

PRACTICAL – 1

Aim: Building the Virtual Laboratory using VMWare workstation for implementing various practical's of Ethical Hacking.

❖ **Introduction:**

1) VM Ware Workstation:

- VMware Workstation is a virtualization software that allows users to create and run multiple virtual machines on a single physical computer. It enables ethical hackers to set up isolated testing environments without affecting the host system. With features like snapshots and network configurations, VMware is widely used for cybersecurity testing, penetration testing, and software development.

2) Kali Linux

- Kali Linux is a Debian-based operating system designed for penetration testing, ethical hacking, and cybersecurity research. It comes pre-installed with numerous security tools such as Metasploit, Nmap, and Wireshark. Kali Linux is widely used by security professionals for vulnerability assessments, forensics, and ethical hacking practices.

3) Metasploitable 2

- Metasploitable 2 is a deliberately vulnerable Linux-based virtual machine designed for security testing and penetration testing practice. It is used to simulate real-world security threats and allows ethical hackers to test exploits, vulnerabilities, and security tools in a controlled environment. This makes it an essential resource for learning ethical hacking techniques.

4) Windows 10

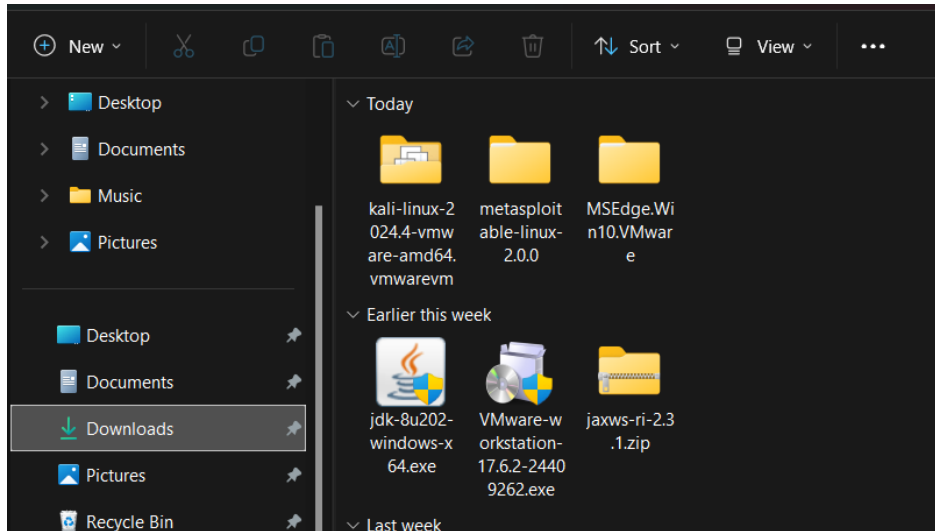
- Windows 10 is a widely used operating system developed by Microsoft, commonly targeted in cybersecurity testing. It provides an ideal environment for ethical hackers to analyze security flaws, test exploits, and practice defense mechanisms. By setting up Windows 10 in a virtual lab, cybersecurity professionals can assess system vulnerabilities and improve security measures.

5) 7-Zip

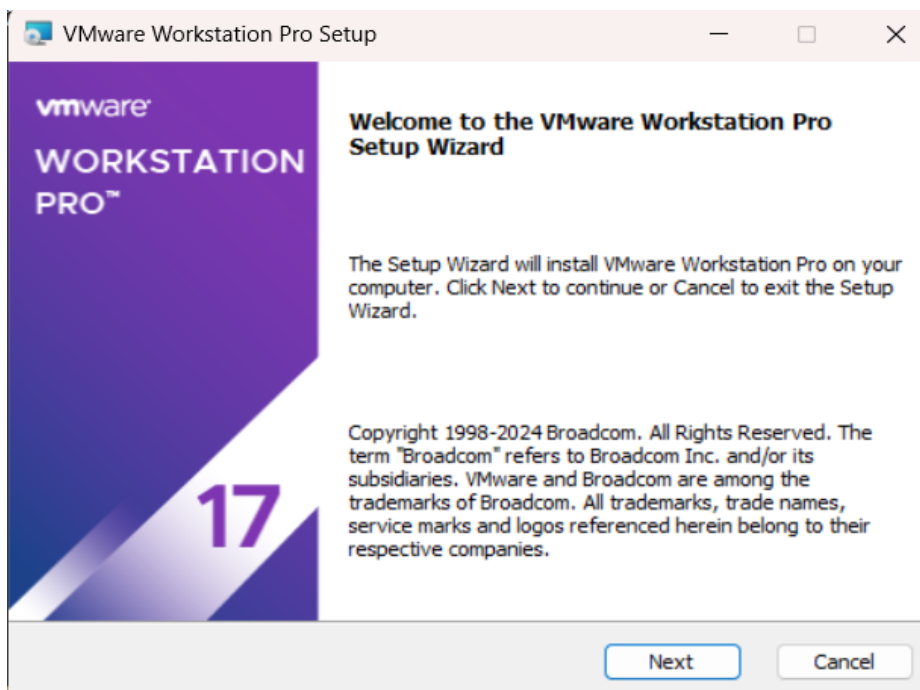
- 7-Zip is a free and open-source file archiver that allows users to compress and extract files efficiently. It supports multiple formats, including **ZIP, RAR, 7z, TAR, and ISO**, and provides a high compression ratio using the **7z** format. 7-Zip is commonly used in ethical hacking to extract large software files, such as Kali Linux or Metasploitable, before installation. Its lightweight nature and strong AES-256 encryption make it a reliable tool for secure file management.

❖ Steps to Install VM Ware :

- 1) Download the VM Ware Workstation from official Web site by following Steps
 - Go to the official VMware website: <https://www.vmware.com>
 - Navigate to Products → Workstation Pro or Workstation Player (free for personal use).
 - Click on Download Now and choose the version compatible with your operating system (Windows/Linux).
- 2) Install VMware Workstation on Windows
 - Locate the downloaded .exe file and double-click to start the installation.



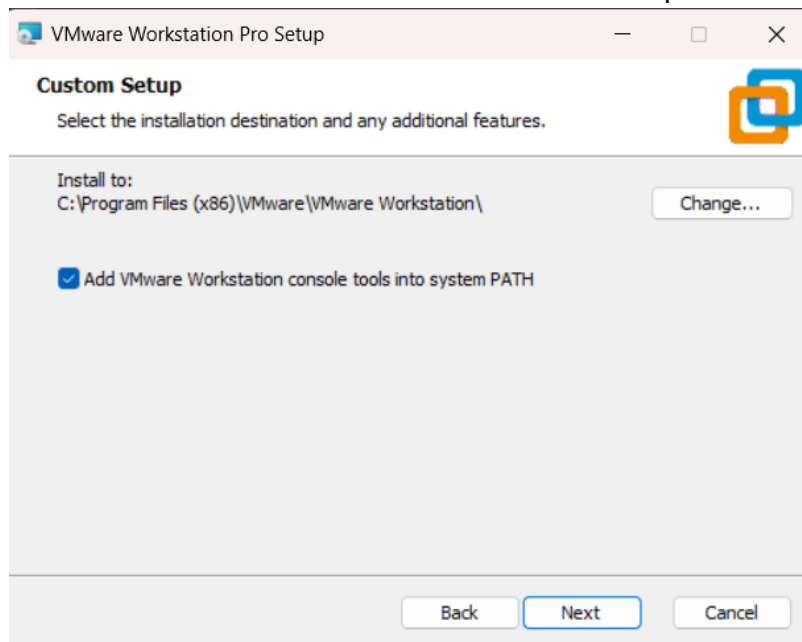
- Double Click on the .exe file to start Installation Process.



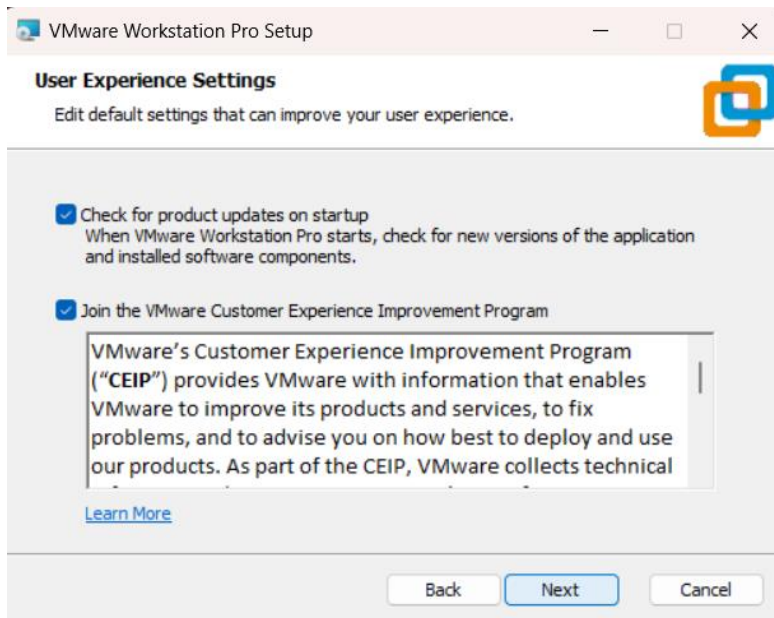
- Accept the License Agreement and Click on Next.



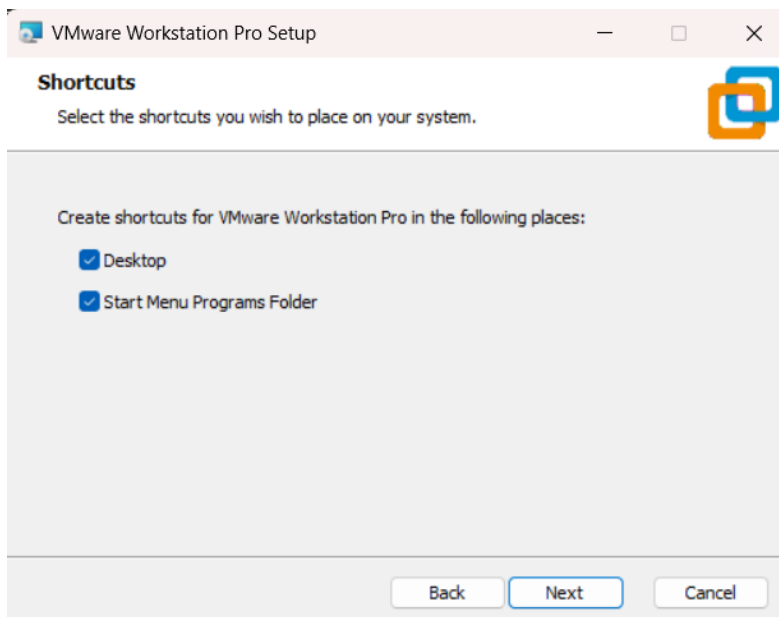
- Select the Path for Installation and select the option then click Next.



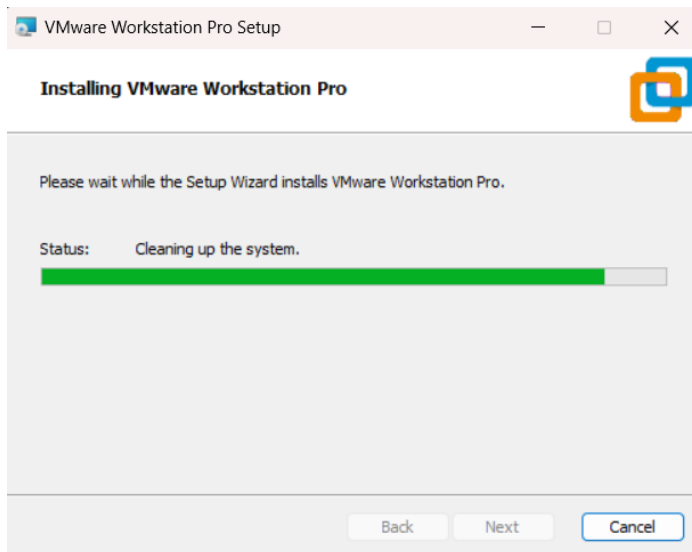
- Select the Options and Click on Next for the Further Steps.



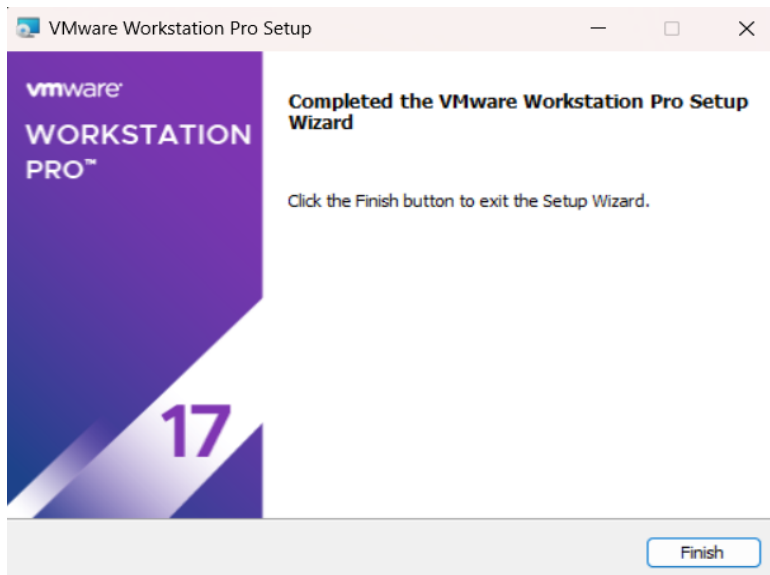
- Select the Both Option for Make the VM Ware Visible in Start menu and Desktop Icons. Then Click Next.



- This Will Start the Installation Process it will take few minutes to complete the Installation of VM Ware in Your System.

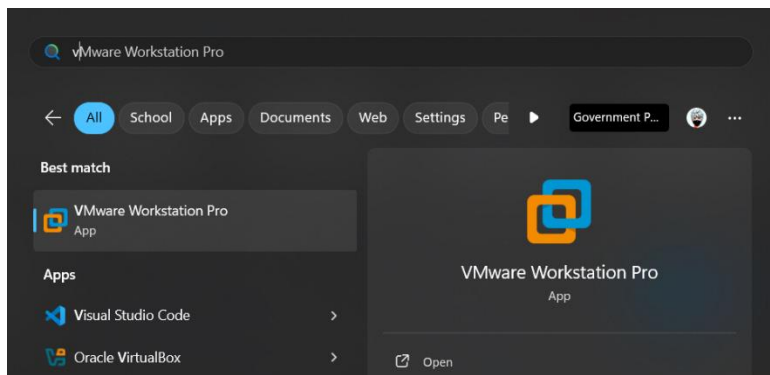


- After Completion of Installation Process Click on Finish.

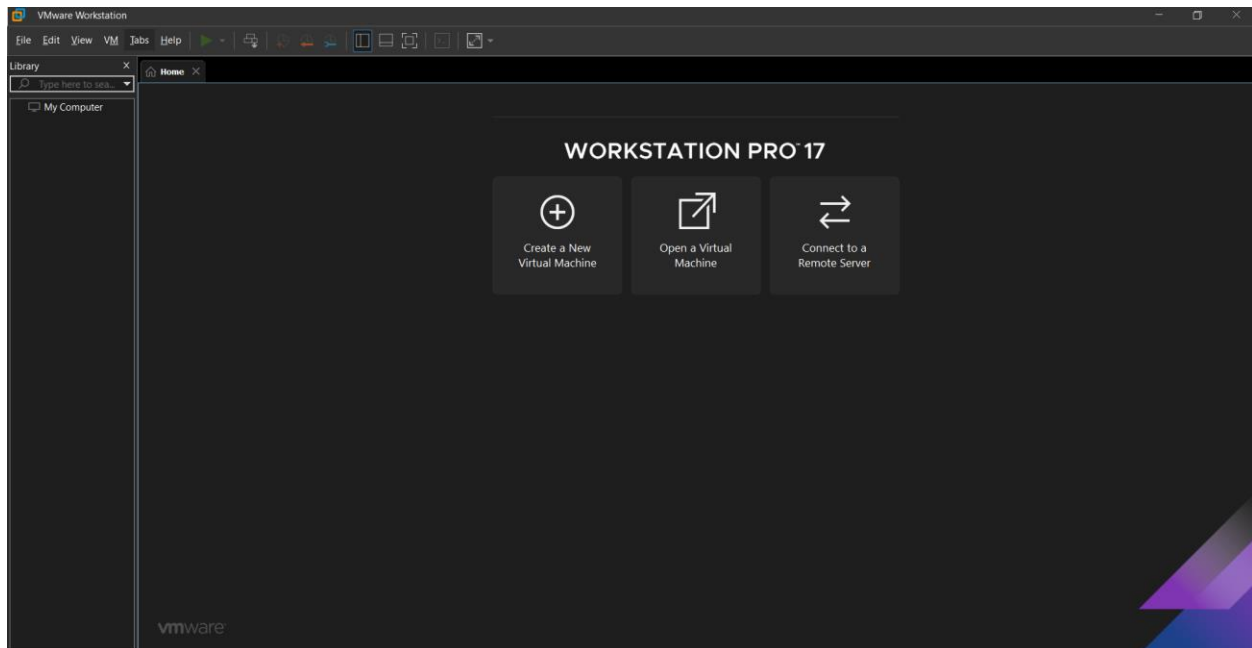


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- Open the VM Ware Work-Station from the Start menu.

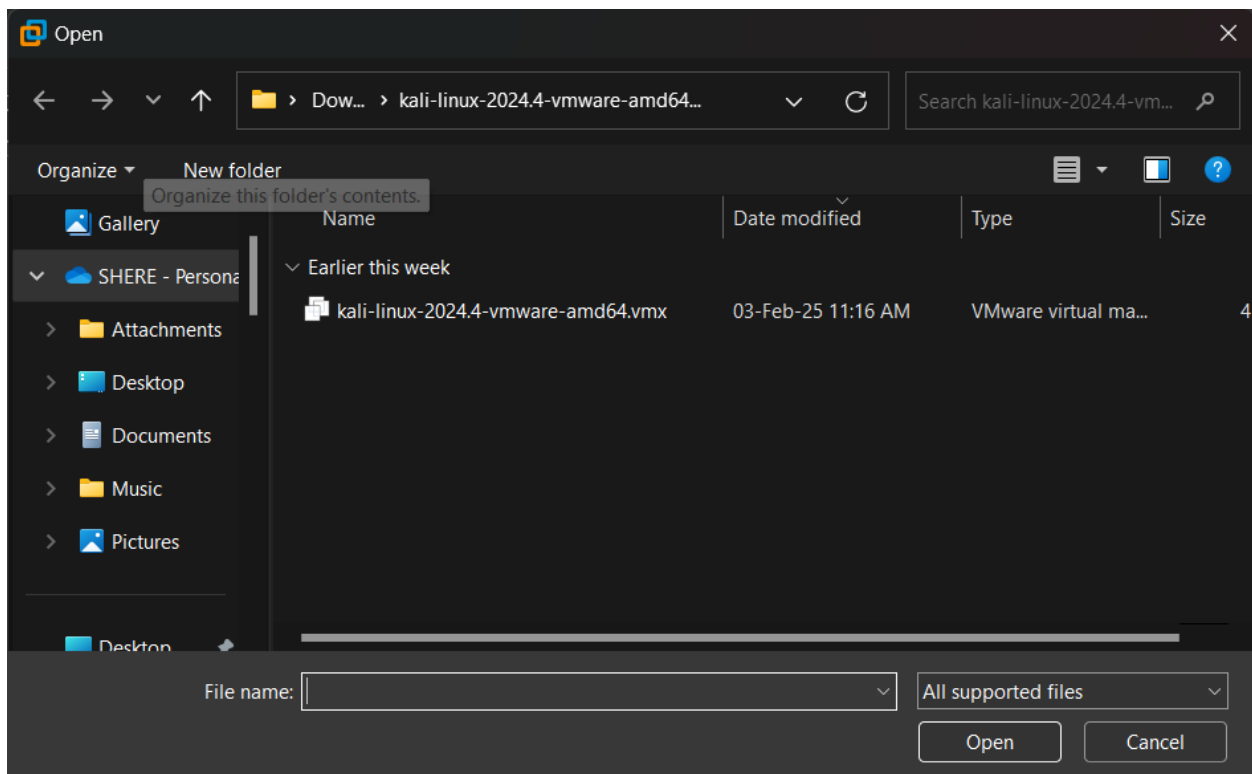


- Open it and Click on Open a Virtual Machine.

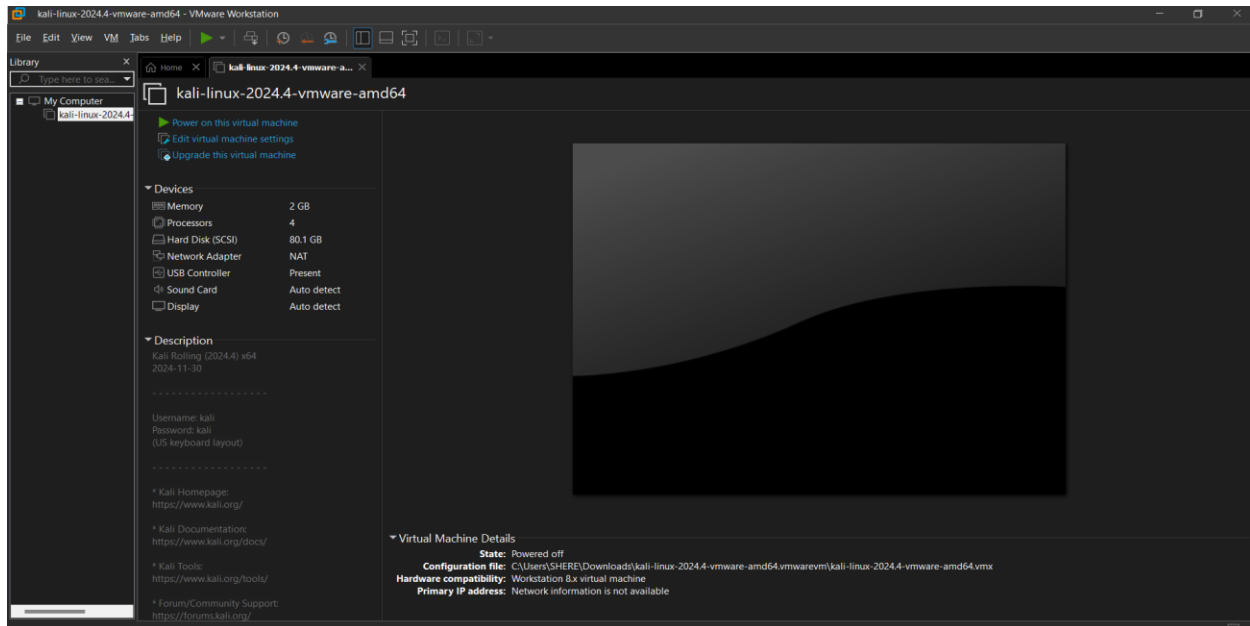


❖ Installation of Kali Linux in VM Ware.

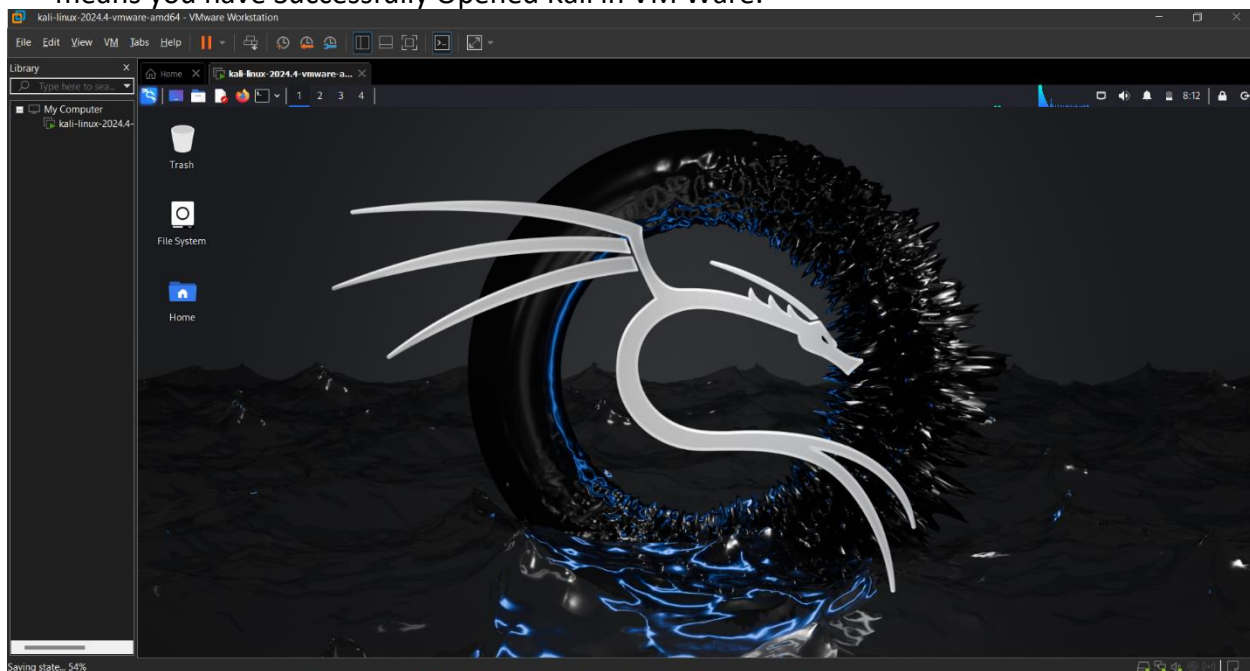
- Select the Kali Linux File and Open it in VM Ware.



- After Opening the File you will see the Following type of interface where you can see the option of “Power on this Virtual Machine” below the Name of Virtual Machine of (Kali Linux) click on it to initialize the Kali Linux.

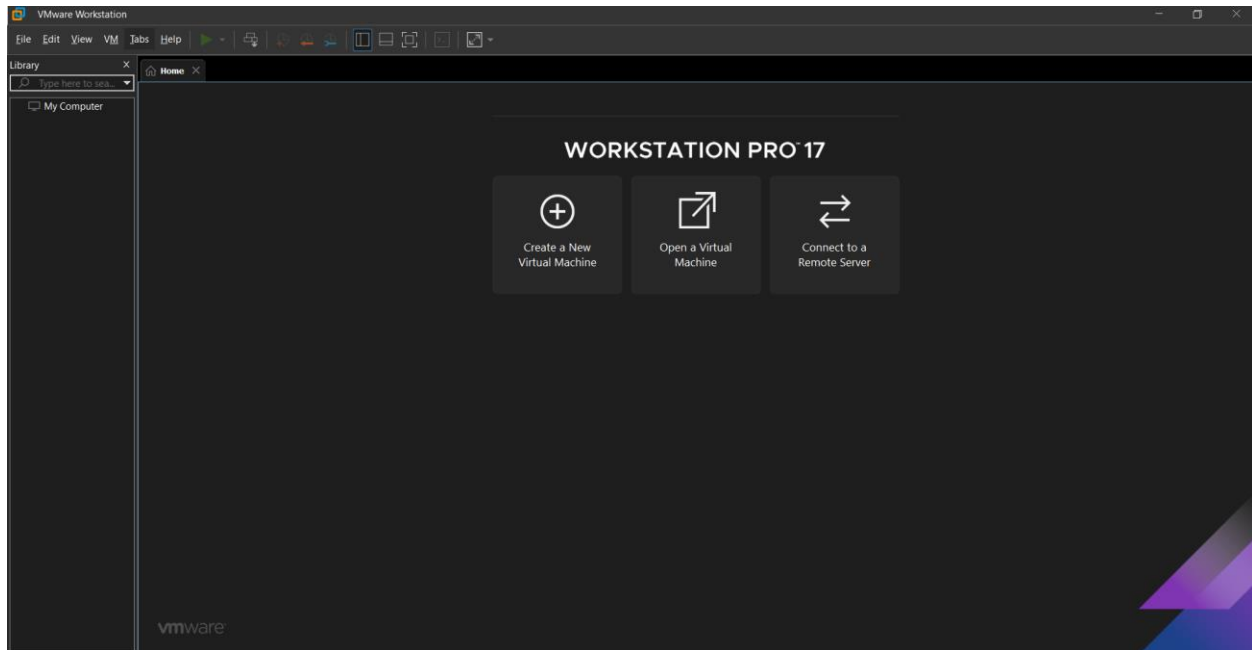


- When you click on it then it initialize the Kali Linux Virtual Interface where it will ask for the USERNAME and PASSWORD. So the default username and Password for Kali is “kali” for both. After Entering the Username and Password Correctly the Following Interface will visible that means you have Successfully Opened Kali in VM Ware.

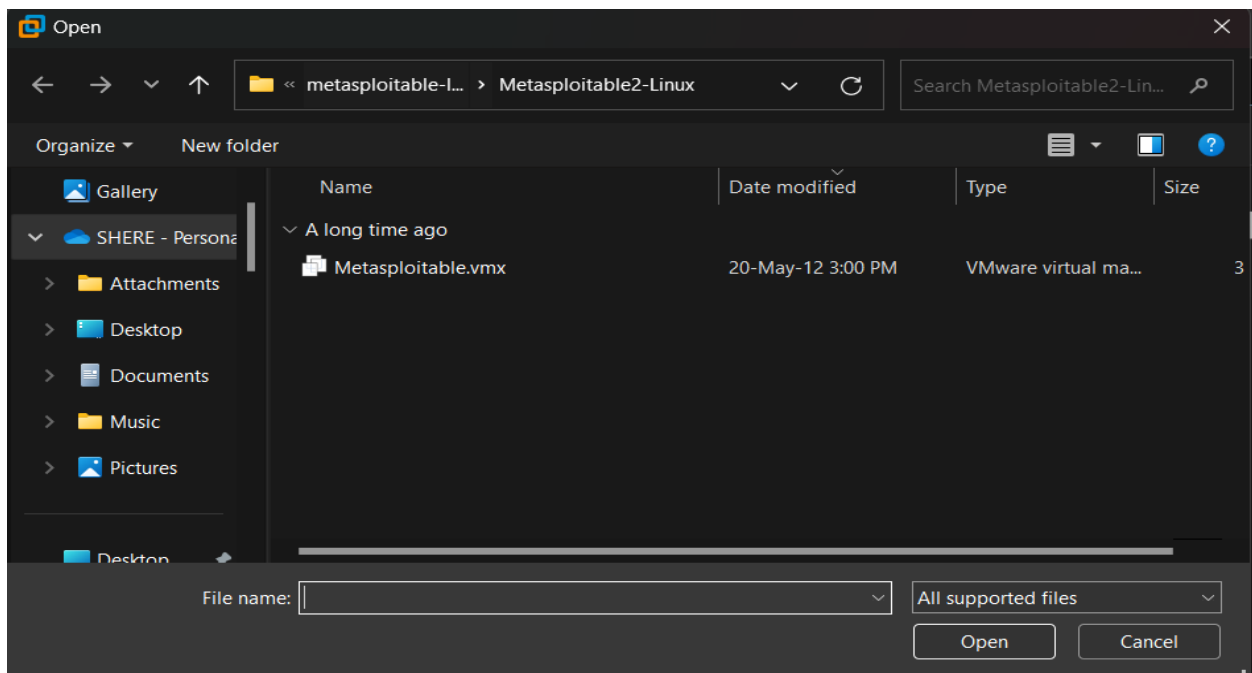


❖ Installation of Metasploitable in VM Ware.

- Now In VM Ware Workstation go to Home Option and Select the same Option again “Open a Virtual Machine”.

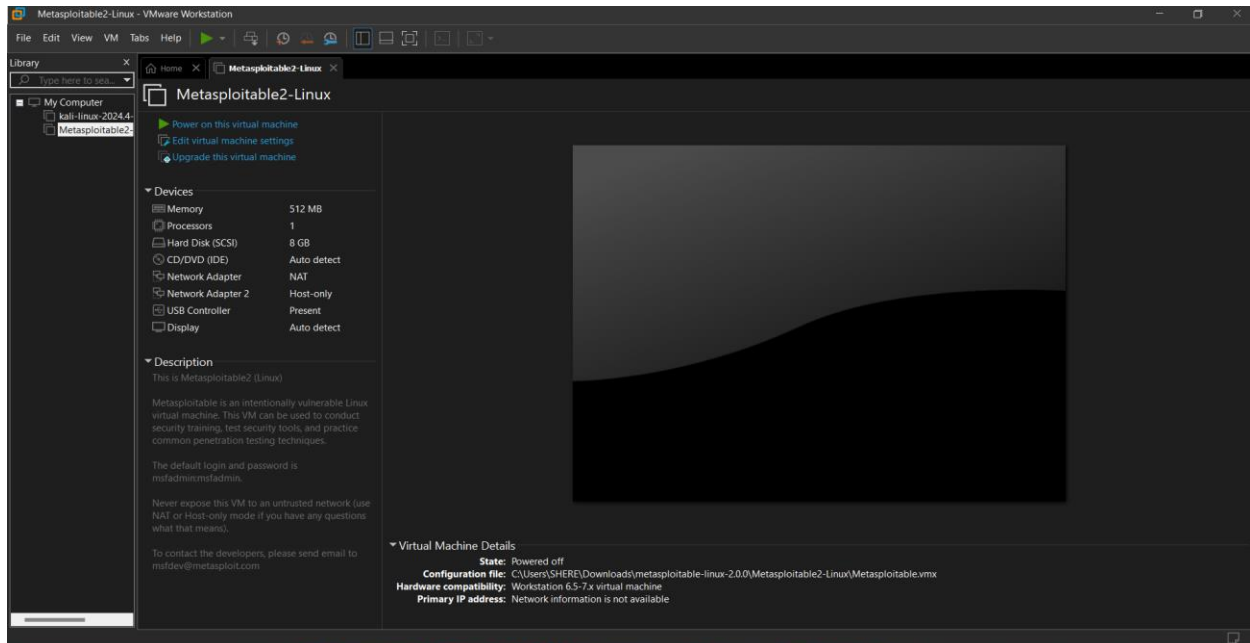


- After That Select the Appropriate file for Metasploitable and click on open.

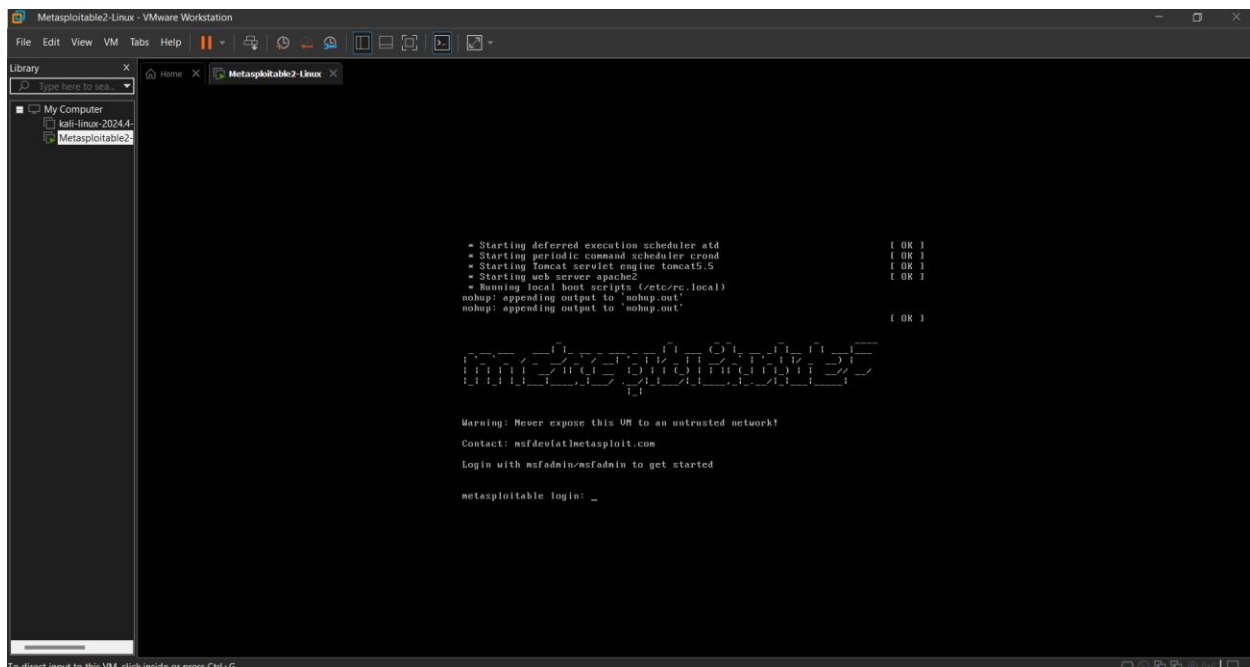


- It Will Open an Interface of Metasploitable which will look like Following. After Opening the File you will see the Following type of interface where you can see the option of “Power on

this Virtual Machine” below the Name of Virtual Machine of (Metasploitable) click on it to initialize the Metasploitable.

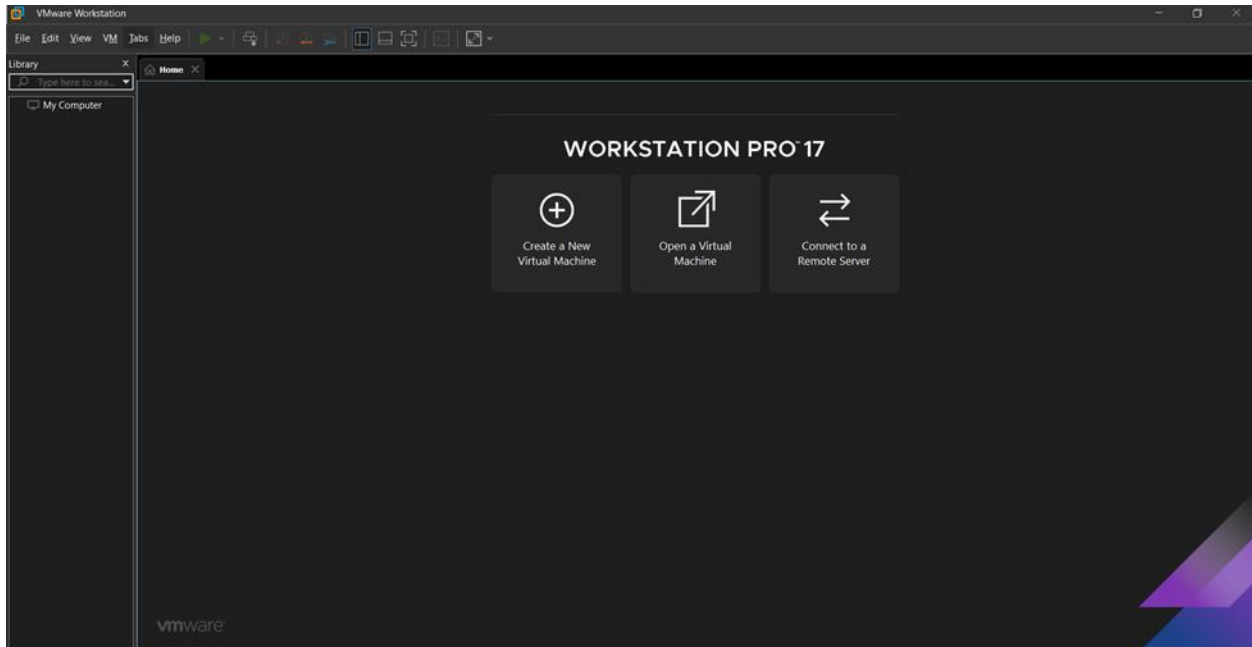


- It will also ask for USERNAME and PASSWORD for it where the Default Username and Password is “msfadmin” for both. After entering it successfully you are ready to work with Metasploitable.

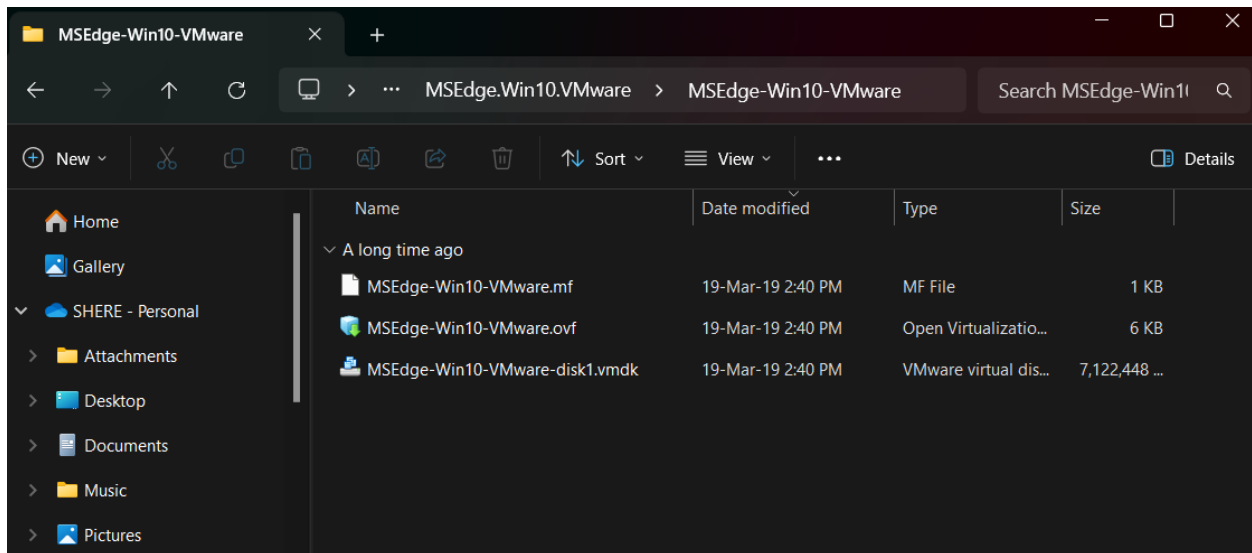


❖ Installation of Windows 10 in VM Ware.

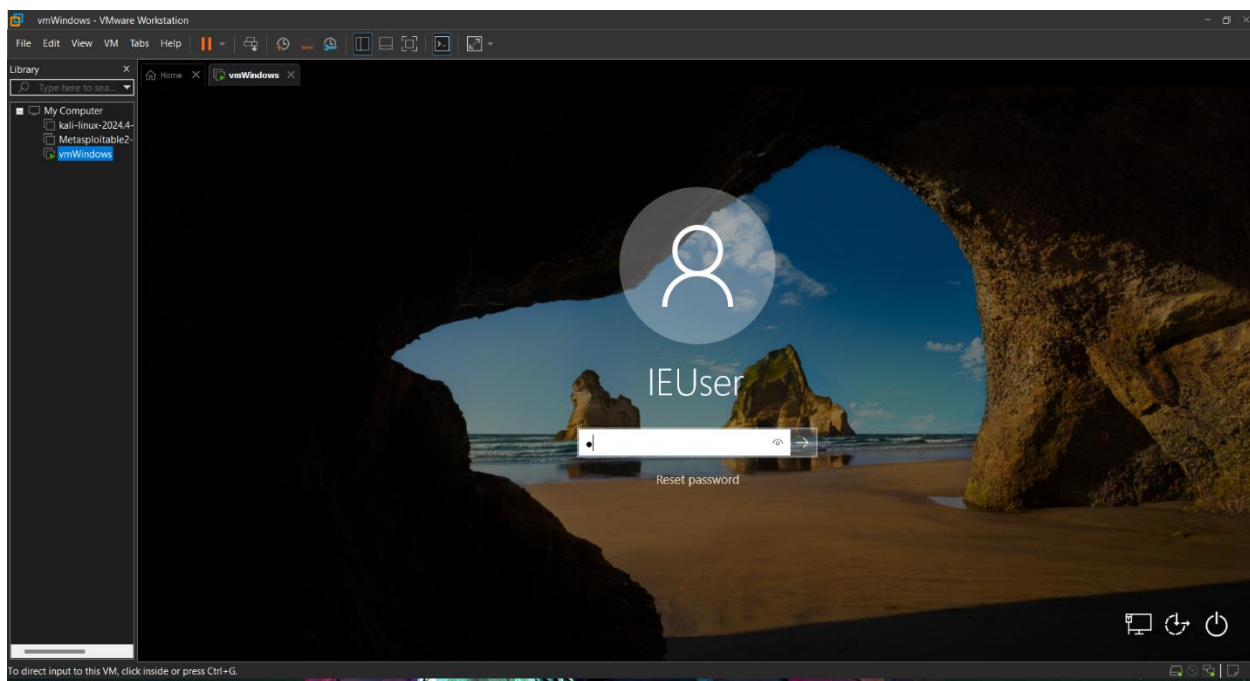
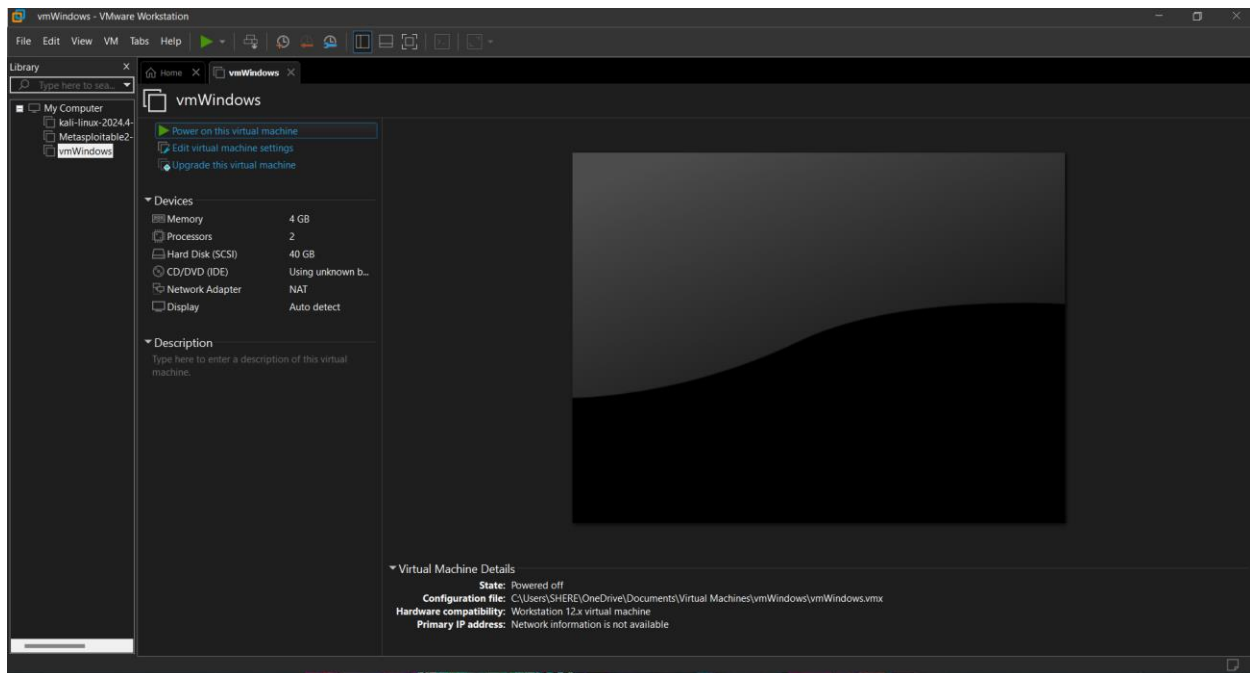
- Now In VM Ware Workstation go to Home Option and Select the same Option again “Open a Virtual Machine”



- After That Select the Appropriate file for Windows 10 Installation and click on open.

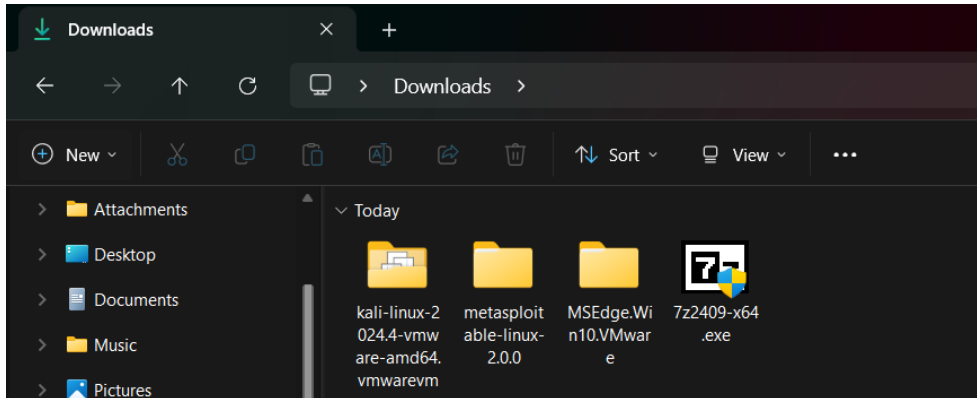


- It Will Open an Interface of Windows 10 which will look like Following. After Opening the File you will see the Following type of interface where you can see the option of “Power on this Virtual Machine” below the Name of Virtual Machine of (Windows 10) click on it to initialize the Window 10.

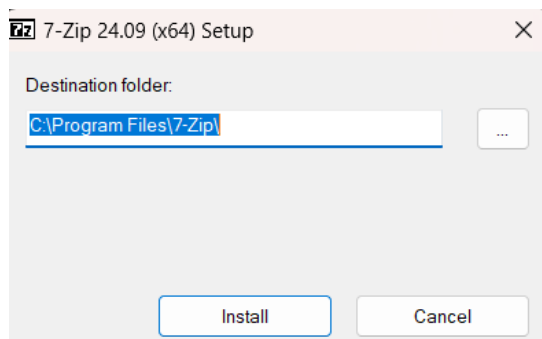


❖ Installation of 7-Zip Software.

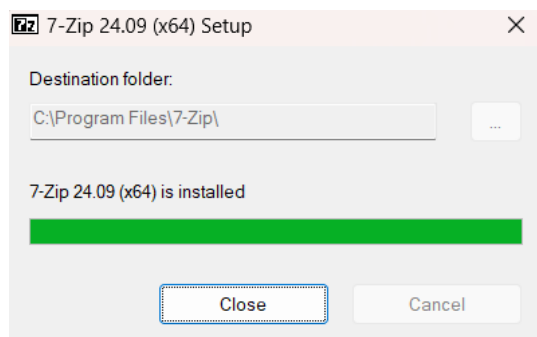
- Go to the official 7-Zip website: <https://www.7-zip.org/>
- Select the version based on your operating system (32-bit or 64-bit).
- Click Download to get the .exe file.



- Locate the downloaded .exe file in your system.
- Double-click on it to start the installation process.



- Select the installation directory (default is recommended) and click Install.
- Once the installation is complete, click Close.



- Here we have completed the Installation of VM Ware, Metasploitable, Kali Linux, Windows 10, 7-zips successfully.