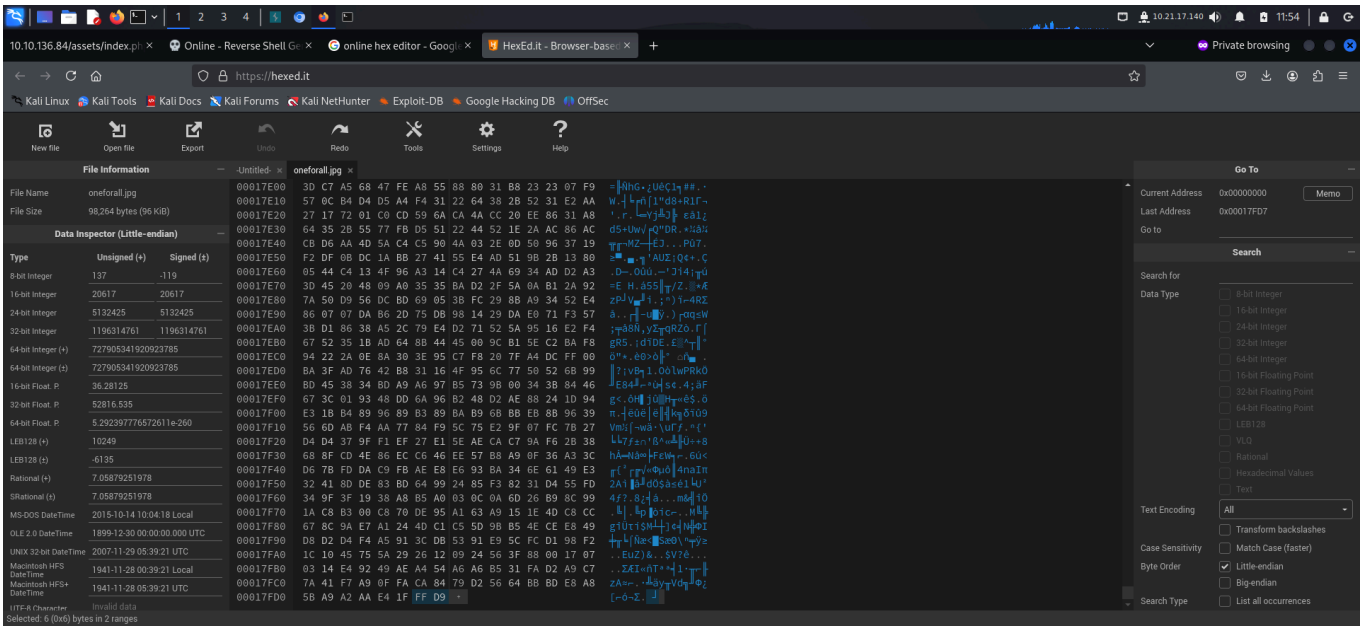
I downloaded the images on my local system and viewed their file type.

oneforall.jpg seemed to have some contents so I viewed its exif data.

The file had an extension of **jpg** but the file type shown was **png**. So I loaded the file in an online hex editor and viewed the magic headers.







The image had the magic header bytes of **png** type.

Typical JPEG Header (Simplified Example in Hex):

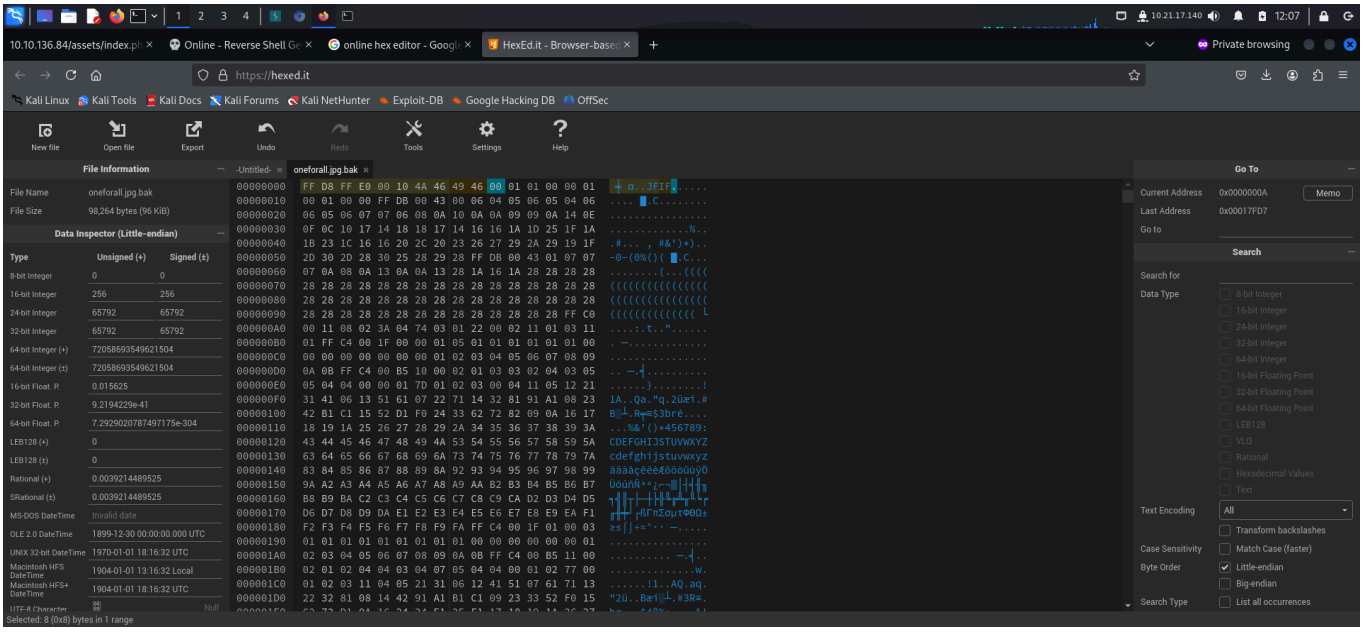
The first few bytes of a basic JPEG file might look like this:

Copy code

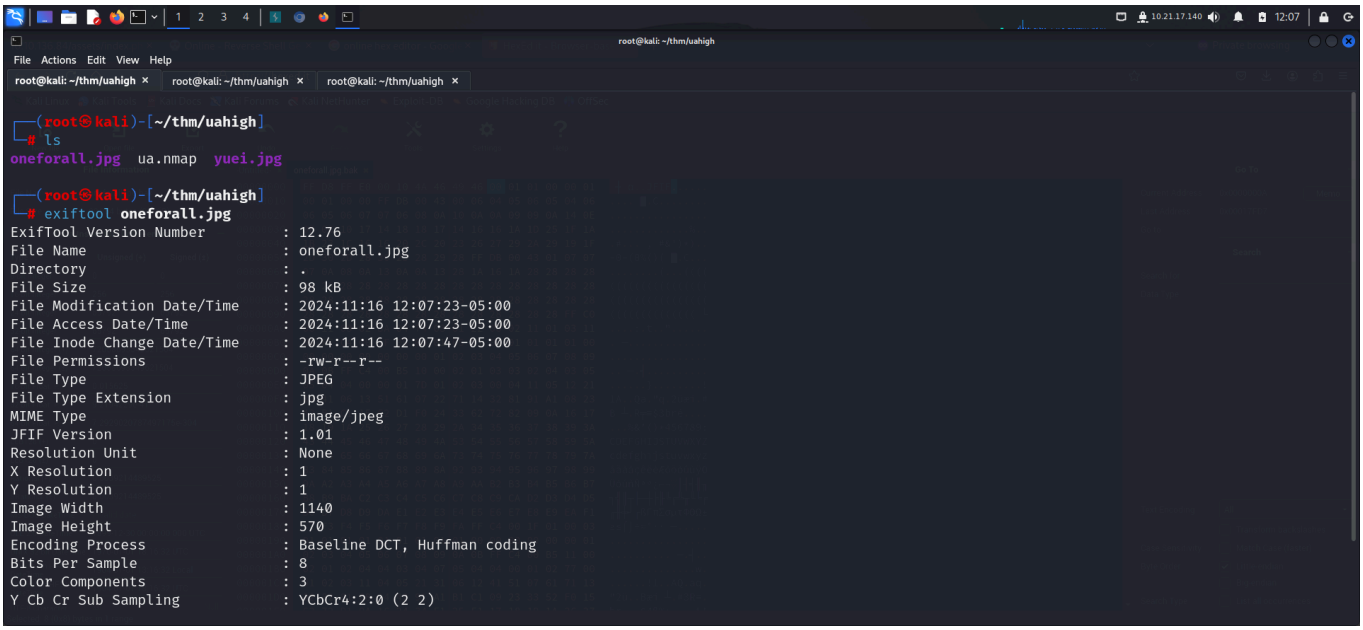
```
FF D8  FF E0  00 10  4A 46 49 46 00 01 01 00 00 00
```

- **FF D8** — Start of Image (SOI) marker.
- **FF E0** — APP0 marker (which is used for the JFIF header).
- **00 10** — Length of the APP0 segment (16 bytes).
- **4A 46 49 46** — ASCII "JFIF" (indicating JPEG File Interchange Format).
- **00 01** — Version of JFIF.

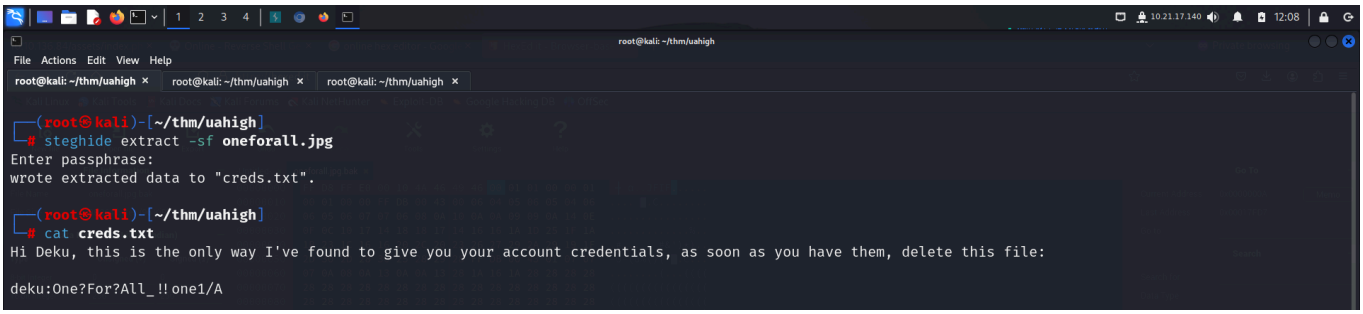
I switched the file headers and downloaded the new image file.



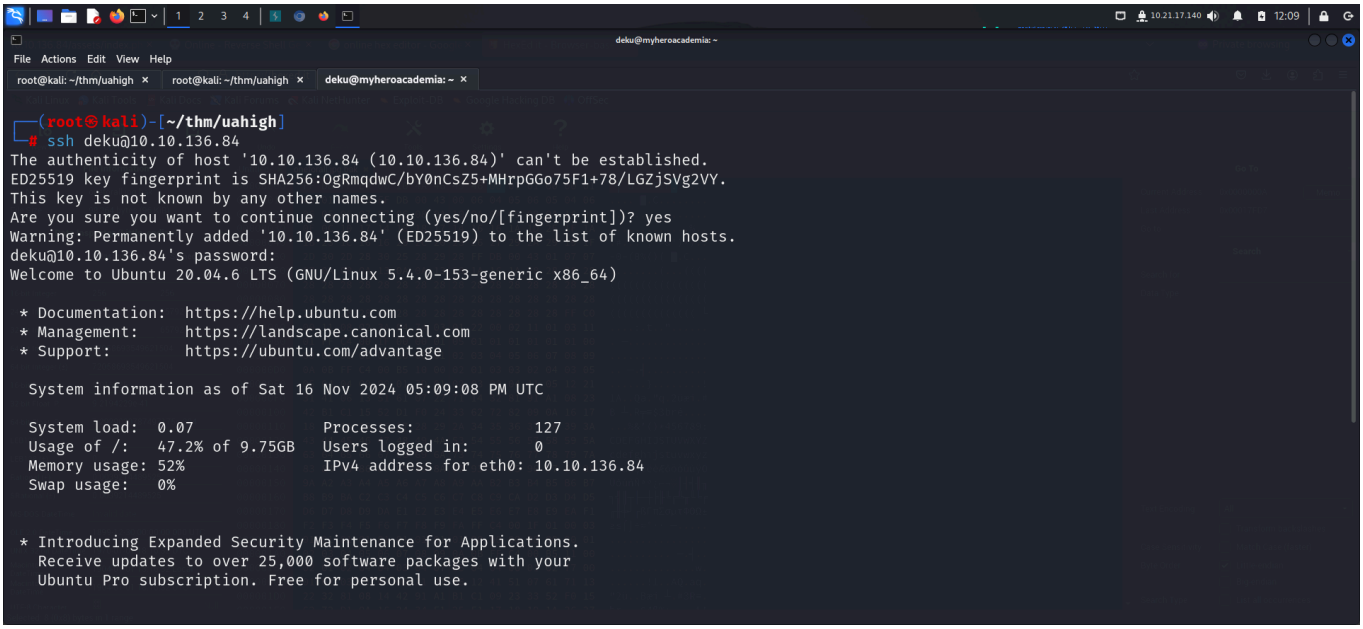
Everything seemed fine now.



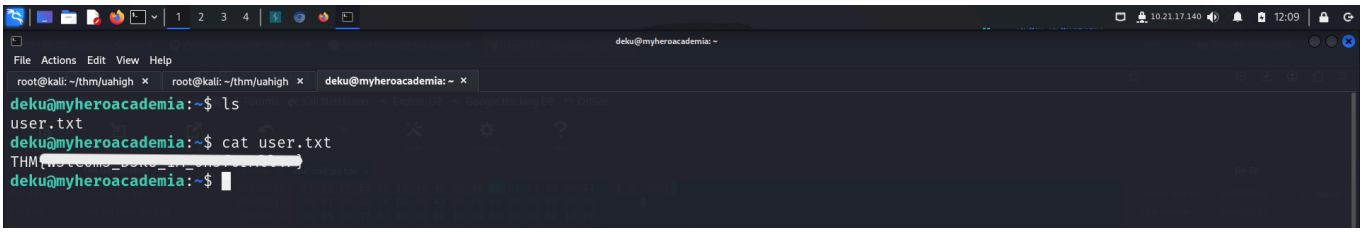
Finally, I tried extracting data from the image. I used the base64 decoded password that I had found in the passphrase.txt file as the password.



I had found the credentials of *deku* so I logged in using **ssh**.

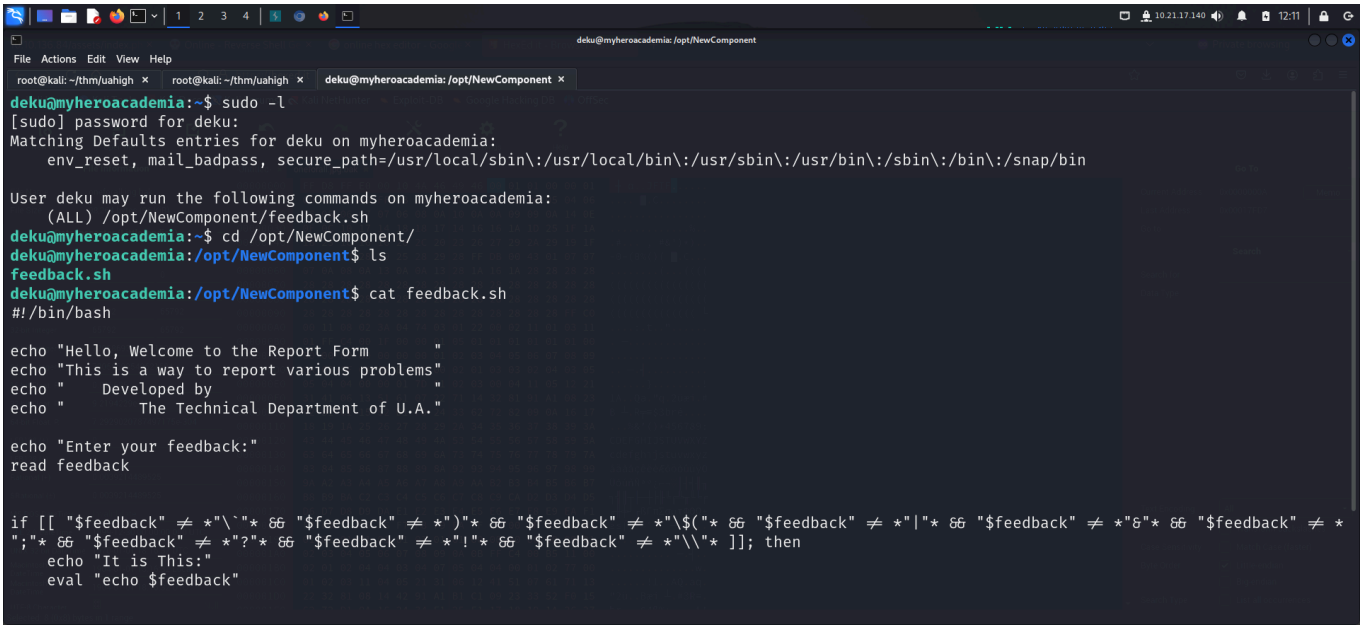


I captured the user flag from *deku*'s home flag.



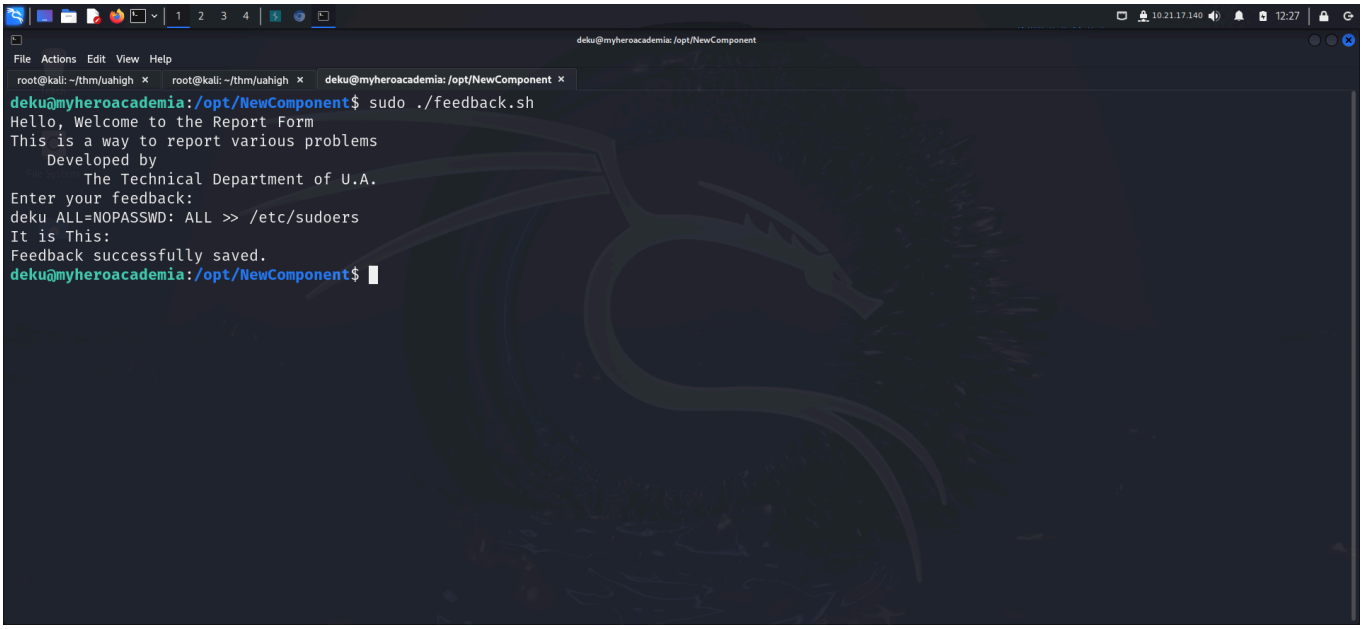
PRIVILEGE ESCALATION

I looked at my **sudo** privileges and found I was allowed to execute a bash script. I read the bash script and found it allowed us to execute commands.

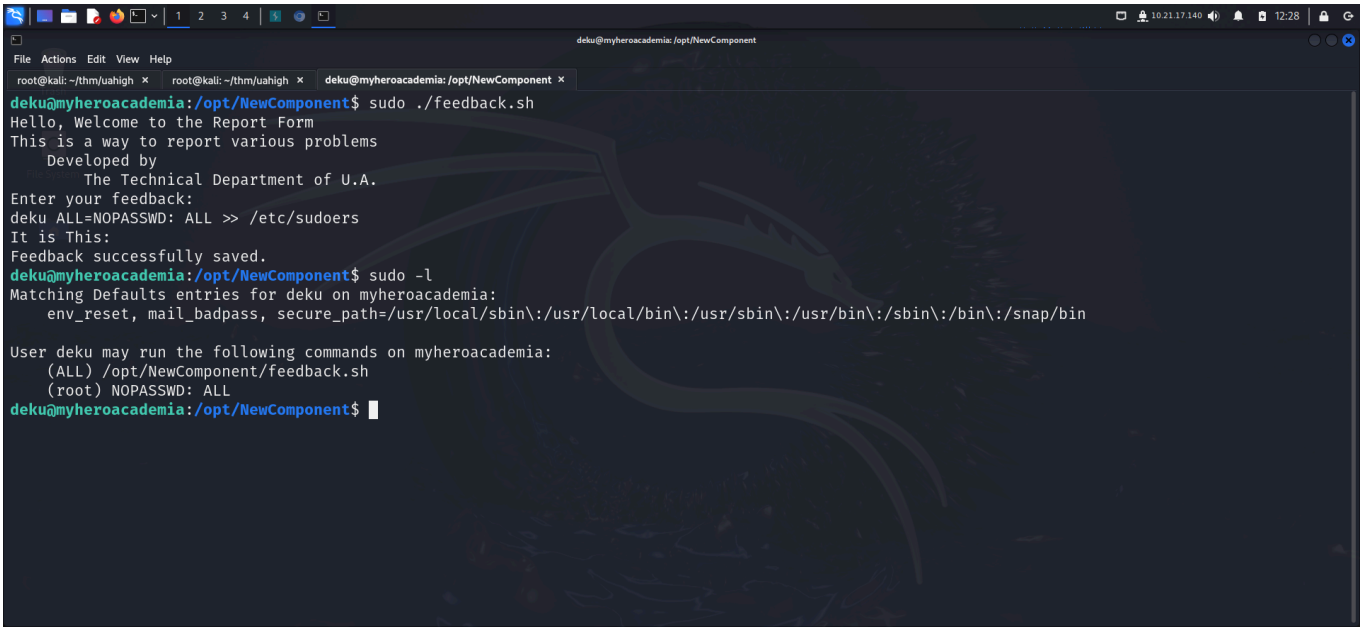


In Bash, the `eval` command is used to evaluate and execute a string as a shell command.

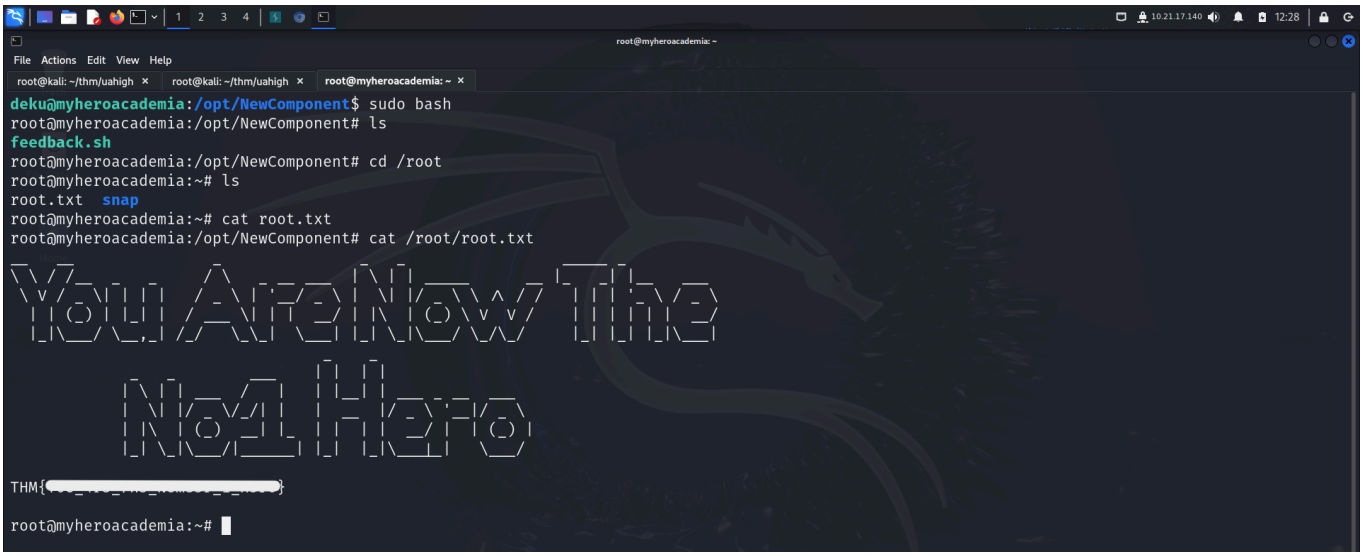
I executed the script and added a new rule in the **sudoers** file allowing my current user to execute all commands as **sudo** without a password.



I verified the changes by viewing my **sudo** privileges.



I then executed **bash** as **sudo** and got shell as root. Finally I captured the root flag from */root* directory.



Happy hacking !