Assignment-11- Using Metasploit Framework

CYSE450 Ethical Hacking and Penetration Testing

(Total: 100 Points)

Please follow the recording provided in the media gallery on canvas to learn about metasploit framework and msfvenom. You may also refer to google.com or e-book provided with 'O'Reilly Learning.

Task-A: (20 Points) Answer the following questions by typing in a word file:

1. What is payload?

   A payload refers to the malicious component of malware that carries out harmful actions on a compromised system or network, such as stealing data, disrupting operations, or providing unauthorized access.

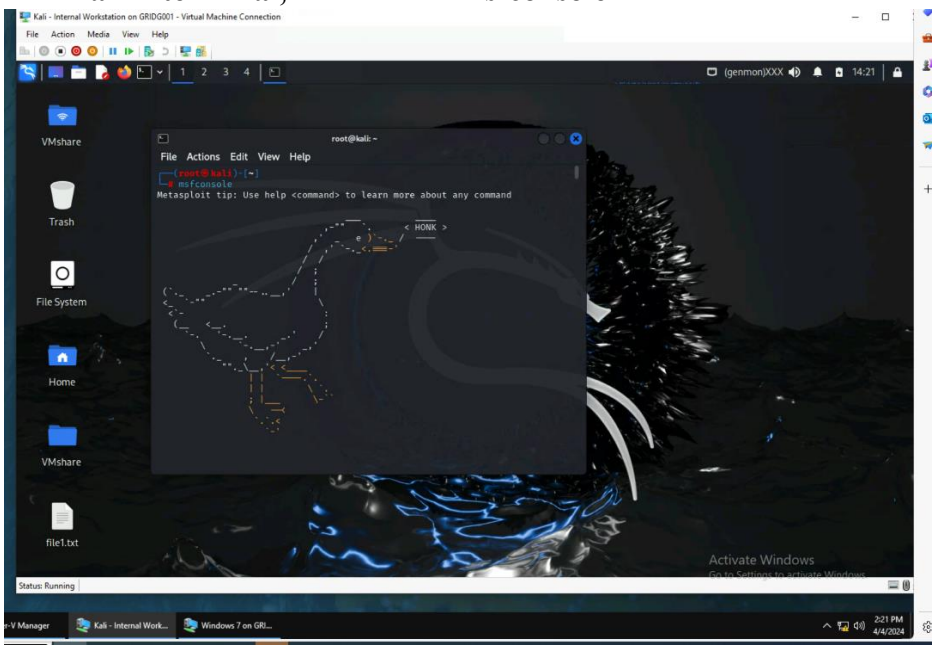
2. What is the difference between bind shell and reverse shell?

   A bind shell involves the attacker setting up a listener on the target system and then connecting to it. A reverse shell occurs when the compromised target system initiates a connection to the attacker's machine, creating a reverse communication channel. The key difference lies in the direction of the initial connection establishment: from attacker to target in bind shell, and from target to attacker in reverse shell.

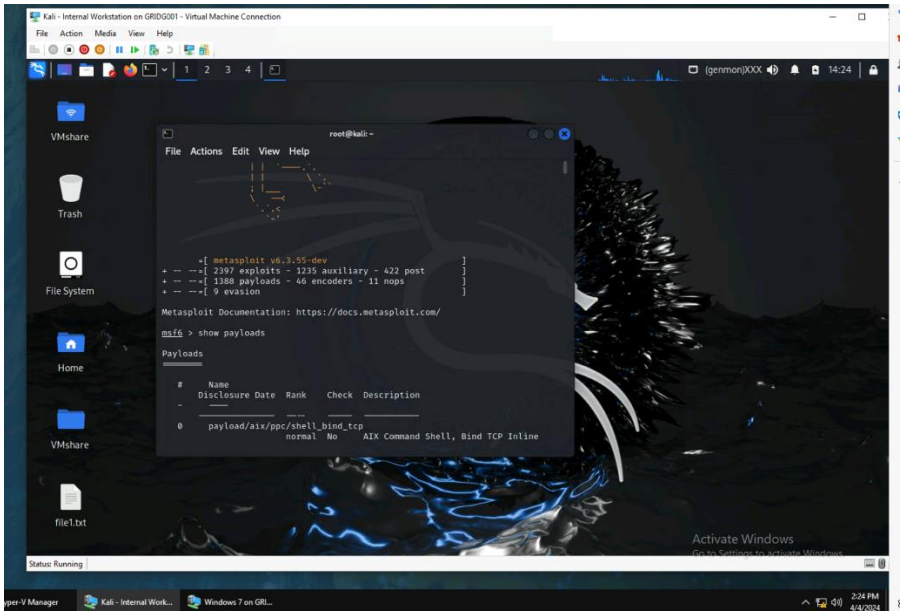
Task B: (80 Points) **Reverse TCP payload for windows (Please submit the screenshot for all the steps)**

The payload you are going to create with msfvenom is a Reverse TCP payload for windows. This payload generates an **exe** which when run connects from the victim's machine to your Metasploit handler giving a **meterpreter** session.

1. **In kali terminal,** Launch **msfconsole** with the command, msfconsole

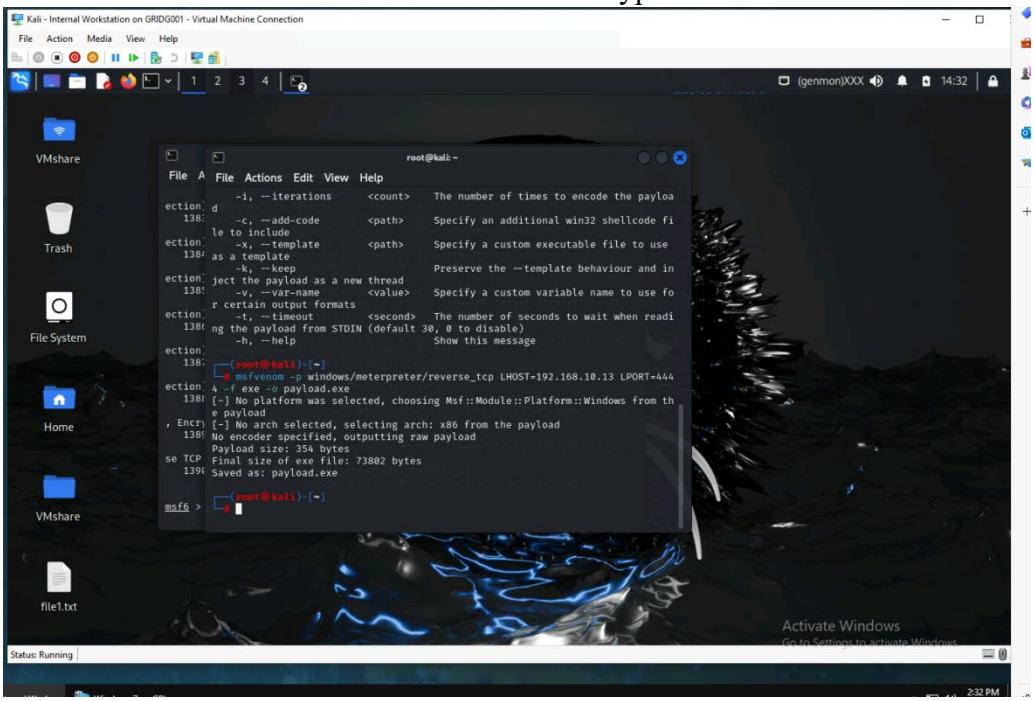


2. Display all the payloads available using, **show payloads** and search for the payload using meterpreter and reverse_tcp, (windows/meterpreter/reverse_tcp)

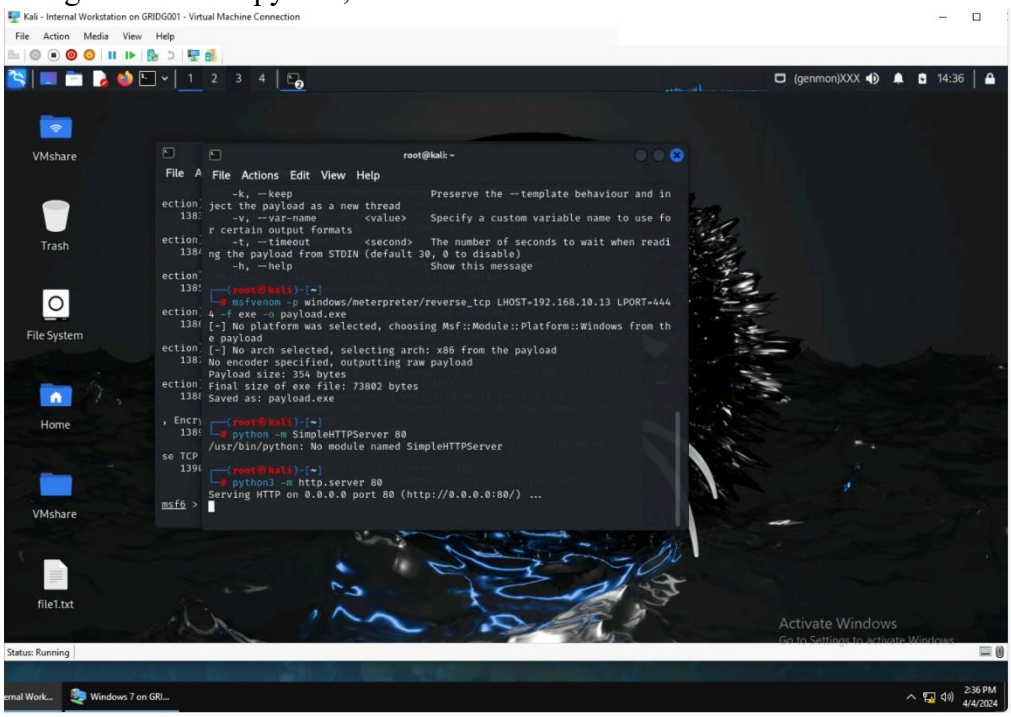


3. Open a new terminal in kali to create a payload using **msfvenom**
   a. Set the **listener host** to the kali Ip address
   b. Set the **listener port number** to 4444

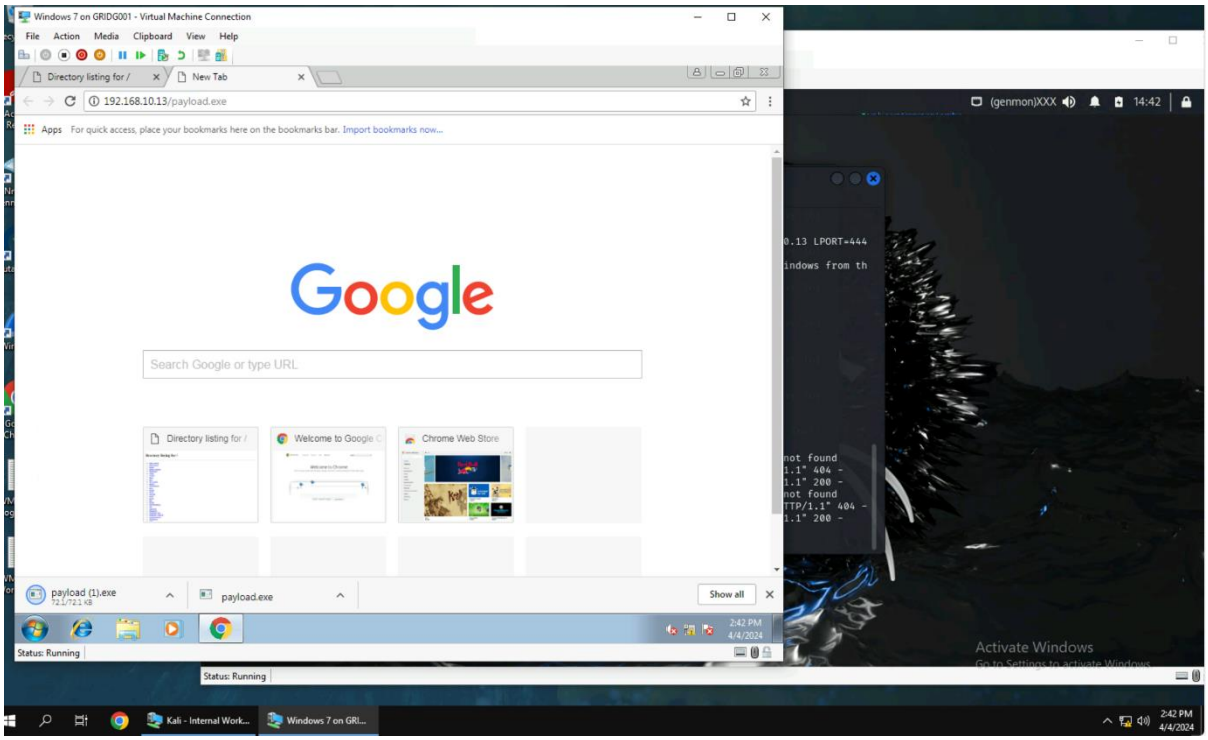
c. Set the file type as **exe**



4. Using python, create the **http.server**



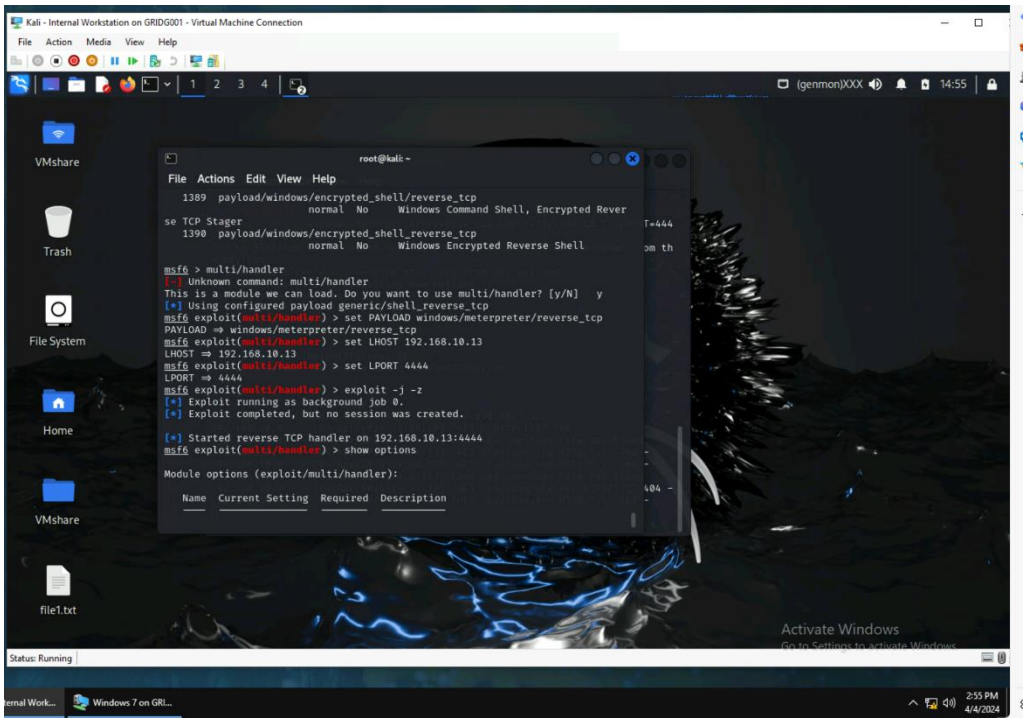
5. **Open the browser in the target machine(windows) and type the address of the kali with the port number it is listening to.**



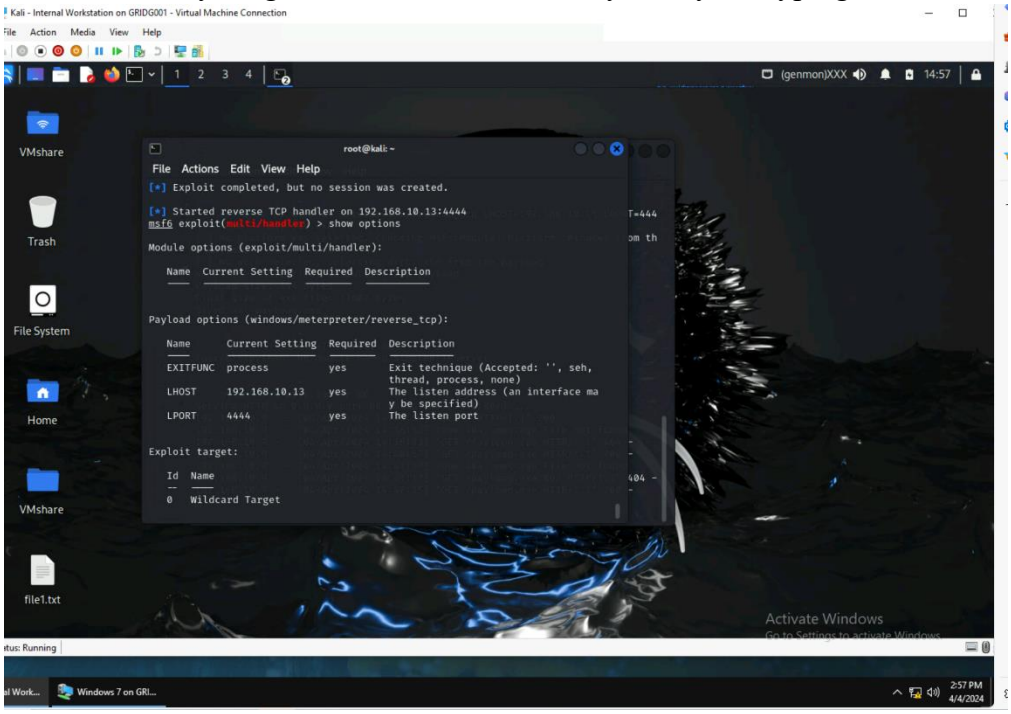
6. Set up a handler in Metasploit to receive the connection from the victim pc. Log into Metasploit by typing **msfconsole** in a new kali terminal.

7. Once Metasploit is loaded use the **multi/handler** exploit and set the payload to be reverse_tcp using, **set payload windows/meterpreter/reverse_tcp**

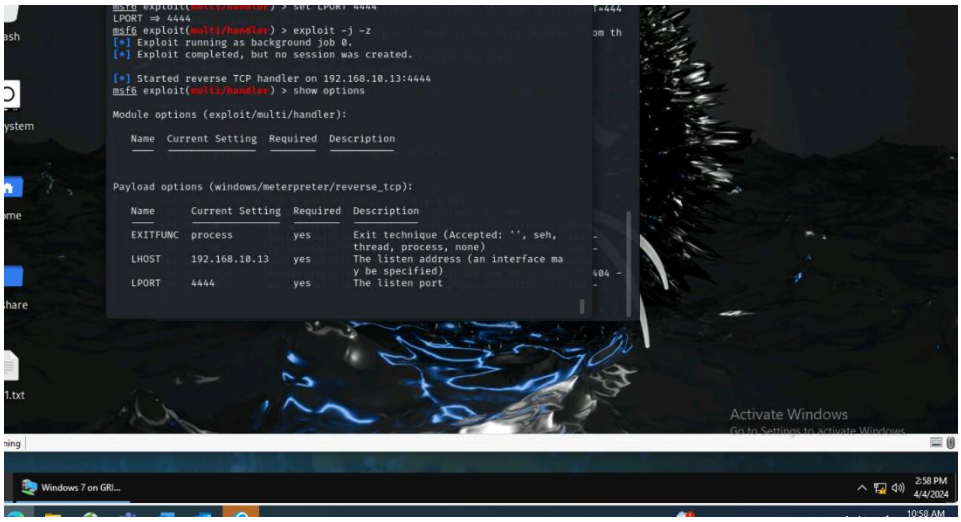
8. Next, you need to set the LHOST and LPORT; copying the details as you set it in payload you just generated in msfvenom.



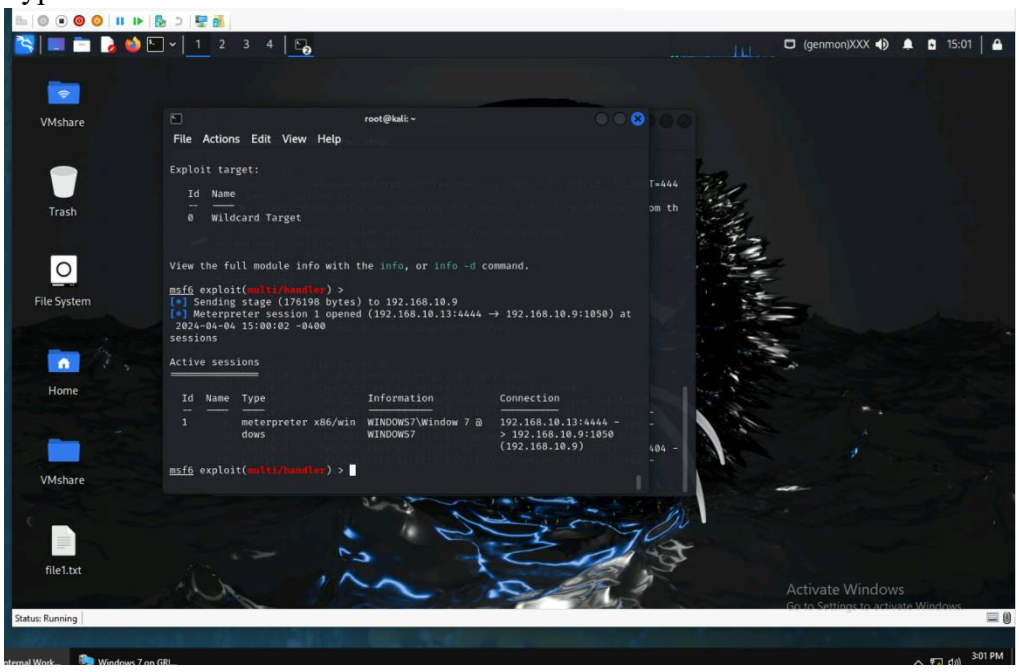
9. Check everything is set correctly by typing **show options**



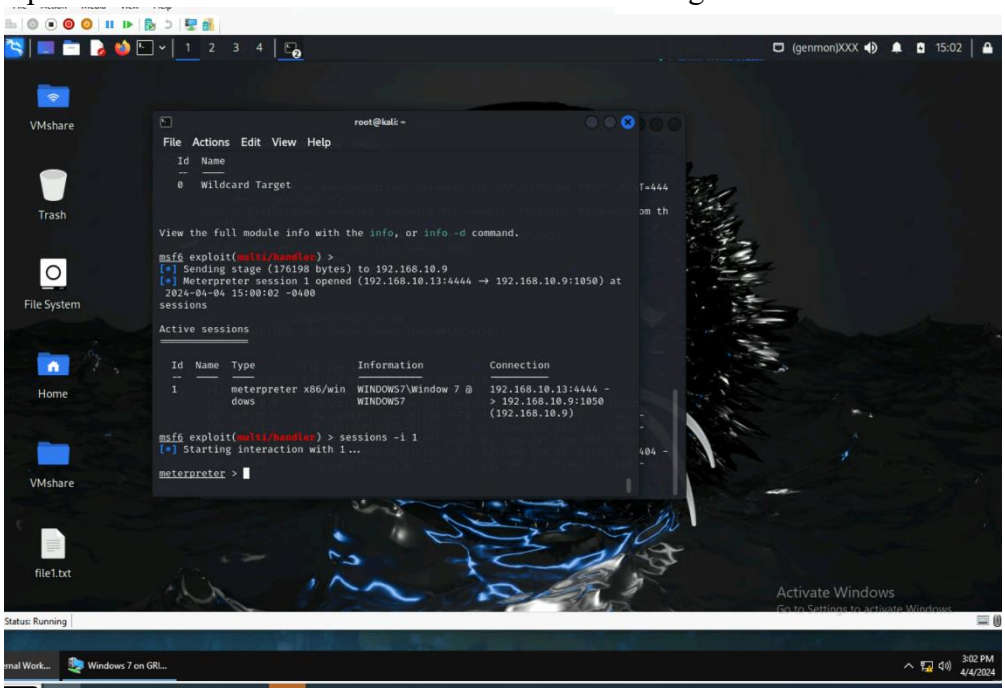
10. If everything looks correct, just type **exploit -j -z** to start your handler and once the EXE payload we created in msfvenom is clicked you should then receive a meterpreter shell.



11. Type **sessions** to see all the sessions.

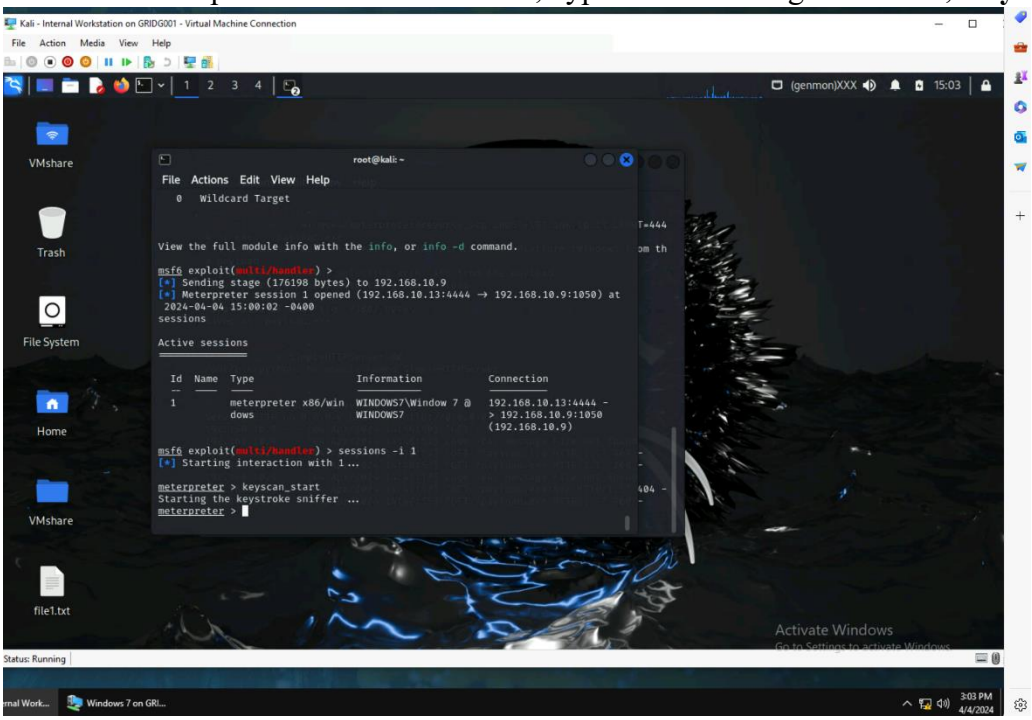


12. Open the active session using the session id.

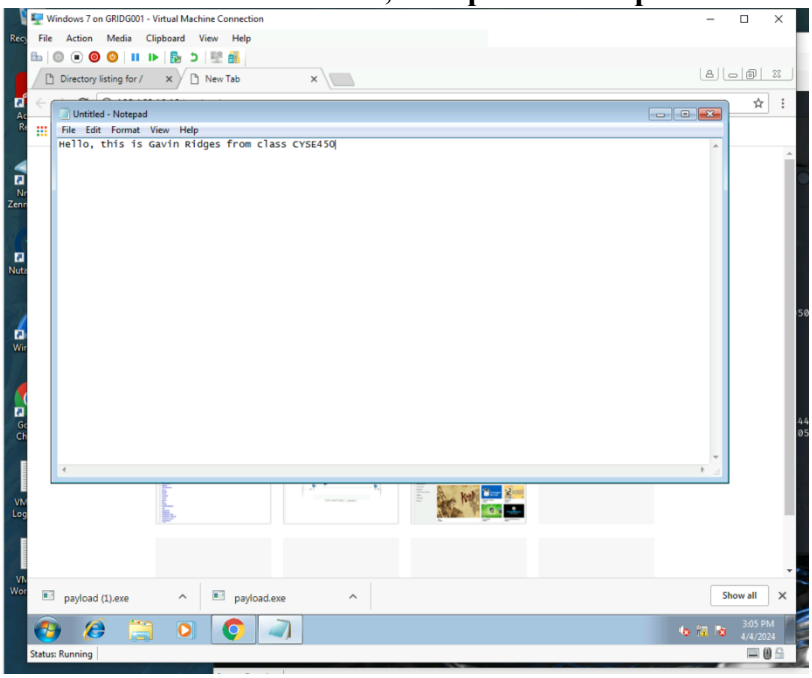


Extra Credit: (15 Points) Perform Keylogging in Windows **(Please submit the screenshot for all the steps)**

1. Once the meterpreter session is created, type the following command, **keyscan_start**



2. **In windows machine, open notepad and type some text**



3. Now in Kali, in meterpreter shell, type the command keyscan_dump