

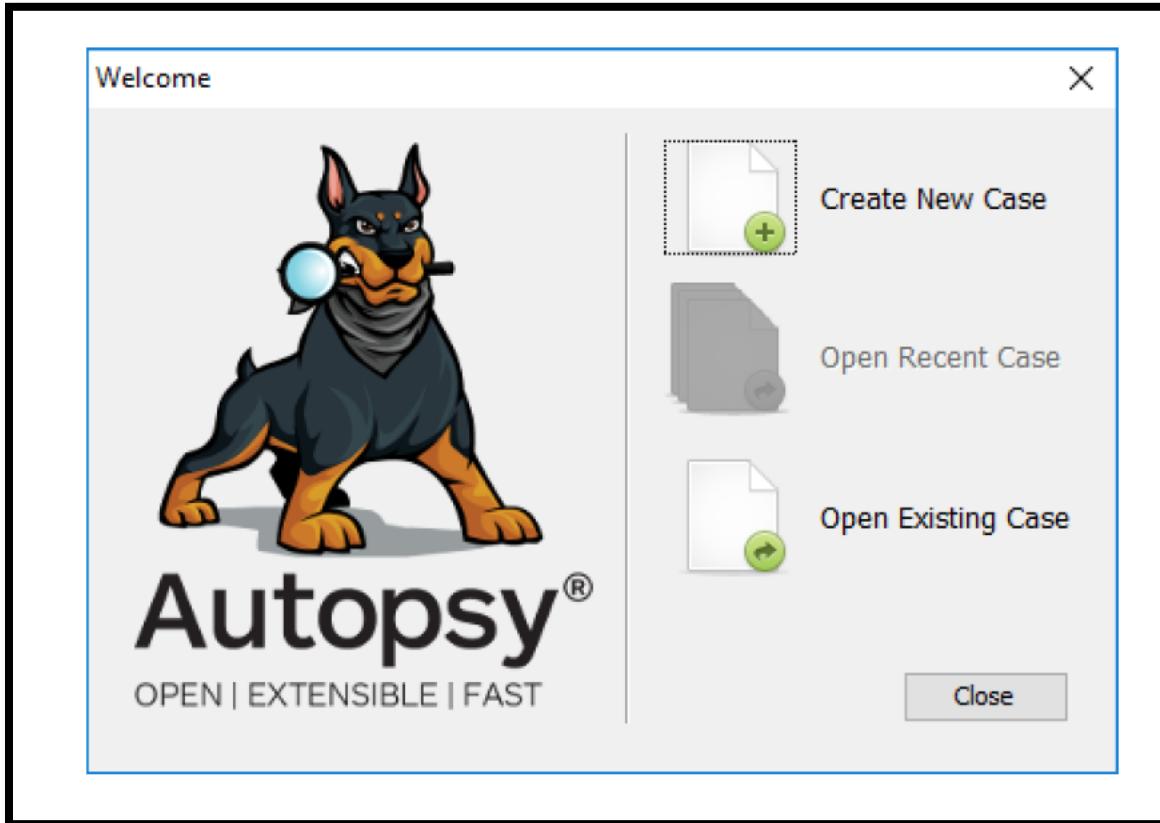
## INDEX

Sr.no	Topic	Sign
1	Analyze hard drive or smartphones using forensic tool or File System Analysis Using the Slueth Kit.	

2	Analyze DNS using WHOIS Tool. Detect OS, Host name using cmd. Detect session and ports through packet sniffing. (Nmap) & command line utilities.	
3	Capture the physical memory of a computer and analyze artefacts in memory. (FTK)	
4	Calculate MD5 & SHA1 (CrypTool)	
5	Use tool to collect, preserve digital evidence without compromising system data. (FTK Imager)	
6	Acquire web pages for forensic investigation. (Wireshark) or Use traffic capturing and analyzing tool. (Wireshark) Using filters and using test login page.	
7	Use tools that scan a hard drive, locate deleted media and scan hard drive. (FTK)	
8	Use a tool to scan drive and it's slack space. (ProDiscover)	
9	Hide text into image. (QuickStego, STool)	
10	Use Email Forensic Tools for Email Recovery Mobile Forensics	

**PRACTICAL NO 01: Analyse hard drives or smart phones using forensic tools  
(Using Autopsy Tool)**

**Step 1: Download Autopsy**



## Step 2: Add case details (suggested make one folder of CF Prac)

This image shows the 'Case Info' step of the 'New Case Information' wizard. The title bar says 'New Case Information'. On the left, a sidebar titled 'Steps' shows '1. Case Info' and '2. Additional Information' with a small Doberman icon next to it. The main area is titled 'Enter New Case Information:' and contains the following fields:

- 'Case Name:' input field containing 'testprac'.
- 'Base Directory:' input field containing 'F:\CFprac' with a 'Browse' button to its right.
- 'Case Type:' radio buttons for 'Single-user' (selected) and 'Multi-user'.
- 'Case data will be stored in the following directory:' input field containing 'F:\CFprac\testprac'.

At the bottom, there are five buttons: '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

New Case Information

**Steps**

1. Case Info  
2. Additional Information

**Additional Information**

**Optional: Set Case Number and Examiner**

Case Number: 001

Examiner: XYZ

< Back Next > Finish Cancel Help

### Step 3: Add any file on which you want to investigate

Add Data Source

**Steps**

1. Enter Data Source Information  
2. Configure Ingest Modules  
3. Add Data Source

**Enter Data Source Information wizard (Step 1 of 3)**

Select source type to add: Image File

Browse for an image file:  
F:\sem4\ComputerForensics\precious.img

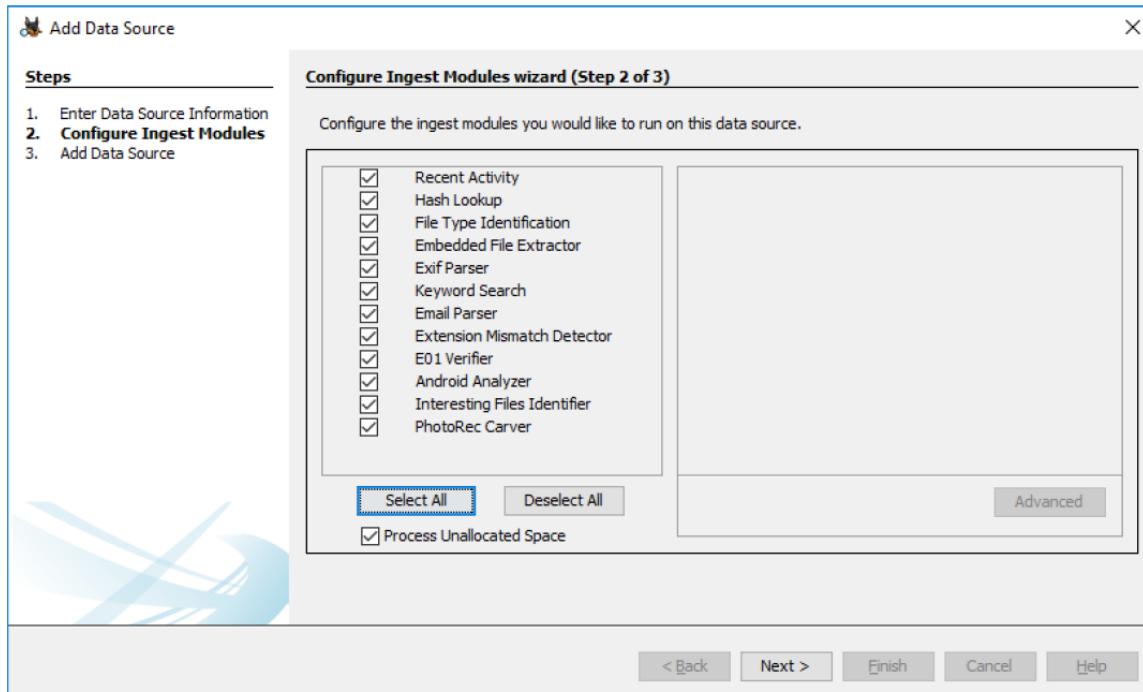
Please select the input timezone: (GMT +5:30) Asia/Calcutta

Ignore orphan files in FAT file systems  
(faster results, although some data will not be searched)

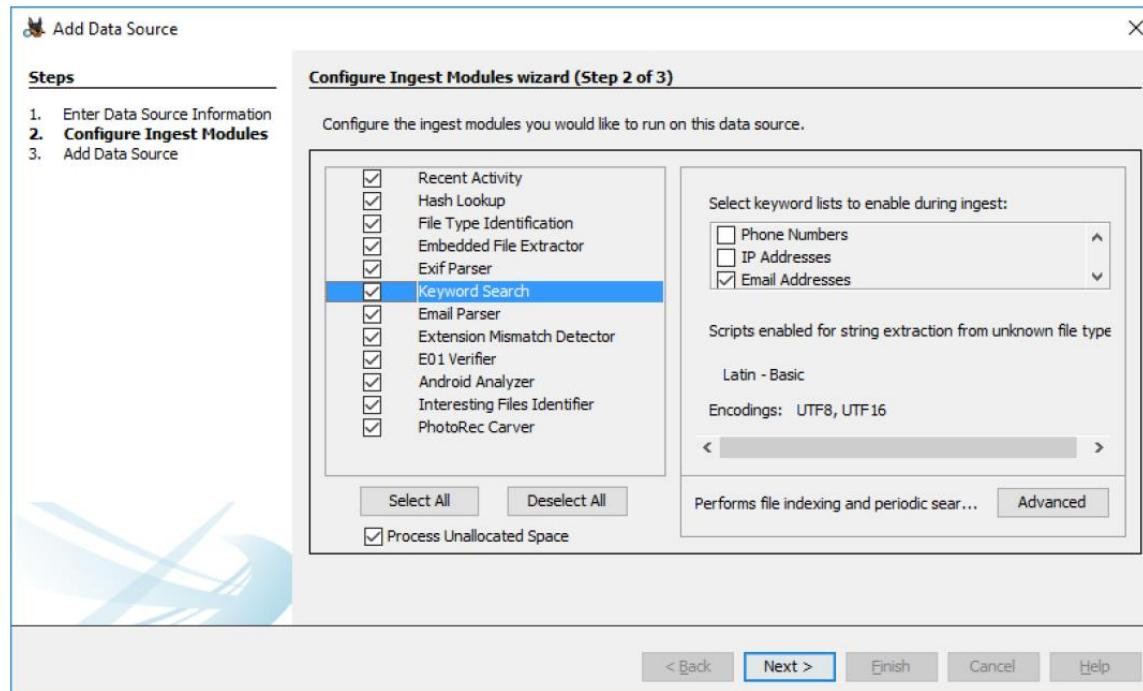
Press 'Next' to analyze the input data, extract volume and file system data, and populate a local database.

< Back Next > Finish Cancel Help

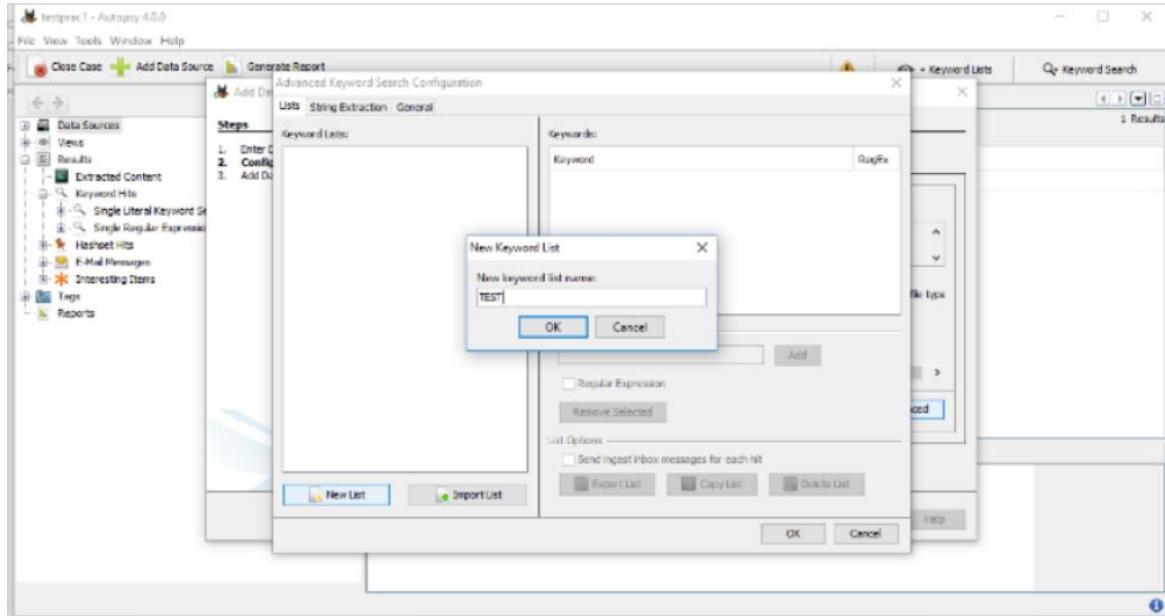
## Step 4: Configure ingest module



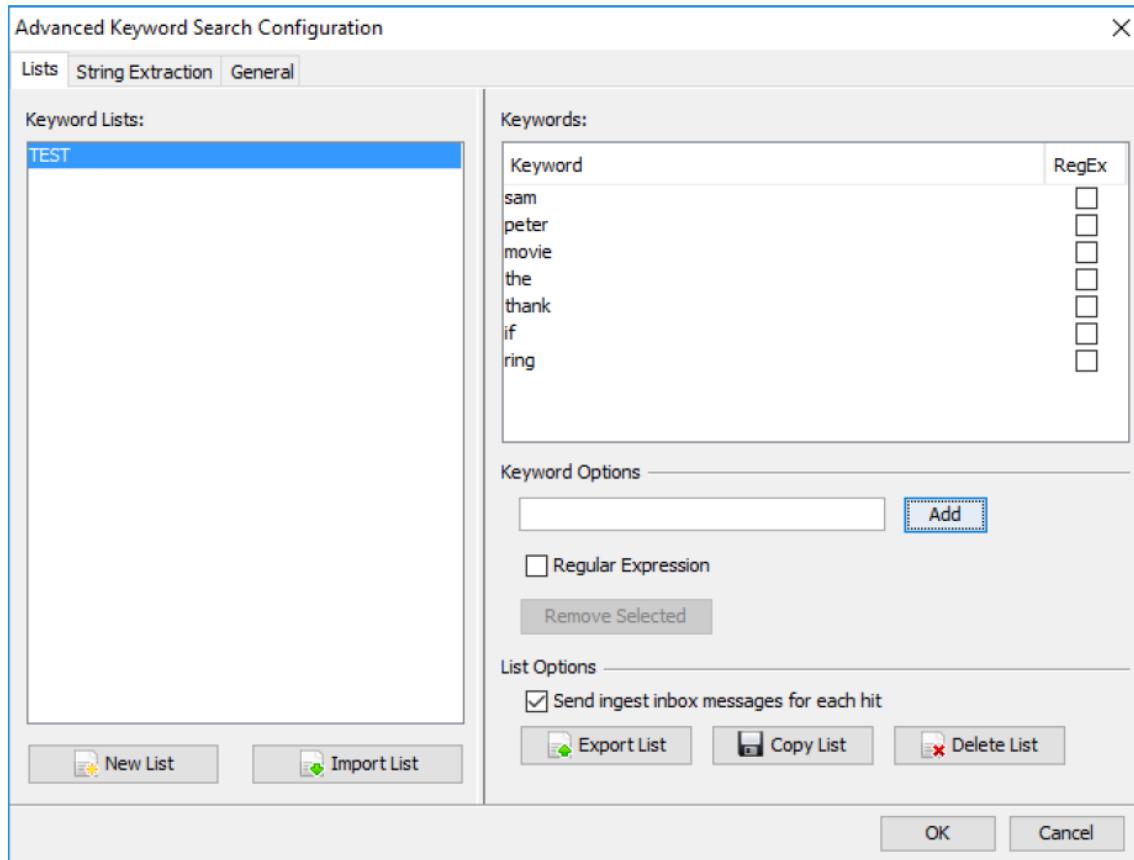
## Step 5: click on keyword search



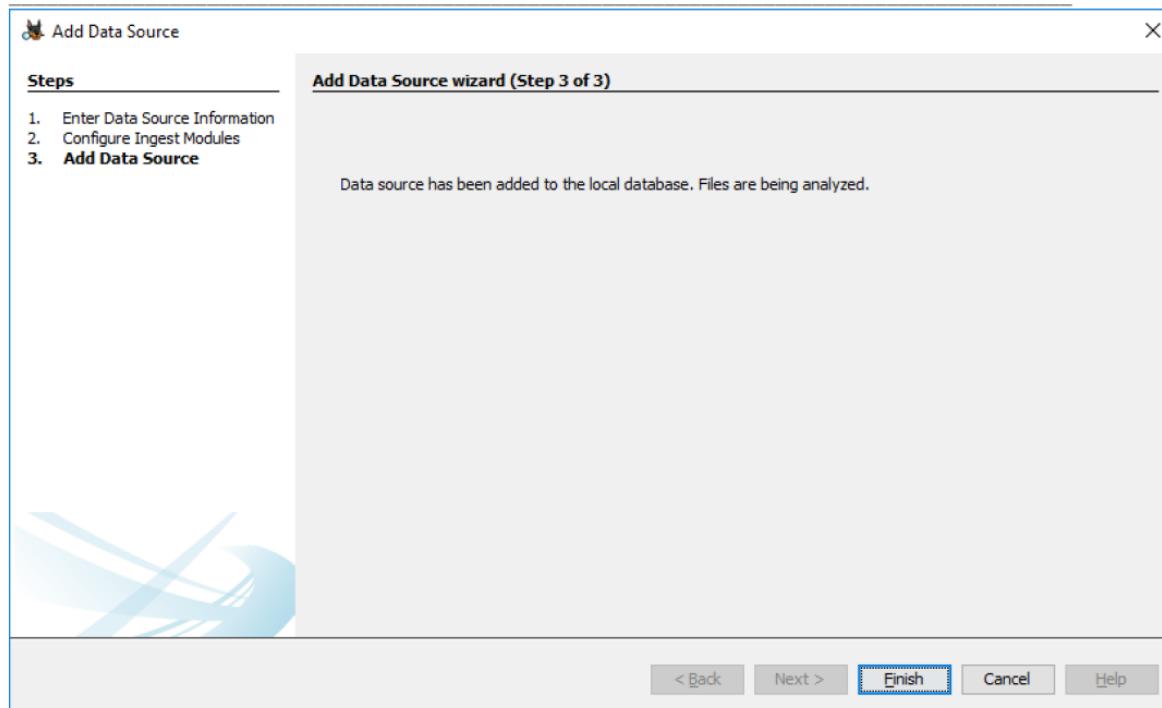
## Step 6: then click on advance & add the following or your own required keywords



## Step 7: you can click on add & add the following keywords



## Step 8: Click on finish



## Step 9: Check the data

testprac1 - Autopsy 4.0.0

File View Tools Window Help

Close Case Add Data Source Generate Report

Directory Listing  
Table: Thumbnal  
Name ID Starting Sector Length in Sectors Description Flags  
vol1 (Unallocated: 0-49663) 1 0 97 Unallocated Unallocated  
vol2 (NTFS / exFAT (0x07): 97-128269920) 2 97 250527 NTFS / exFAT (0x07) Allocated  
vol3 (Unallocated: 250624-381183) 3 250624 255 Unallocated Unallocated

3 Results

Hex Strings File Metadata Results Indexed Text Media

DATA SOURCES:  
- testprac1 (selected)  
- previous.img

VIEWS:  
- Results  
- Extracted Content  
- Devices Attached (19)  
- Encryption Detected (2)  
- Extension Mismatch Detected (27)  
- Installed Programs (61)  
- Operating System Information (2)  
- Operating System User Account (13)  
- Recent Documents (9)  
- Remote Drive (1)  
- Web Bookmarks (24)  
- Web Cookies (84)  
- Web History (920)  
- Web Search (16)

KEYWORD HITS:  
- Single Literal Keyword Search (0)  
- Single Regular Expression Search (0)  
- TEST (146)  
-- movie (56)  
-- peter (5)  
-- ring (26)  
-- san (45)  
-- thank (14)  
- Email Addresses (309)

REPORTS:  
- Hashset Hits  
- E-Mail Messages  
- Interesting Items

Tags Reports

## Step 10: Generate a report

 Generate Report X

**Select and Configure Report Modules**

Report Modules:

Results - HTML  
 Results - Excel  
 Files - Text  
 Google Earth/KML  
 STIX  
 TSK Body File

A report about results and tagged items in HTML format.

*This report will be configured on the next screen.*

[< Back](#) Next > [Finish](#) [Cancel](#) [Help](#)

 Generate Report X

### Configure Artifact Reports

Select which data to report on:

All Results  Tagged Results

Select All  
Deselect All

Data Types

< Back Next > Finish Cancel Help

 Report Generation Progress... X

### Report Generation Progress

Complete

Results - HTML - <E:\CFprac\testprac1\Reports\testprac1 03-16-2017-21-53-08\HTML Report\index.html>  
Complete

Cancel Close

Autopsy Report for case X

file:///F:/CFprac/testprac1/Reports/testprac1%2003-16-2017-21-53-08/HTML%20Report/index.html

## Report Navigation

- Case Summary
- Devices Attached (19)
- E-Mail Messages (33)
- Encryption Detected (2)
- Extension Mismatch Detected (27)
- Installed Programs (61)
- Keyword Hits (455)
- Operating System Information (2)
- Operating System User Account (13)
- Recent Documents (9)
- Remote Drive (1)
- Tagged Files (0)
- Tagged Results (0)
- Thumbnails (0)
- Web Bookmarks (24)
- Web Cookies (84)

## Autopsy Forensic Report

HTML Report Generated on 2017/03/16 21:53:08

Case: testprac1  
Case Number: 001  
Examiner: XYZ  
Number of Images: 1

### Image Information:

precious.img

Timezone: Asia/Calcutta  
Path: F:\sem4\ComputerForensics\precious.img



## PRACTICAL NO 02: Detect OS, hostname, sessions and open ports through packet sniffing.

(Tool used: Nmap)

Command Executed on Window command prompt

Commands:

```
Microsoft Windows [Version 10.0.22621.525]
(c) Microsoft Corporation. All rights reserved.

C:\Users\sies>systeminfo

Host Name: DESKTOP-NUJUK7F
OS Name: Microsoft Windows 11 Pro
OS Version: 10.0.22621 N/A Build 22621
OS Manufacturer: Microsoft Corporation
OS Configuration: Standalone Workstation
OS Build Type: Multiprocessor Free
Registered Owner: sies
Registered Organization:
Product ID: 00331-20210-00000-AA302
Original Install Date: 17-08-2023, 13:04:53
System Boot Time: 05-09-2023, 15:23:32
System Manufacturer: Dell Inc.
System Model: OptiPlex 3090
System Type: x64-based PC
Processor(s): 1 Processor(s) Installed.
[01]: Intel64 Family 6 Model 165 Stepping 3 GenuineIntel ~3701 Mhz
BIOS Version: Dell Inc. 2.0.7, 25-11-2021
Windows Directory: C:\WINDOWS
System Directory: C:\WINDOWS\system32
Boot Device: \Device\HarddiskVolume1
System Locale: en-us;English (United States)
Input Locale: 00004009
Time Zone: (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi
Total Physical Memory: 7,904 MB
Available Physical Memory: 1,543 MB
Virtual Memory: Max Size: 12,768 MB
Virtual Memory: Available: 2,190 MB
Virtual Memory: In Use: 10,578 MB
Page File Location(s): C:\pagefile.sys
Domain: WORKGROUP
Logon Server: \\DESKTOP-NUJUK7F
Hotfix(s): 3 Hotfix(s) Installed.
[01]: KB5017026
[02]: KB5019311
[03]: KB5017233
Network Card(s): 3 NIC(s) Installed.
[01]: Realtek PCIe GbE Family Controller
      Connection Name: Ethernet
      DHCP Enabled: Yes
      DHCP Server: 192.168.10.2
      IP address(es)
      [01]: 192.168.11.120
      [02]: fe80::d4e8:f697:7374:4c2b
[02]: VMware Virtual Ethernet Adapter for VMnet1
      Connection Name: Ethernet 3
      DHCP Enabled: No
```

## M.S.c.I.T SEM III

ITFS

C:\Users\sies&gt;hostname

DESKTOP-NUJUK7F

C:\Users\sies&gt;netstat

## Active Connections

Proto	Local Address	Foreign Address	State
TCP	127.0.0.1:49685	DESKTOP-NUJUK7F:49686	ESTABLISHED
TCP	127.0.0.1:49686	DESKTOP-NUJUK7F:49685	ESTABLISHED
TCP	127.0.0.1:49687	DESKTOP-NUJUK7F:49688	ESTABLISHED
TCP	127.0.0.1:49688	DESKTOP-NUJUK7F:49687	ESTABLISHED
TCP	127.0.0.1:49763	DESKTOP-NUJUK7F:49764	ESTABLISHED
TCP	127.0.0.1:49764	DESKTOP-NUJUK7F:49763	ESTABLISHED
TCP	127.0.0.1:50033	DESKTOP-NUJUK7F:50034	ESTABLISHED
TCP	127.0.0.1:50034	DESKTOP-NUJUK7F:50033	ESTABLISHED
TCP	127.0.0.1:56018	DESKTOP-NUJUK7F:56011	ESTABLISHED
TCP	127.0.0.1:56011	DESKTOP-NUJUK7F:56010	ESTABLISHED
TCP	127.0.0.1:56281	DESKTOP-NUJUK7F:56282	ESTABLISHED
TCP	127.0.0.1:56282	DESKTOP-NUJUK7F:56281	ESTABLISHED
TCP	127.0.0.1:56283	DESKTOP-NUJUK7F:56284	ESTABLISHED
TCP	127.0.0.1:56284	DESKTOP-NUJUK7F:56283	ESTABLISHED
TCP	127.0.0.1:56285	DESKTOP-NUJUK7F:56286	ESTABLISHED
TCP	127.0.0.1:56286	DESKTOP-NUJUK7F:56285	ESTABLISHED
TCP	127.0.0.1:56287	DESKTOP-NUJUK7F:56288	ESTABLISHED
TCP	127.0.0.1:56288	DESKTOP-NUJUK7F:56287	ESTABLISHED
TCP	127.0.0.1:56289	DESKTOP-NUJUK7F:56290	ESTABLISHED
TCP	127.0.0.1:56290	DESKTOP-NUJUK7F:56289	ESTABLISHED
TCP	127.0.0.1:56291	DESKTOP-NUJUK7F:56292	ESTABLISHED
TCP	127.0.0.1:56292	DESKTOP-NUJUK7F:56291	ESTABLISHED
TCP	127.0.0.1:56293	DESKTOP-NUJUK7F:56294	ESTABLISHED
TCP	127.0.0.1:56294	DESKTOP-NUJUK7F:56293	ESTABLISHED
TCP	127.0.0.1:56295	DESKTOP-NUJUK7F:56296	ESTABLISHED
TCP	127.0.0.1:56296	DESKTOP-NUJUK7F:56295	ESTABLISHED
TCP	127.0.0.1:56297	DESKTOP-NUJUK7F:56298	ESTABLISHED
TCP	127.0.0.1:56298	DESKTOP-NUJUK7F:56297	ESTABLISHED
TCP	127.0.0.1:56299	DESKTOP-NUJUK7F:56300	ESTABLISHED
TCP	127.0.0.1:56300	DESKTOP-NUJUK7F:56299	ESTABLISHED
TCP	127.0.0.1:56301	DESKTOP-NUJUK7F:56302	ESTABLISHED
TCP	127.0.0.1:56302	DESKTOP-NUJUK7F:56301	ESTABLISHED
TCP	127.0.0.1:56303	DESKTOP-NUJUK7F:56304	ESTABLISHED
TCP	127.0.0.1:56304	DESKTOP-NUJUK7F:56303	ESTABLISHED
TCP	127.0.0.1:56305	DESKTOP-NUJUK7F:56306	ESTABLISHED
TCP	127.0.0.1:56306	DESKTOP-NUJUK7F:56305	ESTABLISHED
TCP	127.0.0.1:56307	DESKTOP-NUJUK7F:56308	ESTABLISHED
TCP	127.0.0.1:56308	DESKTOP-NUJUK7F:56307	ESTABLISHED
TCP	127.0.0.1:56309	DESKTOP-NUJUK7F:56310	ESTABLISHED
TCP	127.0.0.1:56310	DESKTOP-NUJUK7F:56309	ESTABLISHED
TCP	127.0.0.1:56311	DESKTOP-NUJUK7F:56312	ESTABLISHED

TCP	192.168.11.120:49829	DESKTOP-NUJUK7F:1521	ESTABLISHED
TCP	192.168.11.120:50041	DESKTOP-NUJUK7F:1521	ESTABLISHED
TCP	192.168.11.120:50066	DESKTOP-NUJUK7F:1521	ESTABLISHED
TCP	192.168.11.120:50067	DESKTOP-NUJUK7F:1521	ESTABLISHED
TCP	192.168.11.120:50070	DESKTOP-NUJUK7F:1521	ESTABLISHED
TCP	192.168.11.120:50080	DESKTOP-NUJUK7F:1521	ESTABLISHED
TCP	192.168.11.120:50597	a23-46-9-75:https	CLOSE_WAIT
TCP	192.168.11.120:50600	a23-46-9-50:https	CLOSE_WAIT
TCP	192.168.11.120:50601	a23-46-9-50:https	CLOSE_WAIT
TCP	192.168.11.120:50602	a23-46-9-50:https	CLOSE_WAIT
TCP	192.168.11.120:50603	a23-46-9-50:https	CLOSE_WAIT
TCP	192.168.11.120:50604	a23-46-9-50:https	CLOSE_WAIT
TCP	192.168.11.120:50605	a23-46-9-50:https	CLOSE_WAIT
TCP	192.168.11.120:51171	20.24.121.134:https	CLOSE_WAIT
TCP	192.168.11.120:51173	20.24.121.134:https	CLOSE_WAIT
TCP	192.168.11.120:51174	20.24.121.134:https	CLOSE_WAIT
TCP	192.168.11.120:51175	20.24.121.134:https	CLOSE_WAIT
TCP	192.168.11.120:56012	DESKTOP-NUJUK7F:1521	ESTABLISHED
TCP	192.168.11.120:56017	DESKTOP-NUJUK7F:1521	ESTABLISHED
TCP	192.168.11.120:56018	DESKTOP-NUJUK7F:1521	ESTABLISHED
TCP	192.168.11.120:56020	DESKTOP-NUJUK7F:1521	ESTABLISHED
TCP	192.168.11.120:56824	dhcpc-192-234-137:https	ESTABLISHED
TCP	192.168.11.120:56825	a-0001:https	CLOSE_WAIT
TCP	192.168.11.120:56831	server-108-159-61-9:https	ESTABLISHED
TCP	192.168.11.120:56834	a-0003:https	CLOSE_WAIT
TCP	192.168.11.120:56840	dns:https	ESTABLISHED
TCP	192.168.11.120:56841	dns:https	ESTABLISHED
TCP	192.168.11.120:56851	204.79.197.239:https	ESTABLISHED
TCP	192.168.11.120:56891	a23-218-90-51:https	ESTABLISHED
TCP	192.168.11.120:56892	204.79.197.239:https	ESTABLISHED
TCP	192.168.11.120:56895	20.198.119.84:https	ESTABLISHED
TCP	192.168.11.120:56898	52.182.143.208:https	ESTABLISHED
TCP	192.168.11.120:56926	a-0003:https	ESTABLISHED
TCP	192.168.11.120:56995	a23-9-240-127:http	ESTABLISHED
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	DESKTOP-NUJUK7F:49677	ESTABLISHED
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	DESKTOP-NUJUK7F:49678	ESTABLISHED
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	DESKTOP-NUJUK7F:49679	ESTABLISHED
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	DESKTOP-NUJUK7F:49680	ESTABLISHED
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	DESKTOP-NUJUK7F:49834	ESTABLISHED
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	DESKTOP-NUJUK7F:49838	ESTABLISHED

```
C:\Users\sies>netstat -ano
```

## Active Connections

Proto	Local Address	Foreign Address	State	PID
TCP	0.0.0.0:135	0.0.0.0:0	LISTENING	1272
TCP	0.0.0.0:445	0.0.0.0:0	LISTENING	4
TCP	0.0.0.0:902	0.0.0.0:0	LISTENING	4900
TCP	0.0.0.0:912	0.0.0.0:0	LISTENING	4900
TCP	0.0.0.0:1158	0.0.0.0:0	LISTENING	11832
TCP	0.0.0.0:1521	0.0.0.0:0	LISTENING	3972
TCP	0.0.0.0:1831	0.0.0.0:0	LISTENING	9384
TCP	0.0.0.0:1832	0.0.0.0:0	LISTENING	9540
TCP	0.0.0.0:3306	0.0.0.0:0	LISTENING	5440
TCP	0.0.0.0:3938	0.0.0.0:0	LISTENING	7428
TCP	0.0.0.0:5040	0.0.0.0:0	LISTENING	8380
TCP	0.0.0.0:5501	0.0.0.0:0	LISTENING	7800
TCP	0.0.0.0:5502	0.0.0.0:0	LISTENING	3076
TCP	0.0.0.0:5520	0.0.0.0:0	LISTENING	11832
TCP	0.0.0.0:5522	0.0.0.0:0	LISTENING	7800
TCP	0.0.0.0:5523	0.0.0.0:0	LISTENING	3076
TCP	0.0.0.0:23232	0.0.0.0:0	LISTENING	15624
TCP	0.0.0.0:33060	0.0.0.0:0	LISTENING	5440
TCP	0.0.0.0:49664	0.0.0.0:0	LISTENING	996
TCP	0.0.0.0:49665	0.0.0.0:0	LISTENING	696
TCP	0.0.0.0:49666	0.0.0.0:0	LISTENING	1620
TCP	0.0.0.0:49667	0.0.0.0:0	LISTENING	2324
TCP	0.0.0.0:49668	0.0.0.0:0	LISTENING	3268
TCP	0.0.0.0:49672	0.0.0.0:0	LISTENING	3828
TCP	0.0.0.0:49673	0.0.0.0:0	LISTENING	4012
TCP	0.0.0.0:49674	0.0.0.0:0	LISTENING	4020
TCP	0.0.0.0:49675	0.0.0.0:0	LISTENING	3984
TCP	0.0.0.0:49676	0.0.0.0:0	LISTENING	3996
TCP	0.0.0.0:49689	0.0.0.0:0	LISTENING	980
TCP	127.0.0.1:8079	0.0.0.0:0	LISTENING	15624
TCP	127.0.0.1:10000	0.0.0.0:0	LISTENING	9384
TCP	127.0.0.1:27017	0.0.0.0:0	LISTENING	3744
TCP	127.0.0.1:49670	0.0.0.0:0	LISTENING	3972
TCP	127.0.0.1:49685	127.0.0.1:49686	ESTABLISHED	5440
TCP	127.0.0.1:49686	127.0.0.1:49685	ESTABLISHED	5440
TCP	127.0.0.1:49687	127.0.0.1:49688	ESTABLISHED	5440
TCP	127.0.0.1:49688	127.0.0.1:49687	ESTABLISHED	5440
TCP	127.0.0.1:49763	127.0.0.1:49764	ESTABLISHED	7800
TCP	127.0.0.1:49764	127.0.0.1:49763	ESTABLISHED	7800
TCP	127.0.0.1:50033	127.0.0.1:50034	ESTABLISHED	11832
TCP	127.0.0.1:50034	127.0.0.1:50033	ESTABLISHED	11832
TCP	127.0.0.1:56010	127.0.0.1:56011	ESTABLISHED	3076
TCP	127.0.0.1:56011	127.0.0.1:56010	ESTABLISHED	3076
TCP	127.0.0.1:56275	0.0.0.0:0	LISTENING	15036
TCP	127.0.0.1:56281	127.0.0.1:56282	ESTABLISHED	15624

TCP	[::]:1521	[::]:0	LISTENING	3972
TCP	[::]:1831	[::]:0	LISTENING	9384
TCP	[::]:1832	[::]:0	LISTENING	9540
TCP	[::]:3306	[::]:0	LISTENING	5440
TCP	[::]:3938	[::]:0	LISTENING	7428
TCP	[::]:5520	[::]:0	LISTENING	11832
TCP	[::]:5522	[::]:0	LISTENING	7800
TCP	[::]:5523	[::]:0	LISTENING	3076
TCP	[::]:23232	[::]:0	LISTENING	15624
TCP	[::]:33060	[::]:0	LISTENING	5440
TCP	[::]:49664	[::]:0	LISTENING	996
TCP	[::]:49665	[::]:0	LISTENING	696
TCP	[::]:49666	[::]:0	LISTENING	1620
TCP	[::]:49667	[::]:0	LISTENING	2324
TCP	[::]:49668	[::]:0	LISTENING	3268
TCP	[::]:49672	[::]:0	LISTENING	3828
TCP	[::]:49673	[::]:0	LISTENING	4012
TCP	[::]:49674	[::]:0	LISTENING	4020
TCP	[::]:49675	[::]:0	LISTENING	3984
TCP	[::]:49676	[::]:0	LISTENING	3996
TCP	[::]:49689	[::]:0	LISTENING	980
TCP	[::]:49669	[::]:0	LISTENING	4136
TCP	[fe80::757f:28d1:5b9:1ac4%13]:57085	[fe80::757f:28d1:5b9:1ac4%13]:5501	SYN_SENT	9384
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:49677	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:49678	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:49679	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:49680	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:49834	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:49838	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:49859	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:49866	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:49867	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:49868	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:49902	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1521	[fe80::d4e8:f697:7374:4c2b%12]:50198	ESTABLISHED	3972
TCP	[fe80::d4e8:f697:7374:4c2b%12]:1831	[fe80::d4e8:f697:7374:4c2b%12]:57087	ESTABLISHED	9384
TCP	[fe80::d4e8:f697:7374:4c2b%12]:49677	[fe80::d4e8:f697:7374:4c2b%12]:1521	ESTABLISHED	3996
TCP	[fe80::d4e8:f697:7374:4c2b%12]:49678	[fe80::d4e8:f697:7374:4c2b%12]:1521	ESTABLISHED	4012
TCP	[fe80::d4e8:f697:7374:4c2b%12]:49679	[fe80::d4e8:f697:7374:4c2b%12]:1521	ESTABLISHED	4020
TCP	[fe80::d4e8:f697:7374:4c2b%12]:49680	[fe80::d4e8:f697:7374:4c2b%12]:1521	ESTABLISHED	3984
TCP	[fe80::d4e8:f697:7374:4c2b%12]:49834	[fe80::d4e8:f697:7374:4c2b%12]:1521	ESTABLISHED	7428
TCP	[fe80::d4e8:f697:7374:4c2b%12]:49838	[fe80::d4e8:f697:7374:4c2b%12]:1521	ESTABLISHED	9540
TCP	[fe80::d4e8:f697:7374:4c2b%12]:49859	[fe80::d4e8:f697:7374:4c2b%12]:1521	ESTABLISHED	9384
TCP	[fe80::d4e8:f697:7374:4c2b%12]:49866	[fe80::d4e8:f697:7374:4c2b%12]:1521	ESTABLISHED	7428

TCP	[fe80::d4e8:f697:7374:4c2b%12]:57087	[fe80::d4e8:f697:7374:4c2b%12]:1831	ESTABLISHED	13360
UDP	0.0.0.0:123	*.*	6768	
UDP	0.0.0.0:500	*.*	3596	
UDP	0.0.0.0:1434	*.*	3760	
UDP	0.0.0.0:4500	*.*	3596	
UDP	0.0.0.0:5353	*.*	2304	
UDP	0.0.0.0:5355	*.*	2304	
UDP	0.0.0.0:57455	*.*	2304	
UDP	0.0.0.0:58735	*.*	2304	
UDP	127.0.0.1:1900	*.*	6540	
UDP	127.0.0.1:49195	*.*	6540	
UDP	127.0.0.1:63204	127.0.0.1:63204	3672	
UDP	192.168.11.120:137	*.*	4	
UDP	192.168.11.120:138	*.*	4	
UDP	192.168.11.120:1900	*.*	6540	
UDP	192.168.11.120:49192	*.*	6540	
UDP	192.168.127.1:137	*.*	4	
UDP	192.168.127.1:138	*.*	4	
UDP	192.168.127.1:1900	*.*	6540	
UDP	192.168.127.1:49194	*.*	6540	
UDP	192.168.199.1:137	*.*	4	
UDP	192.168.199.1:138	*.*	4	
UDP	192.168.199.1:1900	*.*	6540	
UDP	192.168.199.1:49193	*.*	6540	
UDP	[::]:123	*.*	6768	
UDP	[::]:500	*.*	3596	
UDP	[::]:1434	*.*	3760	
UDP	[::]:4500	*.*	3596	
UDP	[::]:5353	*.*	2304	
UDP	[::]:5355	*.*	2304	
UDP	[::]:57455	*.*	2304	
UDP	[::]:58735	*.*	2304	
UDP	[::]:1900	*.*	6540	
UDP	[::]:49191	*.*	6540	
UDP	[fe80::ce4:5605:48a3:f98%6]:1900	*.*	6540	
UDP	[fe80::ce4:5605:48a3:f98%6]:49190	*.*	6540	
UDP	[fe80::757f:28d1:5b9:1ac4%13]:1900	*.*	6540	
UDP	[fe80::757f:28d1:5b9:1ac4%13]:49189	*.*	6540	
UDP	[fe80::d4e8:f697:7374:4c2b%12]:1900	*.*	6540	
UDP	[fe80::d4e8:f697:7374:4c2b%12]:49188	*.*	6540	

```
C:\Users\sies>nmap -sA -T4 scanme.nmap.org
Starting Nmap 7.94 ( https://nmap.org ) at 2023-09-05 16:39 India Standard Time
Nmap scan report for scanme.nmap.org (45.33.32.156)
Host is up (0.00045s 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 5.09 seconds

C:\Users\sies>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

Connection-specific DNS Suffix . :
Link-local IPv6 Address . . . . . : fe80::d4e8:f697:7374:4c2b%12
IPv4 Address. . . . . : 192.168.11.120
Subnet Mask . . . . . : 255.255.252.0
Default Gateway . . . . . : 192.168.10.2

Ethernet adapter Ethernet 3:

Connection-specific DNS Suffix . :
Link-local IPv6 Address . . . . . : fe80::757f:28d1:5b9:1ac4%13
IPv4 Address. . . . . : 192.168.199.1
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :

Ethernet adapter Ethernet 4:

Connection-specific DNS Suffix . :
Link-local IPv6 Address . . . . . : fe80::ce4:5605:48a3:f98%6
IPv4 Address. . . . . : 192.168.127.1
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
```

```
C:\Users\sies>nmap -sA -T4 scanme.sies.org
Starting Nmap 7.94 ( https://nmap.org ) at 2023-09-05 16:44 India Standard Time
Nmap scan report for scanme.sies.org (69.64.147.244)
Host is up (0.00053s latency).
rDNS record for 69.64.147.244: ash.parking.local
All 1000 scanned ports on scanme.sies.org (69.64.147.244) are in ignored states.
Not shown: 1000 filtered tcp ports (no-response)

Nmap done: 1 IP address (1 host up) scanned in 6.82 seconds
```

```
nmap done. 1 IP address (1 host up) scanned in 6.82 seconds

C:\Users\sies>nslookup
Default Server: dns.google
Address: 8.8.8.8
```

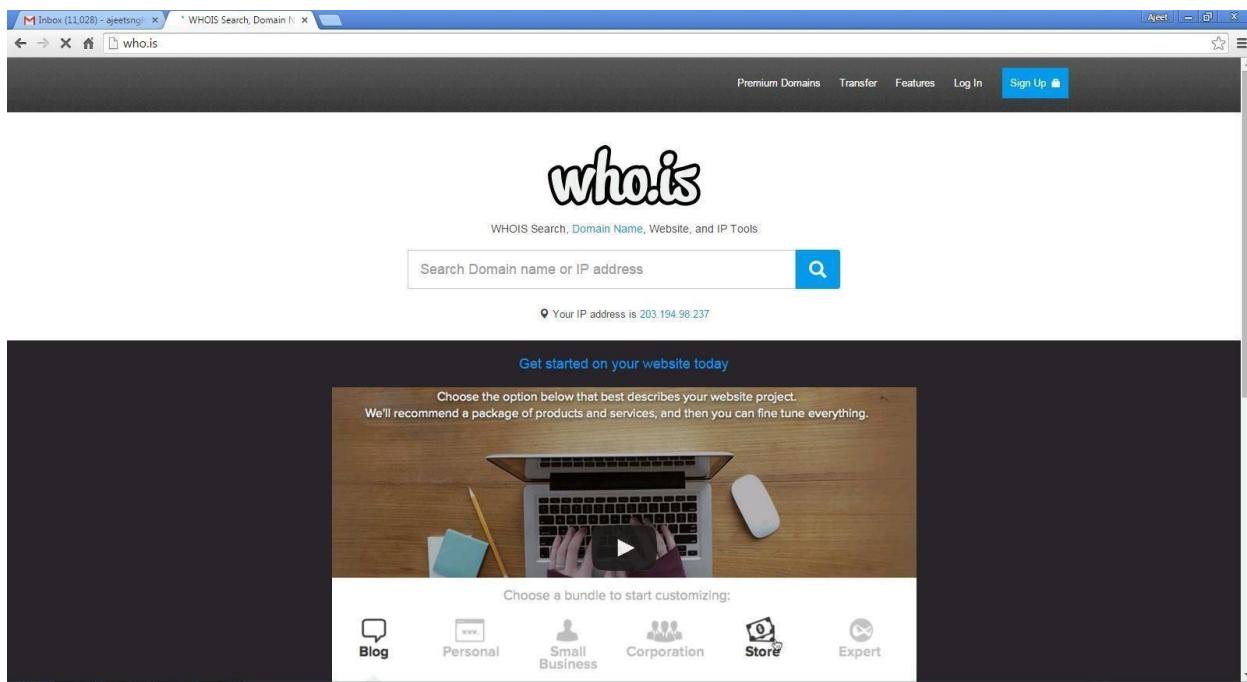
```
C:\Users\gies>nmap -p23,113,139 scanme.nmap.org
Starting Nmap 7.94 ( https://nmap.org ) at 2023-09-05 16:59 India Standard Time
Nmap scan report for scanme.nmap.org (45.33.32.156)
Host is up (0.082s latency).

PORT      STATE SERVICE
23/tcp    closed telnet
113/tcp   closed ident
139/tcp   closed netbios-ssn

Nmap done: 1 IP address (1 host up) scanned in 0.37 seconds
```

## Using tool who.is

Step1: Open the WHO.is website



Step 2: Enter the website name and hit the “Enter button”.



WHOIS Search, Domain Name, Website, and IP Tools

www.prestashop.com



Your IP address is 203.194.98.237

Get started on your website today

### Step 3: Show you information about www.prestashop.com

A screenshot of the Who.is domain search results page for "prestashop.com". The top navigation bar has tabs for Whois, Website Info, History, DNS Records, and Diagnostics, with "Whois" being the active tab. The main content area is divided into sections: "Registrar Info", "Important Dates", and "Name Servers".

Overview for **prestashop.com**:

**Whois**    Website Info    History    DNS Records    Diagnostics

**Registrar Info**

Name	MAILCLUB SAS
Whois Server	whois.mailclub.net
Referral URL	<a href="http://safebrands.com">http://safebrands.com</a>
Status	clientTransferProhibited <a href="http://www.icann.org/epp#clientTransferProhibited">http://www.icann.org/epp#clientTransferProhibited</a>

**Important Dates**

Expires On	April 11, 2016
Registered On	April 11, 2007
Updated On	February 24, 2015

**Name Servers**

a.ns.mailclub.fr	195.64.164.8
b.ns.mailclub.eu	85.31.196.158
c.ns.mailclub.com	87.255.159.64

## Raw Registrar Data

Domain Name: PRESTASHOP.COM  
 Registry Domain ID: 920363578\_DOMAIN\_COM-VRSN  
 Registrar WHOIS Server: whois.mailclub.net  
 Registrar URL: http://www.mailclub.fr  
 Updated Date: 2015-02-24T05:43:34Z  
 Creation Date: 2007-04-11T08:59:05Z  
 Registrar Registration Expiration Date: 2016-04-11T08:59:05Z  
 Registrar: Mailclub SAS  
 Registrar IANA ID: 1290  
 Domain Status: clientTransferProhibited  
<https://icann.org/epp#clientTransferProhibited>  
 Registry Registrant ID:  
 Registrant Name: NOMS DE DOMAINE Responsable  
 Registrant Organization: PRESTASHOP  
 Registrant Street: 12, rue d'Amsterdam  
 Registrant City: Paris  
 Registrant State/Province:  
 Registrant Postal Code: 75009  
 Registrant Country: FR  
 Registrant Phone: +33.140183004  
 Registrant Phone Ext:  
 Registrant Fax: +33.972111878  
 Registrant Fax Ext:  
 Registrant Email: **domains@prestashop.com**  
 Registry Admin ID:  
 Admin Name: NOMS DE DOMAINE Responsable  
 Admin Organization: PRESTASHOP  
 Admin Street: 12, rue d'Amsterdam  
 Admin City: Paris  
 Admin State/Province:  
 Admin Postal Code: 75009  
 Admin Country: FR  
 Admin Phone: +33.140183004  
 Admin Phone Ext:  
 Admin Fax: +33.972111878  
 Admin Fax Ext:  
 Admin Email: **domains@prestashop.com**  
 Registry Tech ID:  
 Tech Name: TINE, Charles  
 Tech Organization: MAILCLUB S.A.S.  
 Tech Street: Pole Media de la Belle de Mai 37 rue Guibal  
 Tech City: Marseille  
 Tech State/Province:

Overview for **prestashop.com**:

Whois

**Website Info**

History

DNS Records

Diagnostics

🕒 Updated 10 hours ago 

## Contact Information

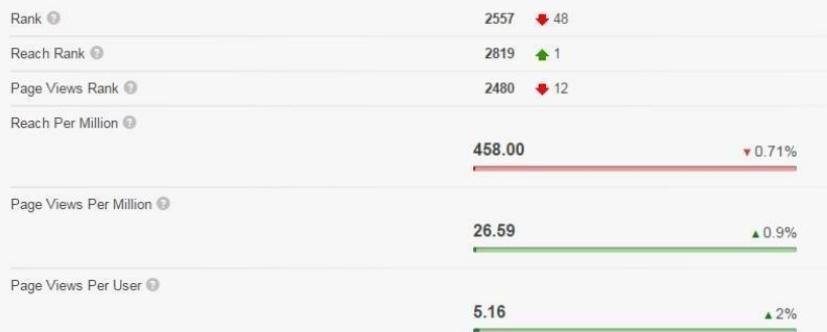
Owner Name	PrestaShop SA
Email	<b>contact@prestashop.com</b>
Address	6, rue Lacépède PARIS, île de France 75005 FRANCE

## Content Data

Title	PrestaShop
Description	PrestaShop is an Open-source e-commerce software that you can download and use it for free at <a href="http://prestashop.com">prestashop.com</a> .
Speed: Median Load Time	2608
Speed: Percentile	 21%
Links In Count	61656

## Traffic Data

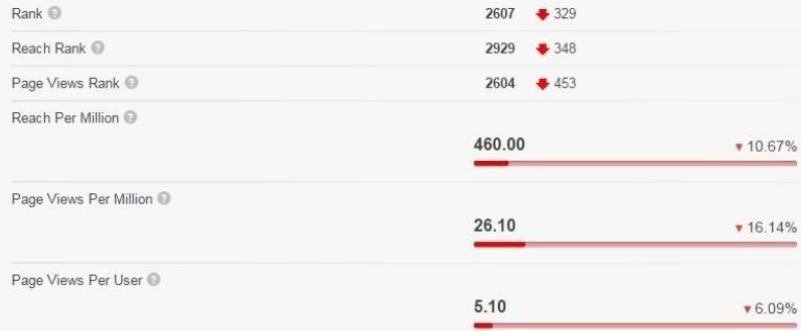
## 3 Months

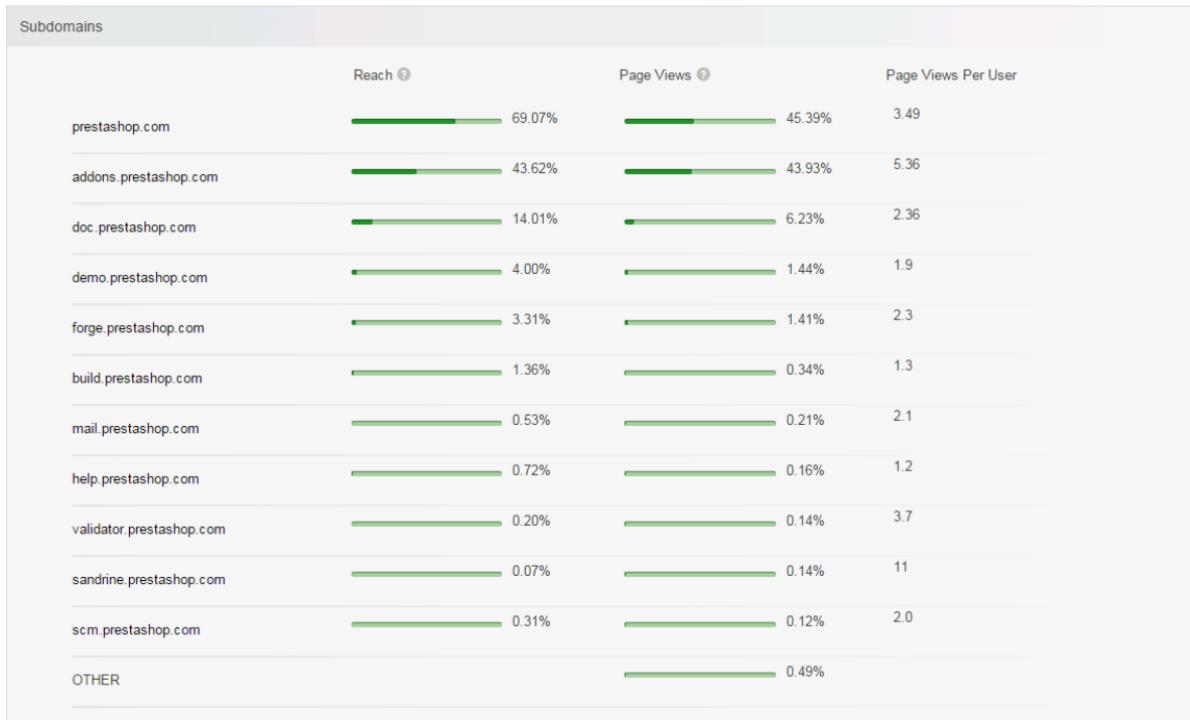
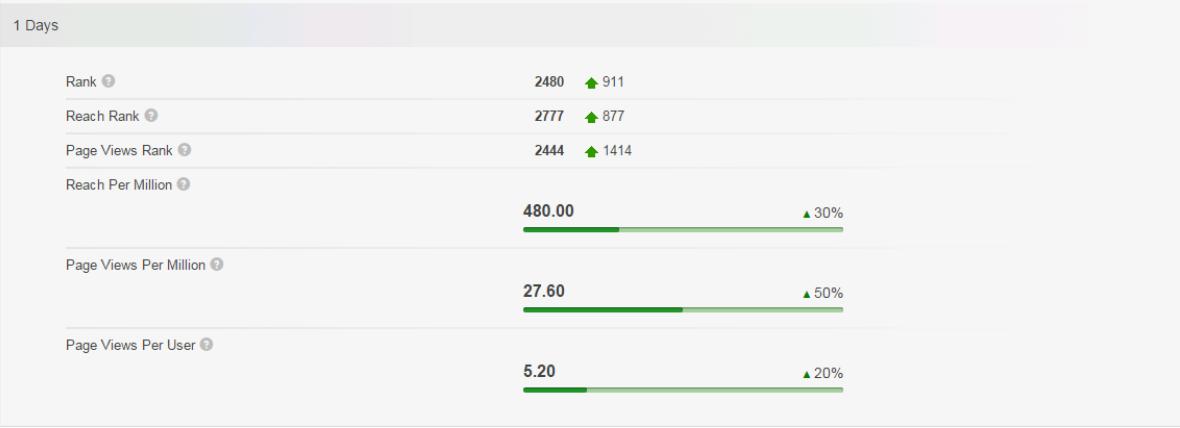


## 1 Month



## 7 Days





Overview for **prestashop.com**: Whois Website Info **History** DNS Records Diagnostics ⌚ Updated 11 hours ago ⌚

Want this archived information removed?

#### Old Registrar Info January 28, 2008

Name	MAILCLUB SAS
Whois Server	whois.mailclub.net
Referral URL	http://safebrands.com
Status	clientTransferProhibited http://www.icann.org/epp#clientTransferProhibited

#### Important Dates

Expires On	April 11, 2016
Registered On	April 11, 2007
Updated On	February 24, 2015

#### Registrar Info September 03, 2015

Name	MAILCLUB SAS
Whois Server	whois.mailclub.net
Referral URL	http://safebrands.com
Status	clientTransferProhibited http://www.icann.org/epp#clientTransferProhibited

#### Important Dates

Expires On	April 11, 2016
Registered On	April 11, 2007
Updated On	February 24, 2015

Overview for **prestashop.com**: Whois Website Info **DNS Records** Diagnostics ⌚ Updated 11 hours ago ⌚

#### Name Servers – prestashop.com

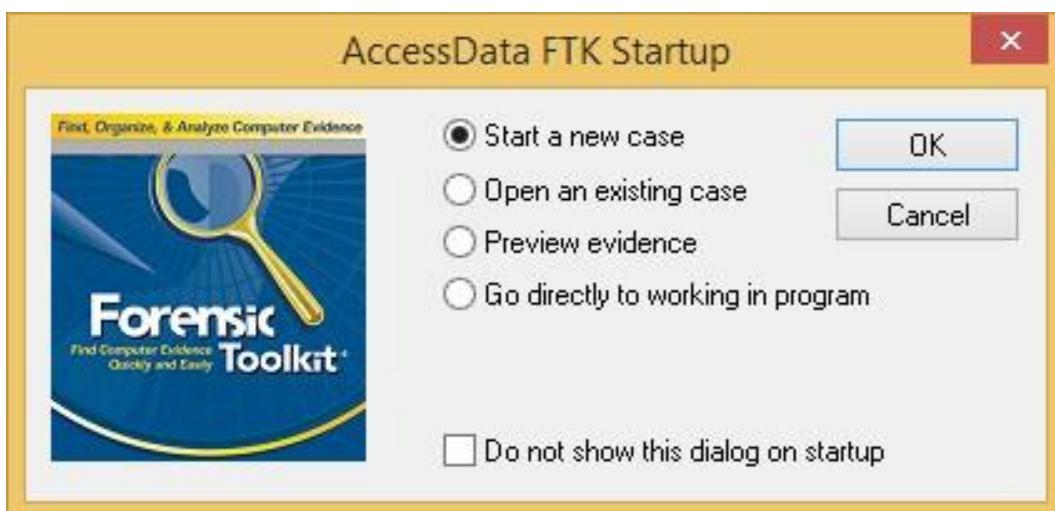
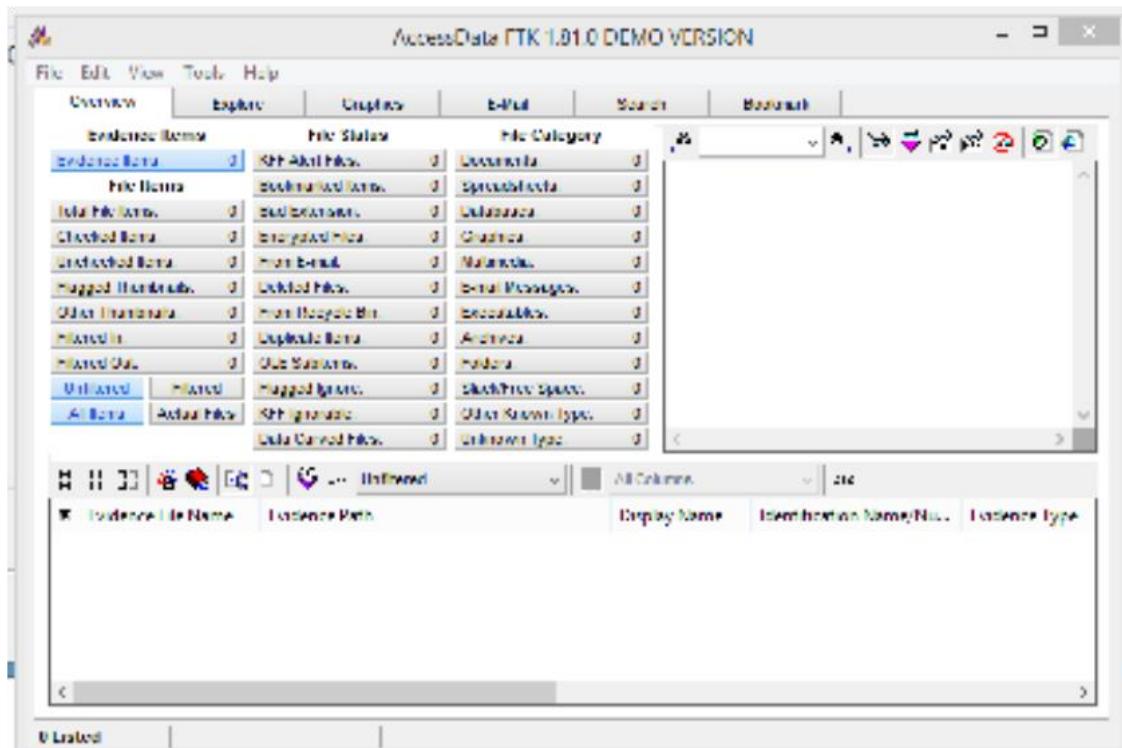
Name Server	IP	Location
a.ns.mailclub.fr	195.64.164.8	Marseille, B8, FR
b.ns.mailclub.eu	85.31.196.158	Marseille, B8, FR
c.ns.mailclub.com	87.255.159.64	Villefranche-sur-Mer, A8, FR

#### SOA Record – prestashop.com

Name Server	master.ns.mailclub.fr
Email	<a href="mailto:domaines@mailclub.fr">domaines@mailclub.fr</a>
Serial Number	2012123310
Refresh	8 hours
Retry	4 hours
Expiry	41 days 16 hours
Minimum	9 hours 13 minutes 20 seconds

## PRACTICAL NO 03: Capture the physical memory of a computer and analyse artifacts in memory.

### USING FTK



New Case X

**AccessData's  
Forensic Toolkit®-FTK®  
The Complete Analysis Tool**

**Wizard for Creating a New Case**

Investigator Name:

Case Information

Case Number:

Case Name:

Case Path:

Case Folder:

Case Description:  
TESTPRAC2

FTK Report Wizard - Case Information X

**Forensic Examiner Information**

The following information will appear on the Case Information page of the report:

Agency/Company:

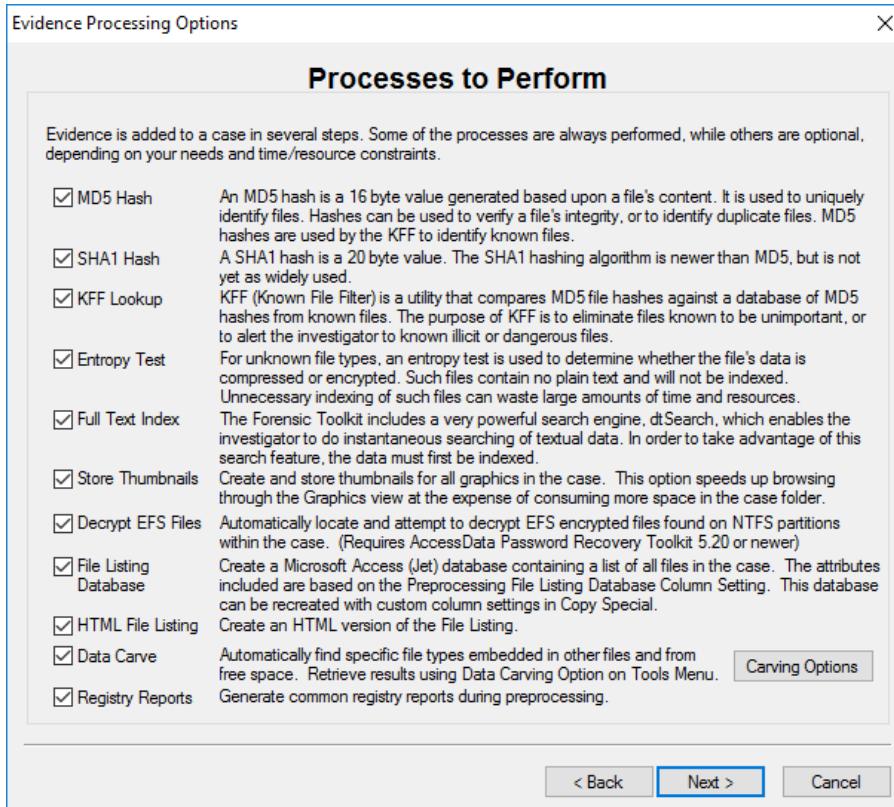
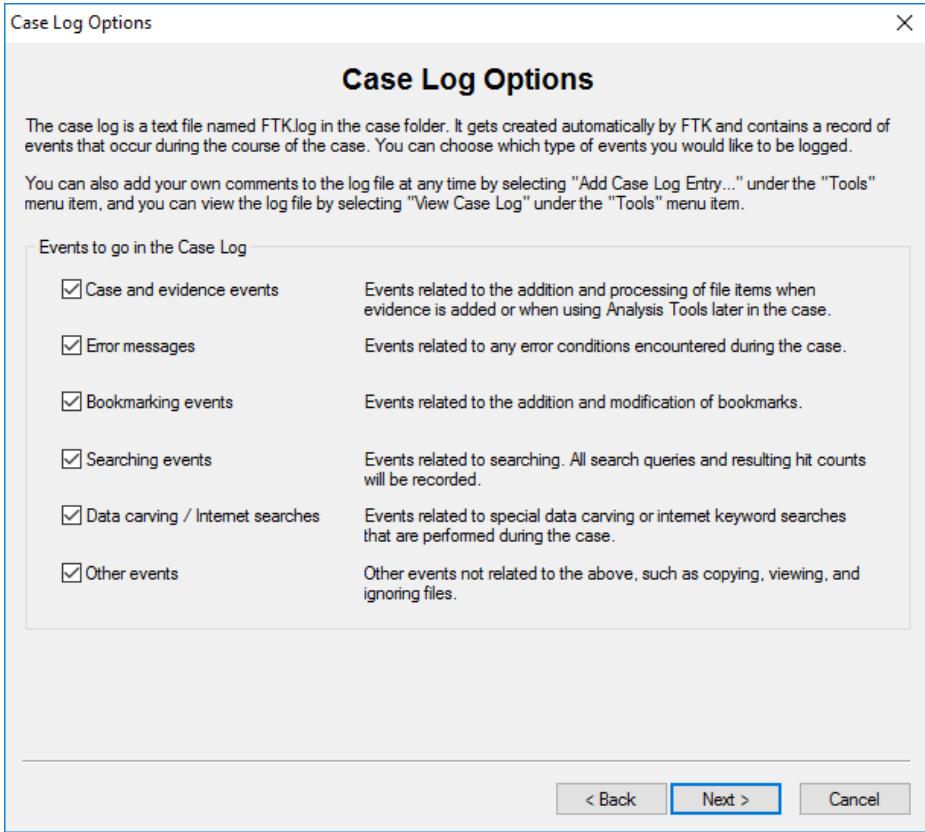
Examiner's Name

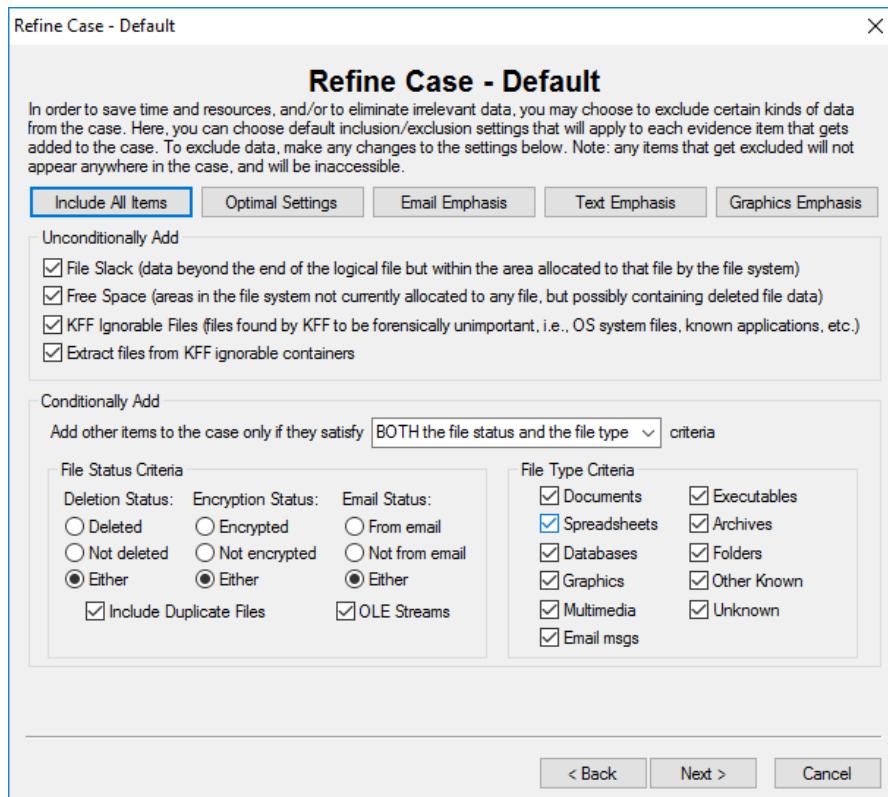
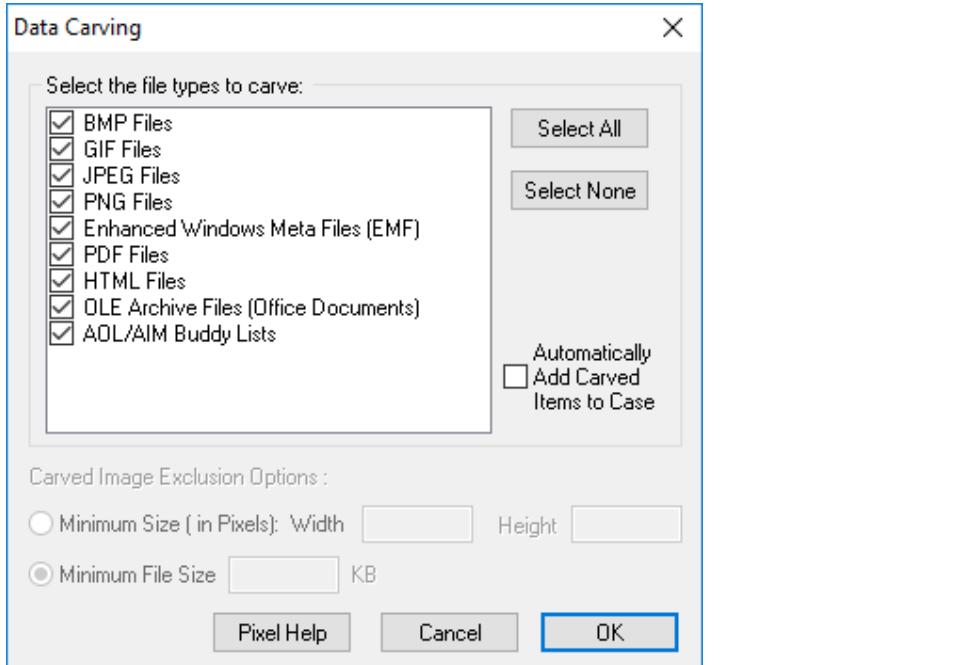
Address:

Phone:  Fax:

E-Mail:

Comments:





Refine Index - Default

**Refine Index - Default**

In order to save time and resources, and/or to make searching more efficient, you may choose to exclude certain kinds of data from being indexed. Here, you can choose default settings that will apply to each evidence item that gets added to the case. To exclude items from being indexed, make any changes to the settings below. Note: any items that don't get indexed initially can be indexed later by clicking on "Analysis Tools" under the "Tools" menu item.

Unconditionally Index

File Slack (data beyond the end of the logical file but within the area allocated to that file by the file system)  
 Free Space (areas in the file system not currently allocated to any file, but possibly containing deleted file data)  
 KFF Ignorable Files (files found by KFF to be forensically unimportant, i.e., OS system files, known applications, etc.)

Conditionally Index

Index other items in the case only if they satisfy BOTH the file status and the file type criteria

File Status Criteria	File Type Criteria
Deletion Status: <input type="radio"/> Deleted <input type="radio"/> Not deleted <input checked="" type="radio"/> Either Encryption Status: <input type="radio"/> Encrypted <input type="radio"/> Not encrypted <input checked="" type="radio"/> Either <input checked="" type="checkbox"/> Include Duplicate Files	Email Status: <input type="radio"/> From email <input type="radio"/> Not from email <input checked="" type="radio"/> Either <input checked="" type="checkbox"/> OLE Streams
<input checked="" type="checkbox"/> Documents <input checked="" type="checkbox"/> Spreadsheets <input checked="" type="checkbox"/> Databases <input checked="" type="checkbox"/> Graphics <input checked="" type="checkbox"/> Multimedia <input checked="" type="checkbox"/> Email msgs <input checked="" type="checkbox"/> Executables <input checked="" type="checkbox"/> Archives <input checked="" type="checkbox"/> Folders <input checked="" type="checkbox"/> Other Known <input checked="" type="checkbox"/> Unknown	

< Back Next > Cancel

Add Evidence to Case

**Add Evidence**

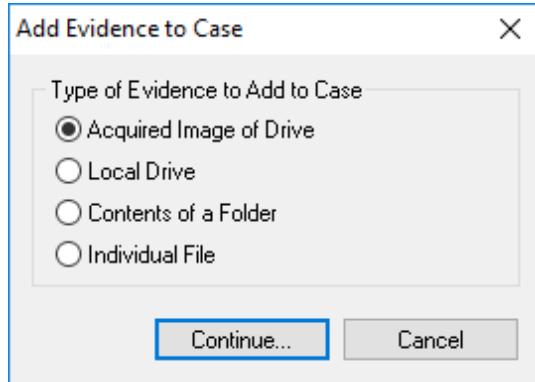
Any number of evidence items can be added to the case. There are several types of evidence items:

- Acquired image of drive: Several formats supported; can be an image of a logical or physical drive
- Local drive: Can be a logical or physical drive
- Folder: Adds all files in the specified folder, including contents of subfolders
- Individual File: Adds a single file. NOTE: Disk image files should be added as acquired images.

The default refinement options, set previously, can be overridden independently for each evidence item, and additional types of refinements can also be made. These refinements can include the exclusion of date/size ranges, as well as specific folders. To make these further refinements, highlight an evidence item in the list and press Refine Evidence - Advanced...

Add Evidence...	Edit Evidence...	Remove Evidence	Refine Evidence - Advanced...			
Display Name	Source	Name/Nu...	Type	Refined	Time Zone	Comment

< Back Next > Cancel



The dialog box is titled "Evidence Information". It contains fields for "Evidence Location" (F:\sem4\ComputerForensics\sample1.img), "Evidence Display Name" (sample1), "Evidence Identification Name/Number" (XYZ), and a large "Comment" area. Below these is a "Local Evidence Time Zone" dropdown set to "Asia/Calcutta". At the bottom are "OK" and "Cancel" buttons.

Evidence Location:	F:\sem4\ComputerForensics\sample1.img	
Evidence Display Name:	sample1	
Evidence Identification Name/Number:	XYZ	
Comment:		
Local Evidence Time Zone:	Asia/Calcutta	

Add Evidence to Case

## Add Evidence

Any number of evidence items can be added to the case. There are several types of evidence items:

- Acquired image of drive: Several formats supported; can be an image of a logical or physical drive
- Local drive: Can be a logical or physical drive
- Folder: Adds all files in the specified folder, including contents of subfolders
- Individual File: Adds a single file. NOTE: Disk image files should be added as acquired images.

The default refinement options, set previously, can be overridden independently for each evidence item, and additional types of refinements can also be made. These refinements can include the exclusion of date/size ranges, as well as specific folders. To make these further refinements, highlight an evidence item in the list and press Refine Evidence - Advanced...

Add Evidence...	Edit Evidence...	Remove Evidence	Refine Evidence - Advanced...			
Display Name	Source	Name/Nu...	Type	Refined	Time Zone	Comment
sample1\KEEPPRYVAT-F...	F:\sem4\Com...	XYZ	FAT12	N	Asia/Calc...	

< Back    Next >    Cancel

Case Summary

## New Case Setup is Now Complete

Case Settings

Case directory where the file database, index, and other case-specific files will be stored:  
c:\Vestprac2

Number of Evidence Items: 1

Processes to be Performed:

File Extraction:	Yes	Remember that although each of these processes adds to the initial processing time, they each play an important role in the investigation process.
File Identification:	Yes	
MD5 Hash:	Yes	
SHA1 Hash:	Yes	
KFF Lookup:	Yes	Processes that are not performed initially can be initiated at a later point in the investigation except the HTML file listing and automated Registry Reports. Additional evidence can also be added later.
Entropy Test:	Yes	
Full Text Index:	Yes	
Store Thumbnails:	Yes	
Decrypt EFS Files:	Yes	
File Listing Database:	Yes	
File Listing HTML:	Yes	
Data Carving:	Yes	
Registry Reports:	Yes	

Press "Back" if you wish to review or change your settings  
Press "Finish" to accept the current settings and start processing the evidence

< Back    Finish    Cancel

AccessData FTK 1.81.0 DEMO VERSION -- c:\testprac2\

File Edit View Tools Help

Evidence Items		File Status		File Category	
Evidence Items:	1	KFF Alert Files:	0	Documents:	1
File Items		Bookmarked Items:		Spreadsheets:	
Total File Items:	19	Bad Extension:	1	Databases:	0
Checked Items:	0	Encrypted Files:	0	Graphics:	1
Unchecked Items:	19	From E-mail:	0	Multimedia:	0
Flagged Thumbnails:	0	Deleted Files:	1	E-mail Messages:	0
Other Thumbnails:	1	From Recycle Bin:	0	Executables:	0
Filtered In:	19	Duplicate Items:	2	Archives:	4
Filtered Out:	0	OLE Subitems:	10	Folders:	1
<b>Unfiltered</b>	<b>Filtered</b>	Flagged Ignore:	0	Slack/Free Space:	5
All Items	Actual Files	KFF Ignorable:	0	Other Known Type:	1
		Data Carved Files:	0	Unknown Type:	6

File Name Evidence Path Display Name Identification Name/Nu... Evidence Type

sample1.img F:\sem4\ComputerForensics sample1\KEEPPRY... XYZ FAT12

1 Listed 0 Checked Total F:\sem4\ComputerForensics\sample1.img

AccessData FTK 1.81.0 DEMO VERSION -- c:\testprac2\

File Edit View Tools Help

Evidence Items		File Status		File Category	
Evidence Items:	1	KFF Alert Files:	0	Documents:	1
File Items		Bookmarked Items:		Spreadsheets:	
Total File Items:	19	Bad Extension:	1	Databases:	0
Checked Items:	0	Encrypted Files:	0	Graphics:	1
Unchecked Items:	19	From E-mail:	0	Multimedia:	0
Flagged Thumbnails:	0	Deleted Files:	1	E-mail Messages:	0
Other Thumbnails:	1	From Recycle Bin:	0	Executables:	0
Filtered In:	19	Duplicate Items:	2	Archives:	4
Filtered Out:	0	OLE Subitems:	10	Folders:	1
<b>Unfiltered</b>	<b>Filtered</b>	Flagged Ignore:	0	Slack/Free Space:	5
All Items	Actual Files	KFF Ignorable:	0	Other Known Type:	1
		Data Carved Files:	0	Unknown Type:	6

File Name Full Path Recycle Bi... Ext File Type Category Subject Cr Date Mod Date Acc Date L-Size P-Size Children

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >IData... OLE Embedd... Archive N/A N/A N/A 10/7/2007 8:25:31 PM 3,584 13,312

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >IData... OLE Stream Unknown N/A N/A N/A 10/7/2007 8:25:31 PM 208 13,312

sample1\KEEPPRYVAT-FAT12\odolist.txt txt Plain Text D... Document 10/7/2007 7:11:28 PM 10/6/2007 10:08:12 ... 10/7/2007 12:00:00 ... 137 512

sample1\KEEPPRYVAT-FAT12\Root Folder Root Folder Folder N/A N/A N/A 7,168 7,168

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >IData... OLE Embedd... Archive 10/7/2007 8:25:31 PM 10/7/2007 8:25:31 PM 2,560 13,312

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >IData... OLE Stream Unknown N/A N/A N/A 10/7/2007 8:25:31 PM 112 13,312

sample1\KEEPPRYVAT-FAT12\DriveFreeSpace1 Drive Free S... Slack/Free S... N/A N/A N/A 1,311,232 26,214,400

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >Encrypt... OLE Stream Unknown N/A N/A N/A 9,016 13,312

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >Encrypt... OLE Stream Unknown N/A N/A N/A 248 13,312

sample1\KEEPPRYVAT-FAT12\FAT1 File Allocatio... Slack/Free S... N/A N/A N/A 4,608 4,608

sample1\KEEPPRYVAT-FAT12\FAT2 File Allocatio... Slack/Free S... N/A N/A N/A 4,608 4,608

sample1\KEEPPRYVAT-FAT12\odolist.txt >File... File Slack Slack/Free S... N/A N/A N/A 375 512

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >IData... OLE Stream Unknown N/A N/A N/A 64 13,312

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >IData... OLE Embedd... Archive 10/7/2007 8:25:31 PM 10/7/2007 8:25:31 PM 2,560 13,312

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >IData... OLE Embedd... Archive 10/7/2007 8:25:31 PM 10/7/2007 8:25:31 PM 2,560 13,312

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >IData... OLE Stream Unknown N/A N/A N/A 512 512

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >IData... OLE Stream Unknown N/A N/A N/A 76 13,312

sample1\KEEPPRYVAT-FAT12\vcics.xlsx >IData... Encrypted U... Other 10/7/2007 7:11:02 PM 10/7/2007 10:55:34 ... 10/7/2007 12:00:00 ... 13,112 13,312

19 Listed 0 Checked Total 0 Highlighted

Add Evidence X

**AccessData's  
Forensic Toolkit®-FTK®  
*The Complete Analysis Tool***

**Wizard for Adding Evidence to the Case**

Investigator Name: XYZ

**Case Information**

Number of Evidence Items: 1

Number of File Items: 19

Case Name: testprac2

Case Folder: c:\testprac2\

Case Number: 001

**Case Description:**  
TESTPRAC2

Next > Cancel

Add Evidence to Case X

Type of Evidence to Add to Case

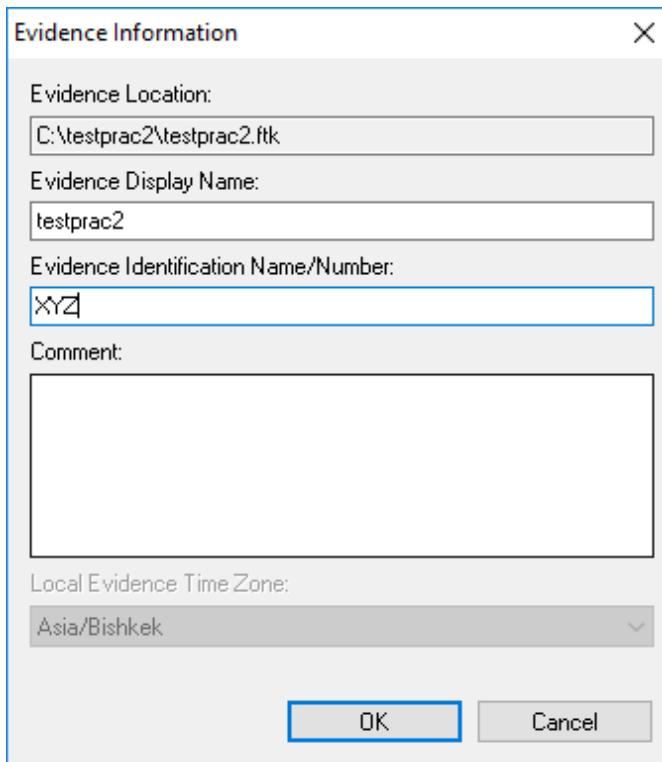
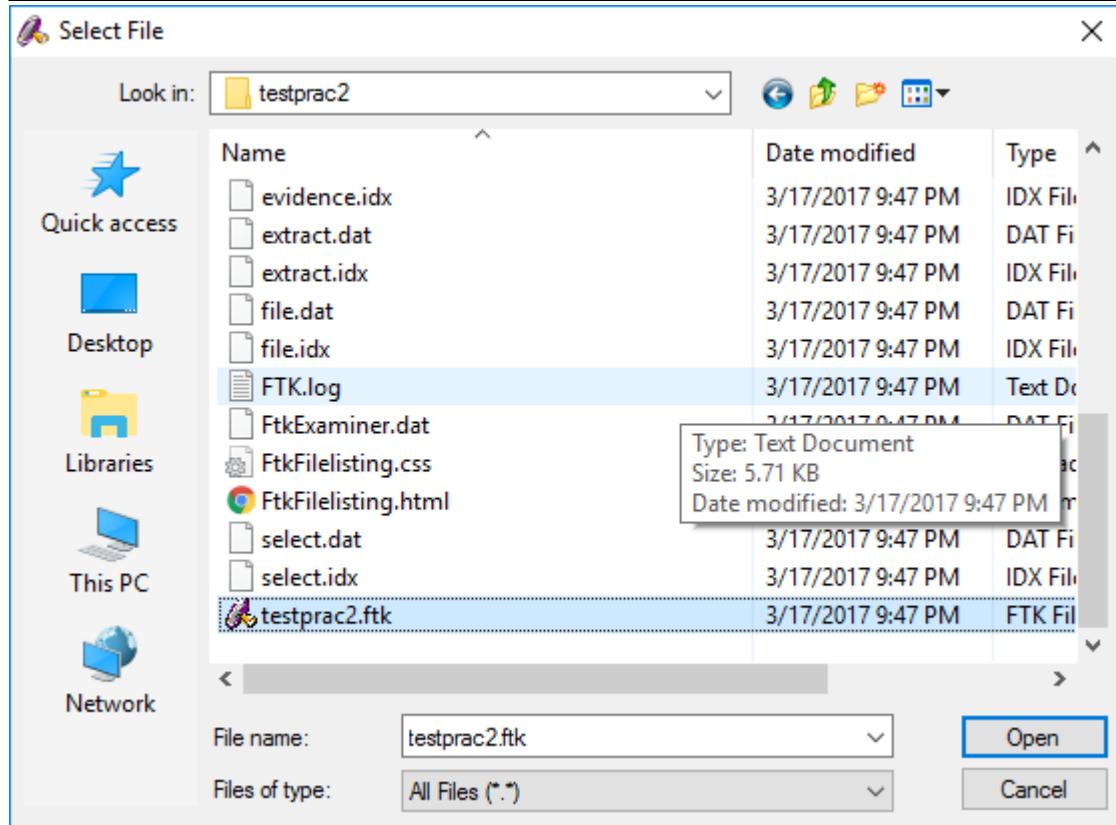
Acquired Image of Drive

Local Drive

Contents of a Folder

Individual File

Continue... Cancel



AccessData FTK 1.81.0 DEMO VERSION -- c:\testprac2\

File Edit View Tools Help

Overview Explore Graphics E-Mail Search Bookmark

Evidence Items		File Status		File Category	
Evidence Items:	2	KFF Alert Files:	0	Documents:	1
File Items		Bookmarked Items:		Spreadsheets:	
Total File Items:	20	Bad Extension:	1	Databases:	0
Checked Items:	0	Encrypted Files:	0	Graphics:	1
Unchecked Items:	20	From E-mail:	0	Multimedia:	0
Flagged Thumbnails:	0	Deleted Files:	1	E-mail Messages:	0
Other Thumbnails:	1	From Recycle Bin:	0	Executables:	0
Filtered In:	20	Duplicate Items:	2	Archives:	4
Filtered Out:	0	OLE Subitems:	10	Folders:	1
Unfiltered	Filtered	Flagged Ignore:	0	Slack/Free Space:	5
All Items	Actual Files	KFF Ignorable:	0	Other Known Type:	1
		Data Carved Files:	0	Unknown Type:	7

OFF Unfiltered All Columns DTZ

Evidence File Name	Evidence Path	Display Name	Identification Name/Nu...	Evidence Type
sample1.img	F:\sem4\ComputerForensics	sample1\KEEPPR...	XYZ	FAT12
testprac2.ftk	C:\testprac2	testprac2	XYZ	Individual file

2 Listed 0 Checked Total C:\testprac2\testprac2.ftk

AccessData FTK 1.81.0 DEMO VERSION -- c:\testprac2\

File Edit View Tools Help

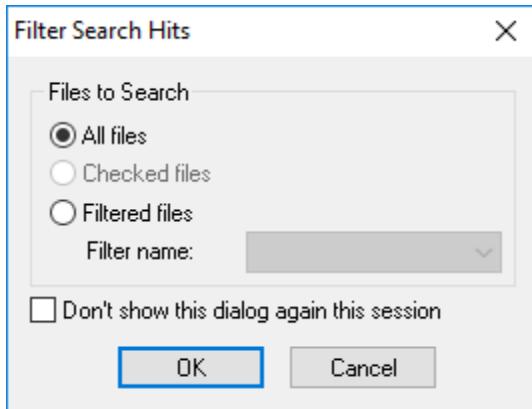
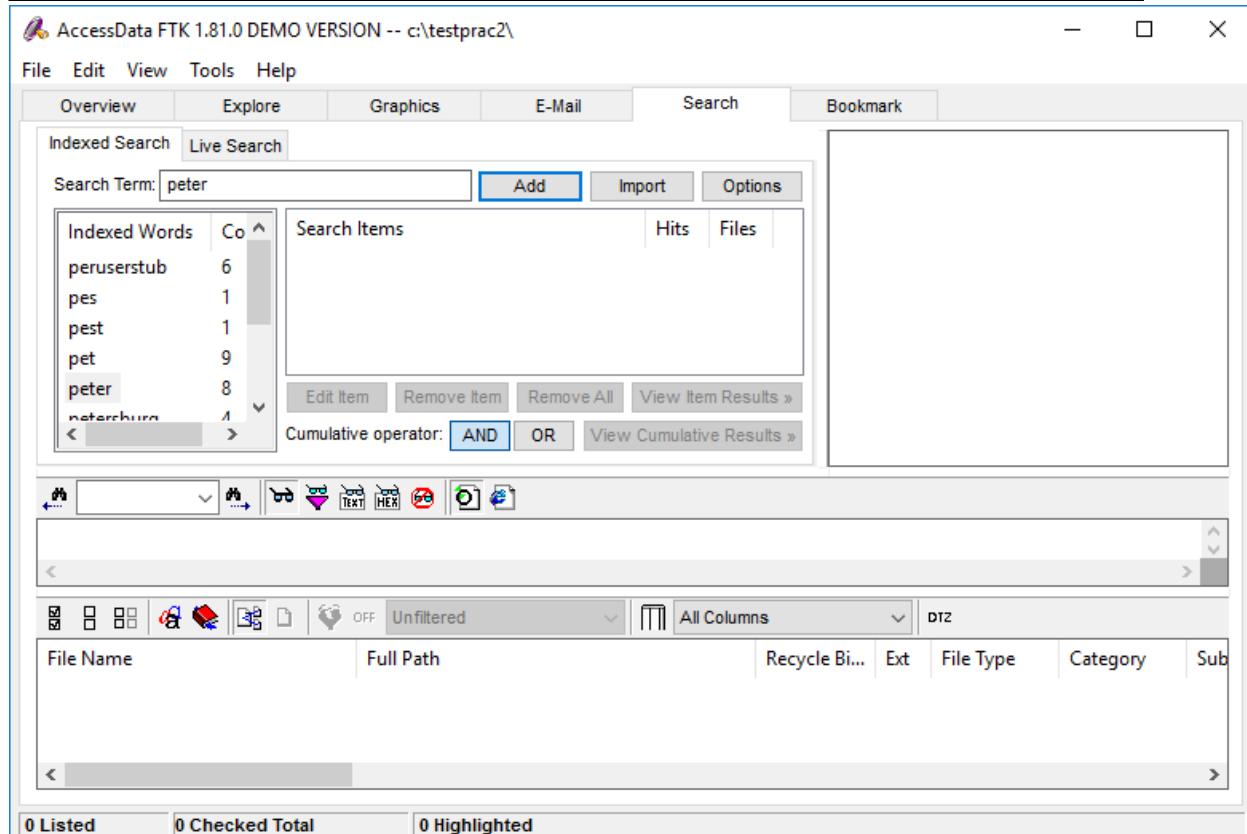
Overview Explore Graphics E-Mail Search Bookmark

Evidence Items		File Status		File Category	
Evidence Items:	2	KFF Alert Files:	0	Documents:	1
File Items		Bookmarked Items:		Spreadsheets:	
Total File Items:	20	Bad Extension:	1	Databases:	0
Checked Items:	0	Encrypted Files:	0	Graphics:	1
Unchecked Items:	20	From E-mail:	0	Multimedia:	0
Flagged Thumbnails:	0	Deleted Files:	1	E-mail Messages:	0
Other Thumbnails:	1	From Recycle Bin:	0	Executables:	0
Filtered In:	20	Duplicate Items:	2	Archives:	4
Filtered Out:	0	OLE Subitems:	10	Folders:	1
Unfiltered	Filtered	Flagged Ignore:	0	Slack/Free Space:	5
All Items	Actual Files	KFF Ignorable:	0	Other Known Type:	1
		Data Carved Files:	0	Unknown Type:	7

OFF Unfiltered All Columns DTZ

File Name	Full Path	Recycle Bi...	Ext	File Type	Category	Sub
!odolist.txt	sample1\KEEPPRYVAT-FAT12\!odolist.txt		txt	Plain Text D...	Document	

1 Listed 0 Checked Total sample1\KEEPPRYVAT-FAT12\!odolist.txt



AccessData FTK 1.81.0 DEMO VERSION -- c:\testprac2\

File Edit View Tools Help

Overview Explore Graphics E-Mail Search Bookmark

Indexed Search Live Search

Search Term:  Add Import Options

Indexed Words	Co...	Search Items	Hits	Files
peter		peter	8	5
sam		sam	235	82
mov		mov	67	12

[Edit Item](#) [Remove Item](#) [Remove All](#) [View Item Results »](#)

Cumulative operator: [AND](#) [OR](#) [View Cumulative Results »](#)

8 Hits in 5 Files - QUERY: (peter)

- + 2 Hits - [tolkien-movies[1].htm] precio
- + 2 Hits - [lordoftherings[2].htm] precio
- + 2 Hits - [lordoftherings[1].htm] precio
- + 1 Hit - [license.txt] precious\Part\_1\The
- + 1 Hit - [index\_flat[1].htm] precious\Par

File Name Full Path Recycle Bi... Ext File Type Category

<input type="checkbox"/> index_flat[1].htm	precious\Part_1\The Precious-NTFS\Document...		htm	Hypertext Do...	Document
<input type="checkbox"/> license.txt	precious\Part_1\The Precious-NTFS\Program Fil...		txt	Plain Text D...	Document
<input type="checkbox"/> lordoftherings[1].htm	precious\Part_1\The Precious-NTFS\Document...		htm	Hypertext Do...	Document

5 Listed 0 Checked Total 0 Highlighted

AccessData FTK 1.81.0 DEMO VERSION -- c:\testprac2\

File Edit View Tools Help

Overview Explore Graphics E-Mail Search Bookmark

Indexed Search Live Search

Search Term:  Add Import Options

Indexed Words	Co...	Search Items	Hits	Files
peter		peter	8	5
sam		sam	235	82
mov		mov	67	12

[Edit Item](#) [Remove Item](#) [Remove All](#) [View Item Results »](#)

Cumulative operator: [AND](#) [OR](#) [View Cumulative Results »](#)

8 Hits in 5 Files - QUERY: (peter)

- + 2 Hits - [tolkien-movies[1].htm] precio
- + 2 Hits - [lordoftherings[2].htm] precio
- + 2 Hits - [lordoftherings[1].htm] precio
- + 1 Hit - [license.txt] precious\Part\_1\The
- + 1 Hit - [index\_flat[1].htm] precious\Par

File Name Full Path Recycle Bi... Ext File Type Category

<input type="checkbox"/> index_flat[1].htm	precious\Part_1\The Precious-NTFS\Document...		htm	Hypertext Do...	Document
<input type="checkbox"/> license.txt	precious\Part_1\The Precious-NTFS\Program Fil...		txt	Plain Text D...	Document

5 Listed 0 Checked Total precious\Part\_1\The Precious-NTFS\Documents and Settings\Frodo Baggins...\index\_flat[1].htm

elijah wood cate blanchett sean astin dominic monaghan billy boyd ian holm hugo weaving liv tyler christopher lee john rhys davies viggo mortensen sean bean orlando bloom miranda otto bernard hill peter jackson frodo baggins bilbo aragorn strider arwen elrond gimli legolas samwise pippin merry gandalf boromir eowyn eomer sauron boromir saruman faramir denethor galadriel gollum hobbit wizard dwarf elf hobbiton bree Weathertop ringwraith dark rider witch king middle earth shire orthanc isengard mordor lóthlórien riendell mt doom rohan gender fangorn forest treebeard ents shalb marla return

AccessData FTK 1.81.0 DEMO VERSION -- D:\MSCIT PART-II SEM IV\prac files\murder\

File Edit View Tools Help

Overview Explore Graphics E-Mail Search Bookmark

Indexed Search Live Search

Search Items Type  
46 72 6f 6d Hex

Add Text  
 ASCII  
 Unicode  
 Case Sensitive  
 Regular Expression  
 Hexadecimal

200 Search

Query: "46 72 6f 6d " <Hex> -- 277 Hits in 97 Filtered Files

- 3 Hits -- [getmsg[1].htm] precious\Part\_1\The Precious-
- 3 Hits -- [getmsg[1].htm] precious\Part\_1\The Precious-
- 2 Hits -- [Deleted Items.dbx] precious\Part\_1\The Precious-
- 1 Hit -- [Message0001] precious\Part\_1\The Precious-NT
- 1 Hit -- [Message0002] precious\Part\_1\The Precious-NT
- 8 Hits -- [Inbox.dbx] precious\Part\_1\The Precious-NTFS
- 1 Hit -- [Attachment1] precious\Part\_1\The Precious-NT
- 3 Hits -- [Message0001] precious\Part\_1\The Precious-N
- 3 Hits -- [Message0002] precious\Part\_1\The Precious-N
- 1 Hit -- [Message0003] precious\Part\_1\The Precious-NT

000 46 72 6f 6d 3a 20 22 46-72 6f 64 6f 20 42 61 67 From: "Frodo Bag  
010 67 69 6e 73 22 20 3c 46-72 6f 64 6f 62 61 67 67 gins" <Frodobagg  
020 69 40 63 6f 6d 63 61 73-74 2e 6e 65 74 3e 0d 0a i@comcast.net>..

Selection start = 0, length = 4

All Columns

File Name	Full Path	Recycle Bi...	Ext	File Type	Category	Subject	Cr Date
Message0001	precious\Part_1\The Precious-NTFS\Document...			E-mail Messa...	E-mail	" RE: HEL...	N/A
Message0001	precious\Part_1\The Precious-NTFS\Document...			E-mail Messa...	E-mail	"Possible J...	N/A
Message0001	precious\Part_1\The Precious-NTFS\Document...			E-mail Messa...	E-mail	"Re: South...	N/A
Message0001	precious\Part_1\The Precious-NTFS\Document...			E-mail Messa...	E-mail	"Training"	N/A
Message0002	precious\Part_1\The Precious-NTFS\Document...			E-mail Messa...	E-mail	"Its a Real ...	N/A

97 Listed 0 Checked Total precious\Part\_1\The Precious-NTFS\Documents and Settings\Frodo Baggins\Local ... Deleted Items.dbx>>Message0002

Create New Bookmark

Bookmark name:

Bookmark comment:

Apply bookmark to:

All highlighted items  All checked items  All currently listed items

File Name	File Path
index_flat[1].htm	precious\Part_1\The Precious-N...

Remember file position/selection

Report options

Include in report  Export files

Include parent of email attachments?

OK Cancel

Create New Bookmark X

Bookmark name: peter      Bookmark comment:

Apply bookmark to:

All highlighted items All checked items All currently listed items

File Name: index\_flat[1].htm      File Path: precious\Part\_1\The Precious-N...

Remember file position/selection

Report options

Include in report     Export files

Include parent of email attachments?

OK Cancel

FTK Report Wizard - Case Information X

## Case Information

The following information will appear on the Case Information page of the report:

Include Investigator Information in report

Agency/Company: College

Investigator's Name: XYZ

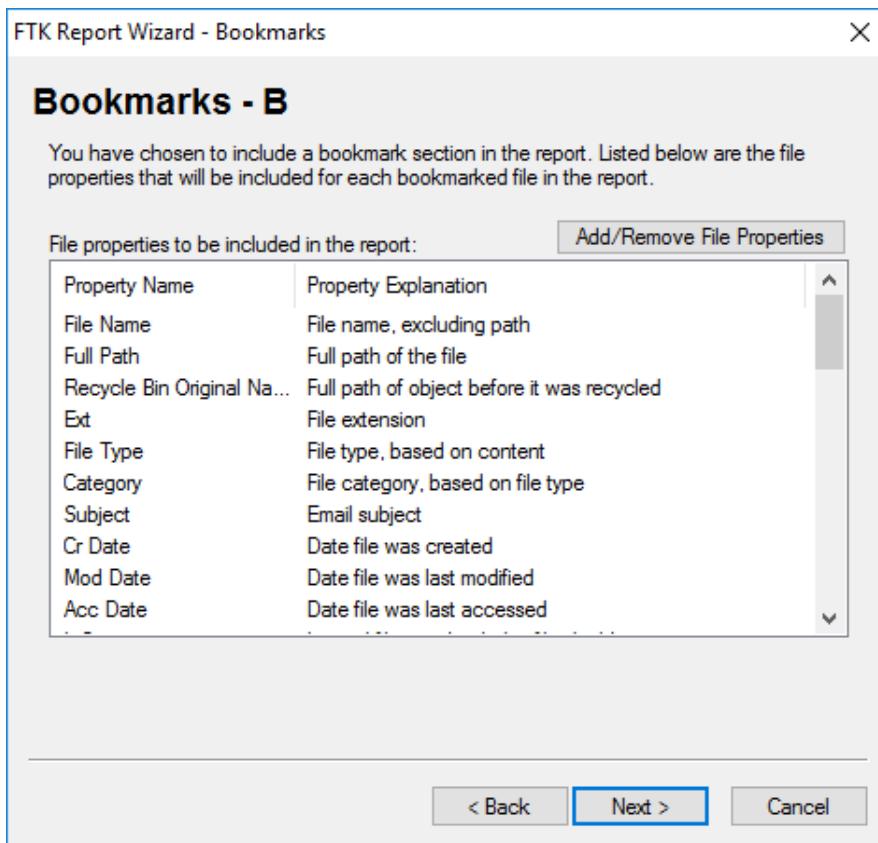
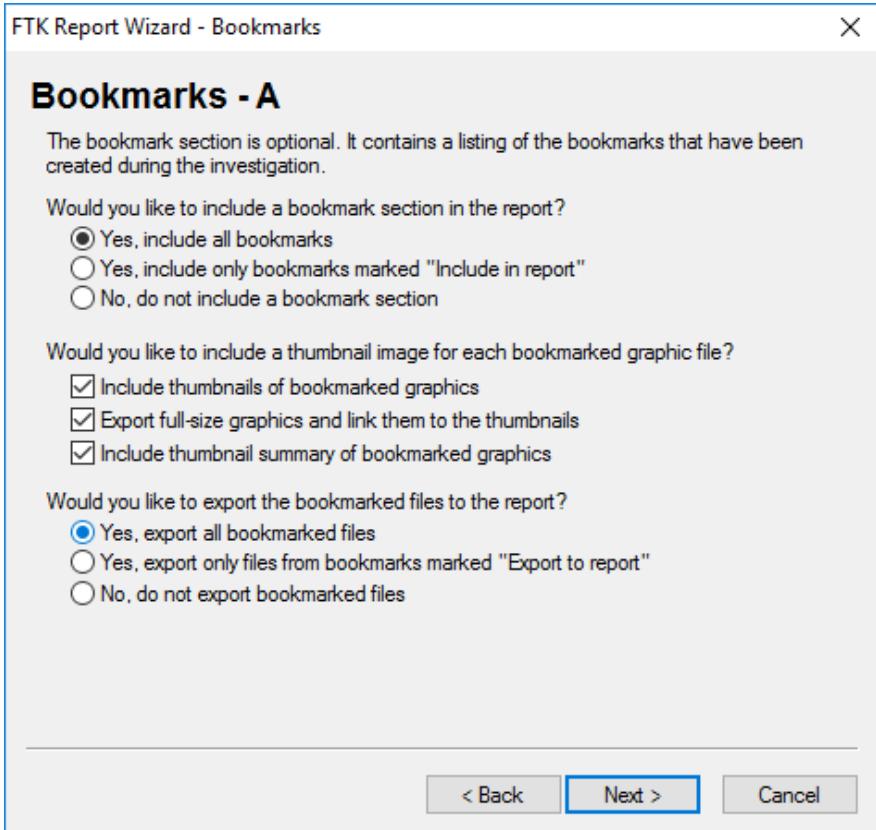
Address: churchgate

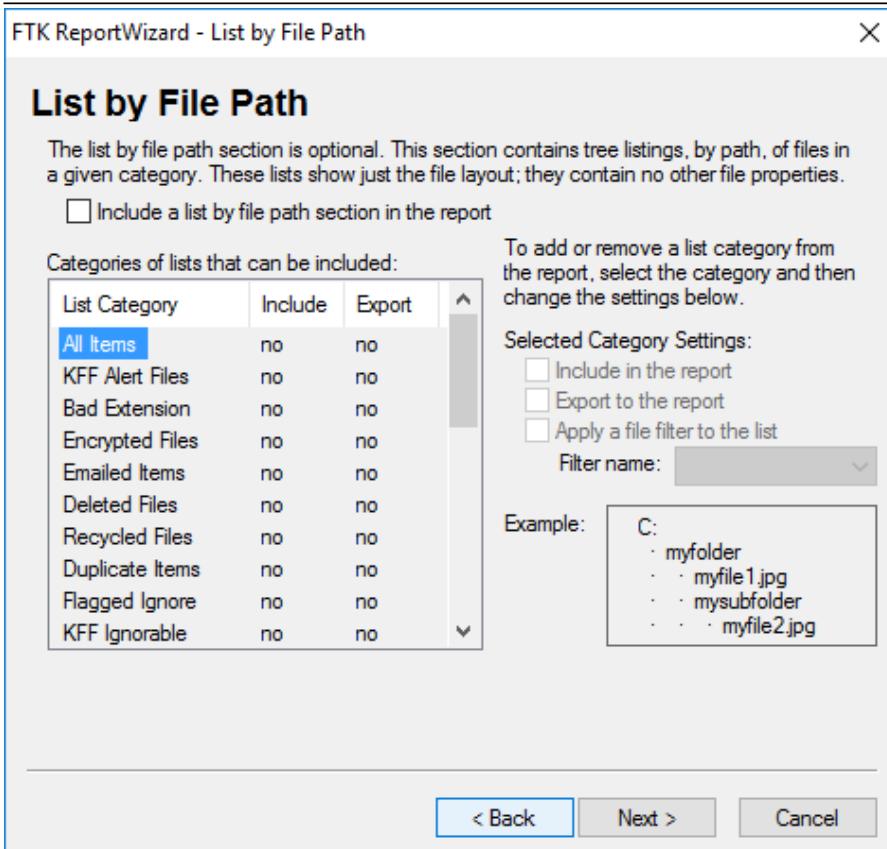
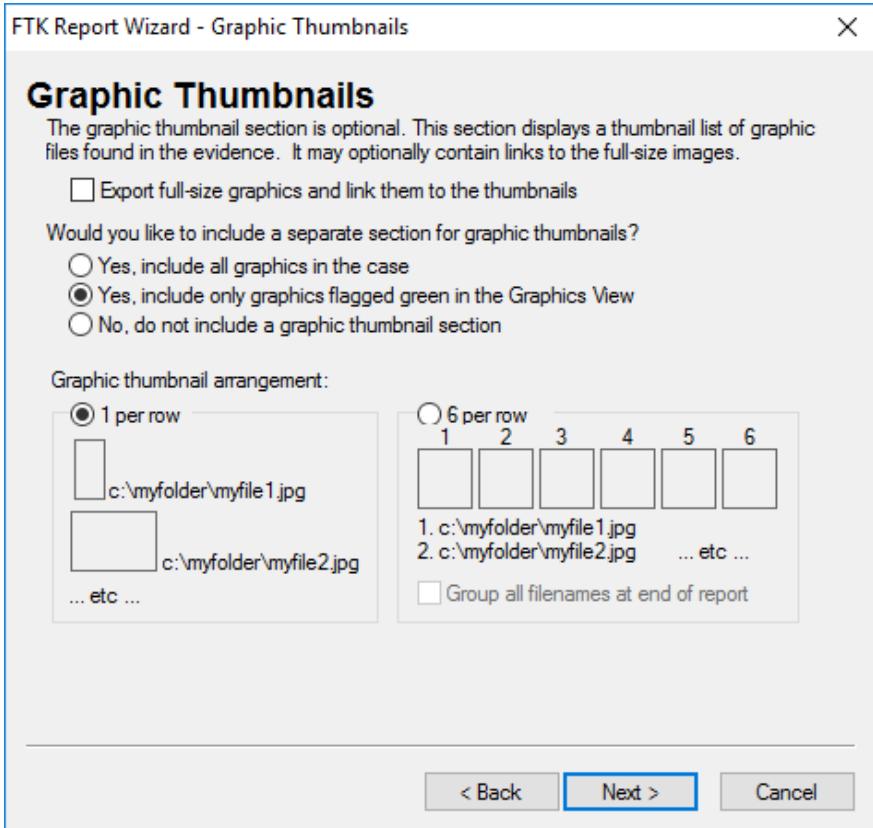
Phone: 1234567890      Fax:

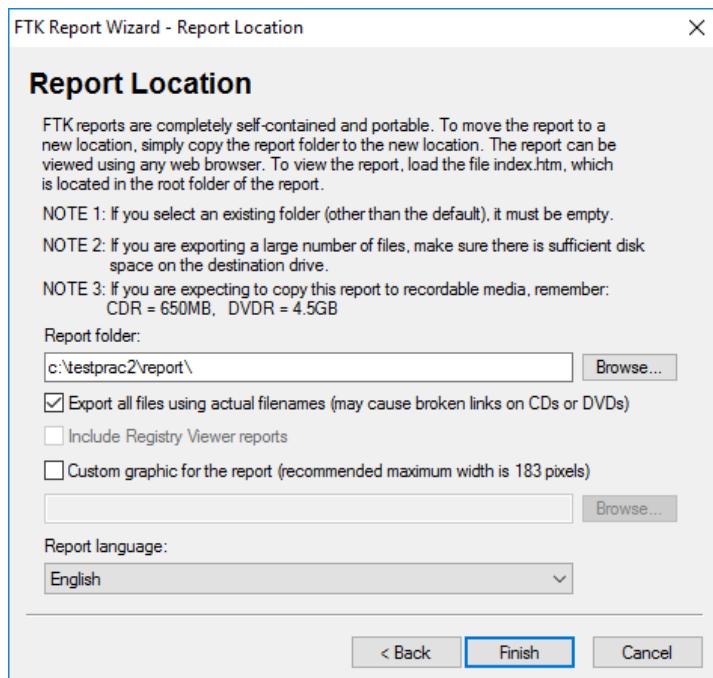
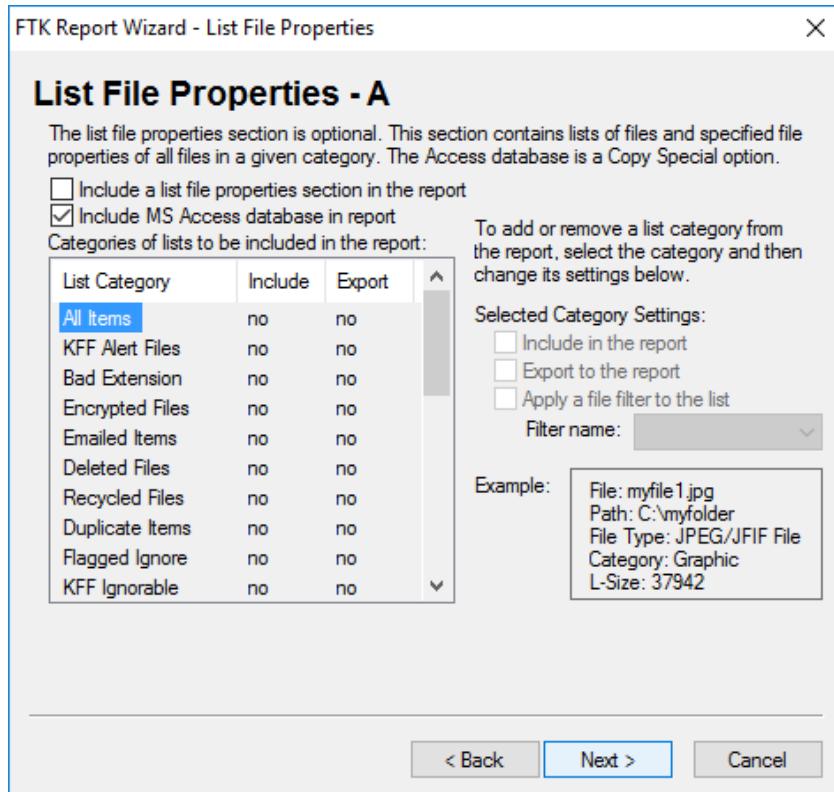
E-Mail: xyz@gmail.com

Comments:

Next > Cancel

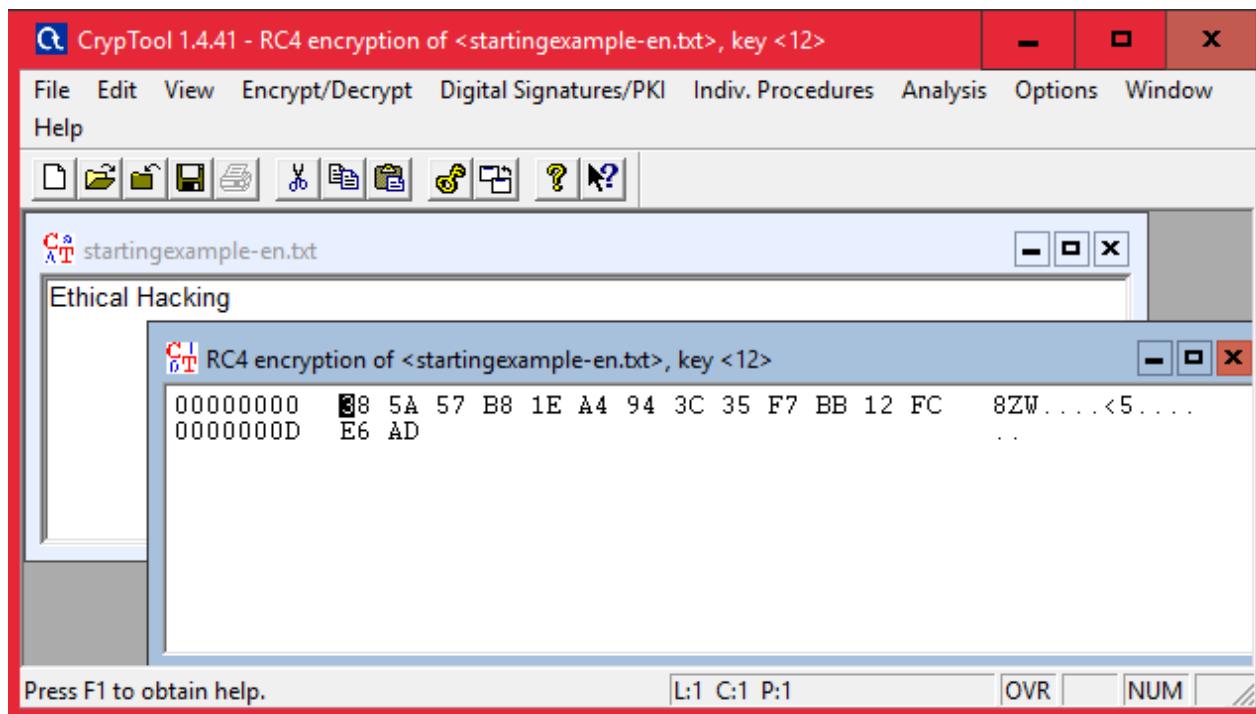
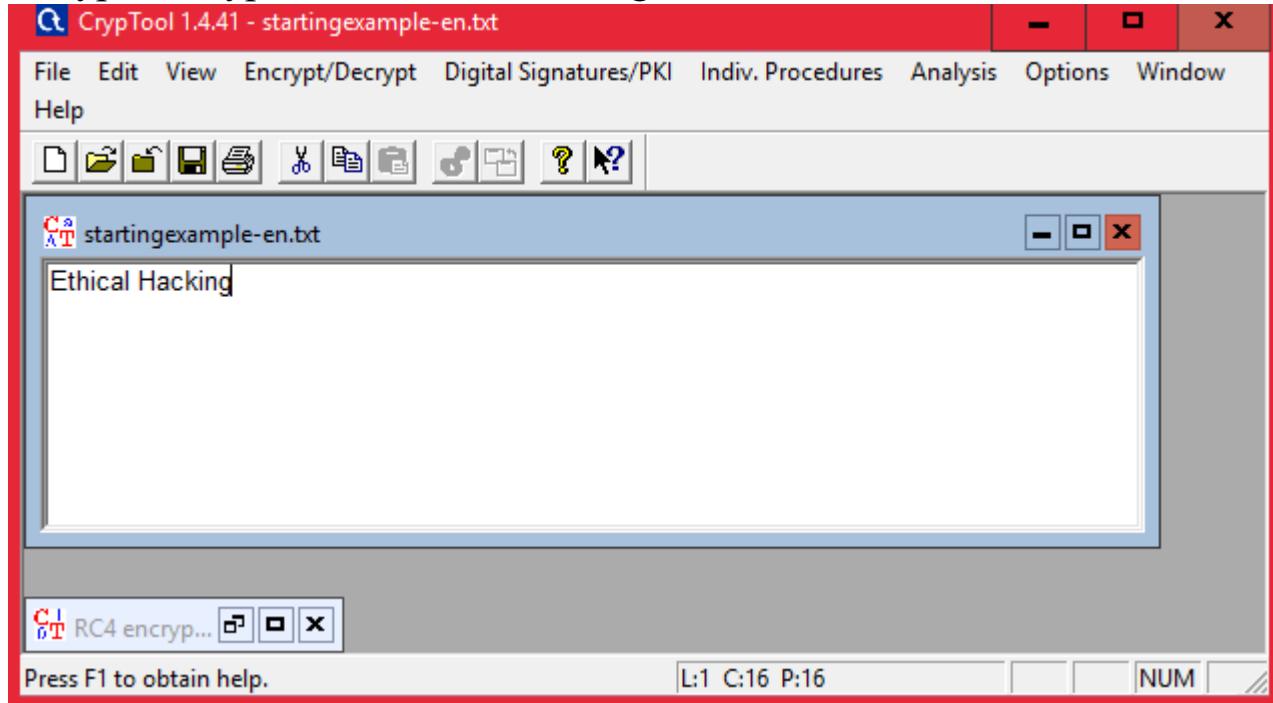




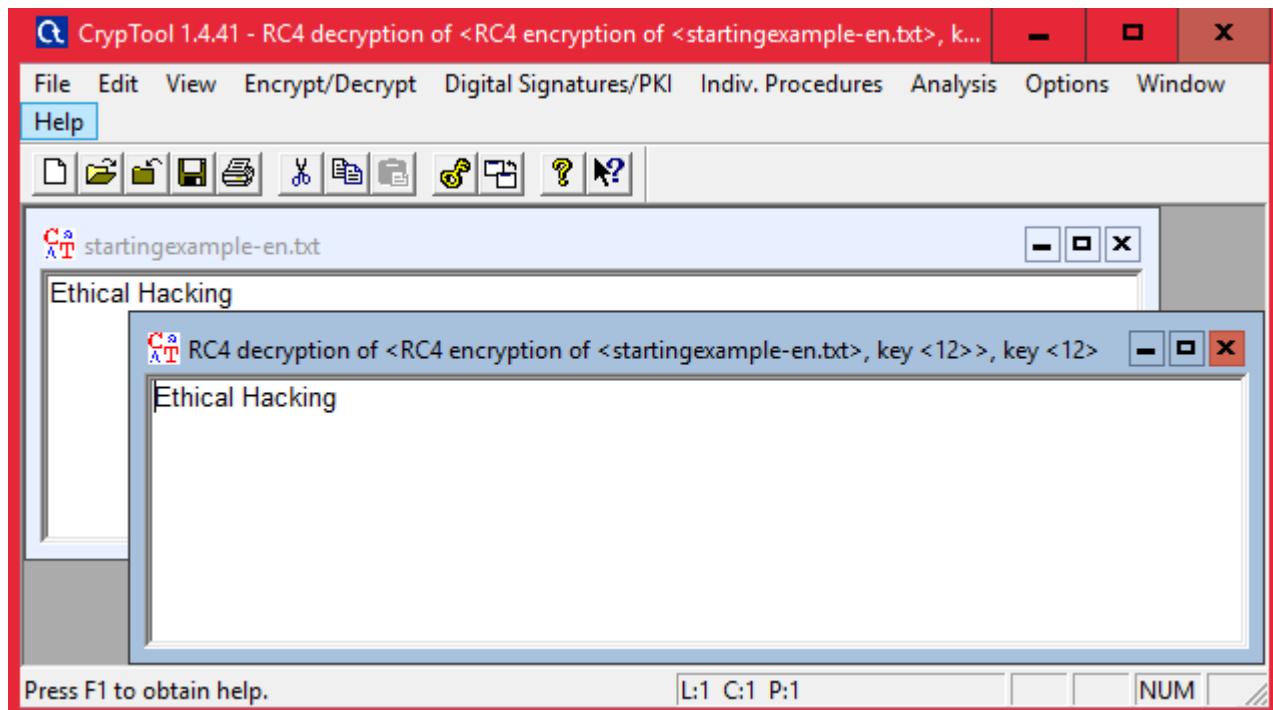


**PRACTICAL NO 04: Calculate the MD5 and SHA1 hashes**

Open tool – choose a file for encryption – Goto  
Encrypt/Decrypt Tab & choose the algorithm

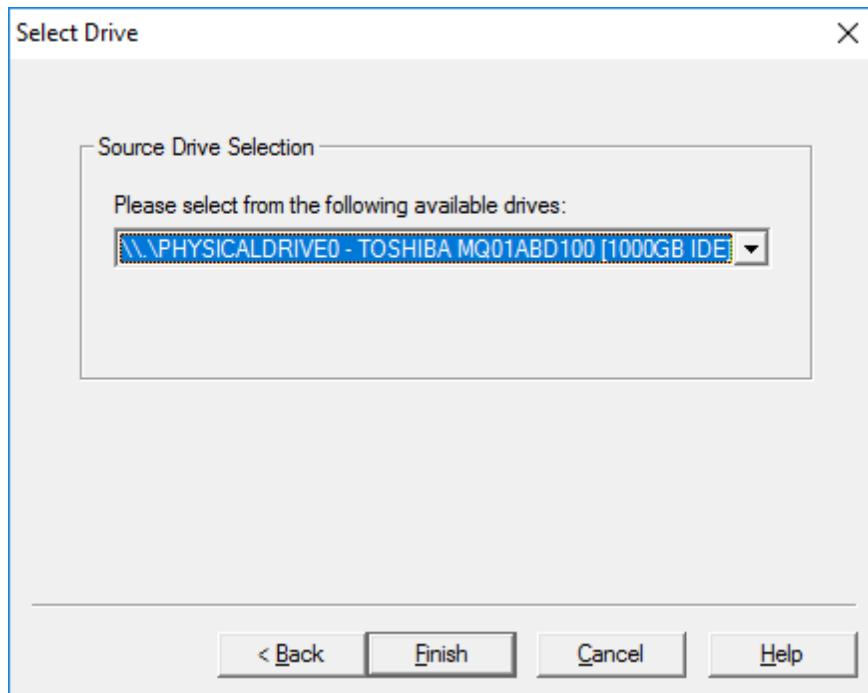
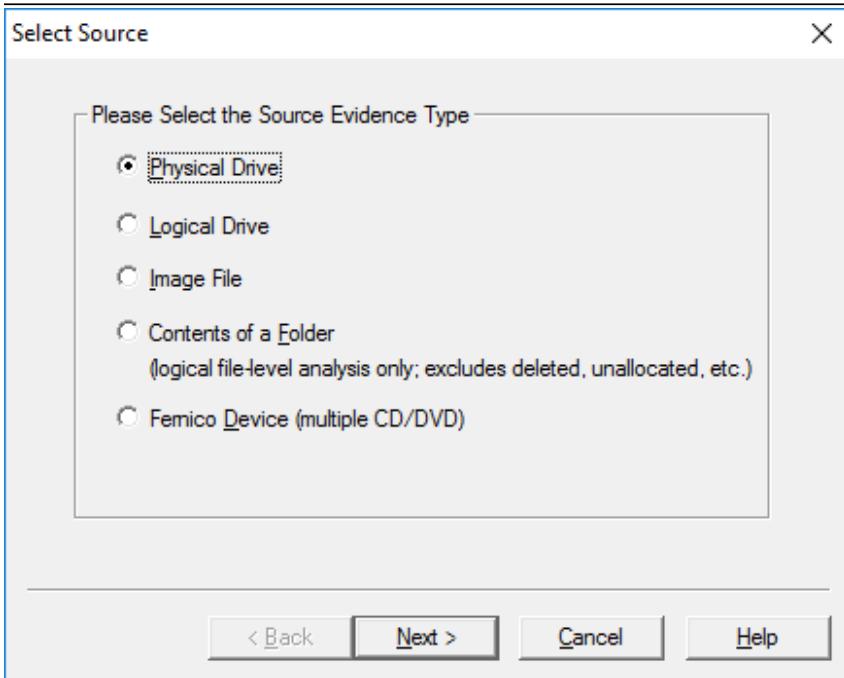


# Decryption



## PRACTICAL NO 05: Use tools to collect, preserve and reveal digital evidence without compromising systems and data

(Tool used: FTK Imager)



Create Image

Image Source  
\\.\PHYSICALDRIVE0

Starting Evidence Number: 1

Image Destination(s)

Add... Edit... Remove Add Overflow Location

Verify images after they are created    Precalculate Progress Statistics  
 Create directory listings of all files in the image after they are created

Start Cancel

Select Image Type

Please Select the Destination Image Type

Raw (dd)  
 SMART  
 E01  
 AFF

< Back Next > Cancel Help

Evidence Item Information

Case Number: 001

Evidence Number: XYZ

Unique Description: XYZ

Examiner: ABC

Notes:

< Back    Next >    Cancel    Help

Select Image Destination

Image Destination Folder  
D:\MSCIT PART-II SEM IV\prac files\ftk imager

Image Filename (Excluding Extension)  
newimage

Image Fragment Size (MB) 1500  
For Raw, E01, and AFF formats: 0 = do not fragment

Compression (0=None, 1=Fastest, ..., 9=Smallest) 0

Use AD Encryption

< Back    Finish    Cancel    Help

**Create Image**

**Image Source**  
\\.\PHYSICALDRIVE0

Starting Evidence Number: 1

**Image Destination(s)**  
D:\\MSCIT PART-II SEM IV\\prac files\\ftk imager\\newimage [raw/dd]

Add... Edit... Remove  
Add Overflow Location

Verify images after they are created    Precalculate Progress Statistics  
 Create directory listings of all files in the image after they are created

**Start** **Cancel**

**Creating Image...**

Image Source: \\.\PHYSICALDRIVE1

Destination: D:\\MSCIT PART-II SEM IV\\prac files\\ftk imager\\newimage

Status: Creating image...

Progress

Elapsed time: 0:00:19  
Estimated time left:

**Cancel**

**Verifying [17%]**

Source Drive/Image: newimage.001

Progress

331.44 of 1909.00 MB verified (82.859 MB/sec)

Elapsed time: 0:00:04  
Estimated time left: 0:00:19

**Cancel**

Drive/Image Verify Results	
<b>Name</b>	
Name	newimage.001
Sector count	3909632
<b>MD5 Hash</b>	
Computed hash	2c30f6973d0ed82e27d7b514291cd8c5
Report Hash	2c30f6973d0ed82e27d7b514291cd8c5
Verify result	Match
<b>SHA1 Hash</b>	
Computed hash	e6076cef8db2b39517c5609da1e4118d2l
Report Hash	e6076cef8db2b39517c5609da1e4118d2l
Verify result	Match
<b>Bad Sector List</b>	
Bad sector(s)	No bad sectors found

[Close](#)

**Image Summary**

Sector Count: 3,909,632  
[Physical Drive Information]  
Drive Model: Kingston DT 101 II USB Device  
Drive Serial Number: 001D0F1E5867E9C077480652  
Drive Interface Type: USB  
Removable drive: True  
Source data size: 1909 MB  
Sector count: 3909632  
[Computed Hashes]  
MD5 checksum: 2c30f6973d0ed82e27d7b514291cd8c5  
SHA1 checksum: e6076cef8db2b39517c5609da1e4118d2b36ef01

Image Information:  
Acquisition started: Mon Mar 20 15:24:47 2017  
Acquisition finished: Mon Mar 20 15:26:16 2017  
Segment list:  
D:\MSCIT PART-II SEM IV\prac files\ftk imager\newimage.001  
D:\MSCIT PART-II SEM IV\prac files\ftk imager\newimage.002

Image Verification Results:  
Verification started: Mon Mar 20 15:26:17 2017  
Verification finished: Mon Mar 20 15:26:28 2017  
MD5 checksum: 2c30f6973d0ed82e27d7b514291cd8c5 : verified  
SHA1 checksum: e6076cef8db2b39517c5609da1e4118d2b36ef01 : ver

[OK](#)

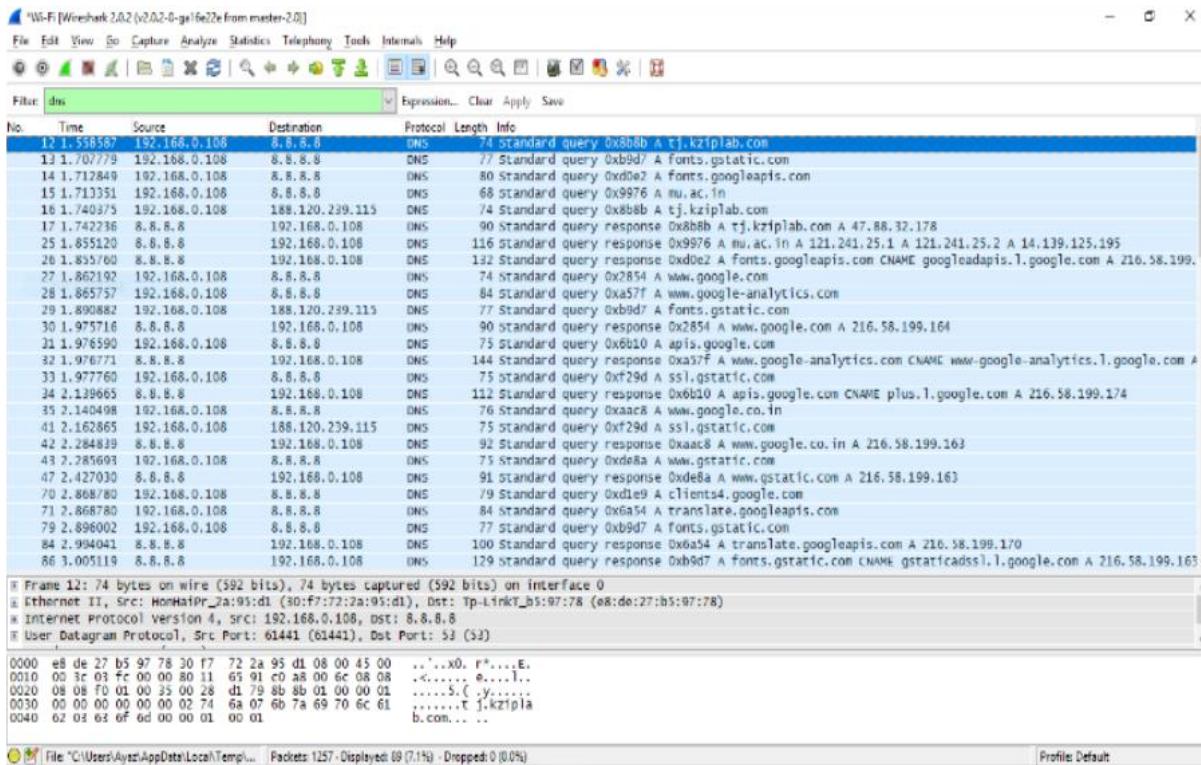
## PRACTICAL N0:06

### Acquire web pages for forensic investigation. (Wireshark) or Use traffic capturing and analyzing tool. (Wireshark) Using filters and using test login page.

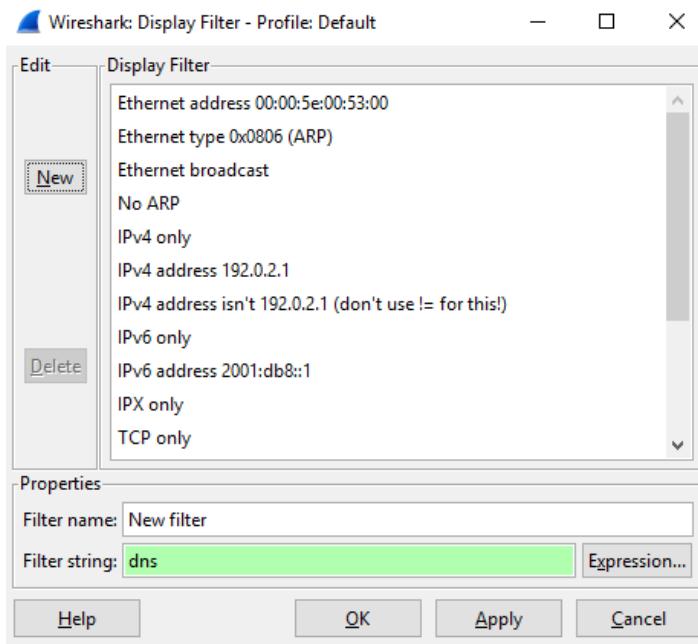
**Description:** Wireshark is a network packet analyser that intercepts, captures and logs information about packets passing through a network interface. This is useful for analysing network problems, detecting network intrusions, network misuse, and other security problems, monitor usage and gather statistics

**Filtering Packets:** If you're trying to inspect something specific, such as the traffic a program sends when phoning home, it helps to close down all other applications using the network so you can narrow down the traffic. Still, you'll likely have a large number of packets to sift through. That's where Wireshark's filters come in.

The most basic way to apply a filter is by typing it into the filter box at the top of the window and clicking Apply (or pressing Enter). For example, type "dns" and you'll see only DNS packets. When you start typing, Wireshark will help you autocomplete your filter.



You can also click the Analyse menu and select Display Filters to create a new filter.



Another interesting thing you can do is right-click a packet and select Follow TCP Stream.

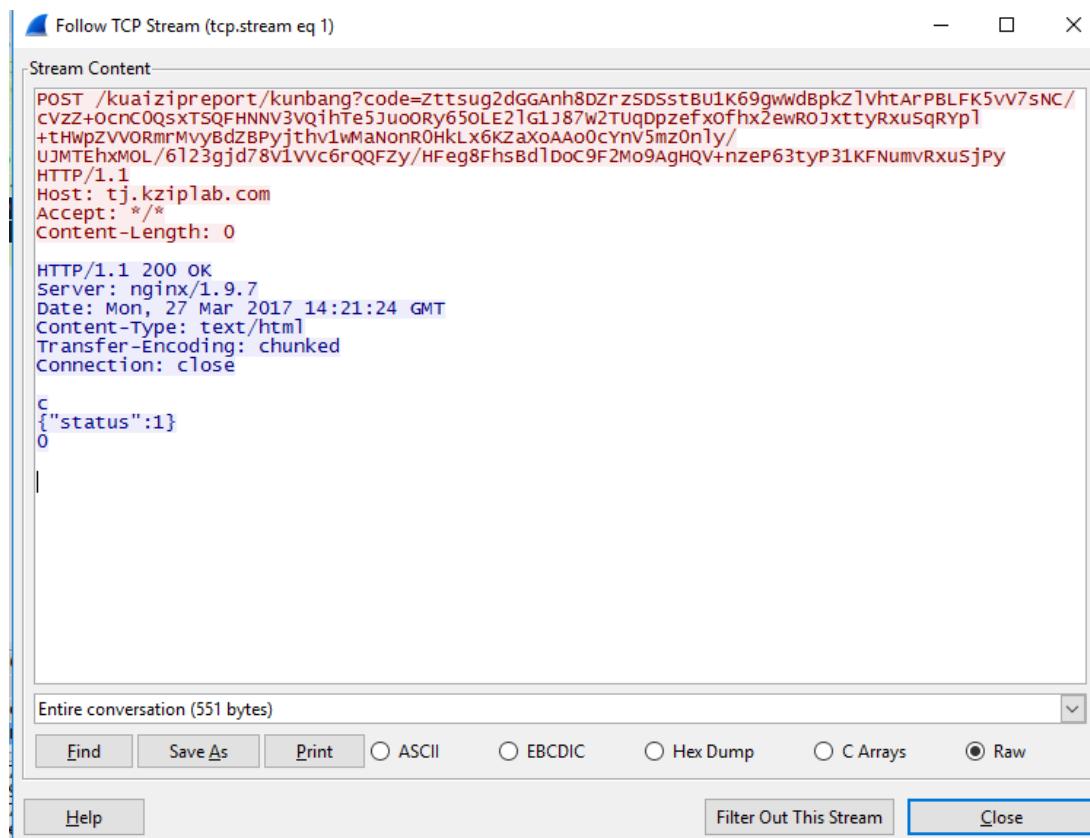
No.	Time	Source	Destination	Protocol	Length	Info
4	0.403408	192.168.0.108	121.241.25.2	TCP	54	1867 - 80 [FIN, ACK] Seq=1 Ack=1 Win=63 Len=0
21	1.768651	192.168.0.108	47.88.32.178	TCP	66	1881 - 80 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
36	2.150211	47.88.32.178	192.168.0.108	TCP	66	80 - 1881 [SYN, ACK] Seq=0 Ack=1 Win=14600 Len=0 MSS=1440 SACK_PERM=1 WS=128
37	2.150300	192.168.0.108	47.88.32.178	TCP	54	1881 - 80 [ACK] Seq=1 Ack=1 Win=16384 Len=0
38	2.150470	192.168.0.108	47.88.32.178	HTTP	434	POST /kuaizipreport/?kunbang?code=zttsg2dgGanh8Dzrzs0stBu1K69gwwd8pkz1vhtArPBLFK5vv7sNC/cVzz+0cnC
50	2.301274	47.88.32.178	192.168.0.108	TCP	54	80 - 1881 [ACK] Seq=1 Ack=381 Win=15744 Len=0
51	2.304020	47.88.32.178	192.168.0.108	HTTP	225	HTTP/1.1 200 OK (text/html)
52	2.304148	192.168.0.108	47.88.32.178	TCP	54	1881 - 80 [FIN, ACK] Seq=381 Ack=172 Win=16384 Len=0
53	2.310957	192.168.0.108	47.88.32.178	TCP	66	1882 - 80 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
54	2.754017	192.168.0.108	216.58.199.163	TCP	66	1883 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
55	2.754204	192.168.0.108	216.58.199.163	TCP	66	1884 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
56	2.754358	192.168.0.108	216.58.199.163	TCP	66	1885 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
57	2.754478	192.168.0.108	216.58.199.163	TCP	66	1886 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
58	2.754597	192.168.0.108	216.58.199.163	TCP	66	1887 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
59	2.754711	192.168.0.108	216.58.199.163	TCP	66	1888 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
60	2.754894	192.168.0.108	216.58.199.163	TCP	66	1889 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
61	2.755052	192.168.0.108	216.58.199.163	TCP	66	1890 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
62	2.755270	192.168.0.108	216.58.199.174	TCP	66	1891 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
63	2.755389	192.168.0.108	216.58.199.174	TCP	66	1892 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
67	2.850611	216.58.199.163	192.168.0.108	TCP	66	443 - 1884 [SYN, ACK] Seq=0 Ack=1 Win=2780 Len=0 MSS=1380 SACK_PERM=1 WS=128
68	2.850687	192.168.0.108	216.58.199.163	TCP	54	1884 - 443 [ACK] Seq=1 Ack=1 Win=16384 Len=0
69	2.851083	192.168.0.108	216.58.199.163	SSL	261	Client Hello
72	2.868893	192.168.0.108	216.58.197.78	TCP	66	1893 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1
73	2.877994	47.88.32.178	192.168.0.108	TCP	54	[TCP Previous segment not captured] 80 - 1881 [ACK] Seq=173 Ack=382 Win=15744 Len=0
81	2.937370	216.58.199.163	192.168.0.108	TCP	54	443 - 1884 [ACK] Seq=1 Ack=208 Win=43904 Len=0
85	2.994475	192.168.0.108	216.58.199.170	TCP	66	1894 - 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM=1

Frame 4: 54 bytes on wire (432 bits), 54 bytes captured (432 bits) on interface 0  
 Ethernet II, Src: HonhaiPr\_2:a95:0d (30:f7:72:2a:95:0d), Dst: Tp-Link:b5:97:78 (e8:de:27:b5:97:78)  
 Internet Protocol Version 4, Src: 192.168.0.108, Dst: 121.241.25.2  
 Transmission Control Protocol, Src Port: 1867 (1867), Dst Port: 80 (80), Seq: 1, Ack: 1, Len: 0

0000 e8 de 27 b5 97 78 30 f7 72 2a 95 d1 08 00 45 00 . . . x0. r%...!E.  
 0010 00 00 00 00 00 00 06 94 00 c0 00 6c 94 f4 .(a.0. . E....y.  
 0020 18 02 07 4b 00 50 99 bb c8 f4 ca 1a 96 43 50 11 ..K.P. ....CP.  
 0030 00 3f 90 e3 00 00 .?...

File: "C:\Users\Ayaz\AppData\Local\Temp\..." | Packets: 1257 - Displayed: 841 (66.9%) - Dropped: 0 (0.0%) | Profile: Default  
 Ask me anything | Windows | Google Chrome | Microsoft Edge | Internet Explorer | File | Edit | View | Go | Capture | Analyze | Statistics | Telephony | Tools | Internal | Help | 19:53 | ENG | 27-03-2017

You'll see the full conversation between the client and the server.



The screenshot shows a Wireshark window titled "Follow TCP Stream (tcp.stream eq 1)". The main pane displays a text-based conversation between a client and a server. The client's request is as follows:

```
POST /kuaizipreport/kunbang?code=zttsg2dGGAnh8DzrzsD5stBU1K69gwwdBpkz1vhtArPBLFK5vv7sNC/  
CVZz+0cnc0QsxtSQFHNNV3VQiTe5Ju0oRy65OLE21G1j87w2Tuqdpzefxofhx2ewROJxttyRxusqrYp1  
+tHwpZVVORMmrMvyBdz8Pyjthv1wMaNonR0HkLx6K2aXoAAo0cYnv5mz0nly/  
UJMTEhxMOL/6123gjd78v1Vvc6rQQFZy/HFeg8FhsBd1Doc9F2Mo9AgHQV+nzeP63tyP31KFNumvRxusjPy  
HTTP/1.1  
Host: tj.kziplab.com  
Accept: */*  
Content-Length: 0
```

The server's response is:

```
HTTP/1.1 200 OK  
Server: nginx/1.9.7  
Date: Mon, 27 Mar 2017 14:21:24 GMT  
Content-Type: text/html  
Transfer-Encoding: chunked  
Connection: close
```

The response body contains JSON data:

```
C  
{"status":1}  
0
```

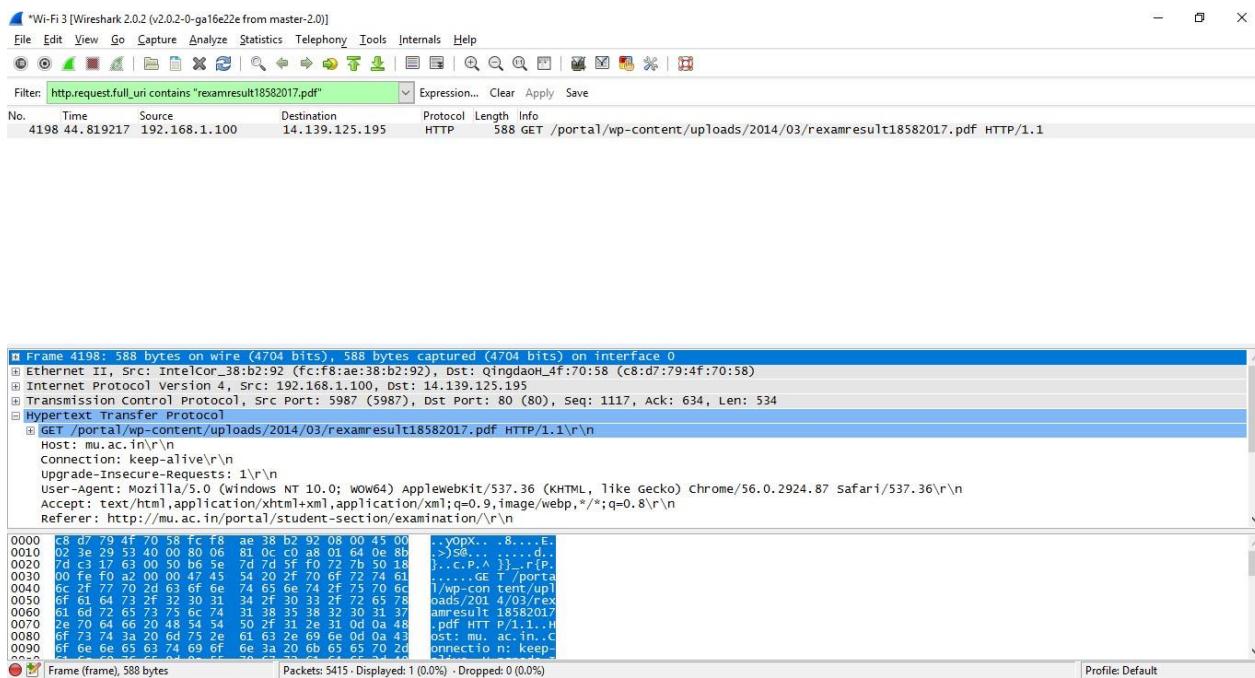
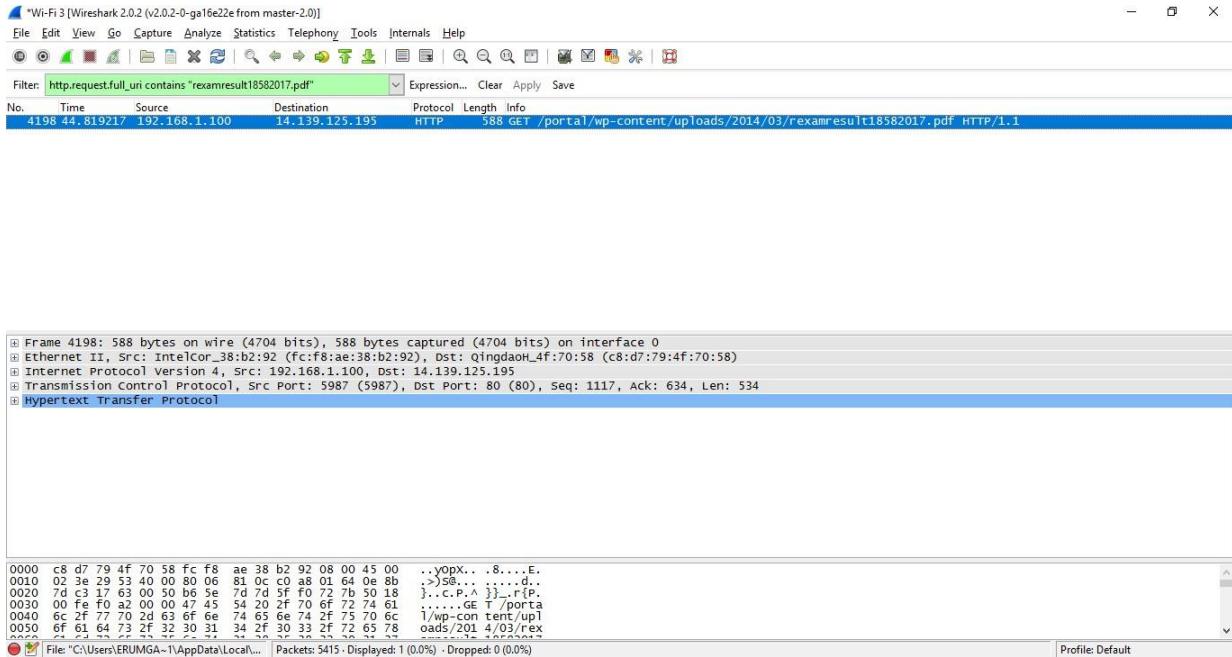
Below the main pane, a status bar indicates "Entire conversation (551 bytes)". At the bottom, there are buttons for "Find", "Save As", "Print", and mode selection (ASCII, EBCDIC, Hex Dump, C Arrays, Raw), with "Raw" selected. There are also "Help", "Filter Out This Stream", and "Close" buttons.

**Close the window and you'll find a filter has been applied automatically —Wireshark is showing you the packets that make up the conversation.**

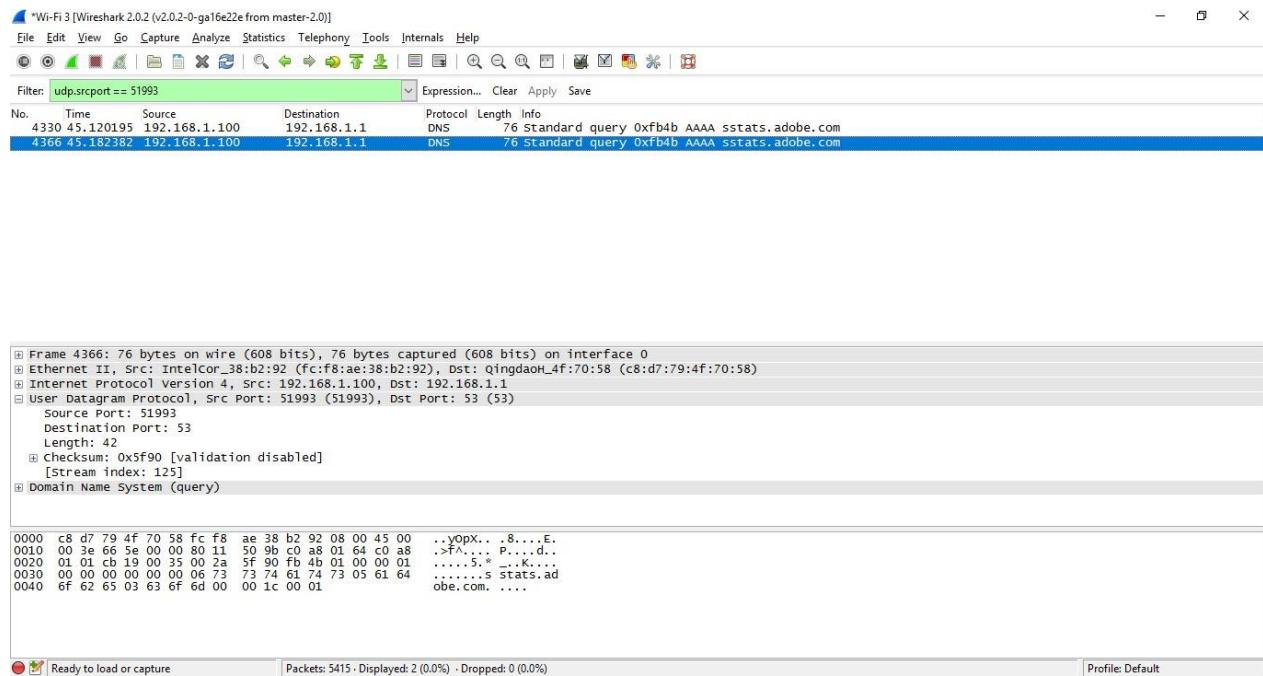
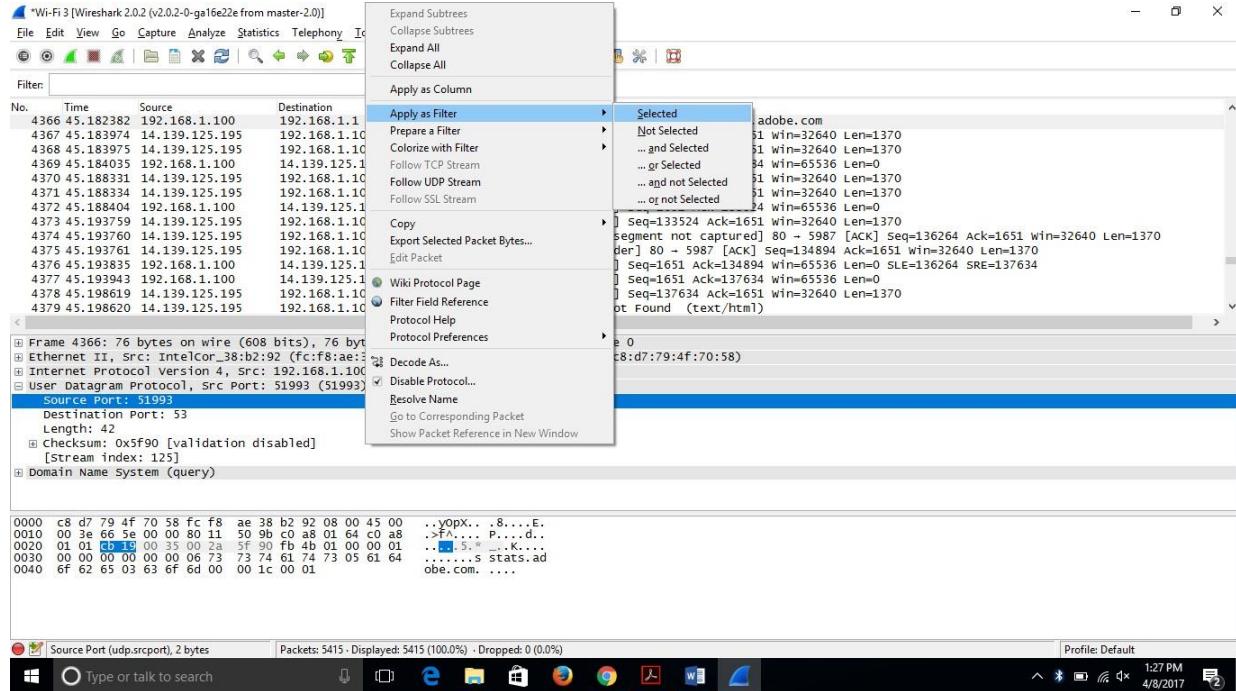
## USING TRAFFIC CAPTURING AND ANALYSIS TOOLS

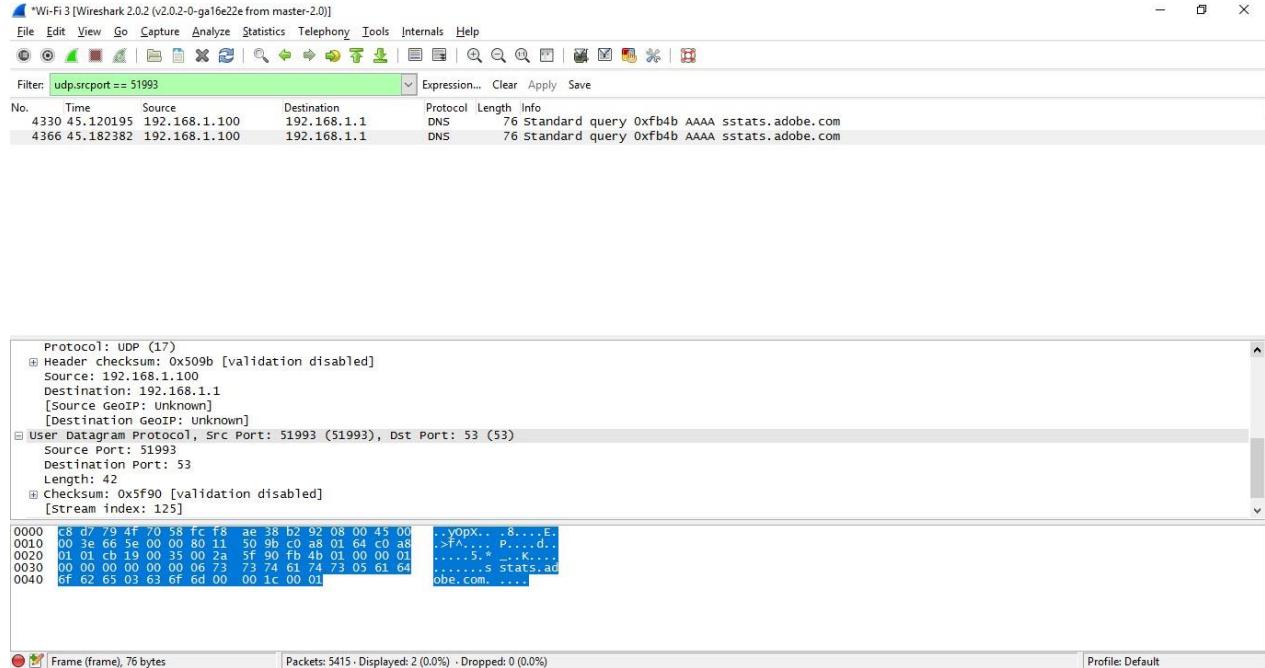
The Wireshark interface displays the following information:

- Panels:** Expression, Clear, Apply, Save.
- Protocol:** HTTP.
- Length:** 588 bytes on wire (4704 bits), 588 bytes captured (4704 bits) on interface 0.
- Source:** Ethernet II, Src: IntelCor\_38:b2:92 (fc:fe:ae:38:b2:92), Dst: Qingdao\_M4f:70:58 (c8:d7:79:4f:70:58).
- Destination:** 192.168.1.100.
- Protocol:** HTTP / portal/wp-content/uploads/2014/03/rexamresult18582017.pdf HTTP/1.1.
- HTTP Headers:**
  - Host: mu.ac.in
  - Connection: keep-alive
  - Upgrade-Insecure-Requests: 1
  - User-Agent: Mozilla/5.0 (Windows NT 10.0; wow64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/56.0.2924.87 Safari/537.36
  - Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,\*/\*;q=0.8
  - Referer: http://mu.ac.in/portal/student-section/examination/
- HTTP Body:** The body of the GET request contains the file "rexamresult18582017.pdf".

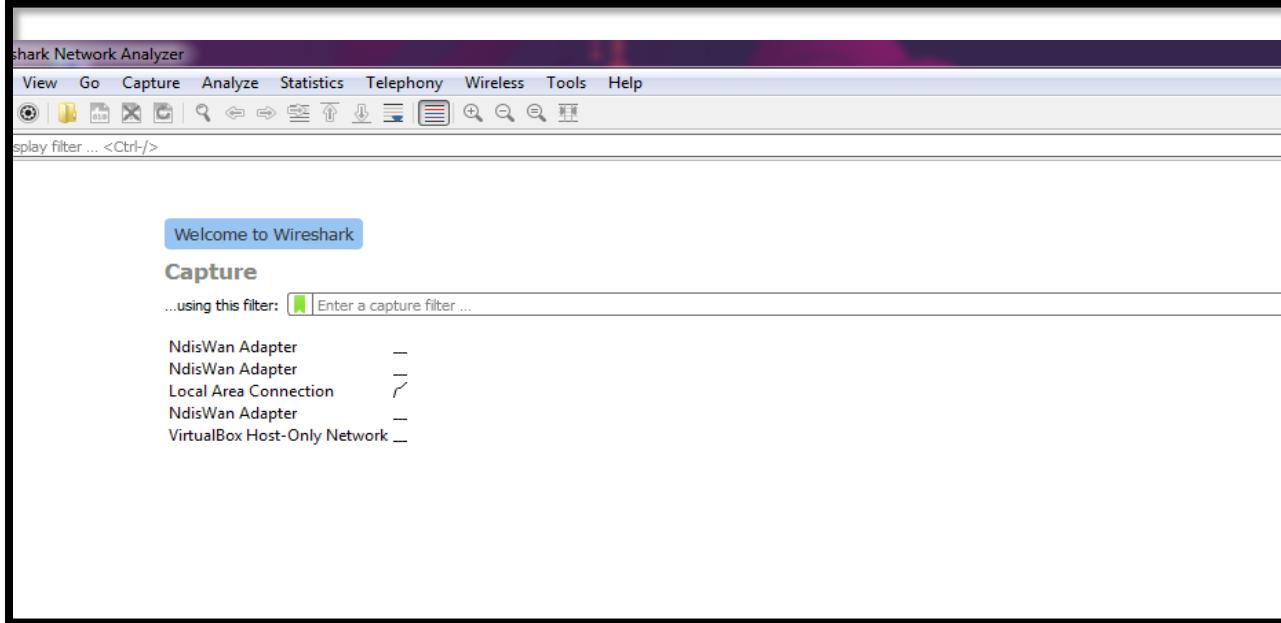


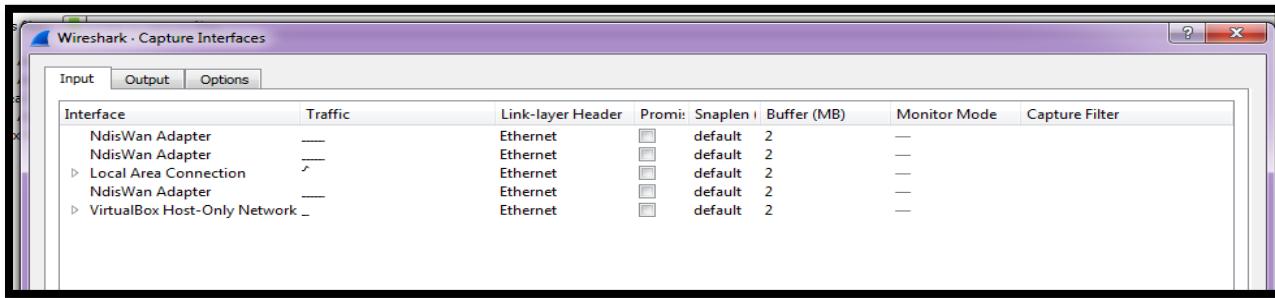
You can also create filters from here —just right-click one of the details and use the Apply as Filter submenu to create a filter based on it.





## Use of wire shark to scan and check the packet information of following protocols





Capturing from 5 interfaces						
No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.0.167	103.232.175.230	TCP	66	55512+445 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=4 SACK_PERM=1
2	0.011612	fe80::c0d7:81fb:26:__	ff02::1:3	LLMNR	85	Standard query 0x4503 A Mac01
3	0.011613	192.168.0.168	224.0.0.252	LLMNR	65	Standard query 0x4503 A Mac01
4	0.015742	192.168.0.167	193.63.196.234	TCP	66	55538+445 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=4 SACK_PERM=1
5	0.080449	192.168.0.163	239.255.255.250	SSDP	217	M-SEARCH * HTTP/1.1
6	0.107784	fe80::f9b6:8a66:9f2__	ff02::1:3	LLMNR	84	Standard query 0x7d68 A wpad
7	0.107785	192.168.0.163	224.0.0.252	LLMNR	64	Standard query 0x7d68 A wpad
8	0.113461	fe80::f9b6:8a66:9f2__	ff02::1:3	LLMNR	84	Standard query 0x1002 A wpad
9	0.113462	192.168.0.163	224.0.0.252	LLMNR	64	Standard query 0x1002 A wpad
10	0.120201	fe80::c0d7:81fb:26:__	ff02::1:3	LLMNR	85	Standard query 0x4503 A Mac01
11	0.120202	192.168.0.168	224.0.0.252	LLMNR	65	Standard query 0x4503 A Mac01
12	0.121913	fe80::f9b6:8a66:9f2__	ff02::1:3	LLMNR	84	Standard query 0x4e9f A wpad
13	0.121914	192.168.0.163	224.0.0.252	LLMNR	64	Standard query 0x4e9f A wpad
14	0.149151	192.168.1.250	239.255.255.250	SSDP	212	M-SEARCH * HTTP/1.1
15	0.207227	fe80::f9b6:8a66:9f2__	ff02::1:3	LLMNR	84	Standard query 0x7d68 A wpad
16	0.207228	192.168.0.163	224.0.0.252	LLMNR	64	Standard query 0x7d68 A wpad

Frame 1: 66 bytes on wire (528 bits), 66 bytes captured (528 bits) on interface 2  
Ethernet II, Src: G-ProCom\_c4:87:93 (00:23:24:c4:87:93), Dst: c0:06:c3:b4:df:1e (c0:06:c3:b4:df:1e)  
Internet Protocol Version 4, Src: 192.168.0.167, Dst: 103.232.175.230  
Transmission Control Protocol, Src Port: 55512, Dst Port: 445, Seq: 0, Len: 0

Acunetix Web Vulnerability Scanner - Test websites  
<http://testphp.vulnweb.com> > login

## login page - Home of Acunetix Art

If you are already registered please enter your **login** information below: ... Signup disabled.  
 Please use the **username test** and the password **test**. search art.

\*5 interfaces

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http

No.	Time	Source	Destination	Protocol	Length	Info
+ 14062	150.034086	192.168.0.167	44.228.249.3	HTTP	531	GET /login.php HTTP/1.1
+ 14103	150.294040	44.228.249.3	192.168.0.167	HTTP	1342	HTTP/1.1 200 OK (text/html)
+ 15852	169.595431	192.168.0.167	44.228.249.3	HTTP	699	POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)
+ 15875	169.858386	44.228.249.3	192.168.0.167	HTTP	1513	HTTP/1.1 200 OK (text/html)

Frame 15852: 699 bytes on wire (5592 bits), 699 bytes captured (5592 bits) on interface 2

Ethernet II, Src: G-ProCom\_c4:87:93 (00:23:24:c4:87:93), Dst: c0:06:c3:b4:df:1e (c0:06:c3:b4:df:1e)

Internet Protocol Version 4, Src: 192.168.0.167, Dst: 44.228.249.3

Transmission Control Protocol, Src Port: 56871, Dst Port: 80, Seq: 478, Ack: 2749, Len: 645

Hypertext Transfer Protocol

HTML Form URL Encoded: application/x-www-form-urlencoded

```
0000 c0 06 c3 b4 df 1e 00 23 24 c4 87 93 08 00 45 00 .....# $.....E.
0010 02 ad 72 33 40 00 80 06 9e e0 c0 a8 00 a7 2c e4 ..r3@... .....
0020 f9 03 de 27 00 50 83 b6 b5 78 b0 6d 02 cb 50 18 ...P.. .x.m..P.
0030 40 29 e1 7a 00 00 50 4f 53 54 20 2f 75 73 65 72 @).z..PO ST /user
0040 69 6e 66 6f 2e 70 68 70 20 48 54 54 50 2f 31 2e info.php HTTP/1.
0050 31 0d 0a 48 6f 73 74 3a 20 74 65 73 74 70 68 70 1..Host: testphp
0060 2e 76 75 6c 6e 77 65 62 2e 63 6f 6d 0d 0a 43 6f .vulnweb .com..Co
0070 6e 6e 65 63 74 69 6f 6e 3a 26 6b 65 65 70 2d 61 nnection : keep-a
0080 6e 69 76 65 0d 0a 43 6f 6e 74 65 6e 74 2d 46 live..Content-Le
0090 6e 67 74 68 3a 20 32 30 0d 0a 43 61 63 68 65 2d ngth: 20 ..Cache-
00a0 43 6f 6e 74 72 6f 6c 3a 26 6d 61 78 2d 61 67 65 Control: max-age
00b0 3d 30 0d 0a 55 70 67 72 61 64 65 2d 49 6e 73 65 =0..Upgr ade-Inse
00c0 63 75 72 65 2d 52 65 71 75 65 73 74 73 3a 20 31 cure-Req uests: 1
00d0 0d 0a 4f 72 69 67 69 6e 3a 20 68 74 74 70 3a 2f ..Origin : http:/
00e0 2f 74 65 73 74 70 68 70 2e 76 75 6c 6e 77 65 62 /testphp .vulnweb
00f0 2e 63 6f 6d 0d 0a 43 6f 6e 74 74 2d 54 79 .com..Content-Ty
0100 76 65 3a 20 61 70 70 6c 69 63 61 74 69 6f 62 pe: appl ication/
0110 78 2d 77 77 77 2d 66 6f 72 6d 2d 75 72 6c 65 6e x-www-fo rm-urlen
```

Hypertext Transfer Protocol

Packets: 17555 · Displayed: 4 (0.0%)

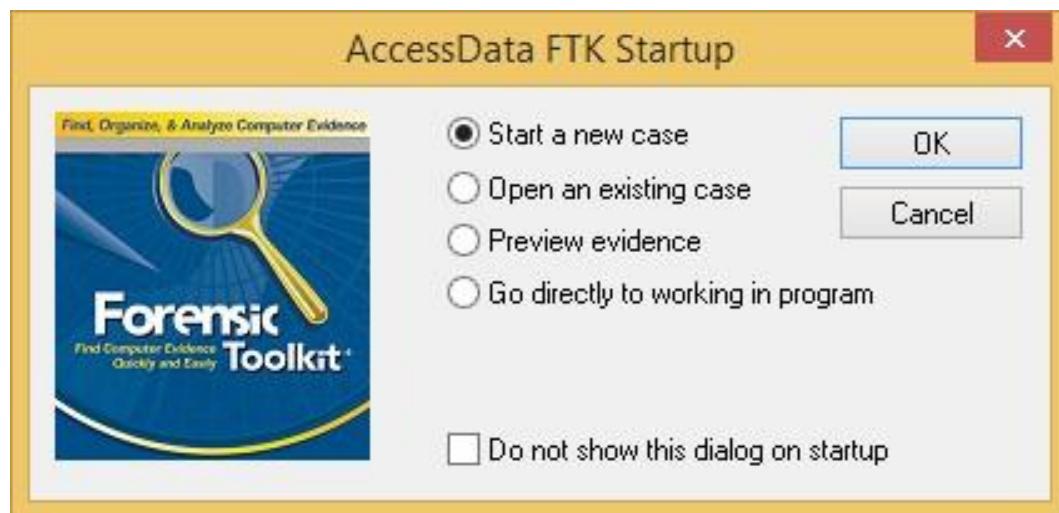
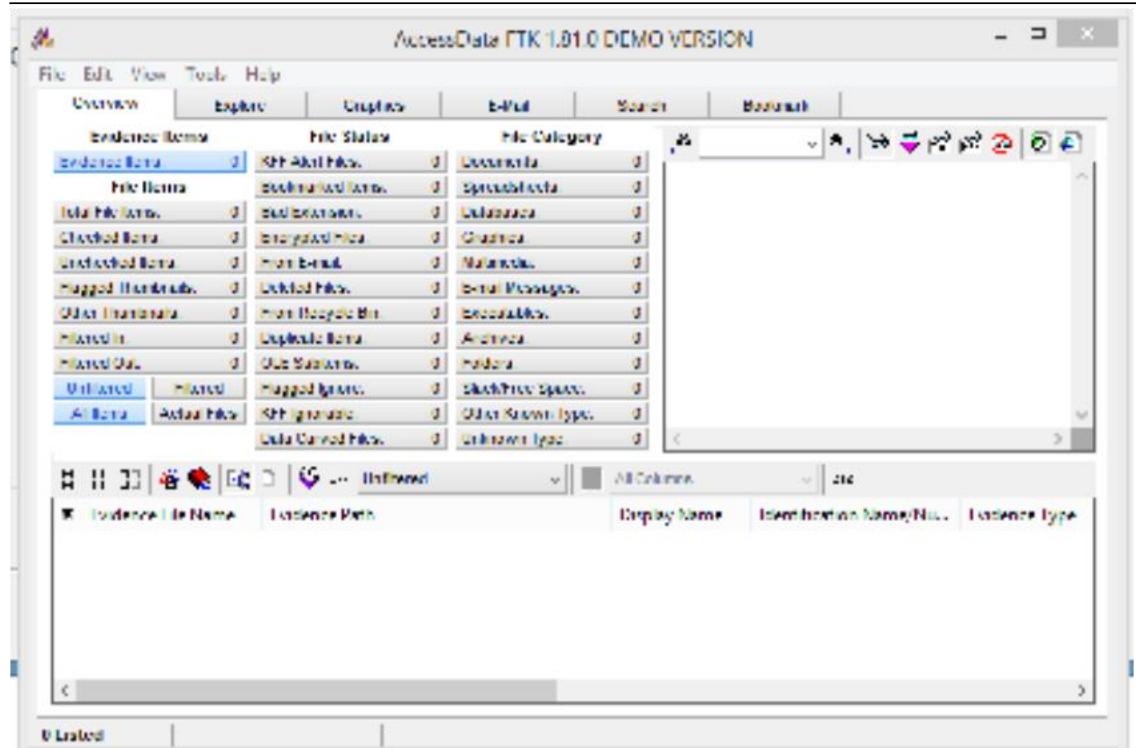
Profile: Default

Hypertext Transfer Protocol

# HTML Form URL Encoded: application/x-www-form-urlencoded

- ▷ Form item: "uname" = "test"
- ▷Form item: "pass" = "test"

## PRACTICAL NO 07: Use tools that scan a hard drive, locate deleted media and scan hard drive. (FTK)



New Case X

**AccessData's  
Forensic Toolkit®-FTK®  
The Complete Analysis Tool**

**Wizard for Creating a New Case**

Investigator Name:

Case Information

Case Number:

Case Name:

Case Path:

Case Folder:

Case Description:  
TESTPRAC2

FTK Report Wizard - Case Information X

**Forensic Examiner Information**

The following information will appear on the Case Information page of the report:

Agency/Company:

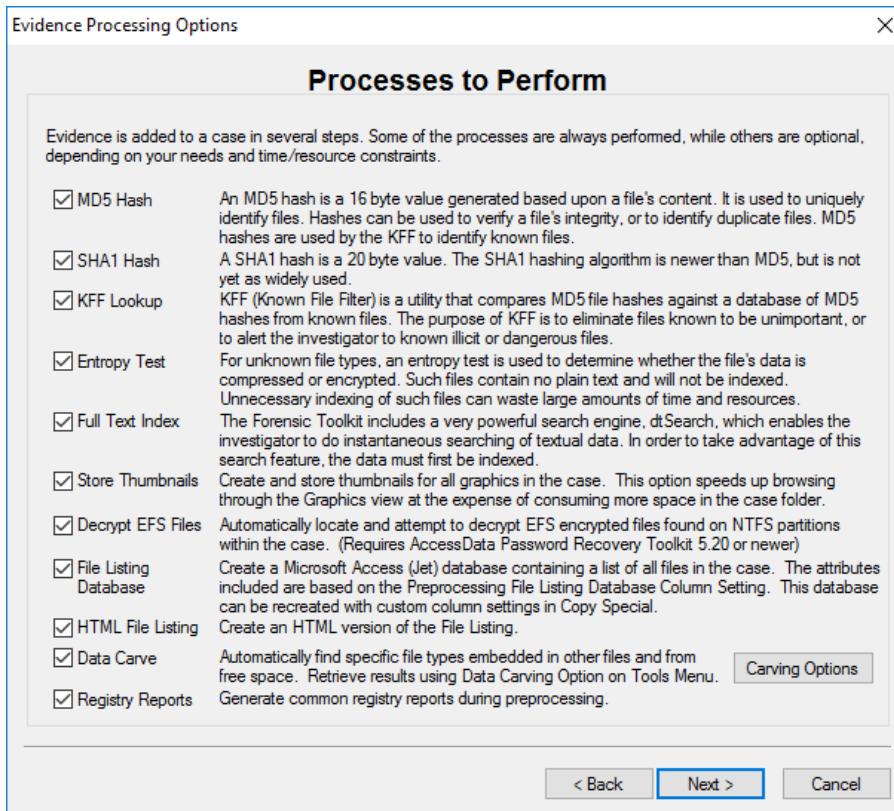
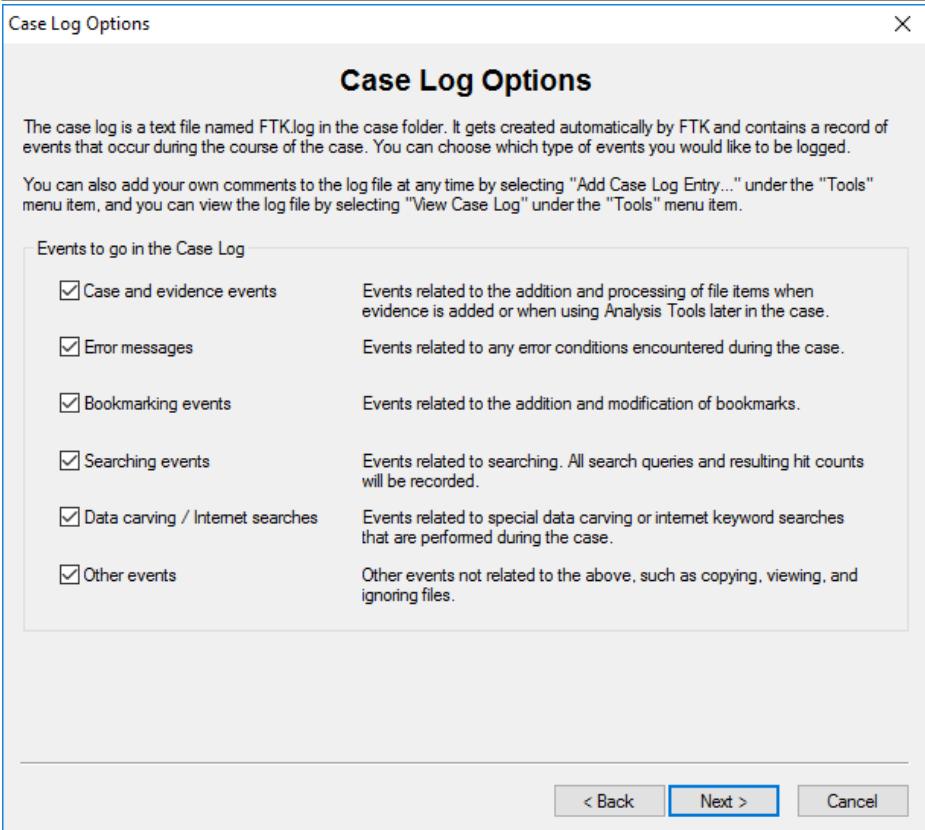
Examiner's Name:

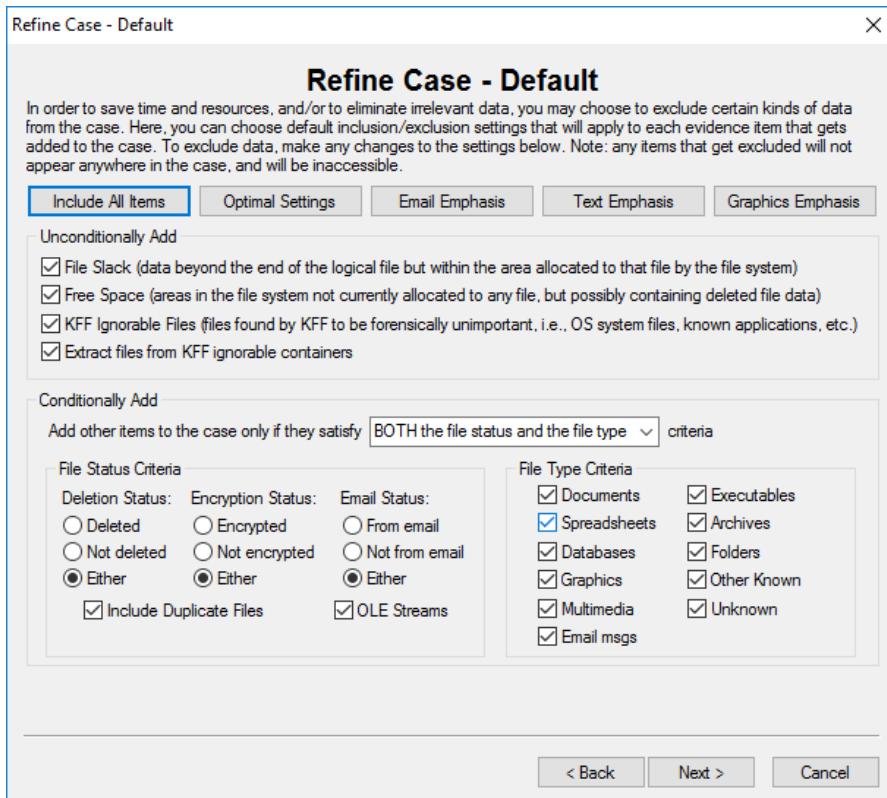
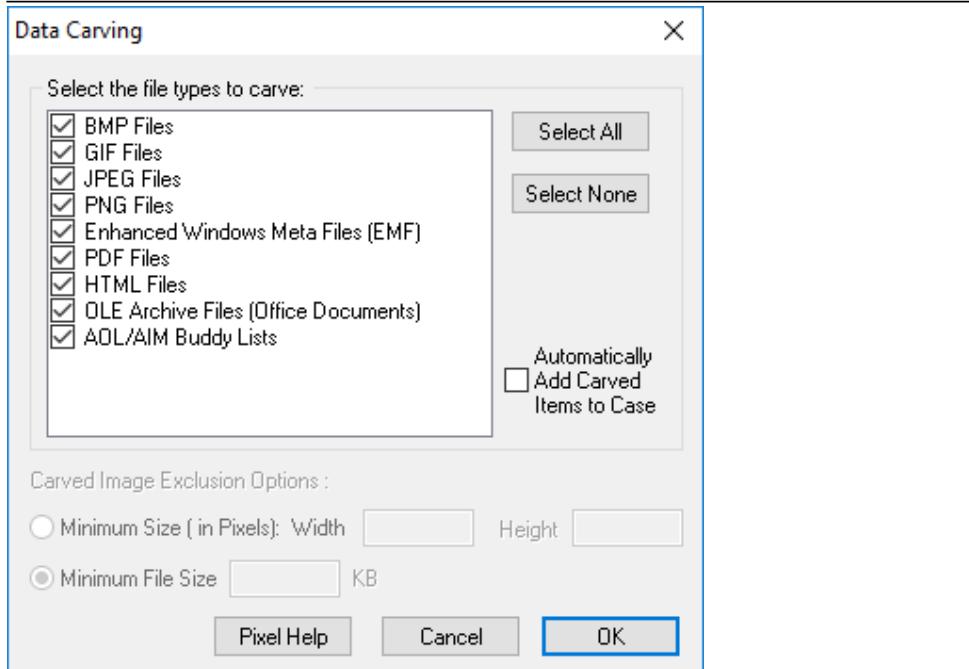
Address:

Phone:  Fax:

E-Mail:

Comments:





Refine Index - Default

## Refine Index - Default

In order to save time and resources, and/or to make searching more efficient, you may choose to exclude certain kinds of data from being indexed. Here, you can choose default settings that will apply to each evidence item that gets added to the case. To exclude items from being indexed, make any changes to the settings below. Note: any items that don't get indexed initially can be indexed later by clicking on "Analysis Tools" under the "Tools" menu item.

**Unconditionally Index**

File Slack (data beyond the end of the logical file but within the area allocated to that file by the file system)  
 Free Space (areas in the file system not currently allocated to any file, but possibly containing deleted file data)  
 KFF Ignorable Files (files found by KFF to be forensically unimportant, i.e., OS system files, known applications, etc.)

**Conditionally Index**

Index other items in the case only if they satisfy BOTH the file status and the file type criteria

<b>File Status Criteria</b>	<b>File Type Criteria</b>		
Deletion Status: <input type="radio"/> Deleted <input type="radio"/> Not deleted <input checked="" type="radio"/> Either	Encryption Status: <input type="radio"/> Encrypted <input type="radio"/> Not encrypted <input checked="" type="radio"/> Either	Email Status: <input type="radio"/> From email <input type="radio"/> Not from email <input checked="" type="radio"/> Either	<input checked="" type="checkbox"/> Documents <input checked="" type="checkbox"/> Spreadsheets <input checked="" type="checkbox"/> Databases <input checked="" type="checkbox"/> Graphics <input checked="" type="checkbox"/> OLE Streams <input checked="" type="checkbox"/> Executables <input checked="" type="checkbox"/> Archives <input checked="" type="checkbox"/> Folders <input checked="" type="checkbox"/> Other Known <input checked="" type="checkbox"/> Unknown <input checked="" type="checkbox"/> Email msgs
<input checked="" type="checkbox"/> Include Duplicate Files			

[< Back](#) [Next >](#) [Cancel](#)

Add Evidence to Case

## Add Evidence

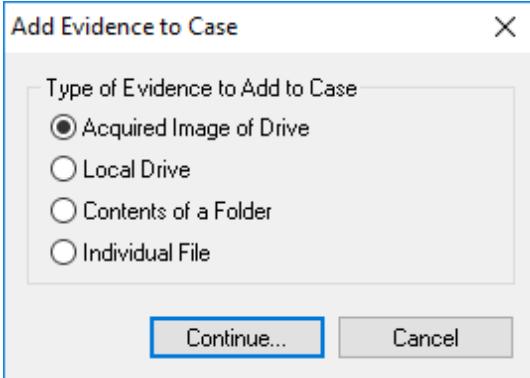
Any number of evidence items can be added to the case. There are several types of evidence items:

- Acquired image of drive: Several formats supported; can be an image of a logical or physical drive
- Local drive: Can be a logical or physical drive
- Folder: Adds all files in the specified folder, including contents of subfolders
- Individual File: Adds a single file. NOTE: Disk image files should be added as acquired images.

The default refinement options, set previously, can be overridden independently for each evidence item, and additional types of refinements can also be made. These refinements can include the exclusion of date/size ranges, as well as specific folders. To make these further refinements, highlight an evidence item in the list and press Refine Evidence - Advanced...

Add Evidence...	Edit Evidence...	Remove Evidence	Refine Evidence - Advanced...			
Display Name	Source	Name/Nu...	Type	Refined	Time Zone	Comment

[< Back](#) [Next >](#) [Cancel](#)



Evidence Information X

Evidence Location:  
F:\sem4\ComputerForensics\sample1.img

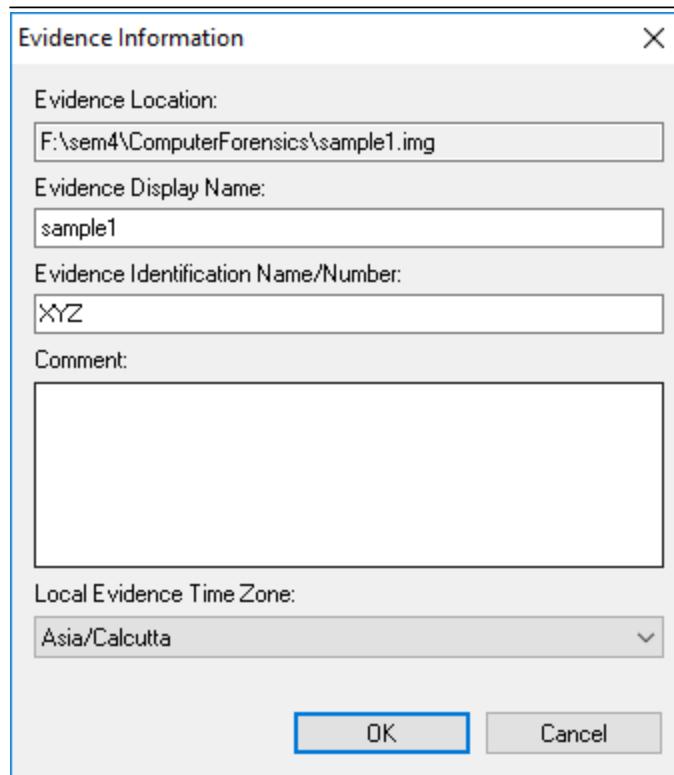
Evidence Display Name:  
sample1

Evidence Identification Name/Number:  
XYZ

Comment:

Local Evidence Time Zone:  
Asia/Calcutta

OK Cancel



Add Evidence to Case X

### Add Evidence

Any number of evidence items can be added to the case. There are several types of evidence items:

Acquired image of drive:	Several formats supported; can be an image of a logical or physical drive
Local drive:	Can be a logical or physical drive
Folder:	Adds all files in the specified folder, including contents of subfolders
Individual File:	Adds a single file. NOTE: Disk image files should be added as acquired images.

The default refinement options, set previously, can be overridden independently for each evidence item, and additional types of refinements can also be made. These refinements can include the exclusion of date/size ranges, as well as specific folders. To make these further refinements, highlight an evidence item in the list and press Refine Evidence - Advanced...

Display Name	Source	Name/Number	Type	Refined	Time Zone	Comment
sample1\KEEPPRYVAT-F...	F:\sem4\Com...	XYZ	FAT12	N	Asia/Calc...	

< Back Next > Cancel

Case Summary X

### New Case Setup is Now Complete

Case Settings

Case directory where the file database, index, and other case-specific files will be stored:

Number of Evidence Items: 1

Processes to be Performed:

File Extraction:	Yes	
File Identification:	Yes	Remember that although each of these processes adds to the initial processing time, they each play an important role in the investigation process.
MD5 Hash:	Yes	
SHA1 Hash:	Yes	
KFF Lookup:	Yes	Processes that are not performed initially can be initiated at a later point in the investigation except the HTML file listing and automated Registry Reports. Additional evidence can also be added later.
Entropy Test:	Yes	
Full Text Index:	Yes	
Store Thumbnails:	Yes	
Decrypt EFS Files:	Yes	
File Listing Database:	Yes	
File Listing HTML:	Yes	
Data Carving:	Yes	
Registry Reports:	Yes	

Press "Back" if you wish to review or change your settings  
 Press "Finish" to accept the current settings and start processing the evidence

< Back Finish Cancel

AccessData FTK 1.81.0 DEMO VERSION -- c:\testprac2\

File Edit View Tools Help

Overview Explore Graphics E-Mail Search Bookmark

Evidence Items		File Status		File Category	
Evidence Items:	1	KFF Alert Files:	0	Documents:	1
File Items		Bookmarked Items:		Spreadsheets:	
Total File Items:	19	Bad Extension:	1	Databases:	0
Checked Items:	0	Encrypted Files:	0	Graphics:	1
Unchecked Items:	19	From E-mail:	0	Multimedia:	0
Flagged Thumbnails:	0	Deleted Files:	1	E-mail Messages:	0
Other Thumbnails:	1	From Recycle Bin:	0	Executables:	0
Filtered In:	19	Duplicate Items:	2	Archives:	4
Filtered Out:	0	OLE Subitems:	10	Folders:	1
<input type="button" value="Unfiltered"/>	<input type="button" value="Filtered"/>	Flagged Ignore:	0	Slack/Free Space:	5
<input type="button" value="All Items"/>	<input type="button" value="Actual Files"/>	KFF Ignorable:	0	Other Known Type:	1
		Data Carved Files:	0	Unknown Type:	6

OFF Unfiltered  DTZ

Evidence File Name	Evidence Path	Display Name	Identification Name/Number	Evidence Type
sample1.img	F:\sem4\ComputerForensics	sample1\KEEPPRY...	XYZ	FAT12

1 Listed 0 Checked Total F:\sem4\ComputerForensics\sample1.img

AccessData FTK 1.81.0 DEMO VERSION -- c:\testprac2\

File Edit View Tools Help

Overview Explore Graphics E-Mail Search Bookmark

Evidence Items		File Status		File Category	
Evidence Items:	1	KFF Alert Files:	0	Documents:	1
File Items		Bookmarked Items:		Spreadsheets:	
Total File Items:	19	Bad Extension:	1	Databases:	0
Checked Items:	0	Encrypted Files:	0	Graphics:	1
Unchecked Items:	19	From E-mail:	0	Multimedia:	0
Flagged Thumbnails:	0	Deleted Files:	1	E-mail Messages:	0
Other Thumbnails:	1	From Recycle Bin:	0	Executables:	0
Filtered In:	19	Duplicate Items:	2	Archives:	4
Filtered Out:	0	OLE Subitems:	10	Folders:	1
<input type="button" value="Unfiltered"/>	<input type="button" value="Filtered"/>	Flagged Ignore:	0	Slack/Free Space:	5
<input type="button" value="All Items"/>	<input type="button" value="Actual Files"/>	KFF Ignorable:	0	Other Known Type:	1
		Data Carved Files:	0	Unknown Type:	6

OFF Unfiltered  DTZ

File Name	Full Path	Recycle Bin...	Ext	File Type	Category	Subject	Cr Date	Mod Date	Acc Date	L-Size	P-Size	Children
FileSpaces	sample1\KEEPPRY\VAT\FAT12\wics.xlsx>\Data...		xlsx	OLE Embedd...	Archive		10/7/2007 8:25:31 PM	10/7/2007 8:25:31 PM	10/7/2007 8:25:31 PM	3,584	13,312	
Primary	sample1\KEEPPRY\VAT\FAT12\wics.xlsx>\Data...		xlsx	OLE Stream	Unknown		N/A	N/A	N/A	208	13,312	
lodolist.txt	sample1\KEEPPRY\VAT\FAT12\lodolist.txt		txt	Plain Text D...	Document		10/7/2007 7:11:28 PM	10/6/2007 10:08:12 ...	10/7/2007 12:00:00 ...	137	512	
(Root Folder)	sample1\KEEPPRY\VAT\FAT12			Root Folder	Folder		N/A	N/A	N/A	7,168	7,168	
DataSpaceInfo	sample1\KEEPPRY\VAT\FAT12\wics.xlsx>\Data...		xlsx	OLE Embedd...	Archive		10/7/2007 8:25:31 PM	10/7/2007 8:25:31 PM	10/7/2007 8:25:31 PM	2,560	13,312	
DriveSpaceMap	sample1\KEEPPRY\VAT\FAT12\wics.xlsx>\Data...		xlsx	OLE Stream	Unknown		N/A	N/A	N/A	112	13,312	
DriveFreeSpace1	sample1\KEEPPRY\VAT\FAT12\DriveFreeSpace1			Drive Free S...	Slack/Free S...		N/A	N/A	N/A	1,311,232	26,214,400	
EncryptedPackage	sample1\KEEPPRY\VAT\FAT12\wics.xlsx>\Encry...		xlsx	OLE Stream	Unknown		N/A	N/A	N/A	9,016	13,312	
EncryptionInfo	sample1\KEEPPRY\VAT\FAT12\wics.xlsx>\Encry...		xlsx	OLE Stream	Unknown		N/A	N/A	N/A	248	13,312	
FAT1	sample1\KEEPPRY\VAT\FAT12\FAT1			File Allocatio...	Slack/Free S...		N/A	N/A	N/A	4,608	4,608	
FAT12	sample1\KEEPPRY\VAT\FAT12\FAT12			File Allocatio...	Slack/Free S...		N/A	N/A	N/A	4,608	4,608	
FileSlack	sample1\KEEPPRY\VAT\FAT12\lodolist.txt>\File...		cfg	File Slack	Slack/Free S...		N/A	N/A	N/A	375	512	
StrongEncryptionDataSpace	sample1\KEEPPRY\VAT\FAT12\wics.xlsx>\Data...		xlsx	OLE Stream	Unknown		N/A	N/A	N/A	64	13,312	
StrongEncryptionTransform	sample1\KEEPPRY\VAT\FAT12\wics.xlsx>\Data...		xlsx	OLE Embedd...	Archive		10/7/2007 8:25:31 PM	10/7/2007 8:25:31 PM	10/7/2007 8:25:31 PM	2,560	13,312	
voja.cfg	sample1\KEEPPRY\VAT\FAT12\voja.cfg		cfg	JPEG/JIF File	Graphic		10/7/2007 7:11:12 PM	9/26/2005 12:15:32 ...	10/7/2007 12:00:00 ...	132,706	133,120	
VBR	sample1\KEEPPRY\VAT\FAT12\VBR			OLE Embedd...	Archive		10/7/2007 8:25:31 PM	10/7/2007 8:25:31 PM	10/7/2007 8:25:31 PM	2,560	13,312	
TransformInfo	sample1\KEEPPRY\VAT\FAT12\wics.xlsx>\Data...		xlsx	Volume Boot...	Slack/Free S...		N/A	N/A	N/A	512	512	
Version	sample1\KEEPPRY\VAT\FAT12\wics.xlsx>\Data...		xlsx	OLE Stream	Unknown		N/A	N/A	N/A	76	13,312	
vics.xlsx	sample1\KEEPPRY\VAT\FAT12\wics.xlsx		xlsx	Encrypted U...	Other		10/7/2007 7:11:02 PM	10/7/2007 10:55:34 ...	10/7/2007 12:00:00 ...	13,112	13,312	

19 Listed 0 Checked Total 0 Highlighted

Create New Bookmark

Bookmark name: peter

Bookmark comment:

Apply bookmark to:

All highlighted items (selected)

All checked items

All currently listed items

File Name: index\_flat[1].htm

File Path: precious\Part\_1\The Precious-N...

Remember file position/selection

Report options:

Include in report    Export files

Include parent of email attachments?

OK Cancel

FTK Report Wizard - Case Information

## Case Information

The following information will appear on the Case Information page of the report:

Include Investigator Information in report

Agency/Company: College

Investigator's Name: XYZ

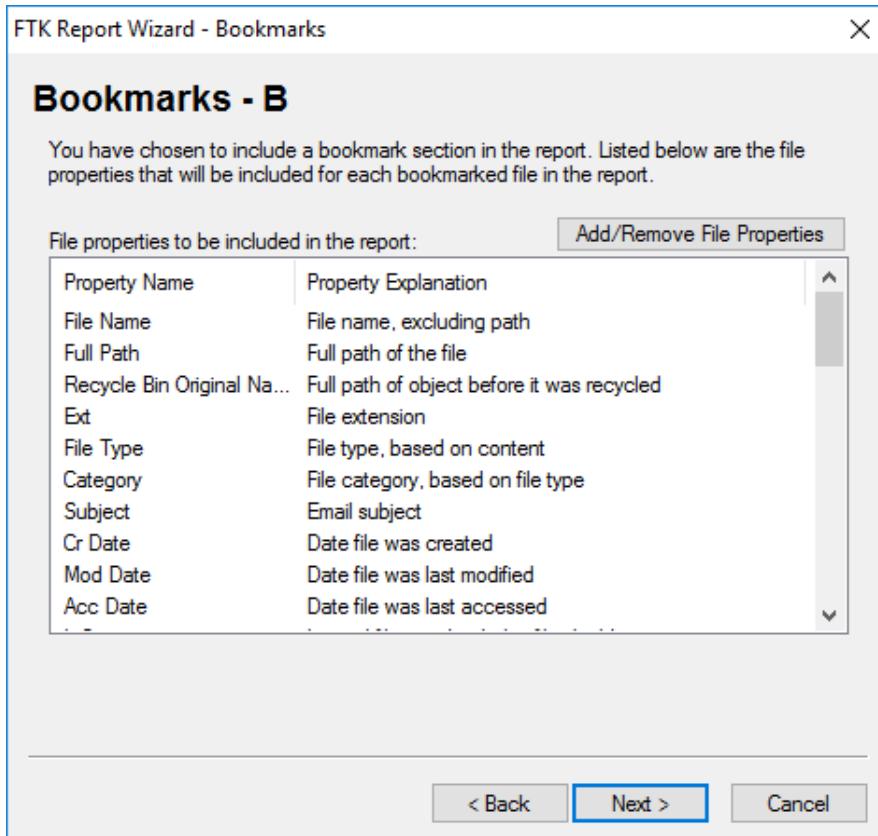
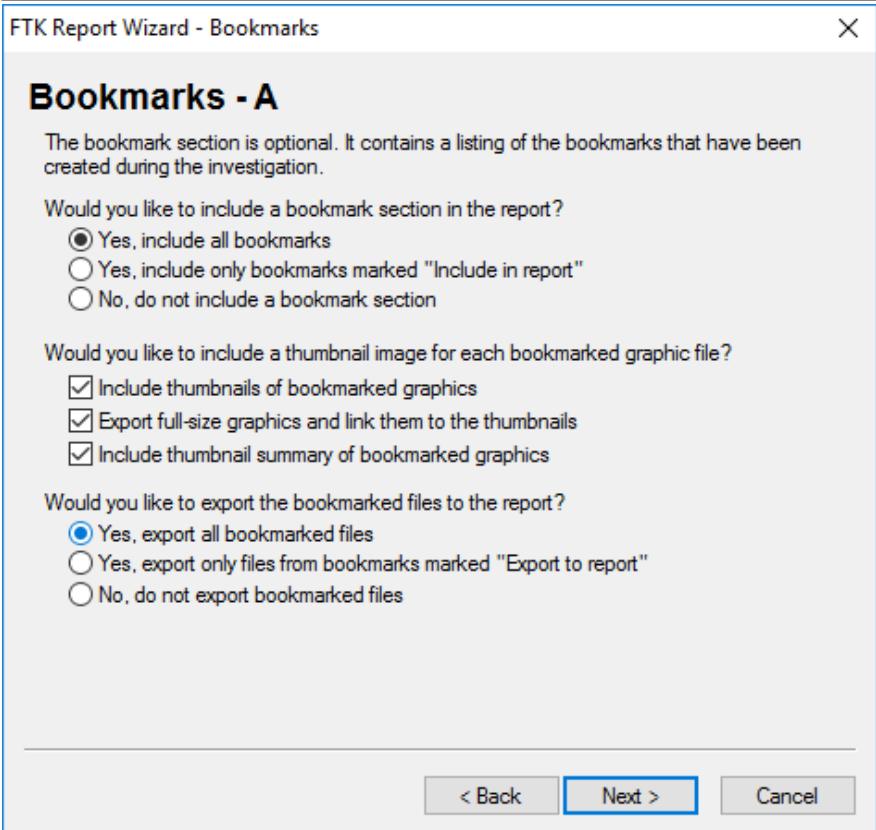
Address: churchgate

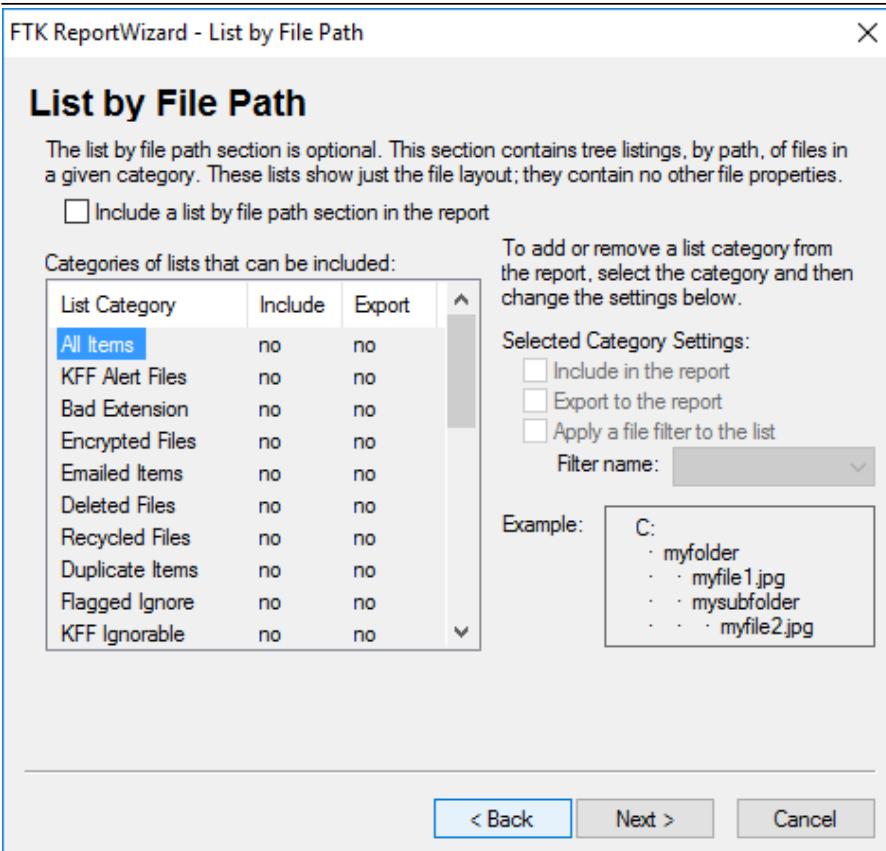
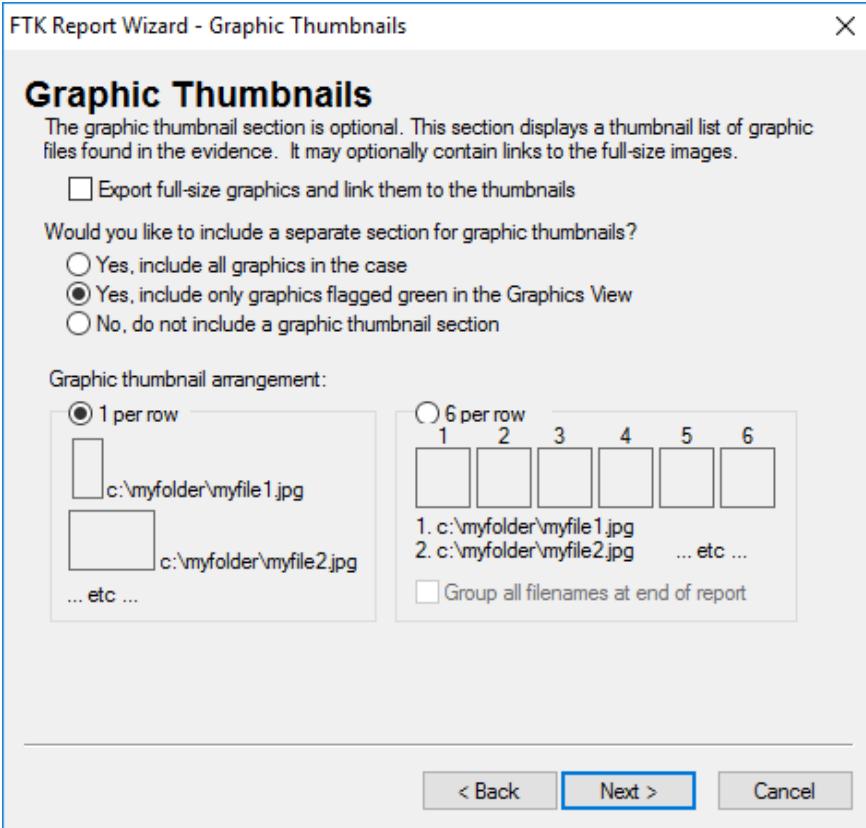
Phone: 1234567890   Fax:

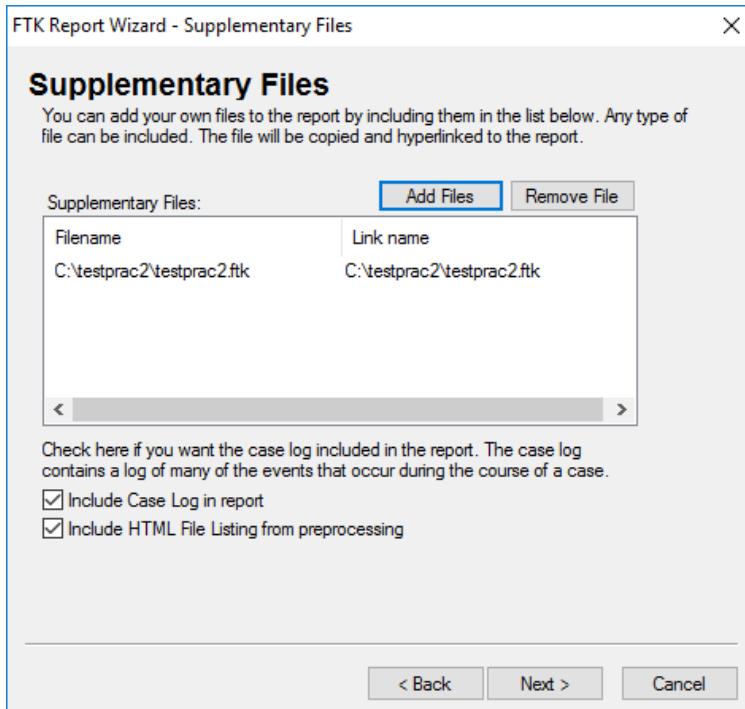
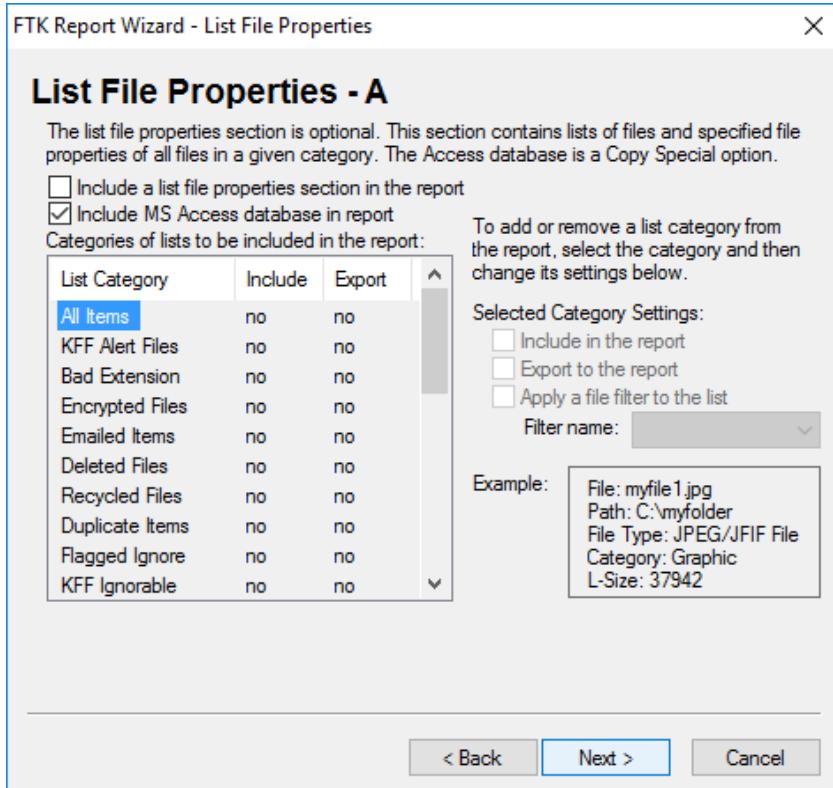
E-Mail: xyz@gmail.com

Comments:

Next > Cancel







## Report Location

FTK reports are completely self-contained and portable. To move the report to a new location, simply copy the report folder to the new location. The report can be viewed using any web browser. To view the report, load the file index.htm, which is located in the root folder of the report.

NOTE 1: If you select an existing folder (other than the default), it must be empty.

NOTE 2: If you are exporting a large number of files, make sure there is sufficient disk space on the destination drive.

NOTE 3: If you are expecting to copy this report to recordable media, remember:  
CDR = 650MB, DVDR = 4.5GB

Report folder:

Browse...

Export all files using actual filenames (may cause broken links on CDs or DVDs)

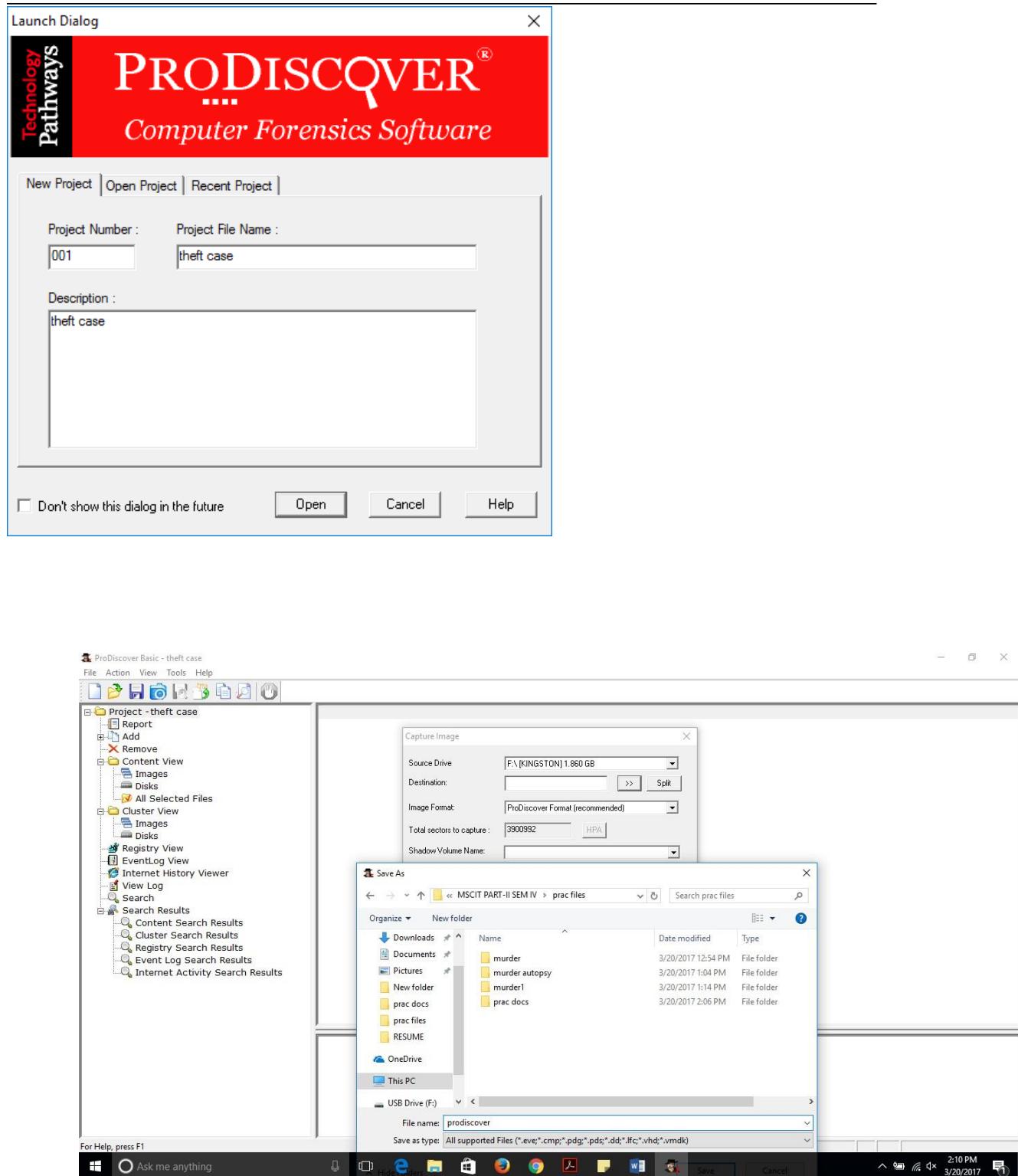
Include Registry Viewer reports

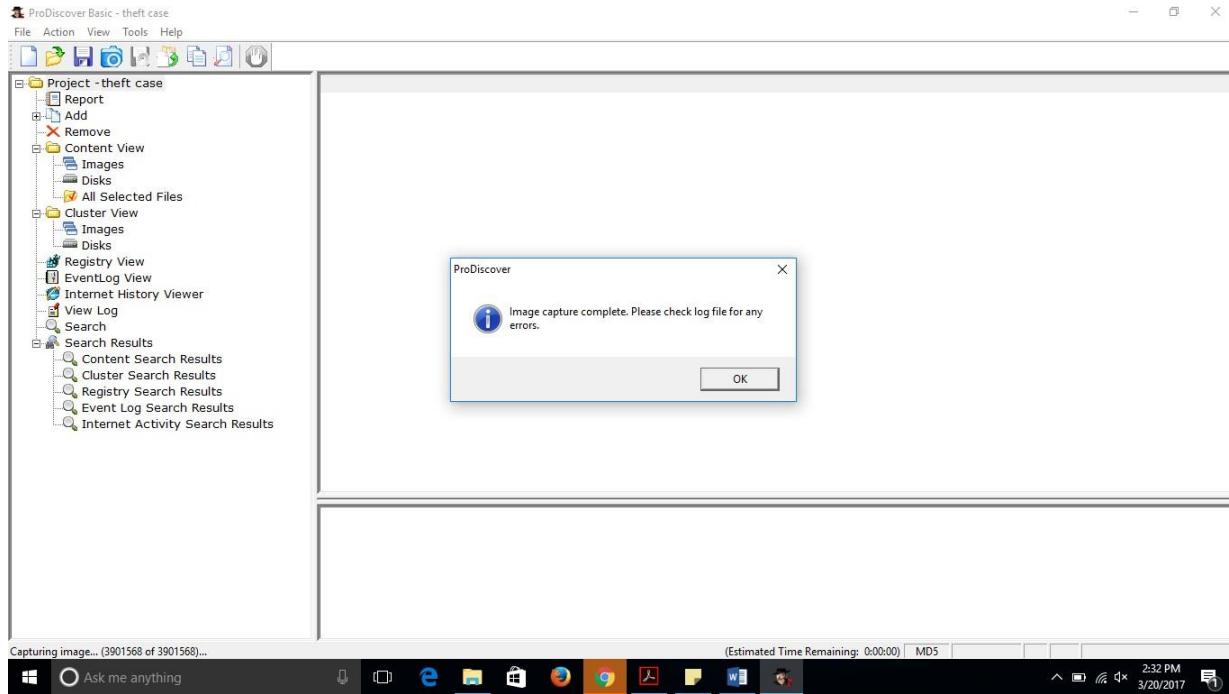
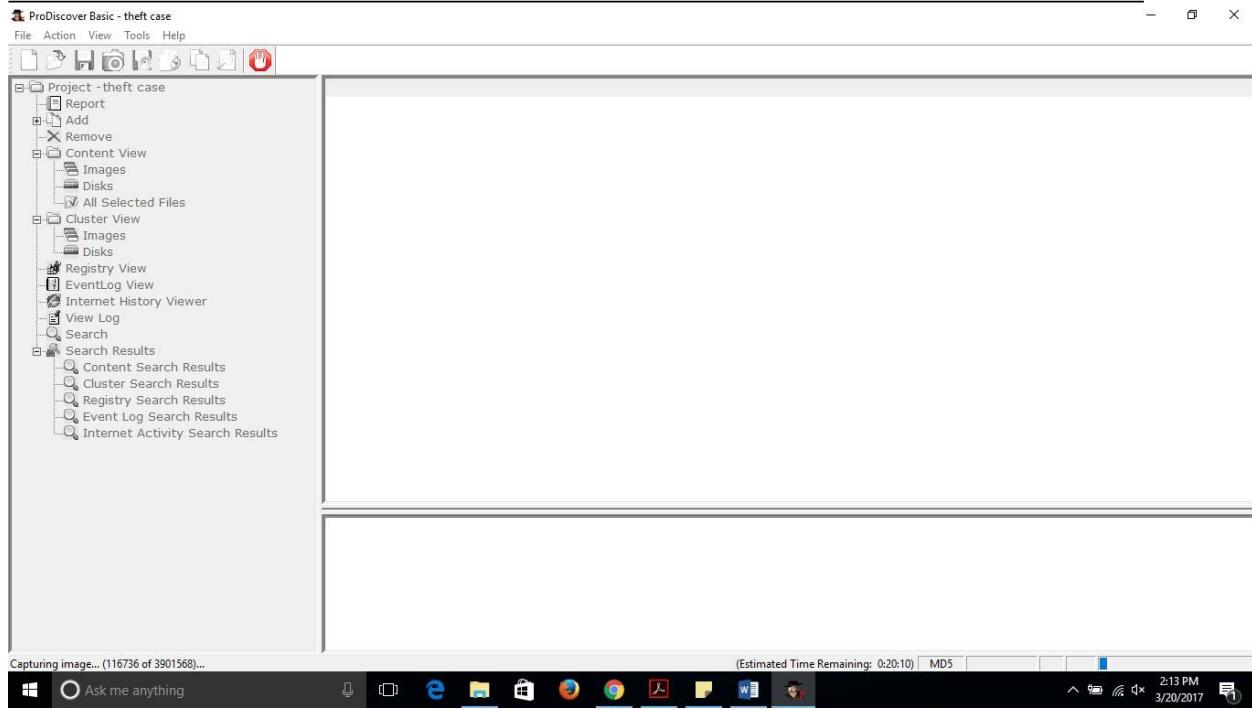
Custom graphic for the report (recommended maximum width is 183 pixels)  
  
Browse...

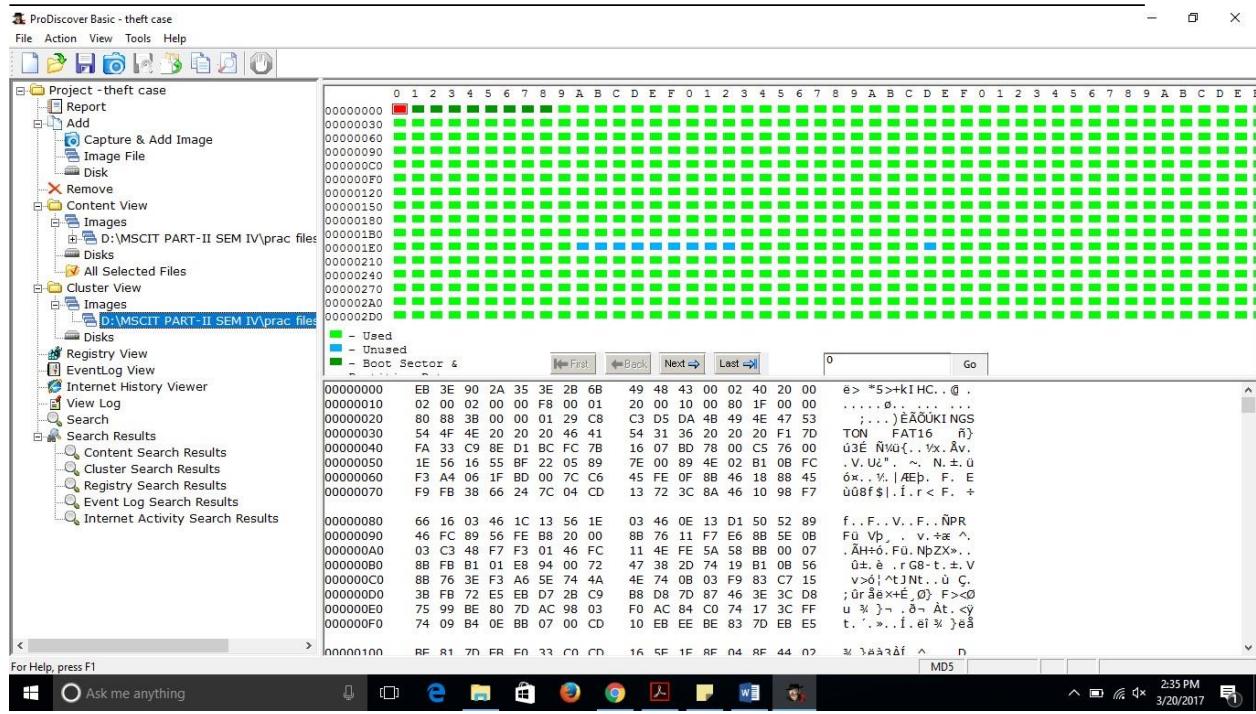
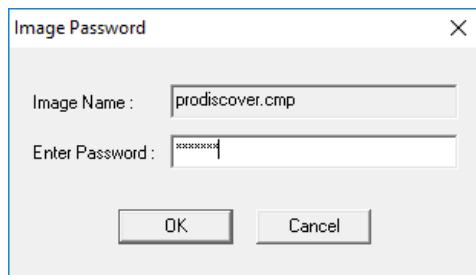
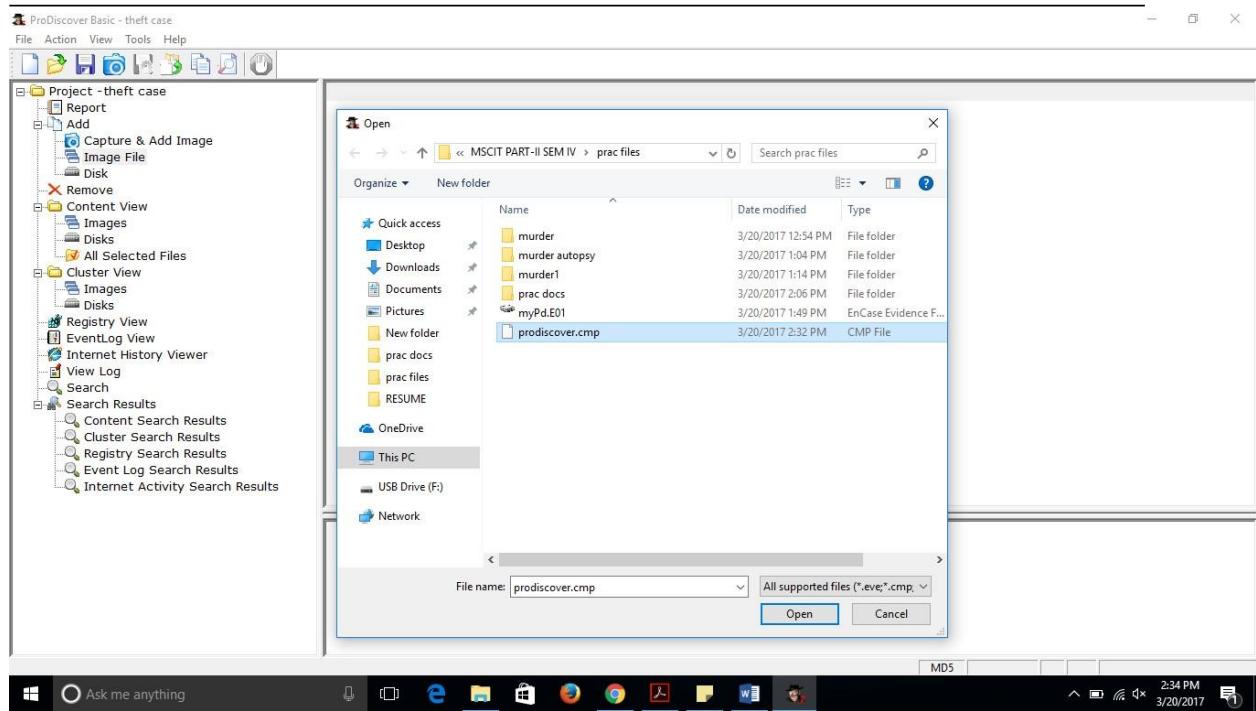
Report language:

▼< BackFinishCancel

## PRACTICAL NO 08: Use a tool to scan drive and it's slack space. (ProDiscover)







ProDiscover Basic - theft case

File Action View Tools Help

Project - theft case

Add Capture & Add Image Image File Disk Remove Content View Images D:\MSCIT PART-II SEM IV\prac files Disks All Selected Files Cluster View Images D:\MSCIT PART-II SEM IV\prac files Disks Registry View EventLog View Internet History Viewer View Log Search Search Results Content Search Results Cluster Search Results Registry Search Results Event Log Search Results Internet Activity Search Results

188 Object(s) (32 Folder(s), 156 File(s))

MD5

Ask me anything

2:36 PM 3/20/2017

Select	File Name	File Extension	Size	Attributes	Deleted	Created Date	Modified Date	Accessed Date
	SLATKO			- d - - -	NO	01/28/2010 ...	01/28/2010 ...	01/28/2010
	RECYCLERW			- d - - -	NO	12/15/2010 ...	12/15/2010 ...	12/15/2010
	TOPILA			- d - - -	NO	12/17/2010 ...	12/17/2010 ...	12/17/2010
	TIFR			- d - - -	NO	12/04/2011 ...	12/04/2011 ...	12/04/2011
	FINAL			- d - - -	NO	12/15/2010 ...	12/15/2010 ...	12/15/2010
	SHP BATCH 7			- d - - -	NO	04/24/2010 ...	04/24/2010 ...	12/05/2010
	SELOMOJE			- d - - -	NO	06/11/2010 ...	06/11/2010 ...	06/11/2010
	Sohel new t...			- d - - -	NO	04/28/2011 ...	04/28/2011 ...	01/01/2013
	.Trashes			- d - - -	NO	04/29/2011 ...	04/29/2011 ...	04/29/2011
	RECYCLER			- d - s h r	NO	08/24/2011 ...	08/24/2011 ...	08/24/2010
	CV			- d - - -	NO	01/03/2012 ...	01/03/2012 ...	01/03/2012
	SJ			- d - - -	NO	02/06/2012 ...	02/06/2012 ...	02/06/2012
	.fseventsds			- d - - -	NO	04/29/2011 ...	04/29/2011 ...	04/29/2011
	prachideepika			- d - - -	NO	04/29/2011 ...	04/29/2011 ...	08/07/2012
	EUROPE			- d - - -	NO	12/11/2011 ...	12/11/2011 ...	12/20/2011
	System Volu...			- d - s h -	NO	03/20/2017 ...	03/20/2017 ...	03/20/2017
	PRIYANKA			- d - - -	NO	04/30/2011 ...	04/30/2011 ...	04/30/2011
	picture tybsc			- d - - -	NO	12/16/2011 ...	12/16/2011 ...	02/23/2013
	Autorun.inf			- d - - -	NO	12/20/2011 ...	12/20/2011 ...	12/20/2011
	âEWFOL~3			- d - - -	YES	02/09/2012 ...	02/09/2012 ...	02/09/2012
	RSM			- d - - h -	NO	07/24/2011 ...	07/24/2011 ...	06/21/2012
	.Spotlight-V...			- d - - -	NO	01/03/2012 ...	01/03/2012 ...	01/03/2012
	Kala ma'am			- d - - -	NO	01/02/2012 ...	12/18/2011 ...	01/03/2012

Search

Event Log Search | Internet History Search

Content Search | Cluster Search | Registry Search

Search in Meta Files  Search in Selected Files only

Select all matches

ASCII  Hex

Case Sensitive  Match whole word

Search for files named :  Search for the pattern(s) :

project

Regular Expression

Select the Disk(s) / Image(s) you want to search in :

D:\MSCIT PART-II SEM IV\prac files\prodiscove.cmp

Filter files by Date(s)

MM - DD - YYYY

Files  Modified between    Created and

The screenshot shows the ProDiscover Basic software interface. The left sidebar displays a file tree with a 'Project - theft case' folder containing 'Report', 'Add', 'Capture & Add Image', 'Image File', 'Disk', and 'Remove' options. Below these are 'Content View' and 'Images' sections, with a detailed view of files from 'D:\MSCIT PART-II SEM IV\prac f'. The right side features a search interface with 'Search 1' and a table of search results.

Select	File Name	Found in
<input checked="" type="checkbox"/>	CERTIFICATE Page.doc	D:\MSCIT PART-II SEM IV\prac files\prodiscov...
<input checked="" type="checkbox"/>	\WRD2430.TMP	D:\MSCIT PART-II SEM IV\prac files\prodiscov...
<input checked="" type="checkbox"/>	\WRL2587.TMP	D:\MSCIT PART-II SEM IV\prac files\prodiscov...
<input checked="" type="checkbox"/>	\ZC8.TMP	D:\MSCIT PART-II SEM IV\prac files\prodiscov...
<input checked="" type="checkbox"/>	print.exe	D:\MSCIT PART-II SEM IV\prac files\prodiscov...
<input checked="" type="checkbox"/>	\LE0001.CHK	D:\MSCIT PART-II SEM IV\prac files\prodiscov...
<input checked="" type="checkbox"/>	Writing a Research paper.ppt	D:\MSCIT PART-II SEM IV\prac files\prodiscov...
<input checked="" type="checkbox"/>	Writing Book Reviews.ppt	D:\MSCIT PART-II SEM IV\prac files\prodiscov...
<input checked="" type="checkbox"/>	KJ1.C.SHP-2010.ppt	D:\MSCIT PART-II SEM IV\prac files\prodiscov...
<input checked="" type="checkbox"/>	Myths associated with Snakes final.ppt	D:\MSCIT PART-II SEM IV\prac files\prodiscov...
<input checked="" type="checkbox"/>	CERTIFICATE Page.doc	D:\MSCIT PART-II SEM IV\prac files\prodiscov...
<input checked="" type="checkbox"/>	cover page- SHP Project.doc	D:\MSCIT PART-II SEM IV\prac files\prodiscov...

0 occurrences found.

The screenshot shows the ProDiscover Basic software interface. The left sidebar displays a tree view of the project structure under 'Project - theft case'. The main area shows a table of file search results:

Select	File Name	File Extension	Size	Attributes	Deleted	Created Date	Modified Date	Accessed Date
<input type="checkbox"/>	A	OUT	1 byte	a -----	NO	12/20/2011	12/20/2011	03/04/2014
<input checked="" type="checkbox"/>	Green chemi...	doc	97,792	a -----	NO	08/24/2010	08/24/2010	03/04/2014
<input type="checkbox"/>	New Microso...	docx	12,719	a -----	NO	04/29/2011	06/13/2011	03/04/2014
<input type="checkbox"/>	Biofuela ...	doc	122,880	a -----	NO	08/24/2010	08/24/2010	03/04/2014
<input type="checkbox"/>	âWRD0401	TMP	34,652	a -----	YES	03/15/2014	03/15/2014	03/15/2014
<input type="checkbox"/>	FAQs	doc	80,896	a -----	NO	09/22/2010	09/22/2010	03/04/2014
<input type="checkbox"/>	sohel chitra...	doc	372,736	a -----	NO	04/30/2011	04/30/2011	03/15/2014
<input type="checkbox"/>	âEGSVR	EXE	674,816	a -----	YES	06/15/2011	09/08/2008	07/26/2011
<input type="checkbox"/>	All reagents ...	doc	46,080	a -----	NO	09/30/2010	09/30/2010	03/04/2014
<input type="checkbox"/>	Latest Inv...				NO	10/20/2010	10/20/2010	03/04/2014
<input type="checkbox"/>	Removal of ...				NO	10/20/2010	10/20/2010	03/04/2014
<input type="checkbox"/>	total repor...				NO	01/01/2003	05/29/2011	03/04/2014
<input checked="" type="checkbox"/>	ganesh da...				YES	01/01/2003	06/15/2011	09/22/2012
<input type="checkbox"/>	ganesh pro...				YES	01/01/2003	06/15/2011	09/22/2012
<input type="checkbox"/>	G-3,G-8				NO	07/28/2011	07/28/2011	03/04/2014
<input type="checkbox"/>	tem 1				NO	07/26/2012	01/25/2011	03/04/2014

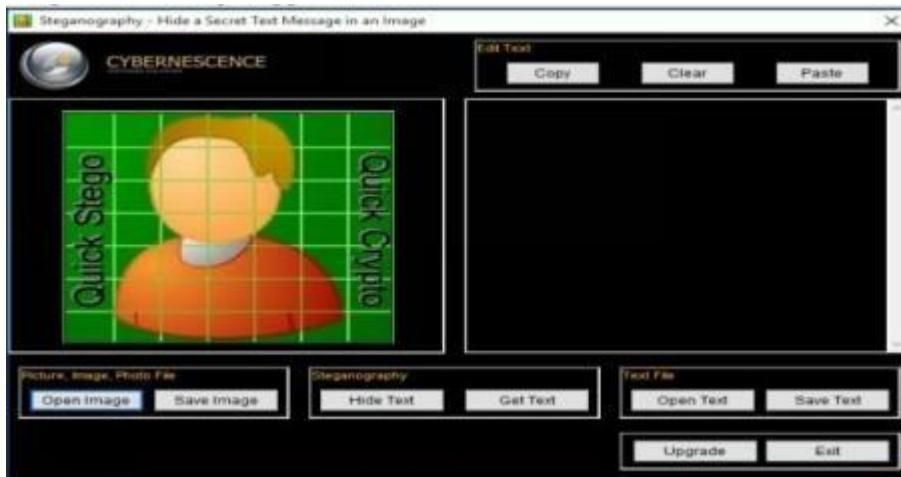
A modal dialog box is open over the table, titled 'Add Comment' for file 'ganesh da...'. It contains fields for 'Add Comment' and 'Investigator comments', with the value 'deleted data' entered. A checkbox 'Apply to all items' is at the bottom left of the dialog.

The bottom status bar shows '188 Object(s) (32 Folder(s), 156 File(s))' and 'MD5'.

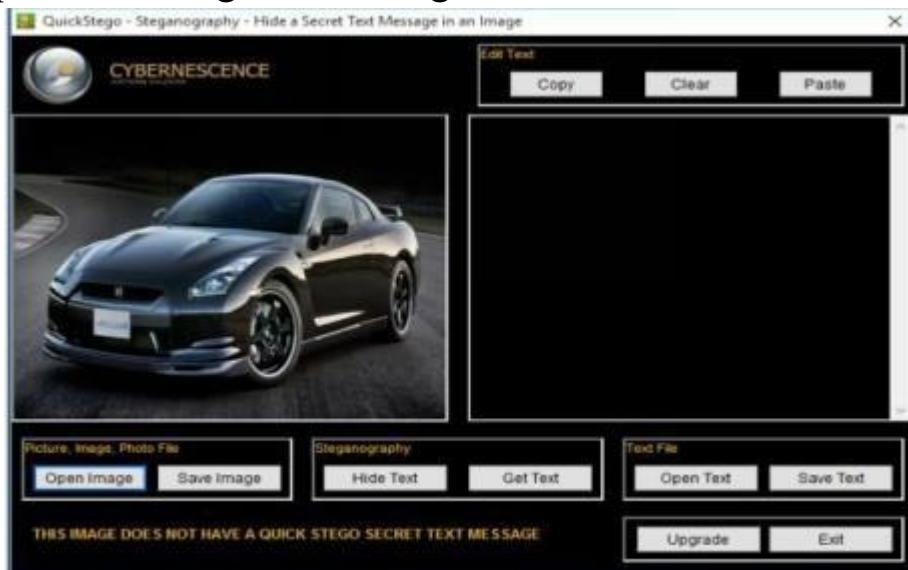
## PRACTICAL NO 09: Hide text into image. (QuickStego, STool)

### Using QuickStego

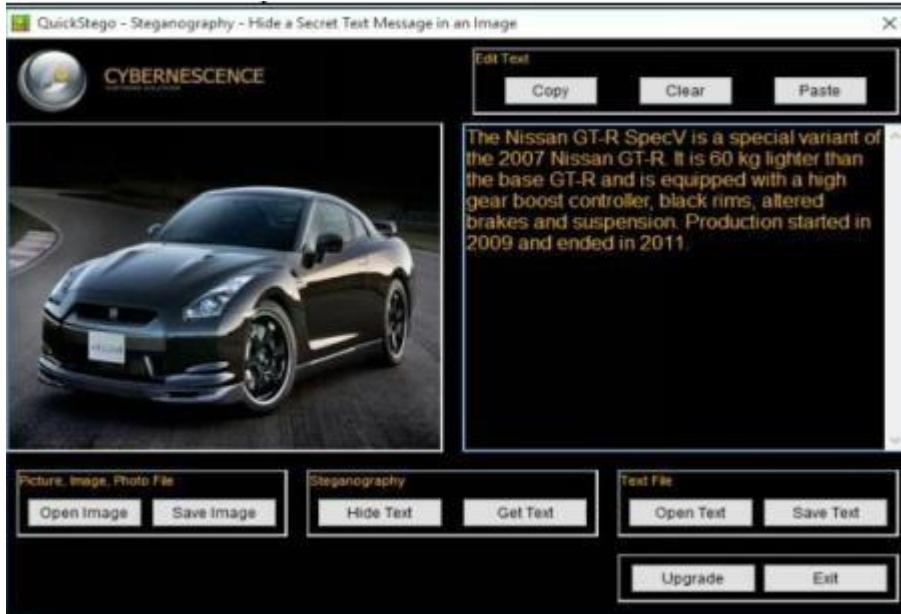
Open QuickStego Application



Upload an Image. This Image is term as **Cover**, as it will hide the text.



## Enter the Text or Upload Text File

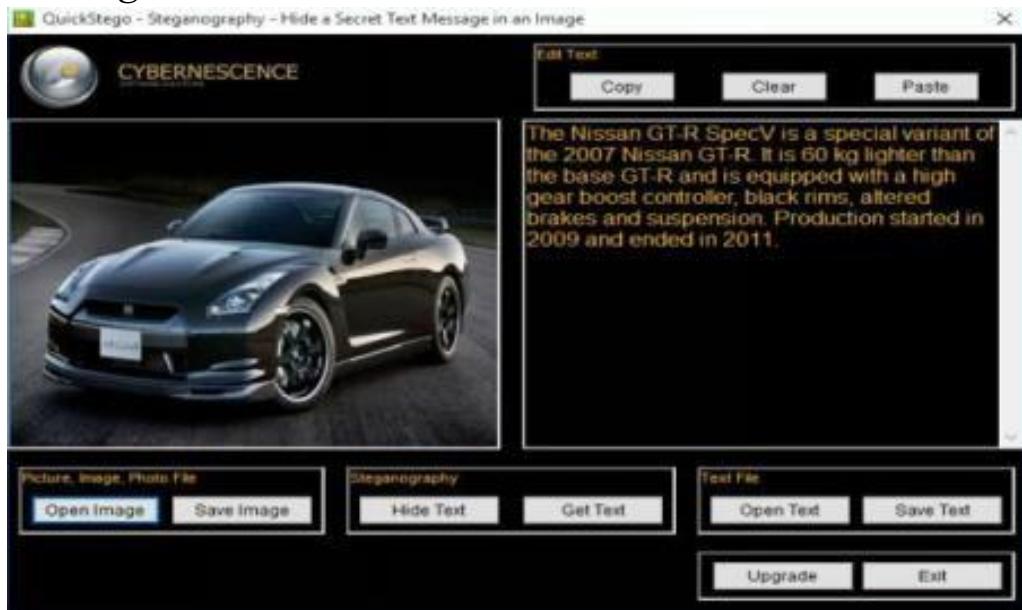


Click Hide Text Button



Save Image - This Saved Image containing Hidden information is termed as Stego Object.

Recovering Data from Image Steganography using QuickStego → Open QuickStego → Click Get Text

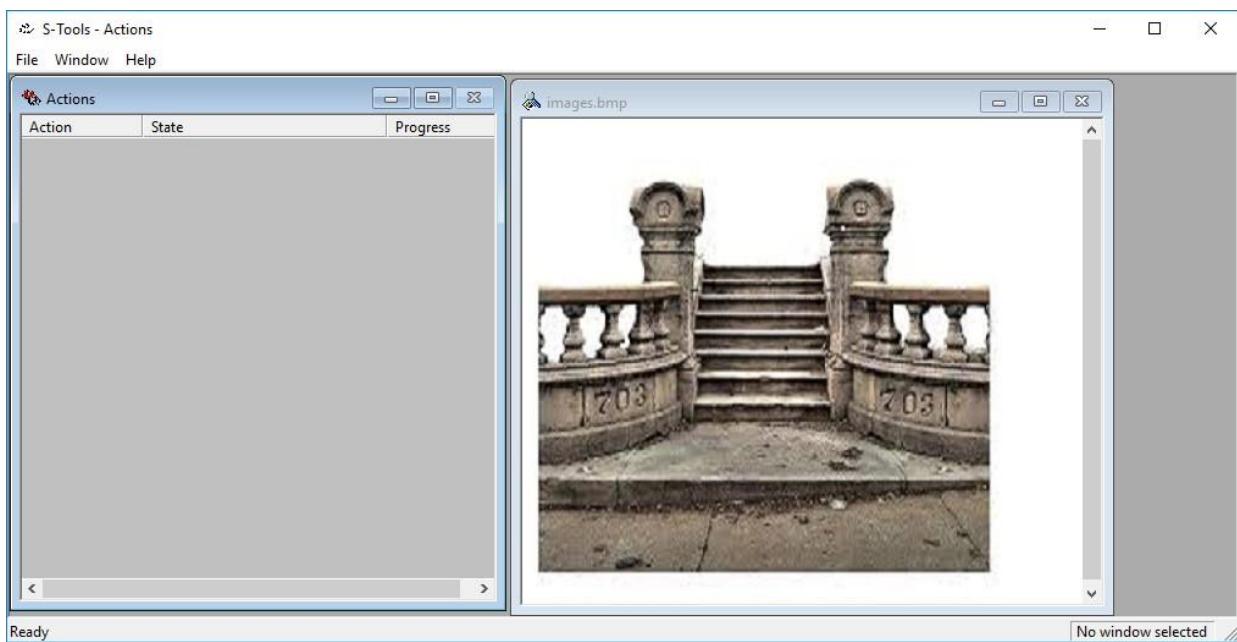
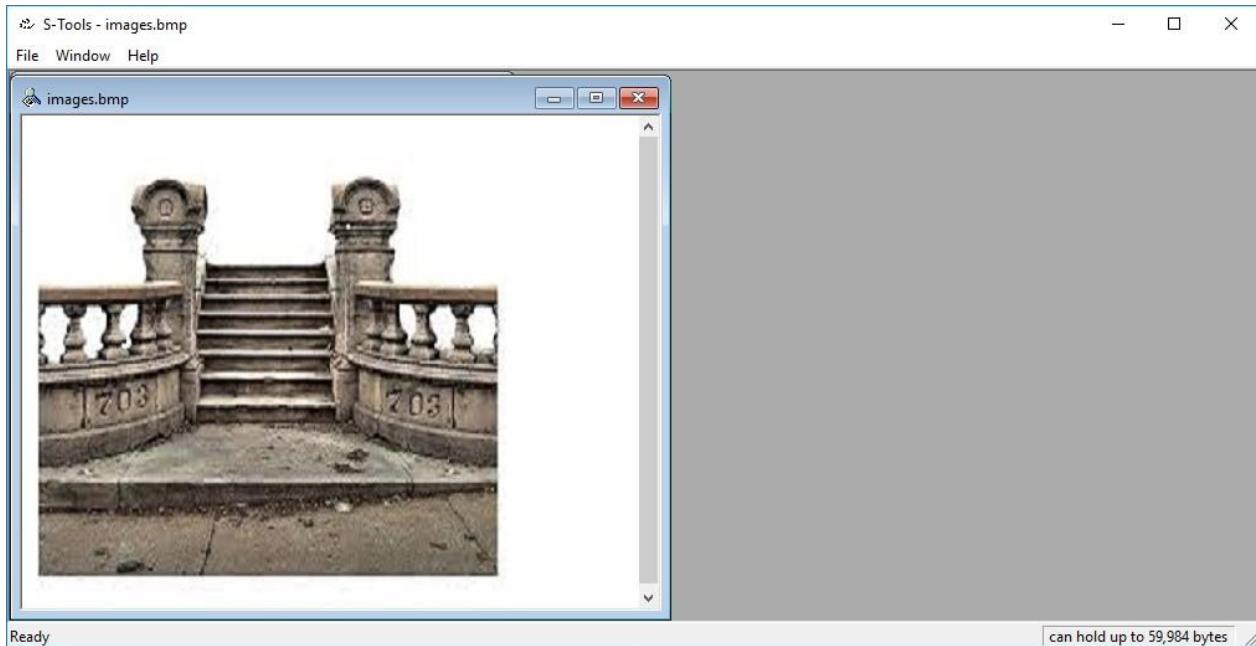


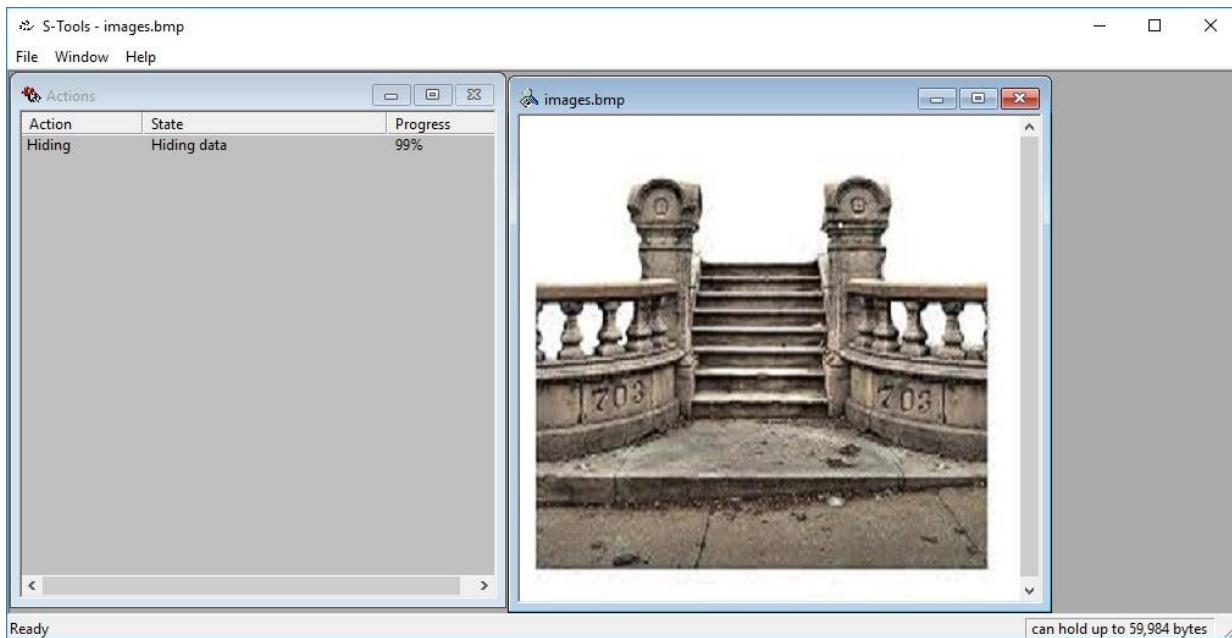
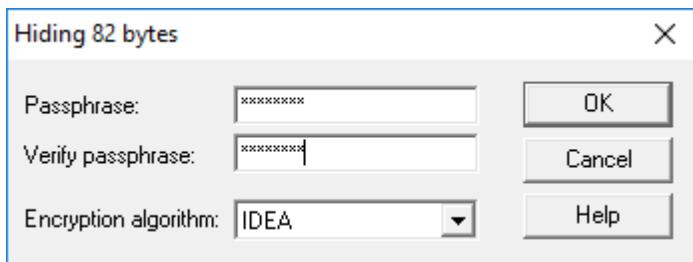
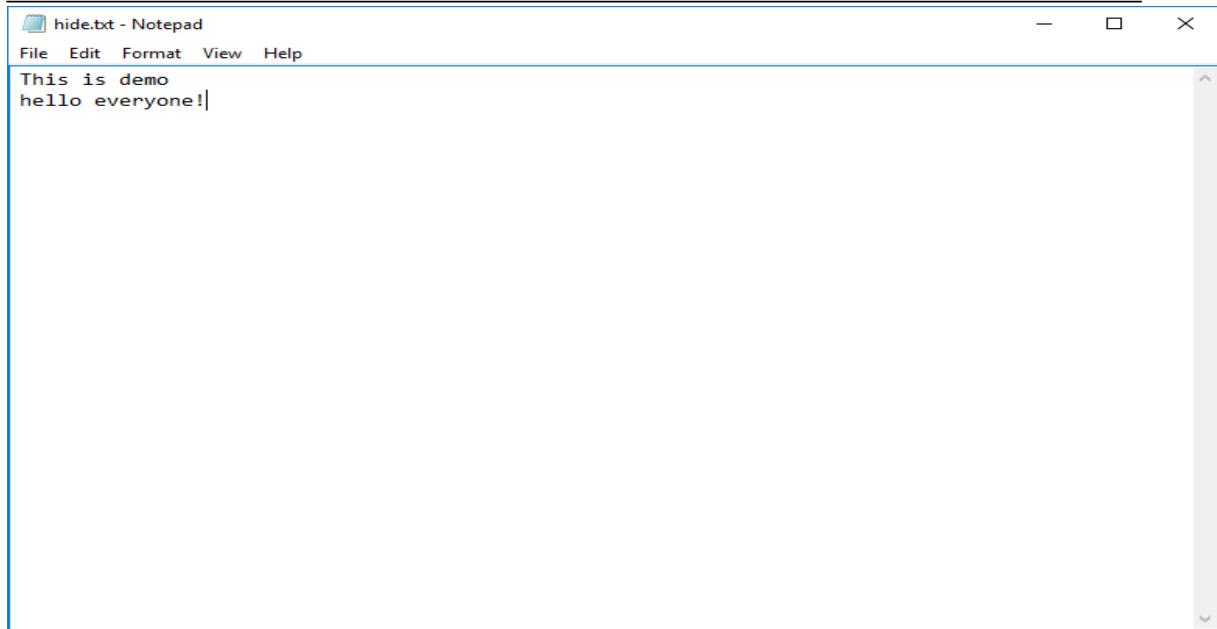
Open and Compare Both Images

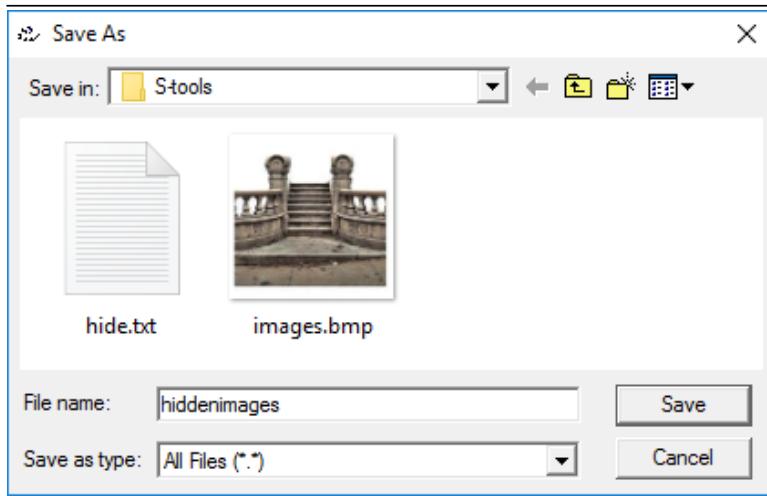
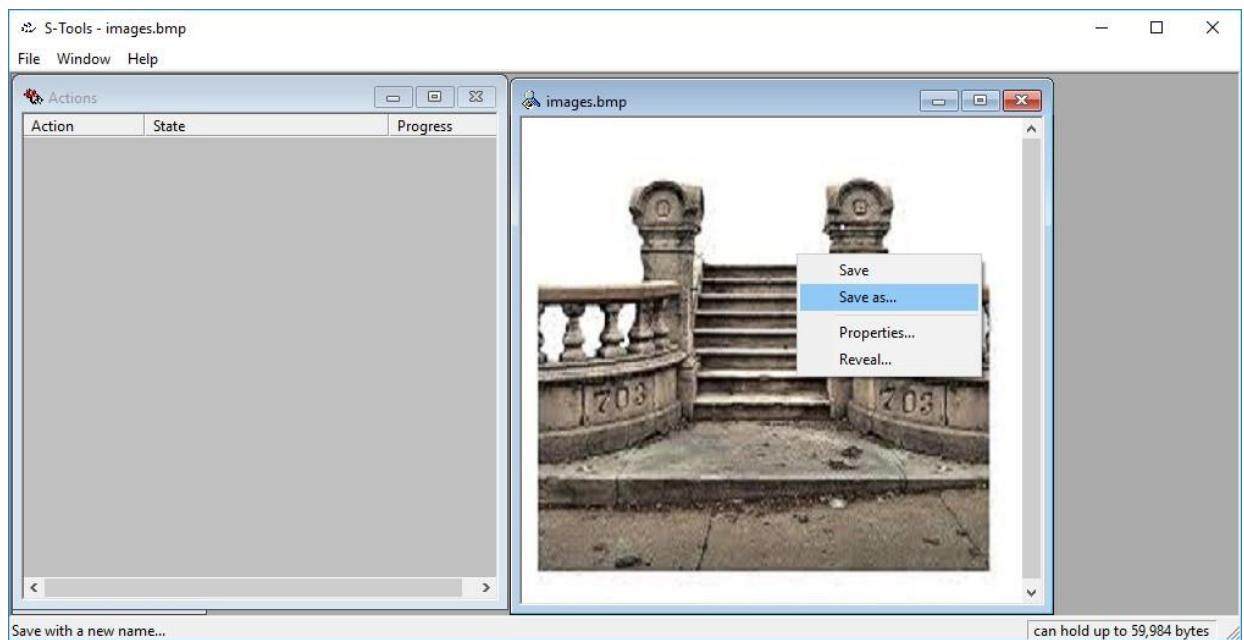


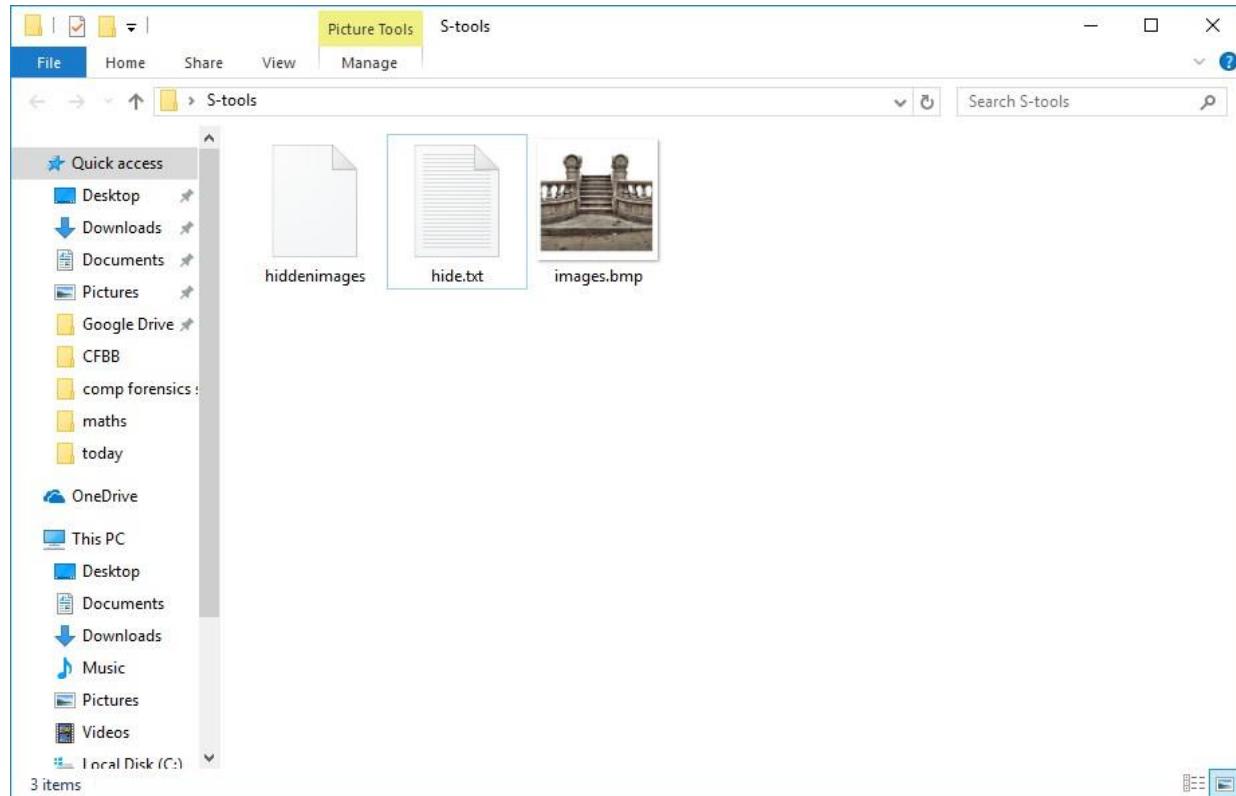
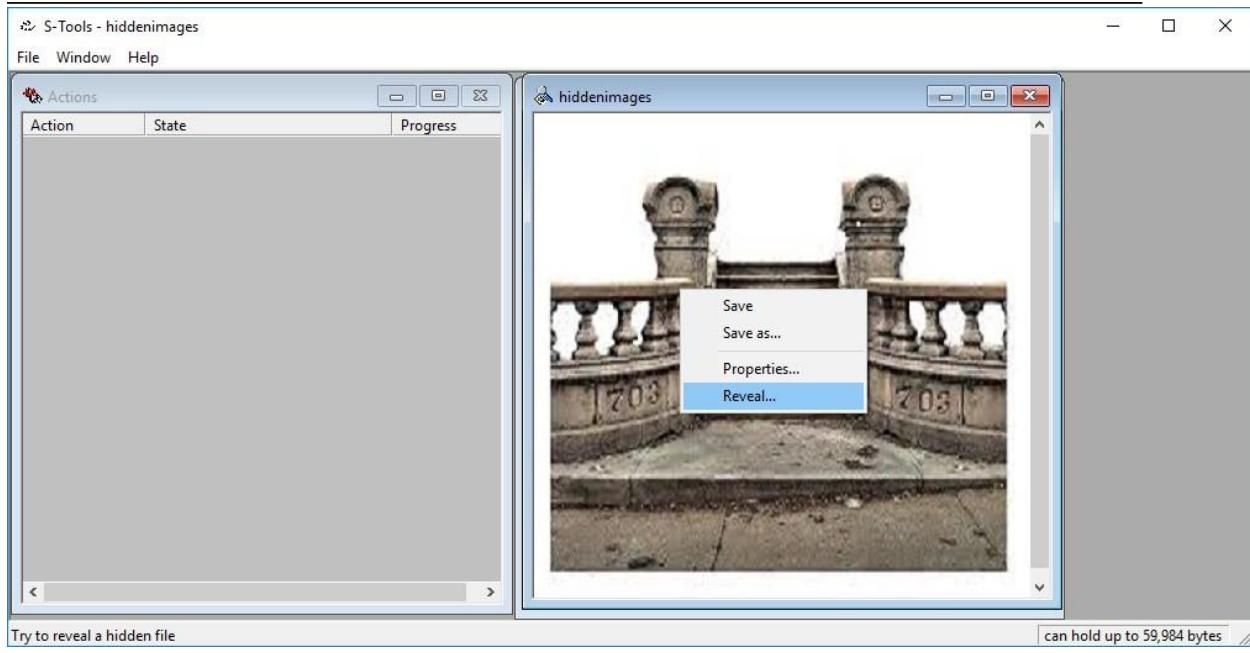
Left Image is without Hidden Text; Right Image is with hidden text

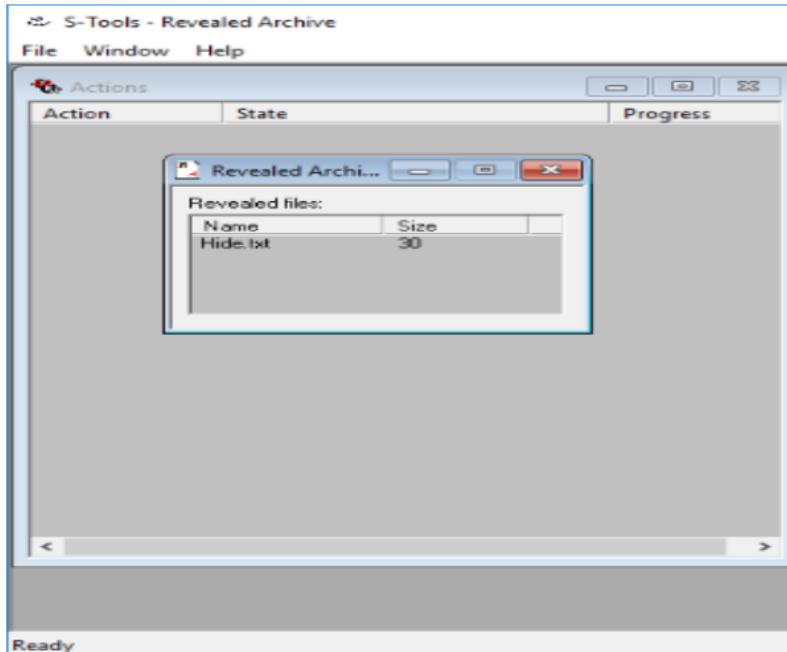
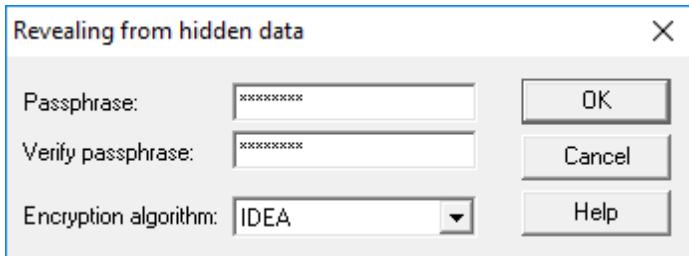
## Using Tool: S tool





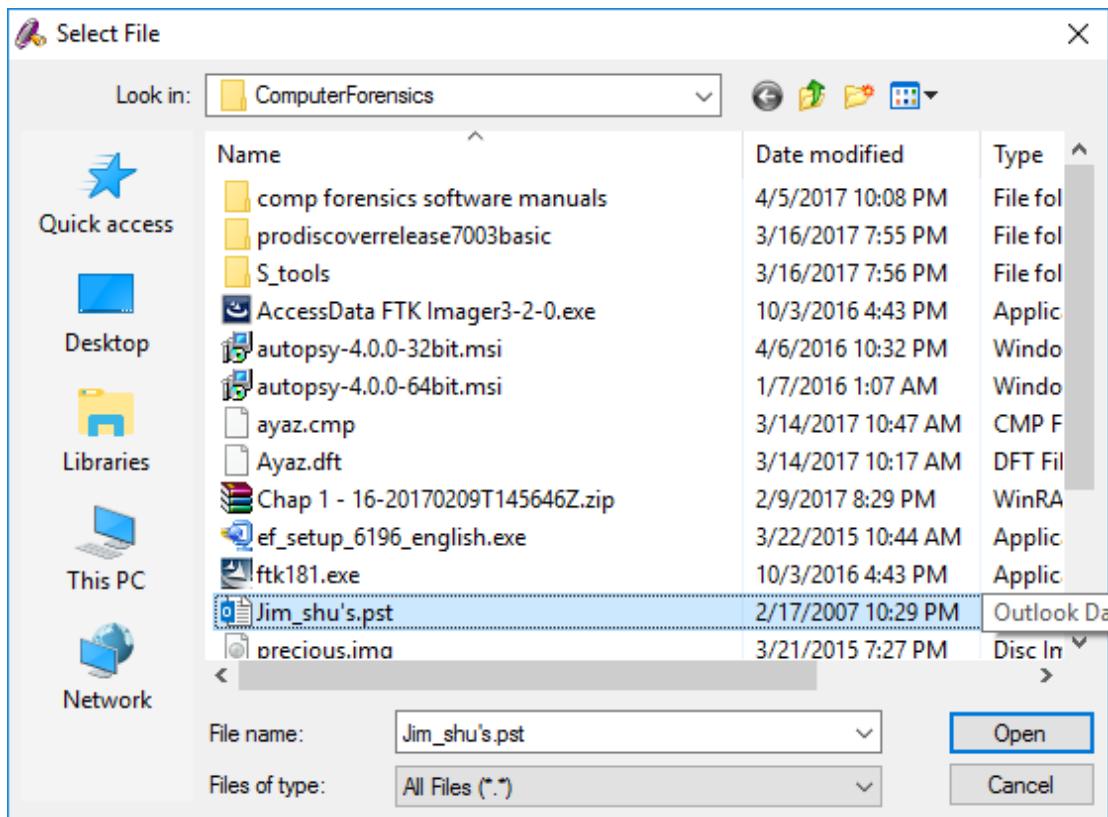
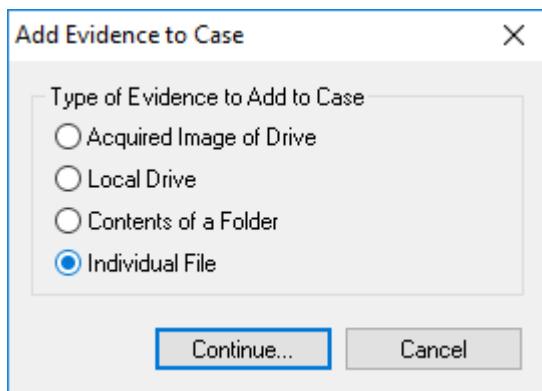






# PRACTICAL NO 10: Use Email Forensic Tools for Email Recovery Mobile Forensics

## EMAIL FORENSIC



Add Evidence to Case

## Add Evidence

Any number of evidence items can be added to the case. There are several types of evidence items:

- Acquired image of drive: Several formats supported; can be an image of a logical or physical drive
- Local drive: Can be a logical or physical drive
- Folder: Adds all files in the specified folder, including contents of subfolders
- Individual File: Adds a single file. NOTE: Disk image files should be added as acquired images.

The default refinement options, set previously, can be overridden independently for each evidence item, and additional types of refinements can also be made. These refinements can include the exclusion of date/size ranges, as well as specific folders. To make these further refinements, highlight an evidence item in the list and press Refine Evidence - Advanced...

Add Evidence...	Edit Evidence...	Remove Evidence	Refine Evidence - Advanced...			
Display Name Jim_shu's	Source F:\sem4\Com...	Name/Nu... XYZ	Type Individual f...	Refined N	Time Zone N/A	Comment

< Back    Next >    Cancel

AccessData FTK 1.81.0 DEMO VERSION -- C:\testprac2\

File Edit View Tools Help

Evidence Items		File Status	File Category
Evidence Items: 3	KFF Alert Files: 0	Documents: 314	
File Items: 3832	Bookmarked Items: 1	Spreadsheets: 10	
Total File Items: 3832	Bad Extension: 159	Databases: 0	
Checked Items: 0	Encrypted Files: 19	Graphics: 1257	
Unchecked Items: 3832	From E-mail: 337	Multimedia: 45	
Flagged Thumbnails: 0	Deleted Files: 58	E-mail Messages: 114	
Other Thumbnails: 1257	From Recycle Bin: 6	Executables: 7	
Filtered In: 3832	Duplicate Items: 380	Archives: 56	
Filtered Out: 0	OLE Subitems: 57	Folders: 669	
<input checked="" type="radio"/> Unfiltered	<input type="radio"/> Filtered	Flagged Ignore: 0	Slack/Free Space: 7
<input type="radio"/> All Items	<input checked="" type="radio"/> Actual Files	KFF Ignorable: 0	Other Known Type: 495
		Data Carved Files: 0	Unknown Type: 858

Evidence File Name	Evidence Path	Display Name	Identification Name/Number	Evidence Type	Added	Children	Descendants	Investigator's Name	Comment
Jim_shu's.pst	F:\sem4\ComputerForensics	Jim_shu's	XYZ	Individual file	4/5/2017 10:13:46 PM	7	39	XYZ	
precious.img	F:\sem4\ComputerForensics	precious\Unpart...	XYZ	Unpartitioned Space	3/17/2017 10:26:59 ...	2	2	XYZ	
precious.img	F:\sem4\ComputerForensics	precious\Part_1\...	XYZ	NTFS	3/17/2017 10:19:07 ...	2782	3788	XYZ	

3 Listed    0 Checked Total    F:\sem4\ComputerForensics\Jim\_shu's.pst

Overview Explore Graphics E-Mail Search Bookmark

Email  Images  PDF  Unfiltered  All Columns  DITZ

File Name	FullPath	Recycle Bin	Ext	File Type	Category	Subject	Cr Date	Mod Date
baggifrodo	precious\Part_1\The Precious-NTFS\Document...			Email Folder	Other	N/A	N/A	N/A
Deleted items.dbx	precious\Part_1\The Precious-NTFS\Document...			Email Message	E-mail	"Returned..	N/A	N/A
Drafts	precious\Part_1\The Precious-NTFS\Document...			Email Message	E-mail	"Possible J..	N/A	N/A
Folders.dbx	precious\Part_1\The Precious-NTFS\Document...			Email Message	E-mail	<No Subje...	N/A	N/A
In.mbx	precious\Part_1\The Precious-NTFS\Document...			Email Message	E-mail	<No Subje...	N/A	N/A
Inbox.dbx	precious\Part_1\The Precious-NTFS\Document...			Email Message	E-mail	"Possible J..	N/A	N/A
Jim_shu'spst	precious\Part_1\The Precious-NTFS\Document...			Email Message	E-mail	<No Subje...	N/A	N/A
Offline.dbx	precious\Part_1\The Precious-NTFS\Document...			Email Message	E-mail	<No Subje...	N/A	N/A
Out.mbx	precious\Part_1\The Precious-NTFS\Document...			Email Message	E-mail	<No Subje...	N/A	N/A
Out.mbox.001	precious\Part_1\The Precious-NTFS\Document...			Email Message	E-mail	<No Subje...	N/A	N/A
Outbox.dbx	precious\Part_1\The Precious-NTFS\Document...			Email Message	E-mail	Unknown A..	Other	Unknown
Outlook.pst	precious\Part_1\The Precious-NTFS\Document...			Email Message	E-mail	Unknown A..	Other	Unknown
<input type="checkbox"/> List all descendants						Unknown A..	Other	Unknown

Open  Save  Print  Find  Filter  Sort  Refresh  Help

**Deleted Message0002**

**Subject:** Possible Job!!  
**From:** Baggifrodo  
**Date:** 1/2/2005  
**To:** samwizgamgee@hotmail.com

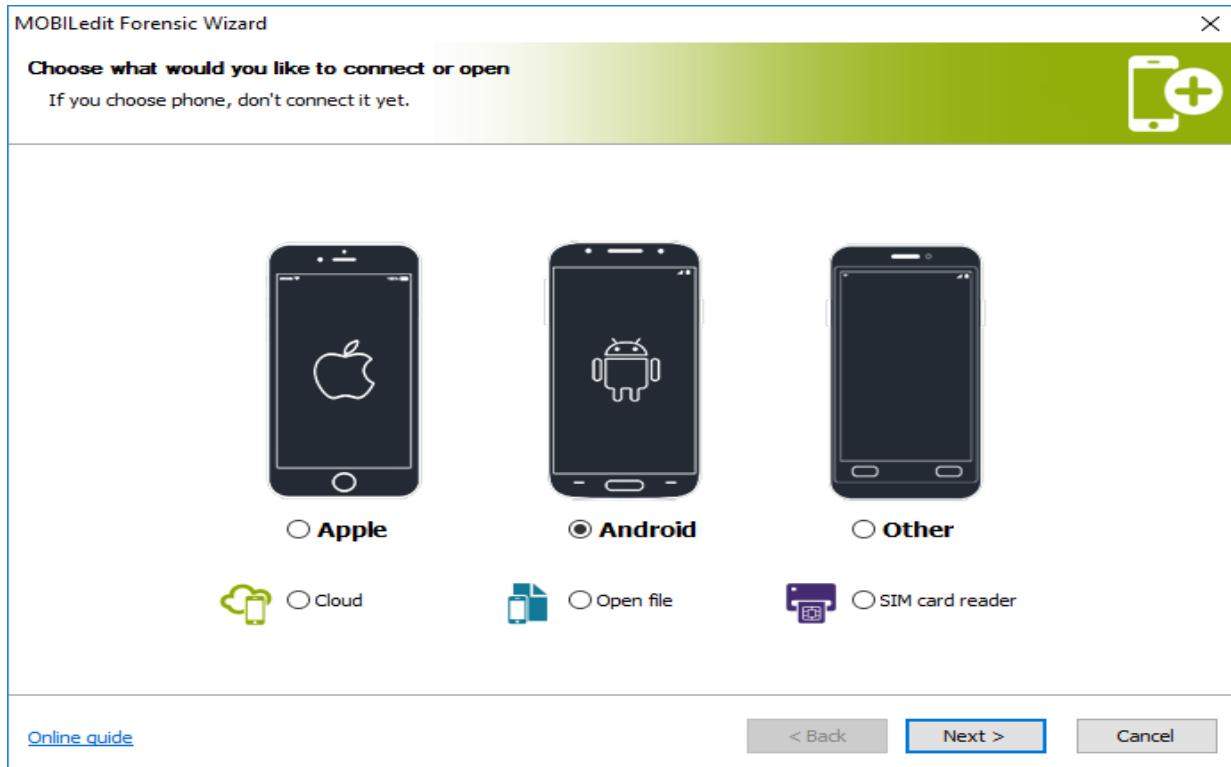
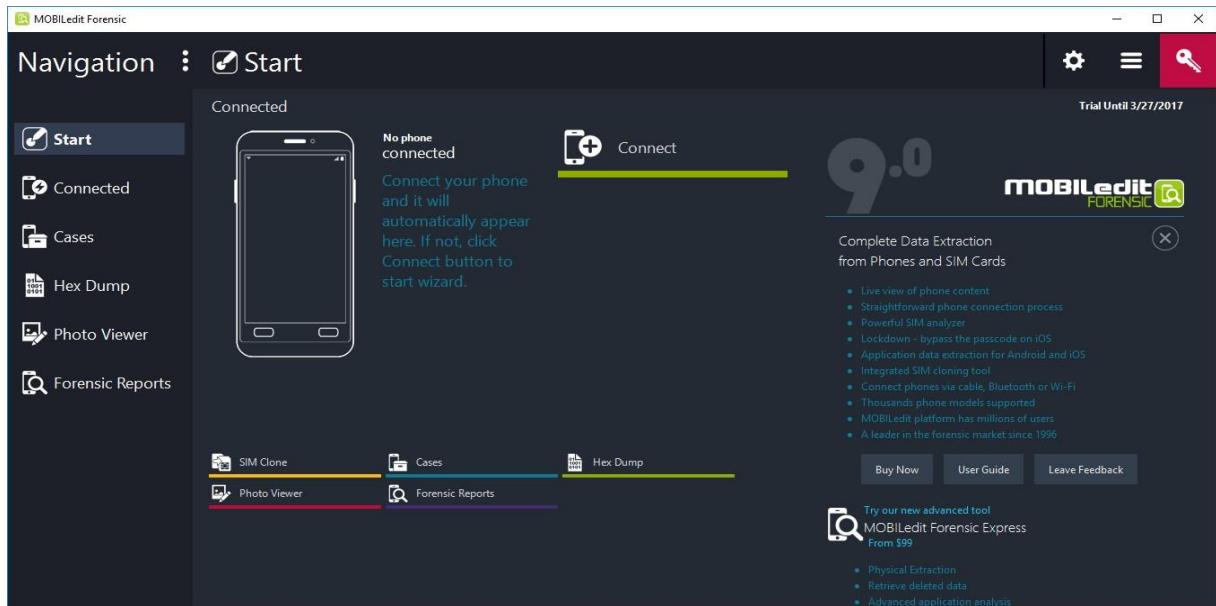
**Message Body**

I got a call today from the Regional Forensic Lab in Isengard. They are starting a new computer forensic section and want to know if we want to join in? What do you think? This might be a real opportunity. The only down side is that I hear Gandalf is going to head the department. If my memory serves me, he can be a real pain to work for. Remember how he used to push us around and talk down to us like he was some kind of all knowing wizard or something. Maybe he has changed now that he is Whitehat. Speaking of Galdalf, look at this....

[Attachment: "D:\Documents and Settings\Frodo Baggins\My Documents\My Pictures\cartmanlotparody.jpg"]

35 Listed 0 Checked Total | precious\Part\_1\The Precious-NTFS\Documents and Settings\All Users\Application Data\ AOLID\_America Online 9.0\organize\baggifrodo>>Deleted Message0002

# USING MOBILEDIT



## MOBILedit Forensic Wizard

### Enable USB debugging



1. Go to Developer options



2. Enable Developer options



3. Enable USB debugging

[Online guide](#)

< Back

Next >

Cancel

## MOBILedit Forensic Wizard

### Connect your phone now

If asked don't choose Charging Only mode. See connected phones below.



Model	Manufacturer	Port
ASUS_T00J1	asus	Android 136C5119

If the phone is already listed, do not wait for detection to complete.  
Select the phone and press Finish.



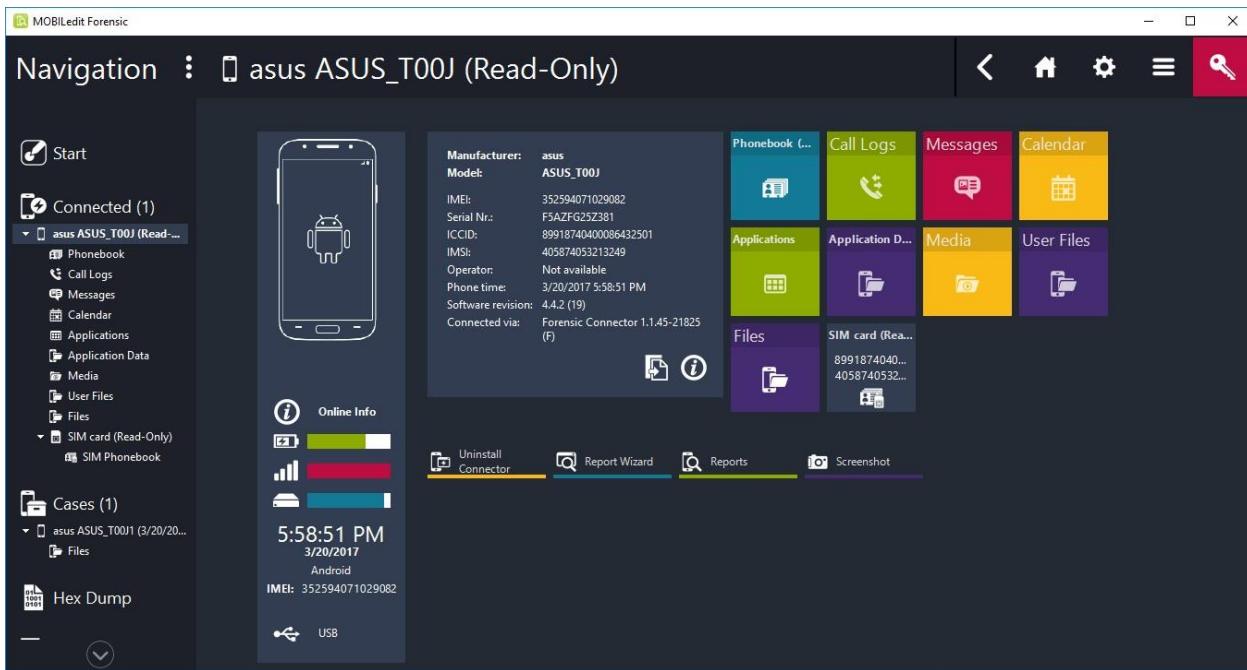
Refresh

[Online guide](#)

< Back

Finish

Cancel



The screenshot shows the MOBILedit Forensic software interface with the navigation path set to Files - asus ASUS\_T00J. The left sidebar is identical to the first screenshot. The main area displays a detailed file listing for the / directory of the device. The table has columns for File Name, Size, Created, and Modified. The file list includes standard Linux directory entries like ., .., acct, ADF, APD, cache, config, dev, lib, media, mnt, proc, res, root, sbin, storage, sys, system, temp\_data, and usr. There are also several files listed under /sbin, such as charger, d, default.prop, etc, file\_contexts, fstab.charger.redhookbay, fstab.ramconsole.redhookbay, fstab.redhookbay, init, and init.usureset.rc. The 'Modified' column shows dates ranging from 3/20/2017 to 1/1/1970.

File Name	Size	Created	Modified
<folder>	<unknown>	3/20/2017 2:	
acct	<folder>	<unknown>	10/16/2013 1:
ADF	<folder>	<unknown>	1/1/1970 5:3
APD	<folder>	<unknown>	3/20/2017 9:
cache	<folder>	<unknown>	10/16/2013 1:
config	<folder>	<unknown>	3/20/2017 2:
data	<folder>	<unknown>	3/20/2017 8:
dev	<folder>	<unknown>	3/20/2017 8:
factory	<folder>	<unknown>	10/16/2013 1:
lib	<folder>	<unknown>	1/1/1970 5:3
media	<folder>	<unknown>	3/20/2017 2:
mnt	<folder>	<unknown>	3/20/2017 2:
proc	<folder>	<unknown>	3/20/2017 2:
res	<folder>	<unknown>	1/1/1970 5:3
root	<folder>	<unknown>	1/16/2015 11:
sbin	<folder>	<unknown>	1/1/1970 5:3
storage	<folder>	<unknown>	3/20/2017 2:
sys	<folder>	<unknown>	3/20/2017 2:
system	<folder>	<unknown>	8/12/2015 8:
temp_data	<folder>	<unknown>	3/20/2017 2:
usr	<folder>	<unknown>	1/1/1970 5:3
charger	1003.20 KB	<unknown>	1/1/1970 12:
d	<unknown>	<unknown>	3/20/2017 8:
default.prop	435 B	<unknown>	1/1/1970 12:
etc	<unknown>	<unknown>	8/12/2015 3:
file_contexts	8.95 KB	<unknown>	1/1/1970 12:
fstab.charger.redhookbay	274 B	<unknown>	1/1/1970 12:
fstab.ramconsole.redhookbay	274 B	<unknown>	1/1/1970 12:
fstab.redhookbay	1.24 KB	<unknown>	1/1/1970 12:
init	483.77 KB	<unknown>	1/1/1970 12:
init.usureset.rc	132 B	<unknown>	1/1/1970 12:

MOBILedit Forensic Wizard

**Data acquire settings**

Please set the following options for data acquiring.  
Data will be stored in the "Cases" folder.

Device Label:  Device Evidence Number:   
Device Name:  Owner Name:   
Owner Phone Number:   
Phone Notes:

Device Capabilities  
 Files

Communication Log Of Backup Operation  
 Create:

MOBILedit Forensic Wizard

**File system acquiring**

Choose the part of filesystem to acquire.

Whole file system  
 Specified file types:   
 Audio  Video  Pictures  
 Selected files & folders  
 Phones  
 asus ASUS\_T00J1

MOBILedit Forensic

Navigation : Files - asus ASUS\_T00J (3/20/2017 12:19:03 PM)

Start

Connected (1)

- asus ASUS\_T00J (Read-Only)
  - Phonebook
  - Call Logs
  - Messages
  - Calendar
  - Applications
  - Application Data
  - Media
  - User Files
  - Files
- SIM card (Read-Only)
  - SIM Phonebook

Cases (1)

- asus ASUS\_T00J (3/20/2017 12:19:03 PM)
  - Files

Hex Dump

Navigation

File Name

File Name	Size	Created	Modified
ADF	<unknown>	<unknown>	<unknown>
APD	<unknown>	<unknown>	<unknown>
factory	<unknown>	<unknown>	<unknown>
media	<unknown>	<unknown>	<unknown>
storage	<unknown>	<unknown>	<unknown>
temp_data	<unknown>	<unknown>	<unknown>

MOBILedit Forensic

Navigation : Photo Viewer

Connected (1)

- asus ASUS\_T00J (Read-Only)
  - Phonebook
  - Call Logs
  - Messages
  - Calendar
  - Applications
  - Application Data
  - Media
  - User Files
  - Files
- SIM card (Read-Only)
  - SIM Phonebook

Cases (1)

- asus ASUS\_T00J (3/20/2017 12:19:03 PM)
  - Files
    - ADF
    - APD
    - factory
    - media
    - storage
    - temp\_data
  - Desktop
    - This PC
    - ZainFa
    - OneDrive
    - CFBB
    - fatzz
    - GasBooking
    - jv
    - S-tools
    - Business Management (1) - Copy.pptx
    - DSC-Request-Form-Sify.pdf
    - Form-Admin.doc
    - green house effect.pptx
    - Hand Delivery.docx
    - images.jpg
    - New Microsoft Word Document.docx
    - New Text Document.txt

Photo Preview



Photo Info

Width:	263
Height:	192
Size:	19.37 KB

Show Photo Preview

from harddrive  
 from phone

Show Preview

Open

C:\Users\ZainFa\Desktop\images.jpg

The screenshot shows the MOBILedit Forensic interface. The left sidebar has a 'Navigation' section with 'Connected (1)' (asus ASUS\_T00J) and 'Cases (1)' (asus ASUS\_T00J 1/3/20/20...). Below it are 'Hex Dump' and 'Photo Viewer' buttons. The main area has a 'Hex Dump' tab active, showing a hex dump of a file named 'images.jpg'. The dump includes columns for address, bytes, and ASCII representation. On the right, there are four preview panes showing fragments of the image file.

Address	Bytes	ASCII
00000000	FF D8 FF E0 00 10 4A 46 49 46 00 01 01 01 00 60	\xFF \xD8 \xFF \xE0 \x00 \x10 \x4A \x46 \x49 \x46 \x00 \x01 \x01 \x01 \x00 \x60
00000010	00 60 00 00 FF E1 00 22 45 78 69 66 00 4D 4D	\x00 \x60 \x00 \x00 \xFF \xE1 \x00 \x22 \x45 \x78 \x69 \x66 \x00 \x4D \x4D
00000020	00 2A 00 00 00 08 00 01 01 12 00 03 00 00 00 01	\x00 \x2A \x00 \x00 \x00 \x08 \x00 \x01 \x01 \x12 \x00 \x03 \x00 \x00 \x00 \x01
00000030	00 01 00 00 00 00 00 00 FF DE 00 43 00 02 01 01	\x00 \x01 \x00 \x00 \x00 \x00 \x00 \x00 \xFF \xDE \x00 \x43 \x00 \x02 \x01 \x01
00000040	02 01 01 02 02 02 02 02 02 02 03 05 03 03 03	\x02 \x01 \x01 \x02 \x02 \x02 \x02 \x02 \x02 \x02 \x03 \x05 \x03 \x03 \x03
00000050	03 03 06 04 04 03 05 07 06 07 07 07 06 07 07 08	\x03 \x03 \x06 \x04 \x04 \x03 \x05 \x07 \x06 \x07 \x07 \x07 \x06 \x07 \x07 \x08
00000060	09 0B 09 08 08 0A 08 07 07 0A 0D 0A 0A 0B 0C 0C	\x09 \x0B \x09 \x08 \x08 \x0A \x08 \x07 \x07 \x0A \x0D \x0A \x0A \x0B \x0C \x0C
00000070	0C 0C 07 09 0E 0F 0D 0C 0E 0B 0C 0C FF DB 00	\x0C \x0C \x07 \x09 \x0E \x0F \x0D \x0C \x0E \x0B \x0C \x0C \xFF \xDB \x00
00000080	43 01 02 02 03 03 03 06 03 03 06 03 06 0C 08 07 08	\x43 \x01 \x02 \x02 \x03 \x03 \x03 \x06 \x03 \x03 \x06 \x03 \x06 \x0C \x08 \x07 \x08
00000090	0C	\x0C
000000A0	0C	\x0C
000000B0	0C	\x0C
000000C0	0C 0C FF C0 01 11 08 00 C0 01 07 03 01 22 00 02	\x0C \x0C \xFF \xC0 \x01 \x11 \x08 \x00 \xC0 \x01 \x07 \x03 \x01 \x22 \x00 \x02
000000D0	11 01 03 11 01 FF C4 00 1F 00 00 01 05 01 01 01	\x11 \x01 \x03 \x11 \x01 \xFF \xC4 \x00 \x1F \x00 \x00 \x01 \x05 \x01 \x01 \x01
000000E0	01 01 01 00 00 00 00 00 00 00 00 01 00 01 02 03 04 05	\x01 \x01 \x01 \x00 \x00 \x00 \x00 \x00 \x00 \x00 \x00 \x01 \x00 \x01 \x02 \x03 \x04 \x05
000000F0	06 07 08 09 0A 0B FF C4 00 B5 10 00 02 01 03 03	\x06 \x07 \x08 \x09 \x0A \x0B \xFF \xC4 \x00 \xB5 \x10 \x00 \x02 \x01 \x03 \x03
00000100	02 04 03 05 05 04 04 00 00 01 7D 01 02 03 00 04	\x02 \x04 \x03 \x05 \x05 \x04 \x04 \x00 \x00 \x01 \x7D \x01 \x02 \x03 \x00 \x04
00000110	11 05 12 21 31 41 06 13 51 61 07 22 71 14 32 81	\x11 \x05 \x12 \x21 \x31 \x41 \x06 \x13 \x51 \x61 \x07 \x22 \x71 \x14 \x32 \x81
00000120	91 A1 08 23 42 B1 C1 15 52 D1 F0 P4 24 33 62 72 82	\x91 \xA1 \x08 \x23 \x42 \xB1 \xC1 \x15 \x52 \xD1 \xF0 \xF4 \x24 \x33 \x62 \x72 \x82
00000130	09 0A 16 17 18 19 1A 25 26 27 28 29 2A 34 35 36	\x09 \xA0 \x16 \x17 \x18 \x19 \xA1 \x25 \x26 \x27 \x28 \x29 \x2A \x34 \x35 \x36
00000140	37 38 39 3A 43 44 45 46 47 48 49 4A 53 54 55 56	\x37 \x38 \x39 \x3A \x43 \x44 \x45 \x46 \x47 \x48 \x49 \x4A \x53 \x54 \x55 \x56
00000150	57 58 59 5A 63 64 65 66 67 68 69 6A 73 74 75 76	\x57 \x58 \x59 \x5A \x63 \x64 \x65 \x66 \x67 \x68 \x69 \x6A \x73 \x74 \x75 \x76
00000160	77 78 79 7A 82 84 85 86 87 88 89 8A 92 93 94 95	\x77 \x78 \x79 \x7A \x82 \x84 \x85 \x86 \x87 \x88 \x89 \x8A \x92 \x93 \x94 \x95
00000170	96 97 98 99 9A B2 A3 A4 A5 A6 A7 A8 A9 AA B2 B3	\x96 \x97 \x98 \x99 \x9A \xB2 \xA3 \xA4 \xA5 \xA6 \xA7 \xA8 \xA9 \xAA \xB2 \xB3
00000180	B4 B5 B6 B7 B8 B9 BA C2 C3 C4 C5 C6 C7 C8 C9 CA	\xB4 \xB5 \xB6 \xB7 \xB8 \xB9 \xBA \xC2 \xC3 \xC4 \xC5 \xC6 \xC7 \xC8 \xC9 \xCA
00000190	D2 D3 D4 D5 D6 D7 D8 D9 DA E1 E2 E3 E4 E5 E6 E7	\xD2 \xD3 \xD4 \xD5 \xD6 \xD7 \xD8 \xD9 \xDA \xE1 \xE2 \xE3 \xE4 \xE5 \xE6 \xE7
000001A0	E8 E9 EA F1 F2 F3 F4 F5 F6 F7 F8 F9 FA FF C4 00	\xE8 \xE9 \xEA \xF1 \xF2 \xF3 \xF4 \xF5 \xF6 \xF7 \xF8 \xF9 \xFA \xFF \xC4 \x00
000001B0	1F 01 00 03 01 01 01 01 01 01 01 01 00 00 00	\x1F \x01 \x00 \x03 \x01 \x01 \x01 \x01 \x01 \x01 \x01 \x01 \x00 \x00 \x00
000001C0	00 00 00 01 02 03 04 05 06 07 08 09 0A 0B FF C4	\x00 \x00 \x00 \x01 \x02 \x03 \x04 \x05 \x06 \x07 \x08 \x09 \x0A \x0B \xFF \xC4
000001D0	00 B5 11 00 02 01 02 04 04 03 04 07 05 04 04 00	\x00 \xB5 \x11 \x00 \x02 \x01 \x02 \x04 \x04 \x03 \x04 \x07 \x05 \x04 \x04 \x00
000001E0	01 02 77 00 01 02 03 11 04 05 21 31 06 12 41 51	\x01 \x02 \x77 \x00 \x01 \x02 \x03 \x11 \x04 \x05 \x21 \x31 \x06 \x12 \x41 \x51
000001F0	07 61 71 13 22 32 81 08 14 42 91 A1 B1 C1 09 23	\x07 \x61 \x71 \x13 \x22 \x32 \x81 \x08 \x14 \x42 \x91 \xA1 \xB1 \xC1 \x09 \x23
00000200	33 52 F0 15 62 72 D1 0A 16 24 34 E1 25 F1 17 18	\x33 \x52 \xF0 \x15 \x62 \x72 \xD1 \x0A \x16 \x24 \x34 \xE1 \x25 \xF1 \x17 \x18

The screenshot shows the MOBILedit Forensic application window. The top navigation bar includes icons for Home, Settings, and Help, along with a search bar labeled "Forensic Reports". The left sidebar lists various data sources and tools: Call Logs, Messages, Calendar, Applications, Application Data, Media, User Files, Files, SIM card (Read-Only), SIM Phonebook, Cases (1) containing an item for "asus ASUS\_T00J1 (3/20/2017)", Files, Hex Dump, Photo Viewer (1) containing "images.jpg", and Forensic Reports. The main content area has three sections: "Data Sources" (listing External Sources (1) and Devices (2)), "Report Templates" (listing XML-HTML Report, XML for Search Tool, XML for i2 (with Connections) selected, Excel, and RTF in English), and a green callout box stating "Advanced PDF and HTML reports available via Phone Forensics Express". A blue callout box at the bottom right says "How to customize a template".

