PSP0201

Week 5

Writeup

Group name: The Convocation

Group members:

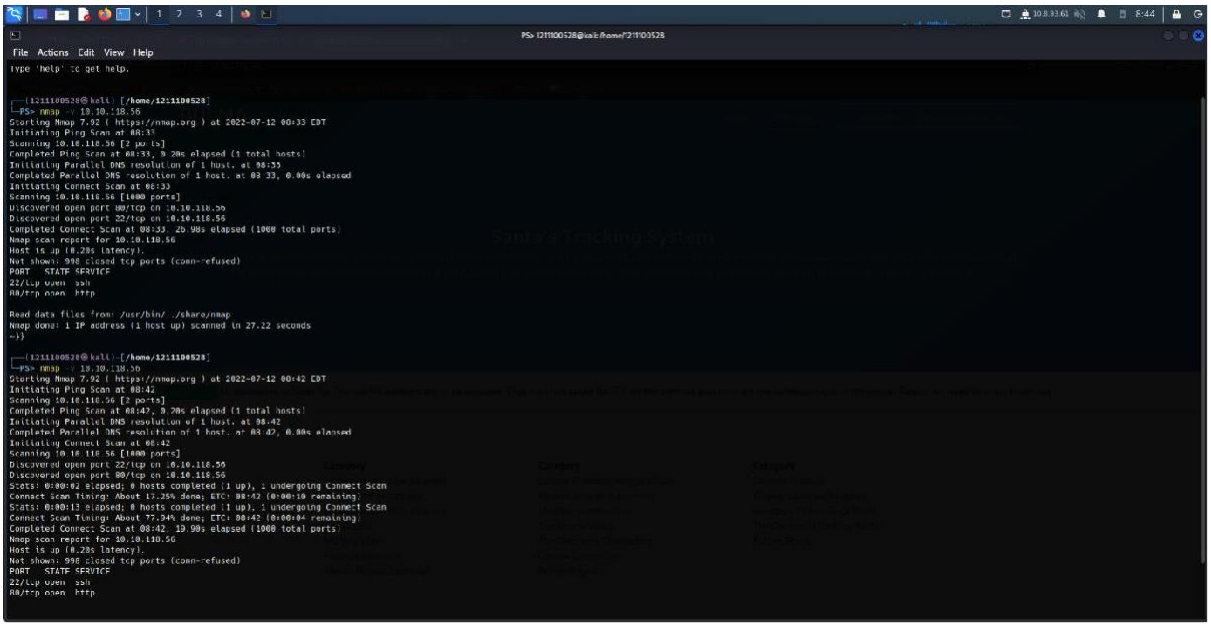
ID Number	Name	Role
1211101903	Daniysh bin Ahmad Azwang Aisram	Leader
1211102601	Adil Azraie bin Razman	Member
1211102301	Muhammad Aqrel bin Shahrulanuar Mushaddat	Member

Day 16 : Scripting – Help! Where is Santa?

Tools used: Kali Linux, Firefox, Terminal, Nano, Python

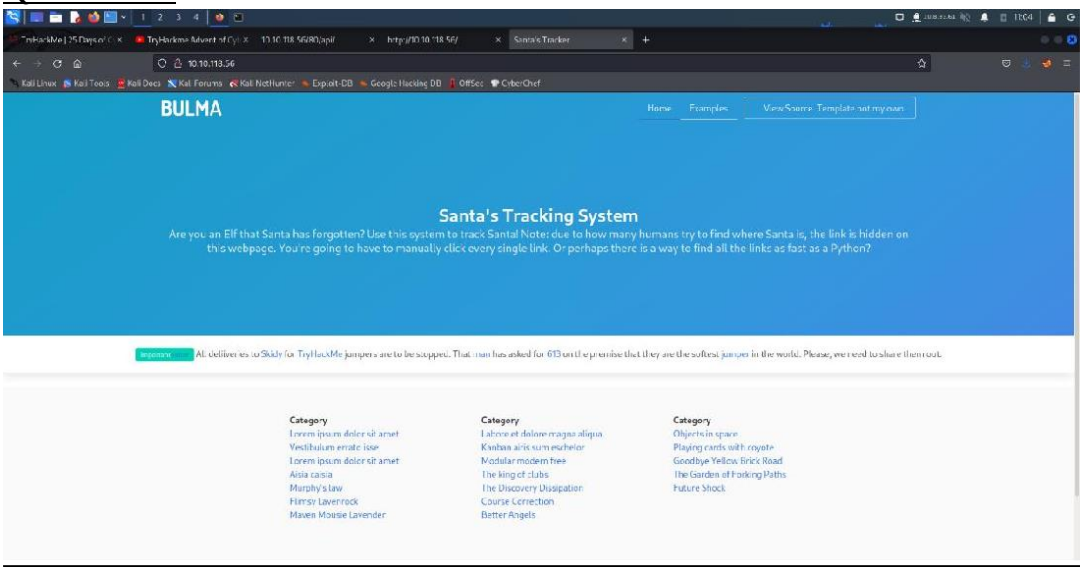
Solution/Walkthrough:

Question 1:



By using nmap while using the address that we get, we can get the port number that we require to open the API.

Question 2:

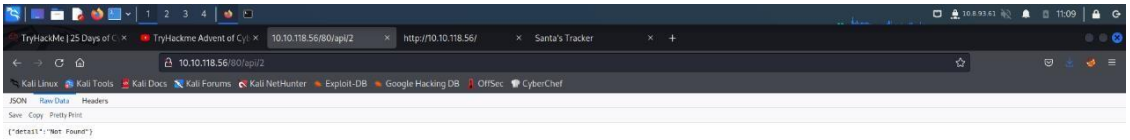


We can get the template name by visiting the URL page.

Question 3:

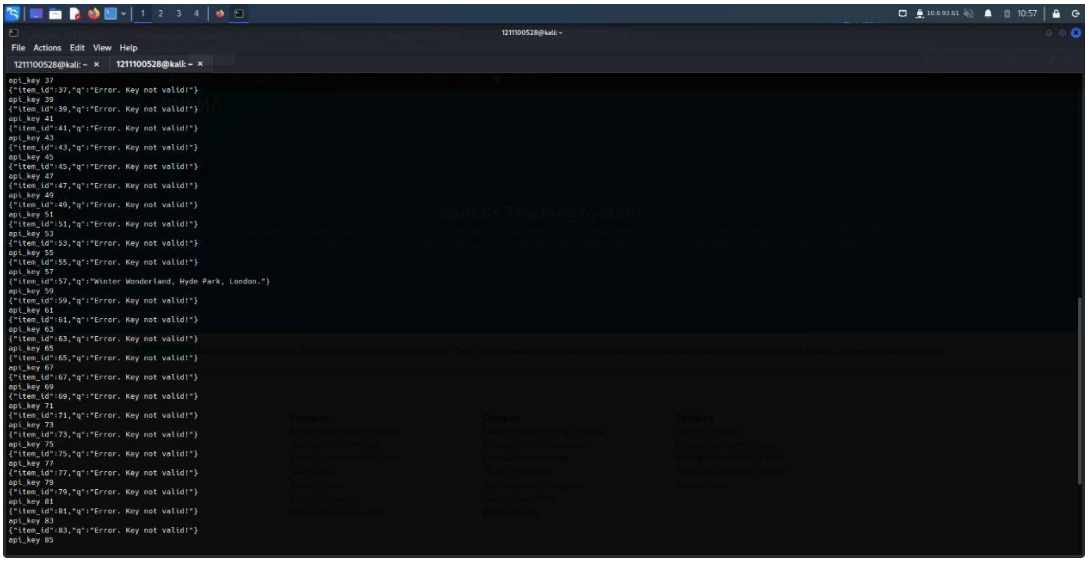
We can get the answer to this question by simply adding “/api/” to the URL andport number for the web server.

Question 4:



To get to this page we have to type in the URL code plus the port number and theapi . After that just open the Raw Data tab in the page.

Question 5 & 6:



To get to the address we should use the brute.py method and also the nano app to then use python commands to get the location address and also the correct api key Infront of the address.

Thought Process / Methodology:

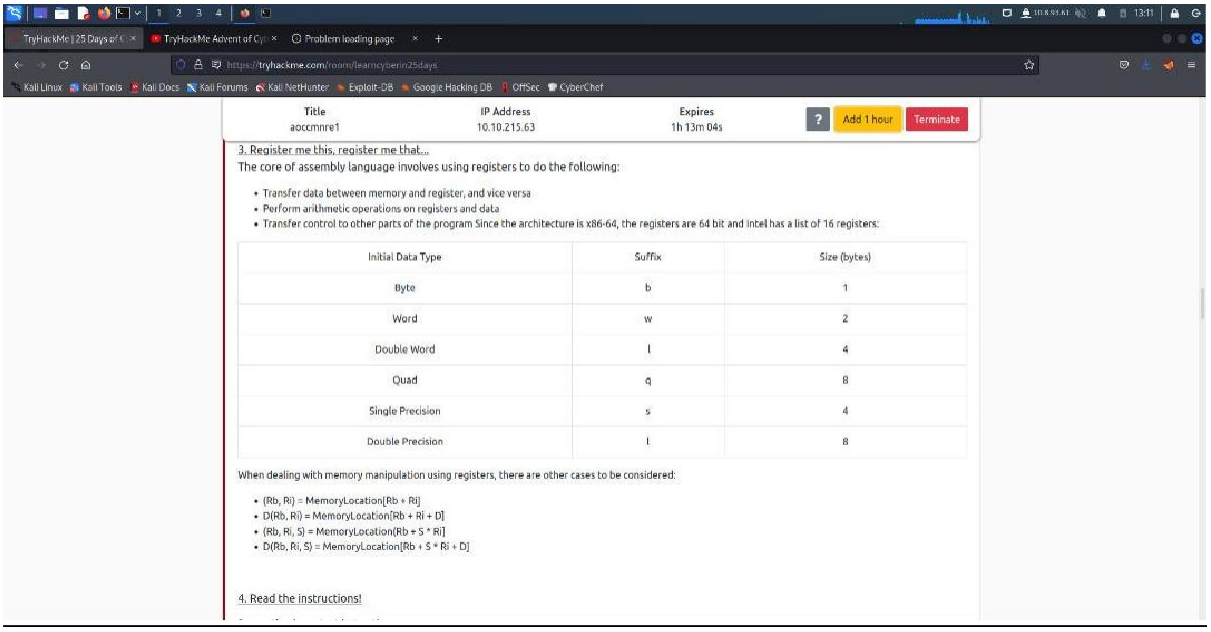
First of all, we have to open the website by starting the machine to get to the IP address. Then, we need to get the port number by opening the terminal and use the nmap method. Then we can open the website by using IP address plus the port number to open the website. Next we can add "/api/" at the URL to open the api secret page to find a lot of information such as the Raw Data. Finally, to get the location address of santa and the api key, we need to use the brute technic and use the python language to as a command to get the things that we want.

Day 17 : Reverse Engineering – ReverseELFneering

Tools used: Kali Linux, Firefox, Terminal.

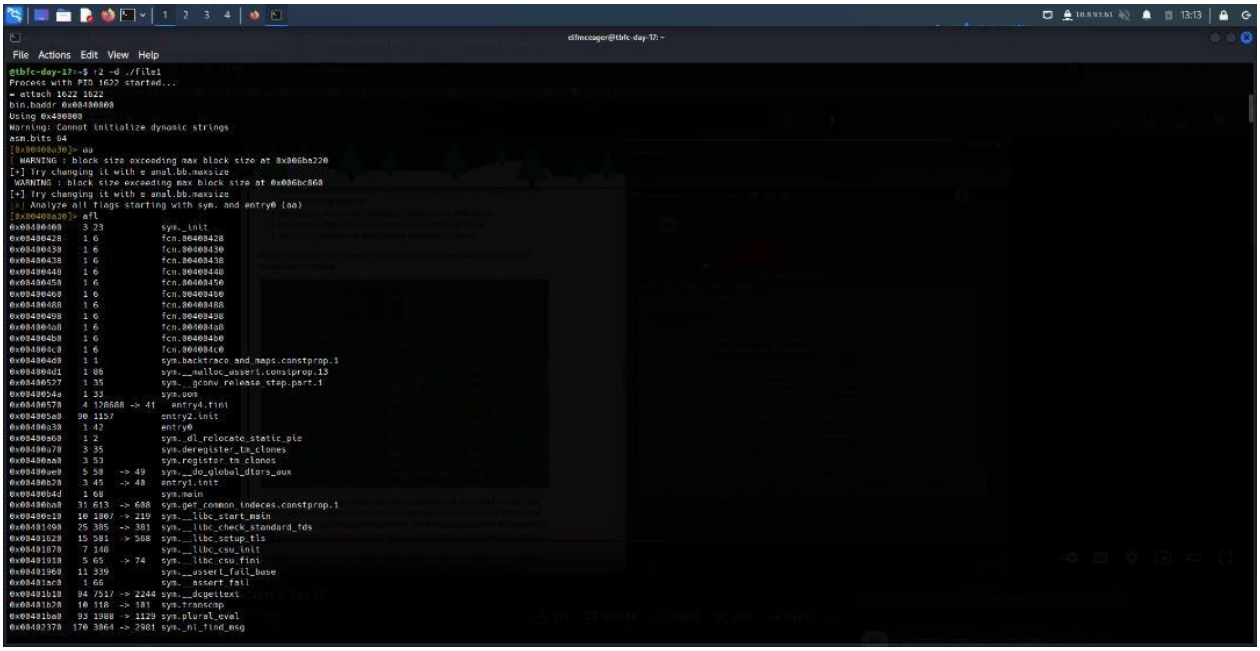
Solution/Walkthrough:

Question 1:



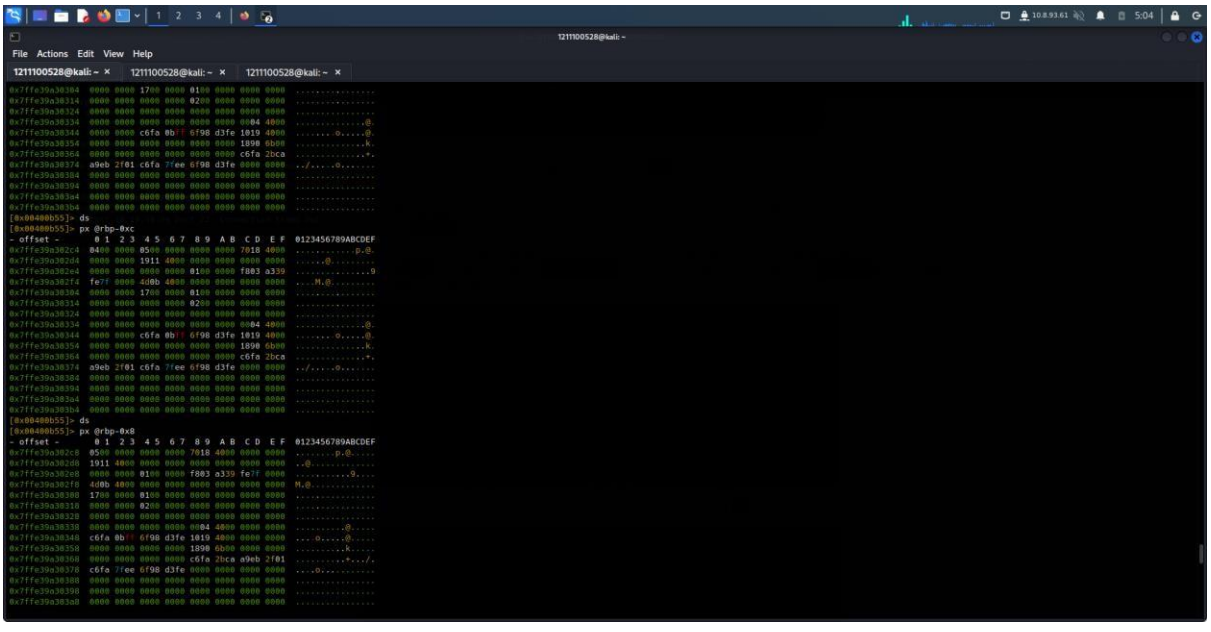
For Question 1, we can find the answer in the tryhackme question itself.

Question 2:



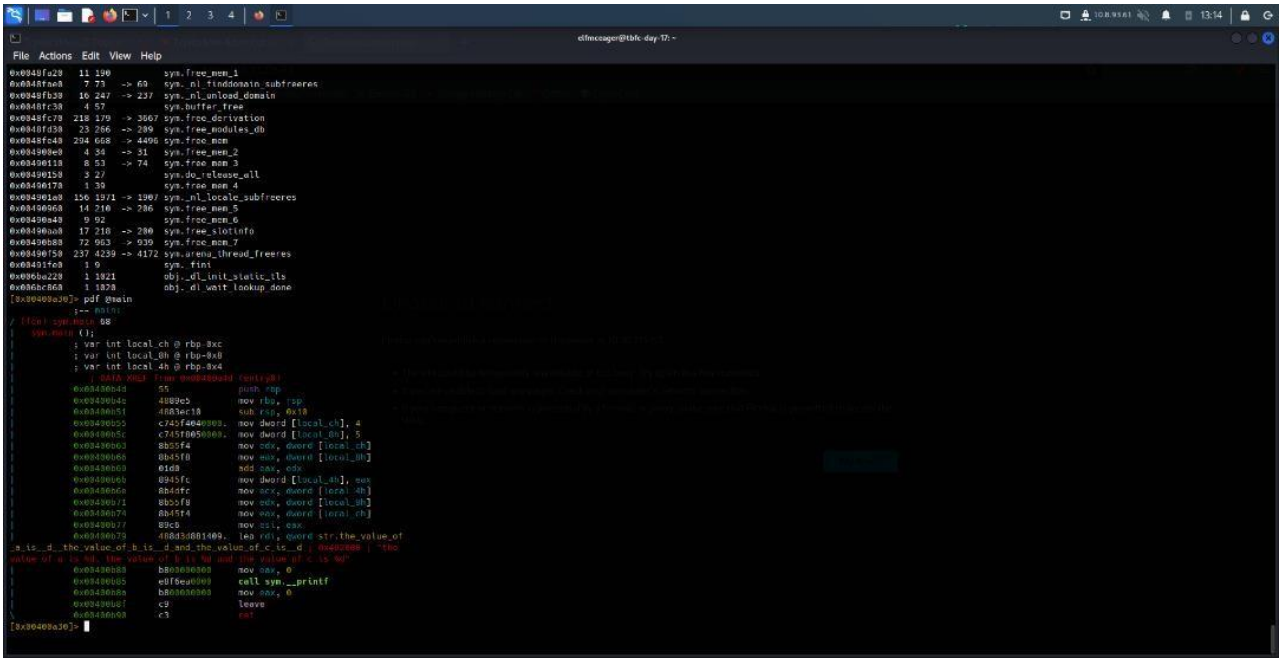
The command that we need to input to analyze the program in radare2 is the command **“aa” .**

Question 3:



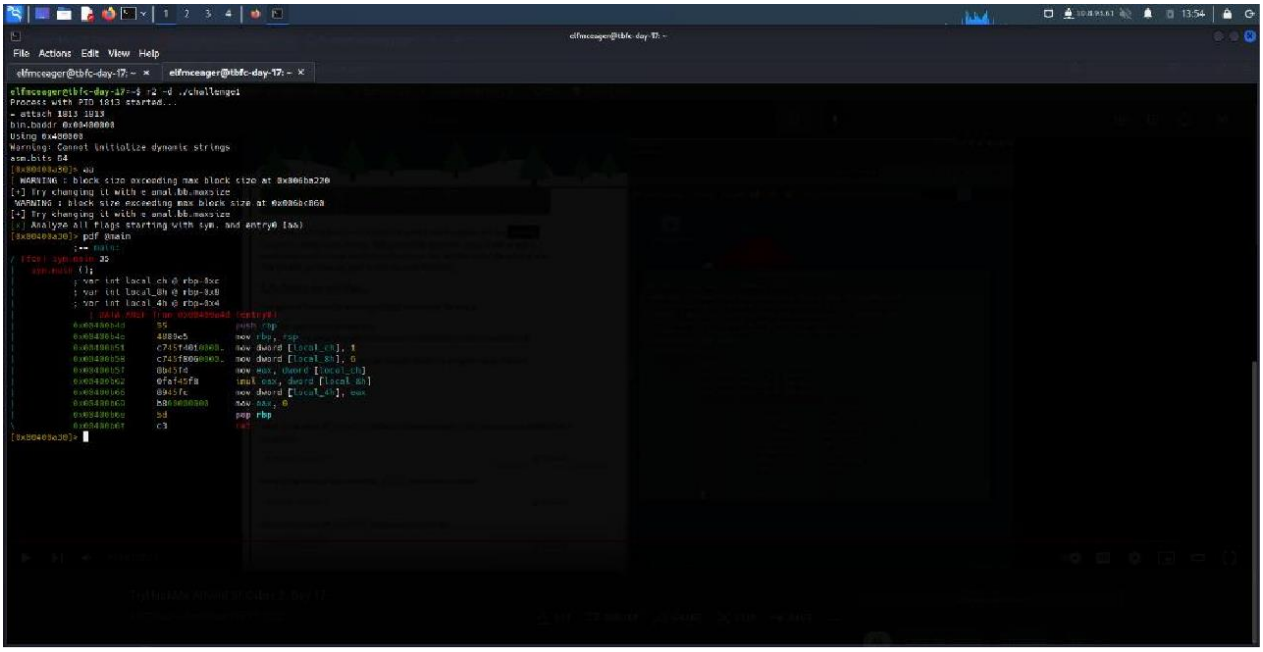
The command to set a breakpoint in radare2 would be the command **“db”.**

Question 4:



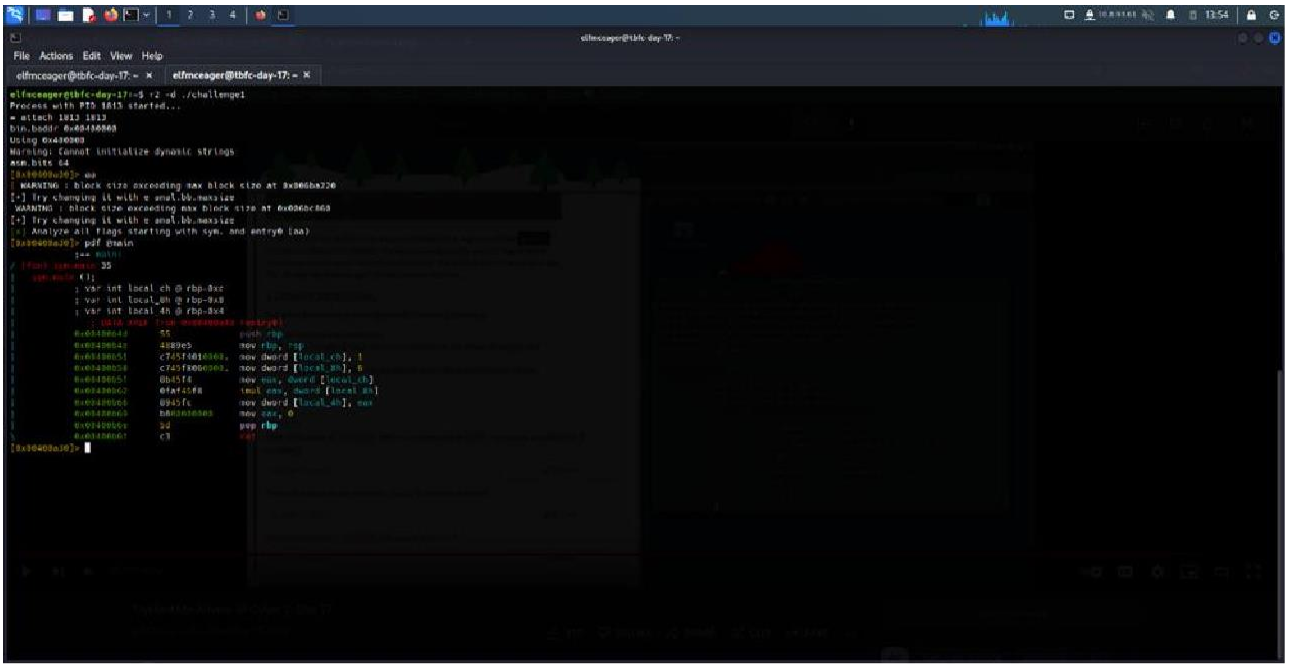
The command that we need to execute the program until we hit a breakpoint would be the command **“pdf @main”.**

Question 5:



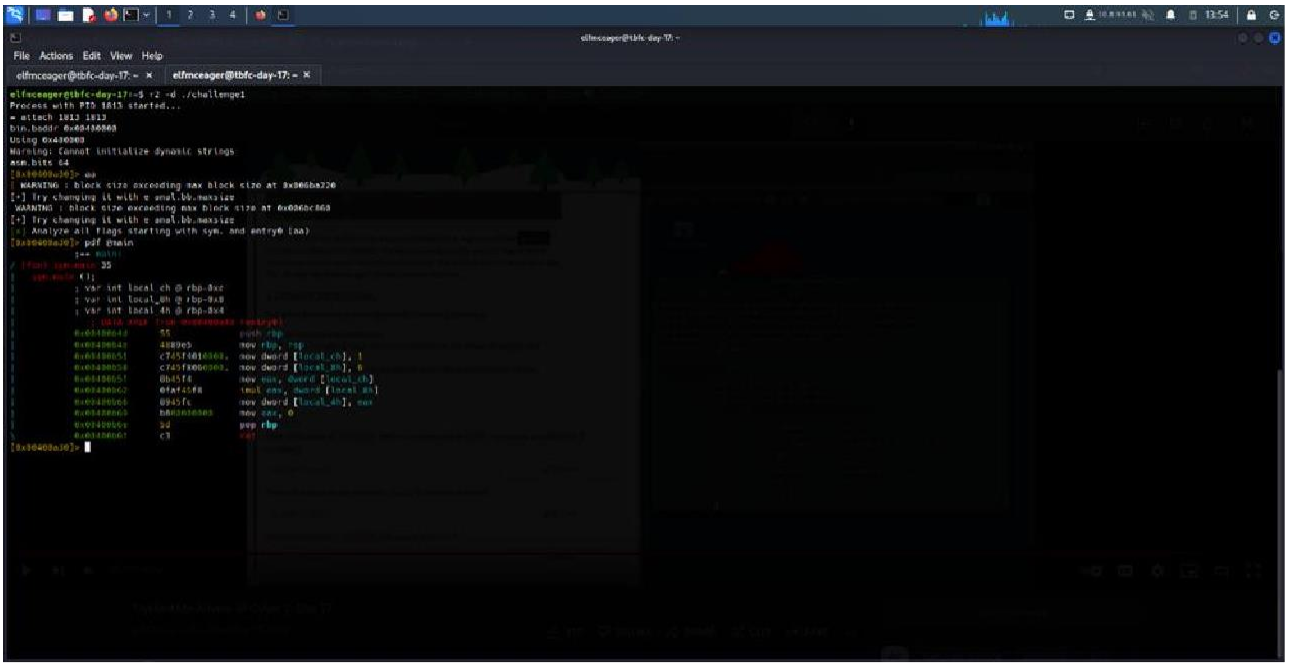
The value of local_ch when its corresponding movl instruction is called **“1”** as in the numeral digit.

Question 6:



The value of eax when the imull instruction is called “6” as in the numeral digit.

Question 7:



The value of local_4h before eax is set to 0 would be the value **“6”.**

Thought Process / Methodology:

First of all, we have to connect the terminal to the web page that we need to access and that is by using the command “nmap” and “cat target.txt” to target the web page. Then, we just need to access the page by using the username and password that were given so that we can use **Radare2** to open the binary debugging mode. After that we can use the command “aa” to start analyze the r2program. Once the analysis is complete we need to find on where to start analyzing from like an entry point and that is by using the command “afl” . After we found out the main function, we can examine the assembly code by running the command “pdf @main”. Then we can set a breakpoint by using the command “db”. After we’ve set a breakpoint, we can run the program by using the command “dc” to execute the program until we hit the breakpoint. Then we need to view the contents of the variable and to do that we should use the command “rbp-0xc”. Finally, we just need to repeat the same process by using the command “ds” to execute and move on to the next binary values that we need.

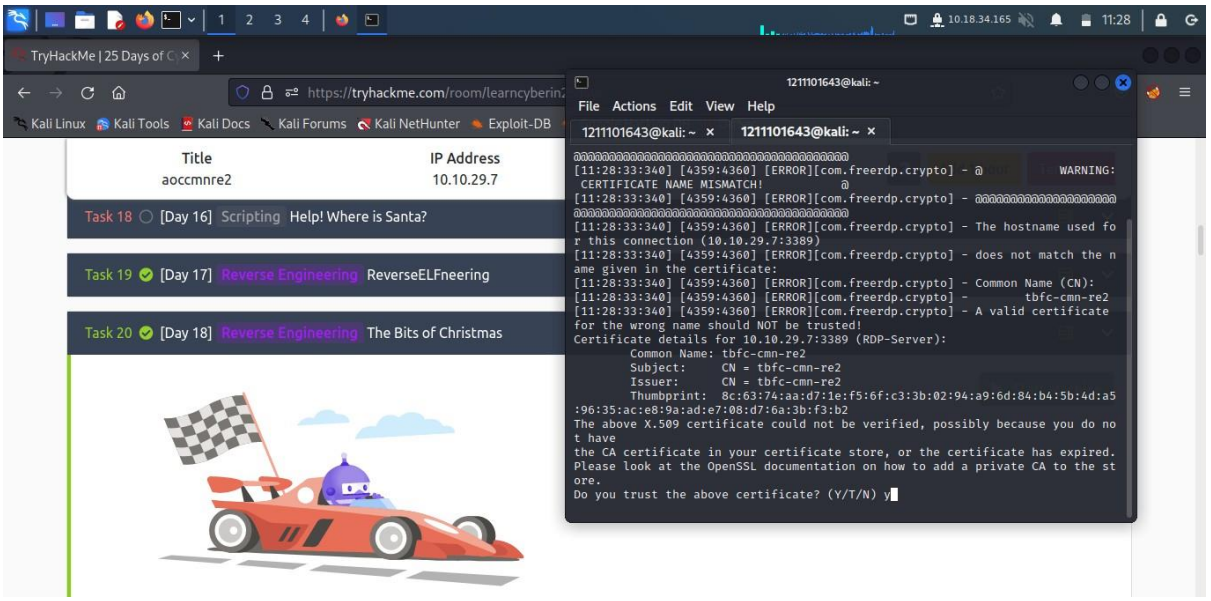
Day 18: Reverse Engineering - The Bits of Christmas

Tools used: Kali Linux, Firefox, Terminal

Solution/Walkthrough:

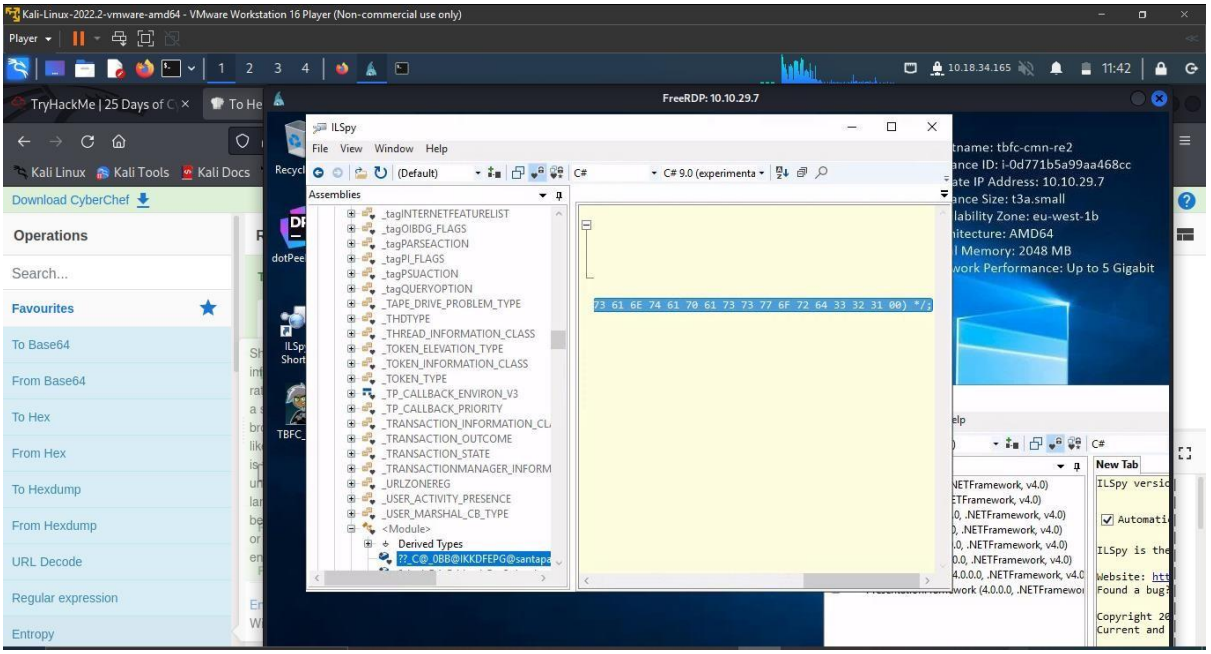
Question 1:

First of all, we install remmina open remmina using terminal



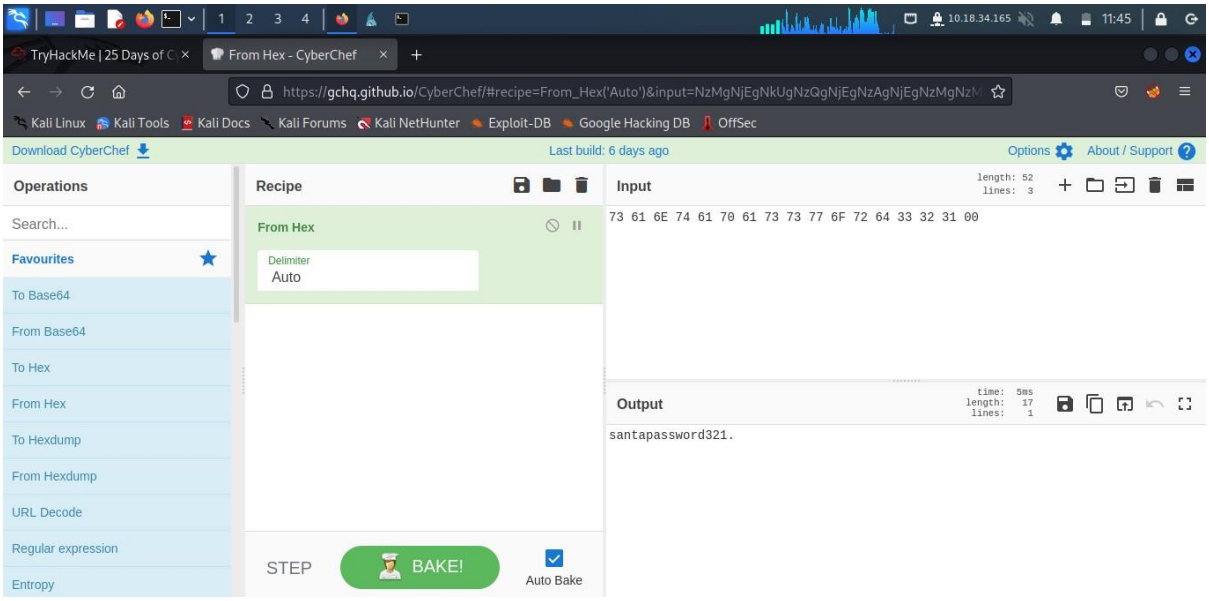
Question 2:

Then we log in into rdp server and we click the password is formatted in hexadecimal.



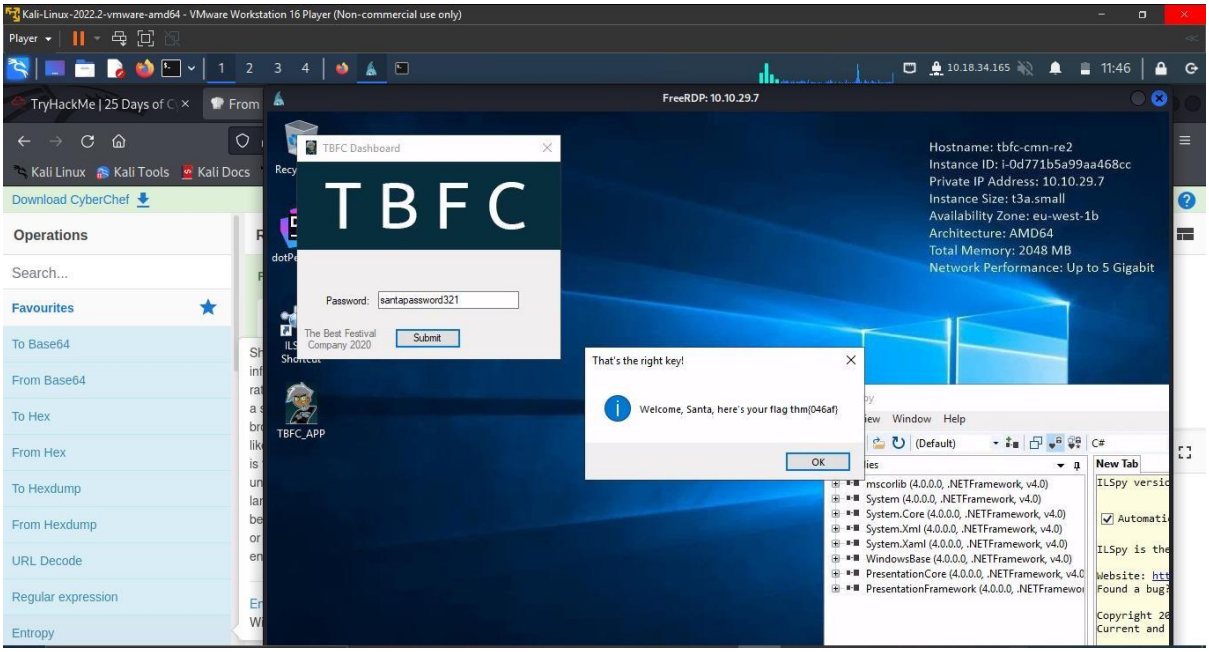
Question 3:

We get the password from the cyberchef.



Question 5:

Finally, we put the password in TBFC and get the right key.



Methodology:

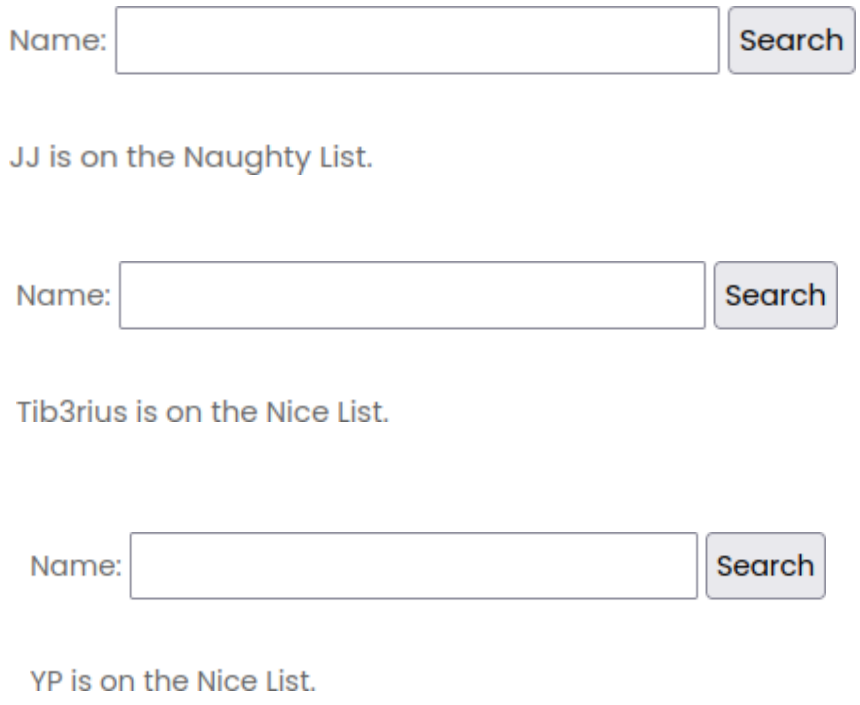
Open terminal and open remmina to get the password of TBFC. Then, get into the RDP and get the password. The file that displayed to us after we click the password is formatted in hexadecimal. We can use an online tool such as Cyberchef to decode that and the results gives by Cyberchef is the same password on the previous file. After that, we put the password in the TVFC and get the thm to answer the tryhackme question.

Day 19: The Naughty or Nice List

Tools used: Firefox, Kali Linux

Question 1:

Type in the name provided into the search bar.



Name: Search

Kanes is on the Naughty List.

Name: Search

Timothy is on the Naughty List.

Question 2:

Type in “/?proxy=http%3A%2F%2Flist.hohoho%3A8080%2F” to the URL.

Welcome children!

To find out if you are currently on the naughty list or the nice list, please enter your name below!

Have a Merry Christmas! Ho ho ho!

- Santa

Name: Search

Not Found

The requested URL was not found on this server.

Question 3:

Type in “/?proxy=http%3A%2F%2Flist.hohoho%3A80” to the URL.

Welcome children!

To find out if you are currently on the naughty list or the nice list, please enter your name below!

Have a Merry Christmas! Ho ho ho!

- Santa

Name: Search

Failed to connect to list.hohoho port 80: Connection refused

Question 4:

Type in "/?proxy=http%3A%2F%2Flist.hohoho%3A22" to the URL.

Welcome children!

To find out if you are currently on the naughty list or the nice list, please enter your name below!

Have a Merry Christmas! Ho ho ho!

- Santa

Name: Search

Recv failure: Connection reset by peer

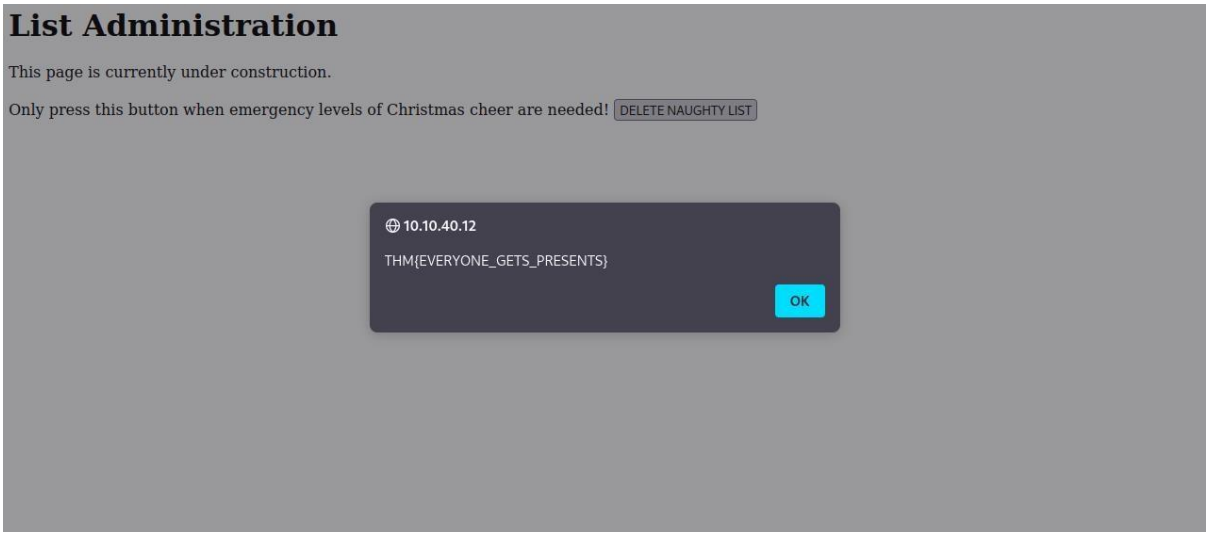
Question 5:

Type in “/?proxy=http%3A%2F%2Flocalhost” to the URL.

Question 6 & 7:

Type in “?proxy=http%3A%2F%2Flist.hohoho.localtest.me” to the URL.

Then, you will receive a message from Elf McSkidy that contains the password for santa. Insert the password to the admin login form.



Thought Process / Methodology:

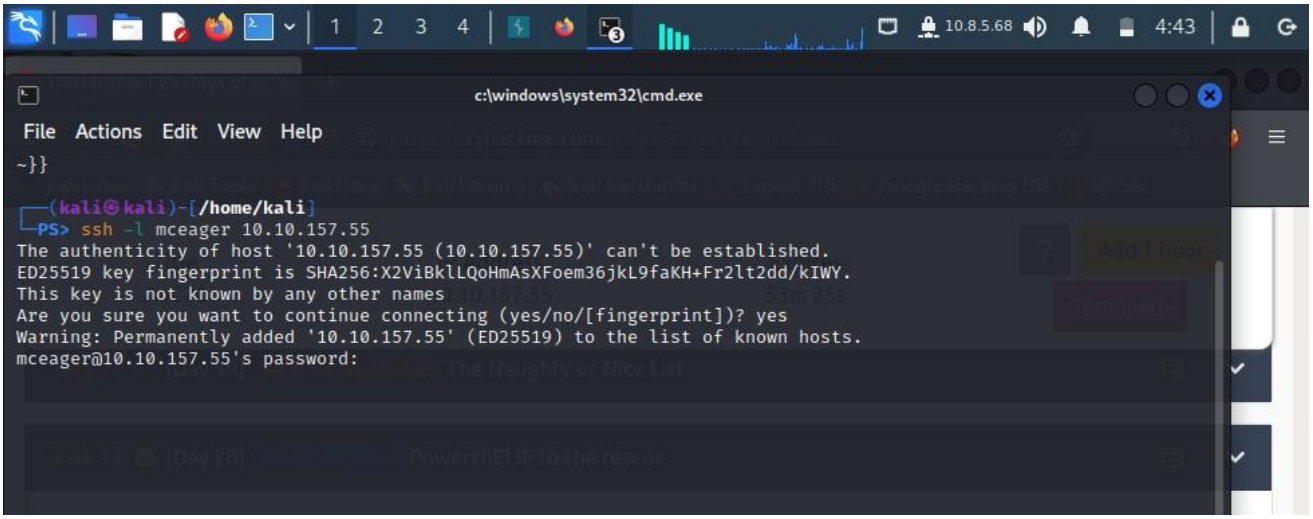
For day 19th we need to use Server-Side Request Forgery (SSRF) to complete this challenge. Basically, by changing the URL we can get different results based on what we thought such as hostnames, port number, etc. First, we need to get the IP address and put it in the URL. Then, we can try to put names into the searchbar to see if it had any responses. Then we can try changing the URL by using localhost or a different port number to see the changes. To get Santa's passwordwe need to change the portnames to a different one so that we can observe the changes. We will insert list.hohoho.localtest.me to see if it passes because it resolves every subdomain to 127.0.0.1. We can actually use any portnames but in this specific challenge, we will use localtest.me. Finally, after inserting localtest.me, we can finally get Santa's passwords and get the flag.

DAY 20: PowershELIF to the rescue

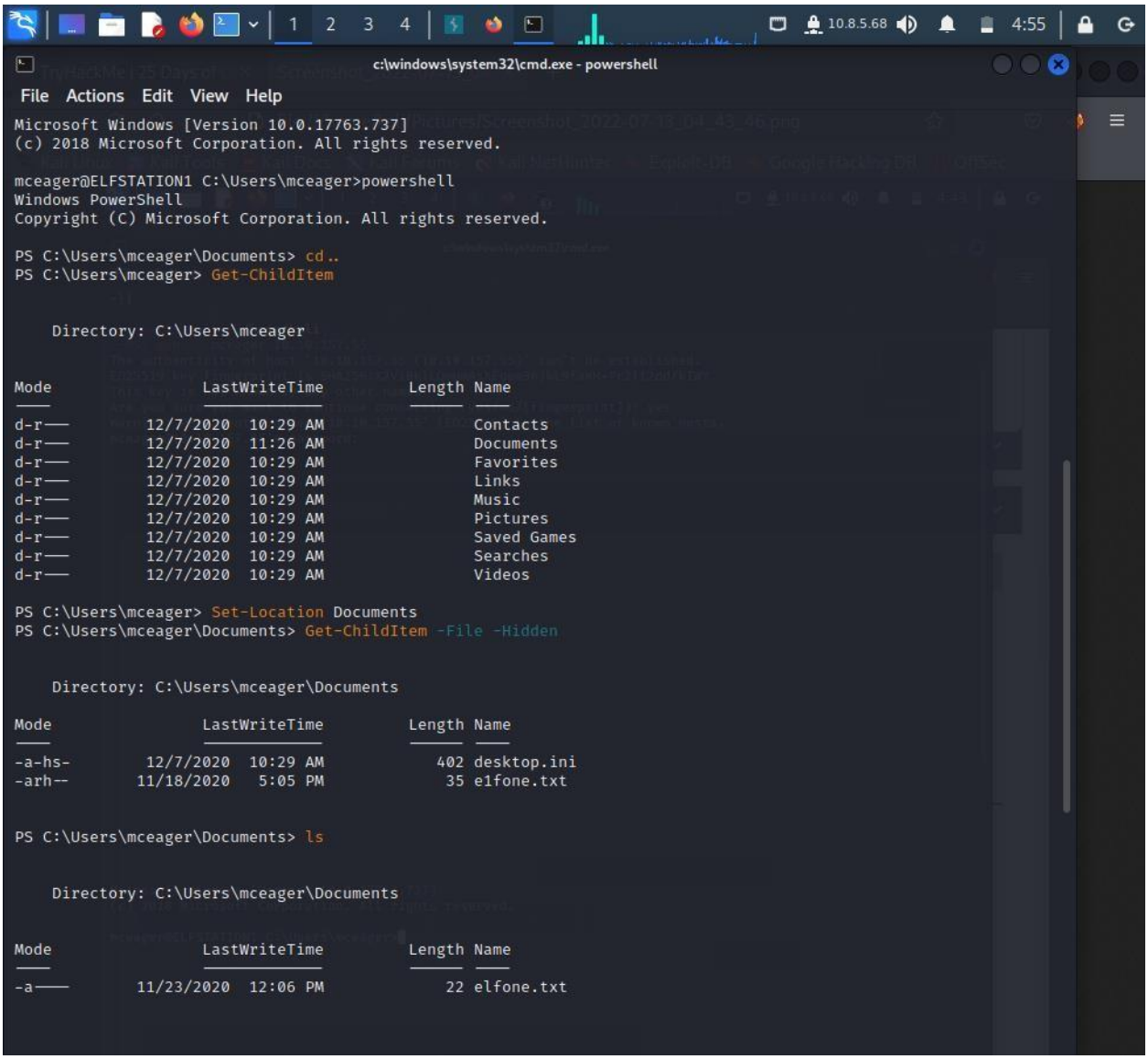
Tools used: Kali Linux, Terminal, Powershell

Solution/Walkthrough:

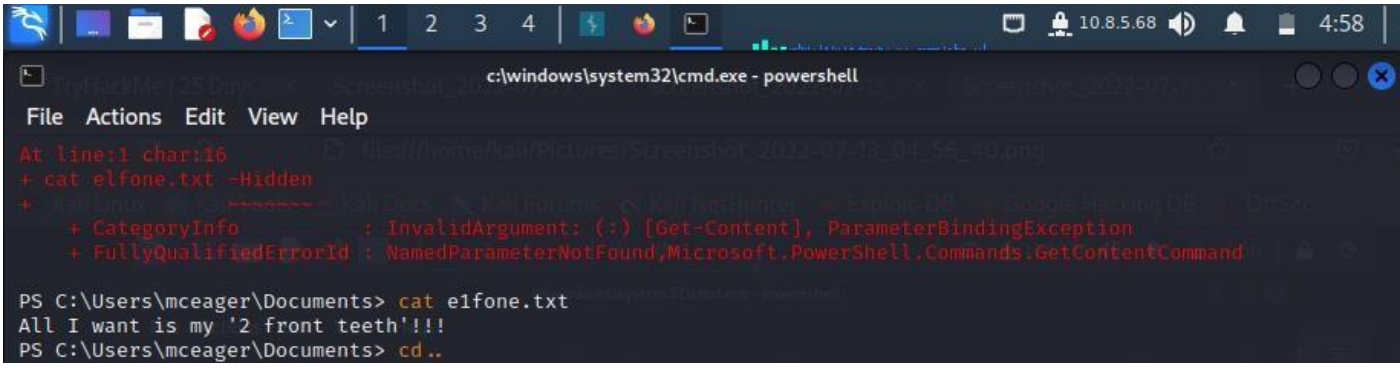
Question 1



You will use the SSH to connect to the remote machine. The command to run to connect to the remote machine is ssh -l mceager MACHINE_IP. Prompt the password ‘r0ckStar!’

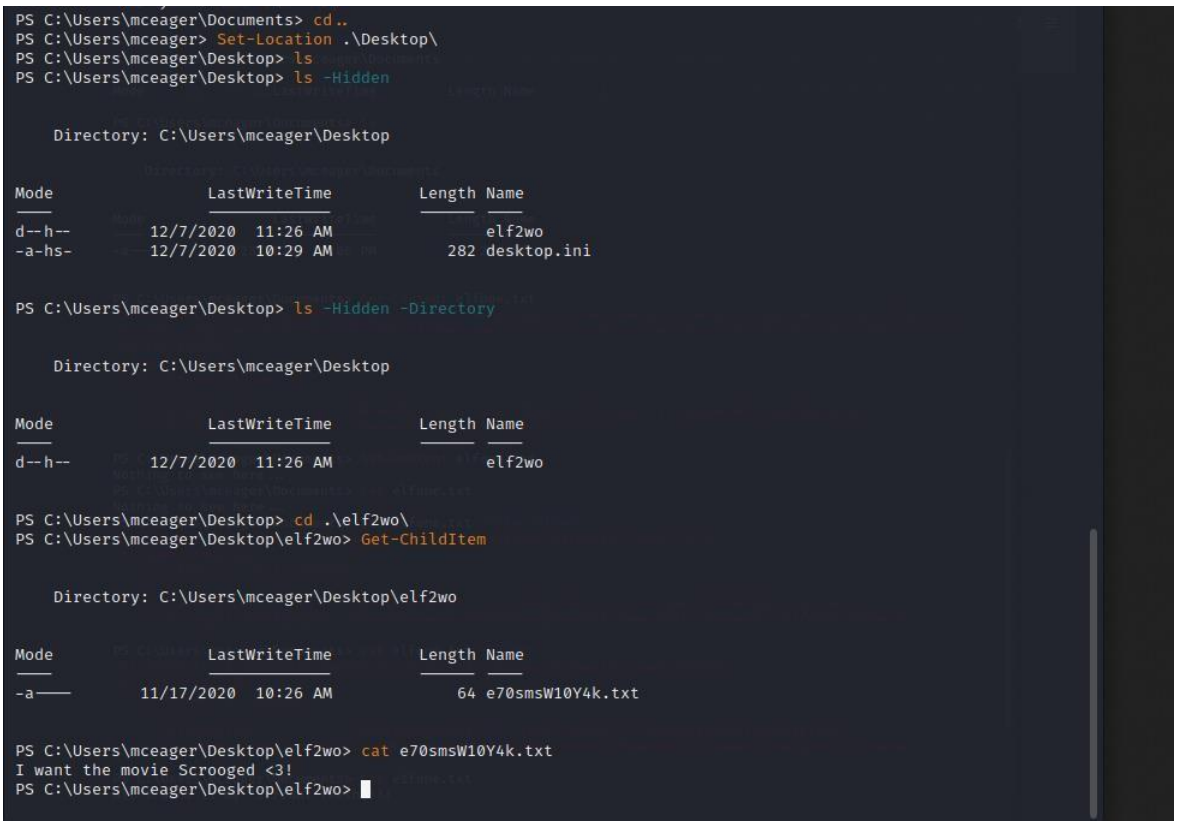


Launch powershell and navigate to the documents folder. To list the contents of the current directory we are in, we can use the Get-ChildItem cmdlet. Next, use the -Hidden cmdlet to get only hidden items, and you able to see the text file.



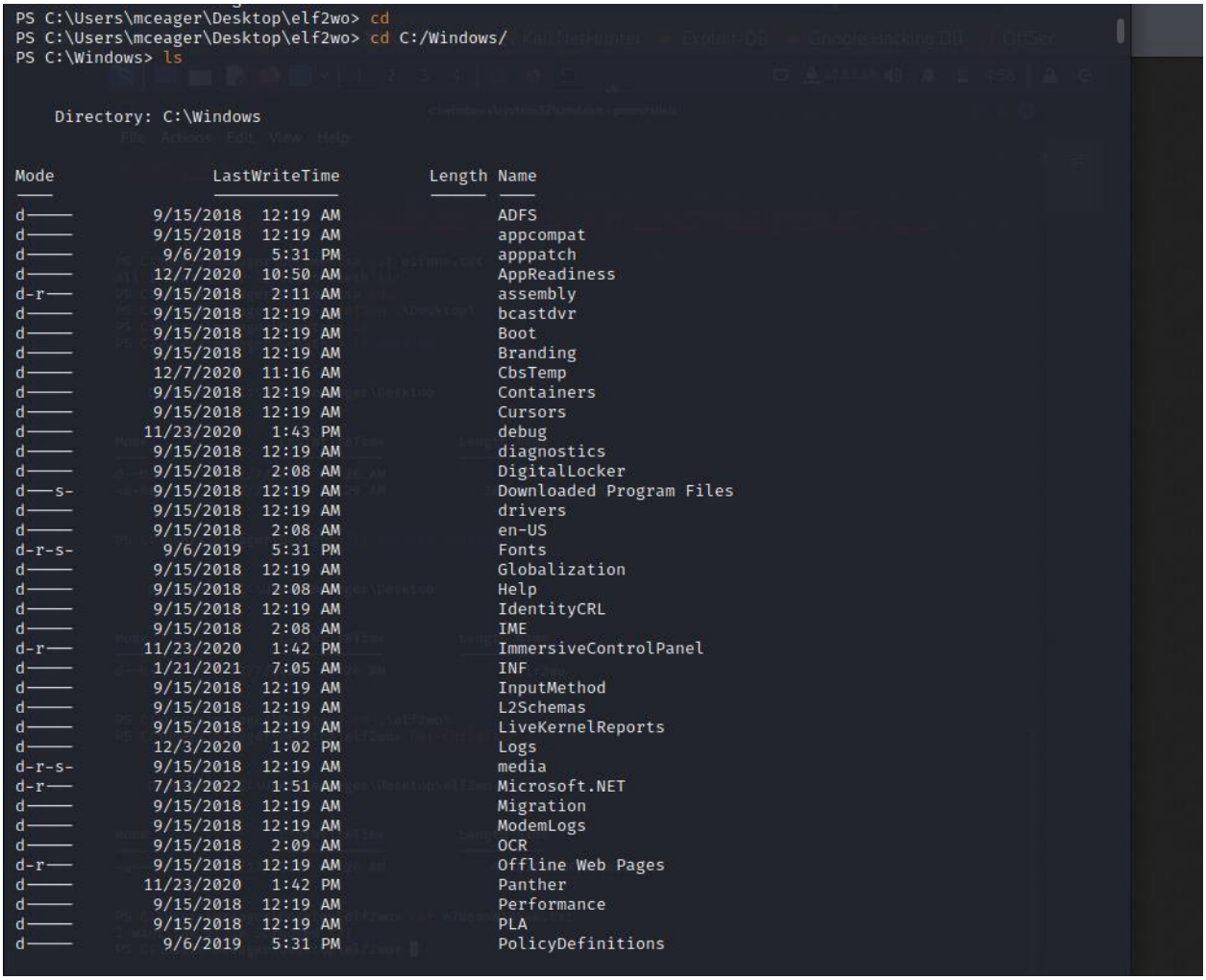
Enter cat text.file to reveal what does the Elf 1 want?

Question 2



Reset the file directory location to desktop location. Repeat the question 1 process. Find the hidden file that contains what the Elf 2 wants. Enter cat text.file to reveal what does Elf 2 want?

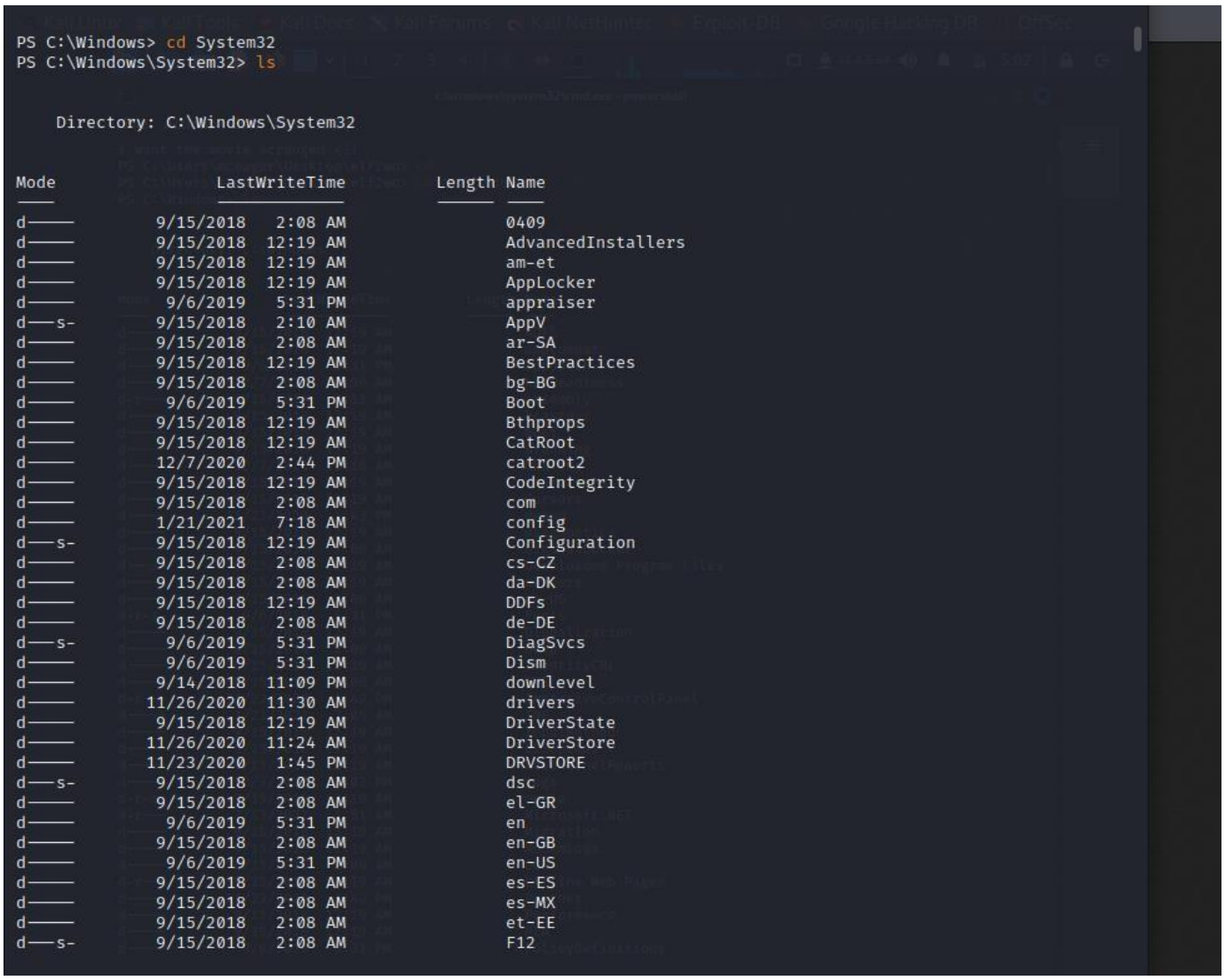
Question 3



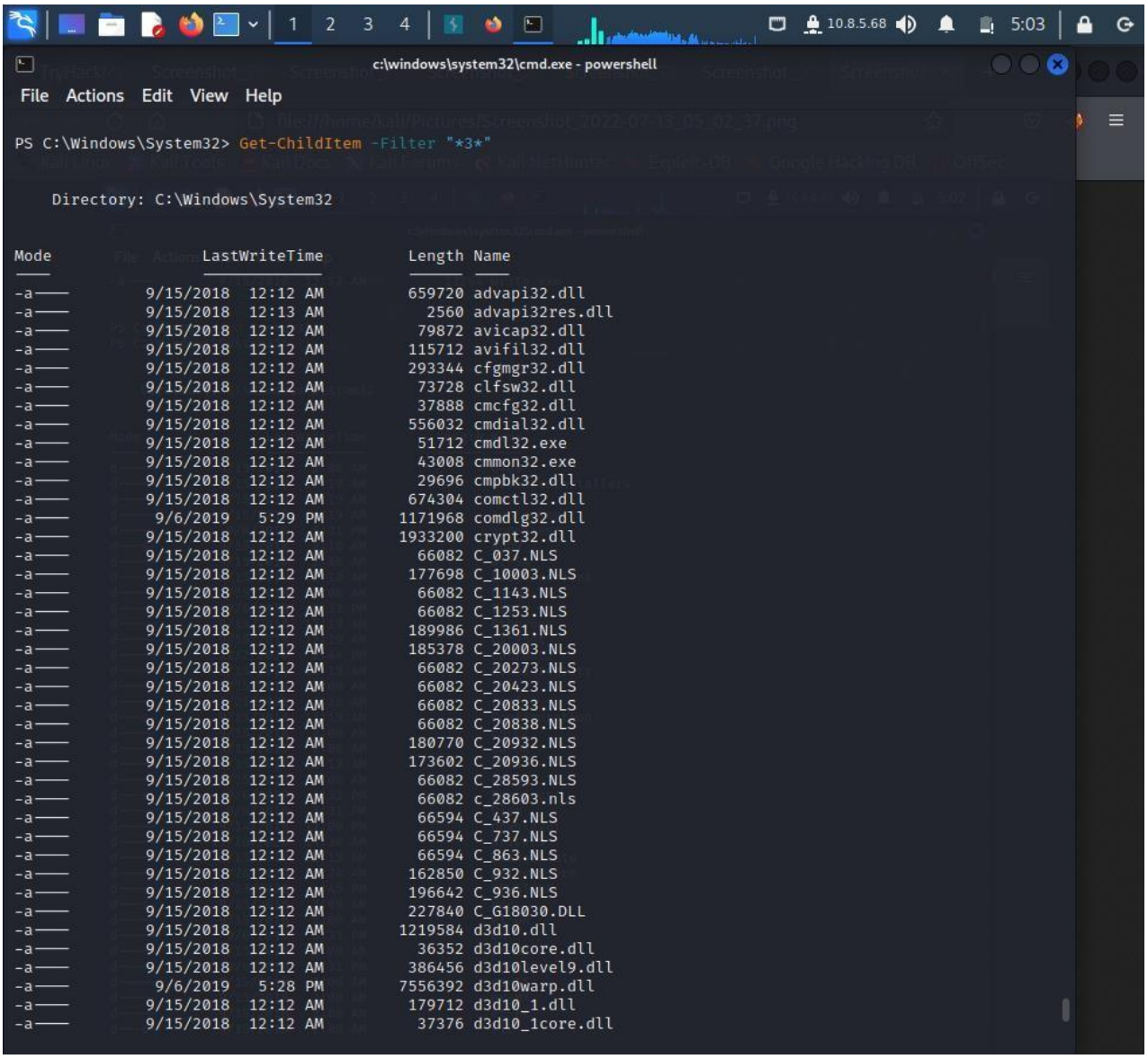
```
PS C:\Users\mceager\Desktop\elf2wo> cd
PS C:\Users\mceager\Desktop\elf2wo> cd C:/Windows/
PS C:\Windows> ls


    Directory: C:\Windows


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         9/15/2018  12:19 AM                ADFS
d-----         9/15/2018  12:19 AM                appcompat
d-----          9/6/2019   5:31 PM                apppatch
d-----        12/7/2020  10:50 AM                AppReadiness
d-r---         9/15/2018   2:11 AM                assembly
d-----         9/15/2018  12:19 AM                bcastdvr
d-----         9/15/2018  12:19 AM                Boot
d-----         9/15/2018  12:19 AM                Branding
d-----        12/7/2020  11:16 AM                CbsTemp
d-----         9/15/2018  12:19 AM                Containers
d-----         9/15/2018  12:19 AM                Cursors
d-----        11/23/2020   1:43 PM                debug
d-----         9/15/2018  12:19 AM                diagnostics
d-----         9/15/2018   2:08 AM                DigitalLocker
d---s-         9/15/2018  12:19 AM                Downloaded Program Files
d-----         9/15/2018  12:19 AM                drivers
d-----         9/15/2018   2:08 AM                en-US
d-r-s-          9/6/2019   5:31 PM                Fonts
d-----         9/15/2018  12:19 AM                Globalization
d-----         9/15/2018   2:08 AM                Help
d-----         9/15/2018  12:19 AM                IdentityCRL
d-----         9/15/2018   2:08 AM                IME
d-r---        11/23/2020   1:42 PM                ImmersiveControlPanel
d-----         1/21/2021   7:05 AM                INF
d-----         9/15/2018  12:19 AM                InputMethod
d-----         9/15/2018  12:19 AM                L2Schemas
d-----         9/15/2018  12:19 AM                LiveKernelReports
d-----         12/3/2020   1:02 PM                Logs
d-r-s-         9/15/2018  12:19 AM                media
d-r---         7/13/2022   1:51 AM                Microsoft.NET
d-----         9/15/2018  12:19 AM                Migration
d-----         9/15/2018  12:19 AM                ModemLogs
d-----         9/15/2018   2:09 AM                OCR
d-r---         9/15/2018  12:19 AM                Offline Web Pages
d-----        11/23/2020   1:42 PM                Panther
d-----         9/15/2018  12:19 AM                Performance
d-----         9/15/2018  12:19 AM                PLA
d-----          9/6/2019   5:31 PM                PolicyDefinitions
```

Reset the file directory. Enter the windows file and type ls for the file list.

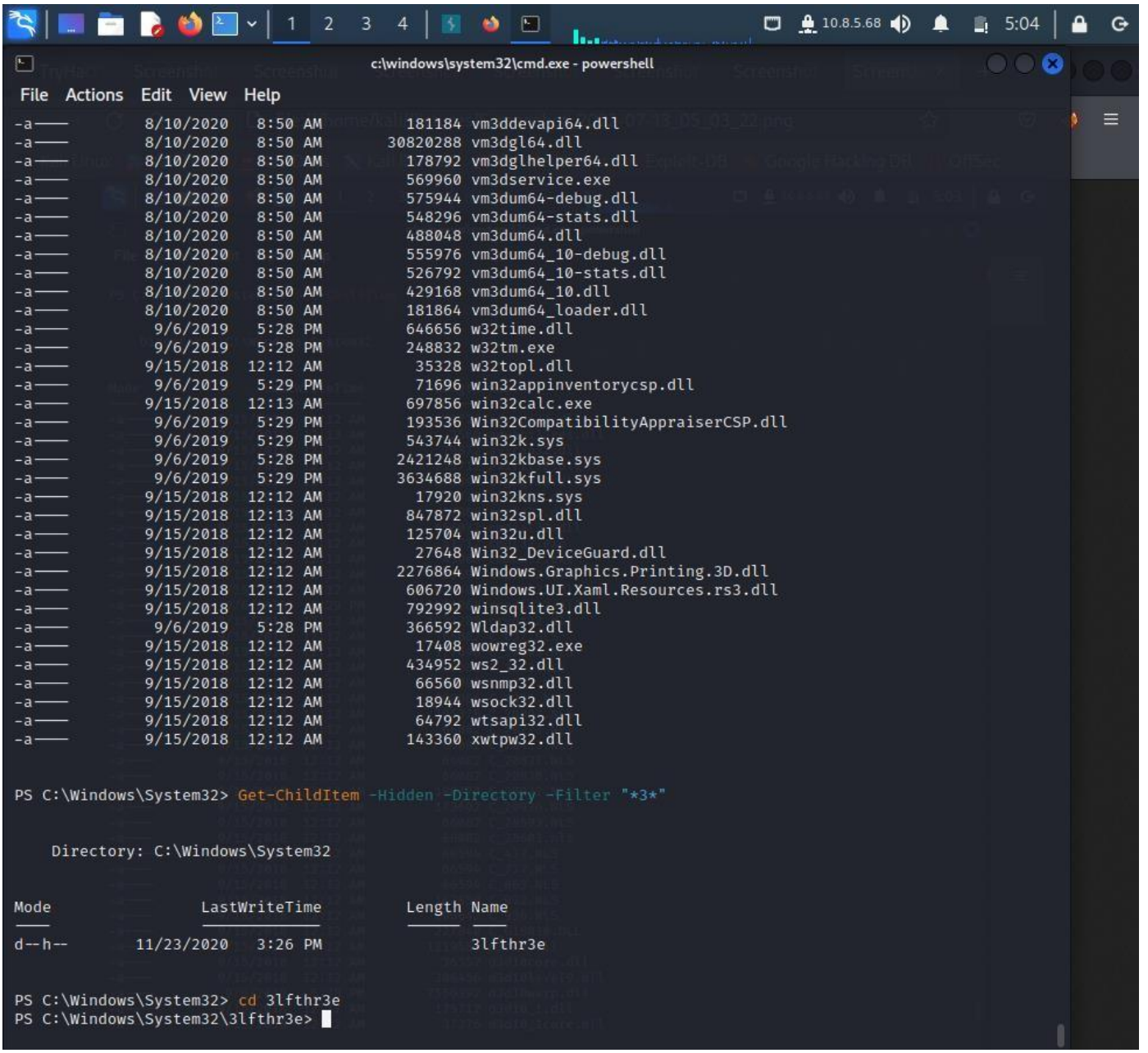
Next, enter System32 command and type ls for the file list.



```
PS C:\Windows> cd System32
PS C:\Windows\System32> ls


    Directory: C:\Windows\System32


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         9/15/2018   2:08 AM                0409
d-----         9/15/2018  12:19 AM                AdvancedInstallers
d-----         9/15/2018  12:19 AM                am-et
d-----         9/15/2018  12:19 AM                AppLocker
d-----          9/6/2019   5:31 PM                appraiser
d----s-        9/15/2018   2:10 AM                AppV
d-----         9/15/2018   2:08 AM                ar-SA
d-----         9/15/2018  12:19 AM                BestPractices
d-----         9/15/2018   2:08 AM                bg-BG
d-----          9/6/2019   5:31 PM                Boot
d-----         9/15/2018  12:19 AM                Bthprops
d-----         9/15/2018  12:19 AM                CatRoot
d-----         12/7/2020   2:44 PM                catroot2
d-----         9/15/2018  12:19 AM                CodeIntegrity
d-----         9/15/2018   2:08 AM                com
d-----         1/21/2021   7:18 AM                config
d----s-        9/15/2018  12:19 AM                Configuration
d-----         9/15/2018   2:08 AM                cs-CZ
d-----         9/15/2018   2:08 AM                da-DK
d-----         9/15/2018  12:19 AM                DDFs
d-----         9/15/2018   2:08 AM                de-DE
d----s-         9/6/2019   5:31 PM                DiagSvcs
d-----          9/6/2019   5:31 PM                Dism
d-----         9/14/2018  11:09 PM                downlevel
d-----        11/26/2020  11:30 AM                drivers
d-----         9/15/2018  12:19 AM                DriverState
d-----        11/26/2020  11:24 AM                DriverStore
d-----        11/23/2020   1:45 PM                DRVSTORE
d----s-        9/15/2018   2:08 AM                dsc
d-----         9/15/2018   2:08 AM                el-GR
d-----          9/6/2019   5:31 PM                en
d-----         9/15/2018   2:08 AM                en-GB
d-----          9/6/2019   5:31 PM                en-US
d-----         9/15/2018   2:08 AM                es-ES
d-----         9/15/2018   2:08 AM                es-MX
d-----         9/15/2018   2:08 AM                et-EE
d----s-        9/15/2018   2:08 AM                F12
```



Next, enter filter to reveal the file directory list



Therefore, enter the same command with the hidden files and it shows the hidden file name that the Elf3 wanted.

Question 4

```
PS C:\Windows\System32> cd 3lfthr3e
PS C:\Windows\System32\3lfthr3e> ls
PS C:\Windows\System32\3lfthr3e> dir
PS C:\Windows\System32\3lfthr3e> Get-ChildItem
PS C:\Windows\System32\3lfthr3e> Get-ChildItem -Hidden


    Directory: C:\Windows\System32\3lfthr3e


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
-arh--        11/17/2020  10:58 AM          85887 1.txt
-arh--        11/23/2020   3:26 PM       12061168 2.txt


PS C:\Windows\System32\3lfthr3e> Get-Content 1.txt | Measure-Object


Count    : 9999
Average  :
Sum      :
Maximum  :
Minimum  :
Property :



PS C:\Windows\System32\3lfthr3e> Get-Content 1.txt | Measure-Object -Word

Lines Words Characters Property
-----  -----  ---------- --------
       9999


PS C:\Windows\System32\3lfthr3e>
```

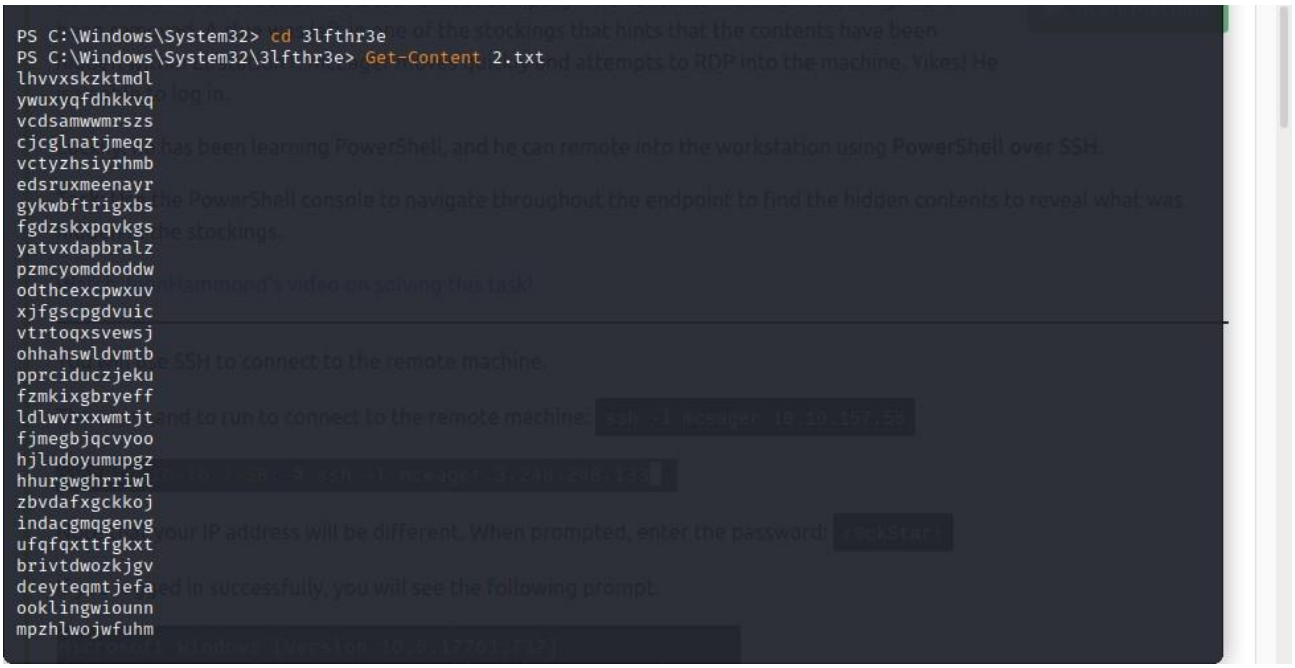
Enter the command directory for the hidden file that shown in question 3 before. Enter Get-Content text with measure object to get on how many words in the first file.

Question 5

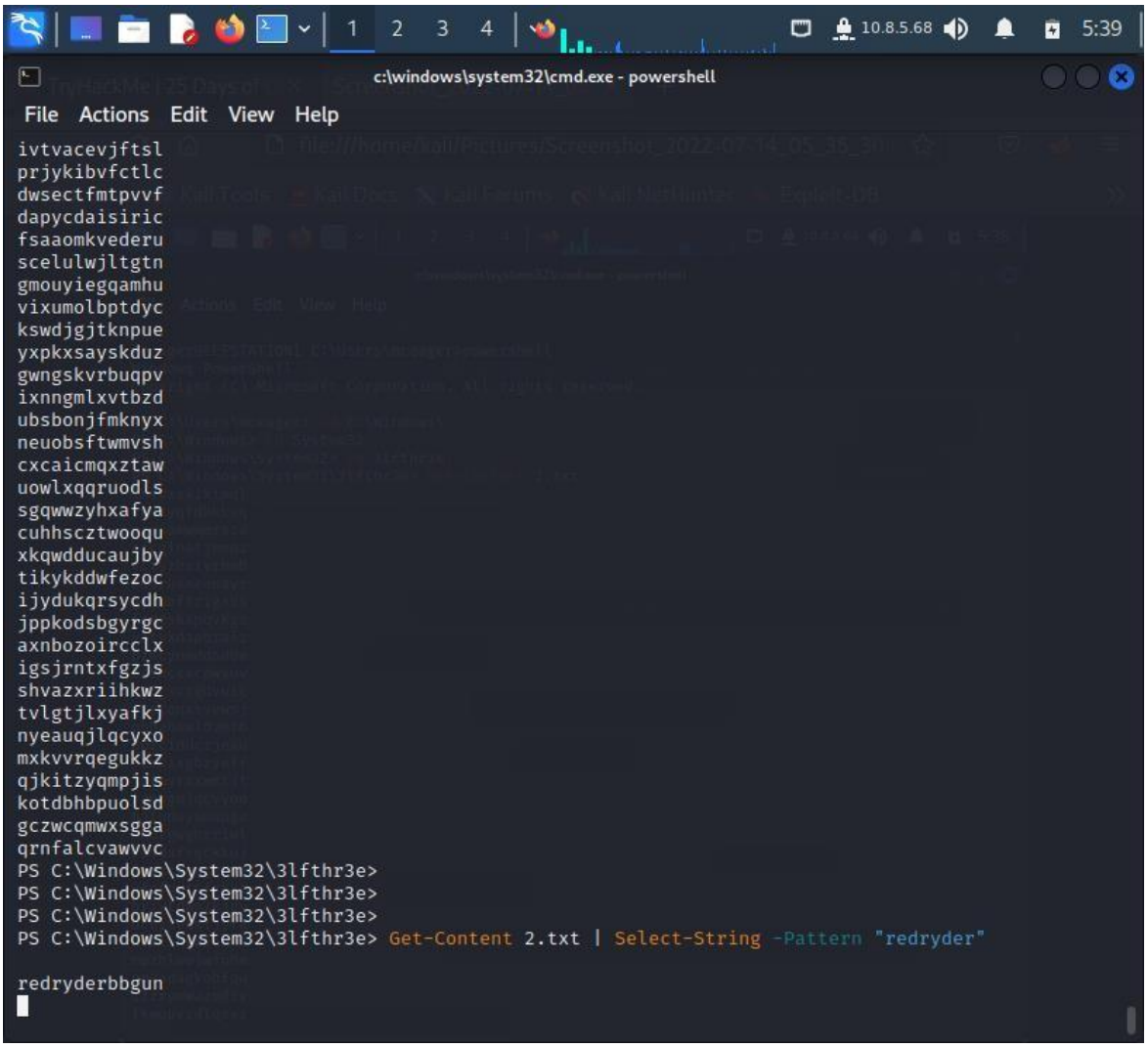
```
PS C:\Windows\System32\3lfthr3e> (Get-Content 1.txt)[551]
Red
PS C:\Windows\System32\3lfthr3e> (Get-Content 1.txt)[551,6991]
Red
Ryder
PS C:\Windows\System32\3lfthr3e> (Get-Content 1.txt)[6991]
Ryder
PS C:\Windows\System32\3lfthr3e> Get-Content 1.txt | Select-Object -Index
Select-Object : Missing an argument for parameter 'Index'. Specify a parameter of type 'System.Int32[]' and
try again.
At line:1 char:35
+ Get-Content 1.txt | Select-Object -Index
+                                   ~~~~~~
    + CategoryInfo          : InvalidArgument: (:) [Select-Object], ParameterBindingException
    + FullyQualifiedErrorId : MissingArgument,Microsoft.PowerShell.Commands.SelectObjectCommand

PS C:\Windows\System32\3lfthr3e> Get-Content 1.txt | Select-Object -Index 551
Red
PS C:\Windows\System32\3lfthr3e> Get-Content 1.txt | Select-Object -Index 551,6991
Red
Ryder
PS C:\Windows\System32\3lfthr3e>
```

Enter the 2 words at index 551 and 6991 in the first file which going to reveal the 2 words from the index

Question 6



Reset command directory with the hidden folder and list Get-Content 2nd text



Therefore, search in the list by use select-string pattern “redryder”

Methodology

First of all, use powershell to reveal most of the file within the documents include the hidden files. According to this task, the subject file which is Elf is what we needed to find the content that is hidden. By using the command directory list, we can identify the location and certain contents that inside the file. Therefore, different type of hidden folder name which accessible through different type of command directory. The last 2 words are from index 551 and 6991 are shown in the first and the second file which wis wanted from the last Elf. At the end, we be able to complete all the file directory and any content that being hidden inside the hidden file by using powershell under the command prompt and windows system 32.