

# Recovering Deleted and Damaged Files (4e)

Digital Forensics, Investigation, and Response, Fourth Edition - Lab 03

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Time on Task:  
6 hours, 46 minutes

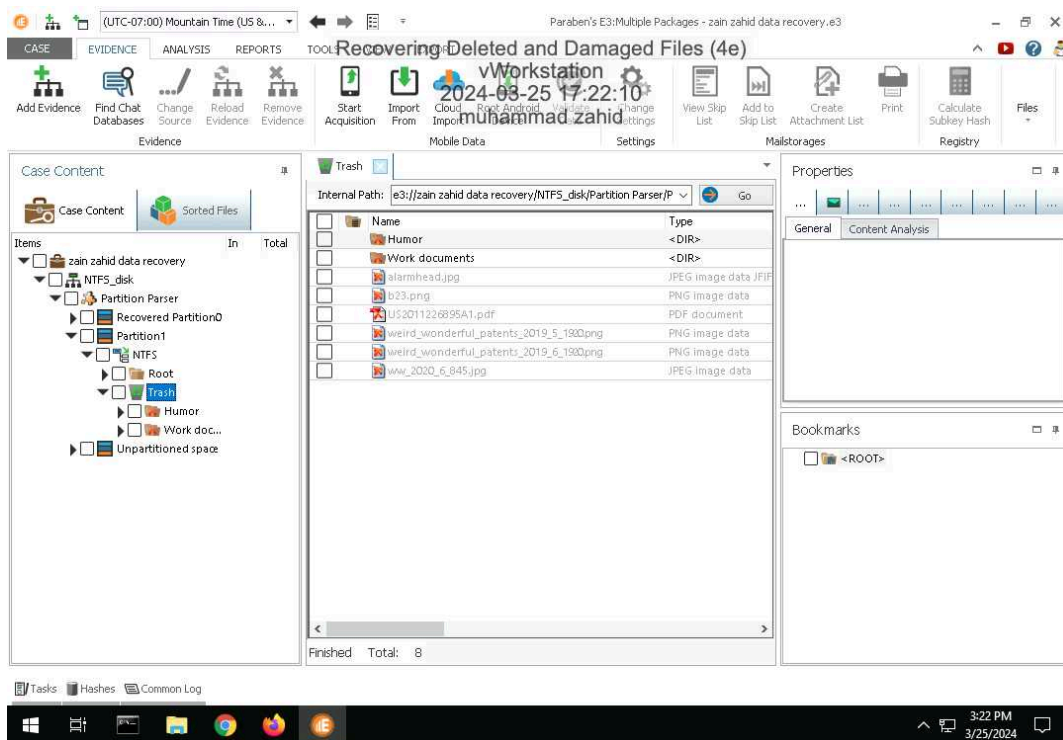
Progress:  
100%

Report Generated: Wednesday, March 27, 2024 at 3:01 AM

## Section 1: Hands-On Demonstration

### Part 1: Recover Deleted Files from an NTFS Drive Image with E3

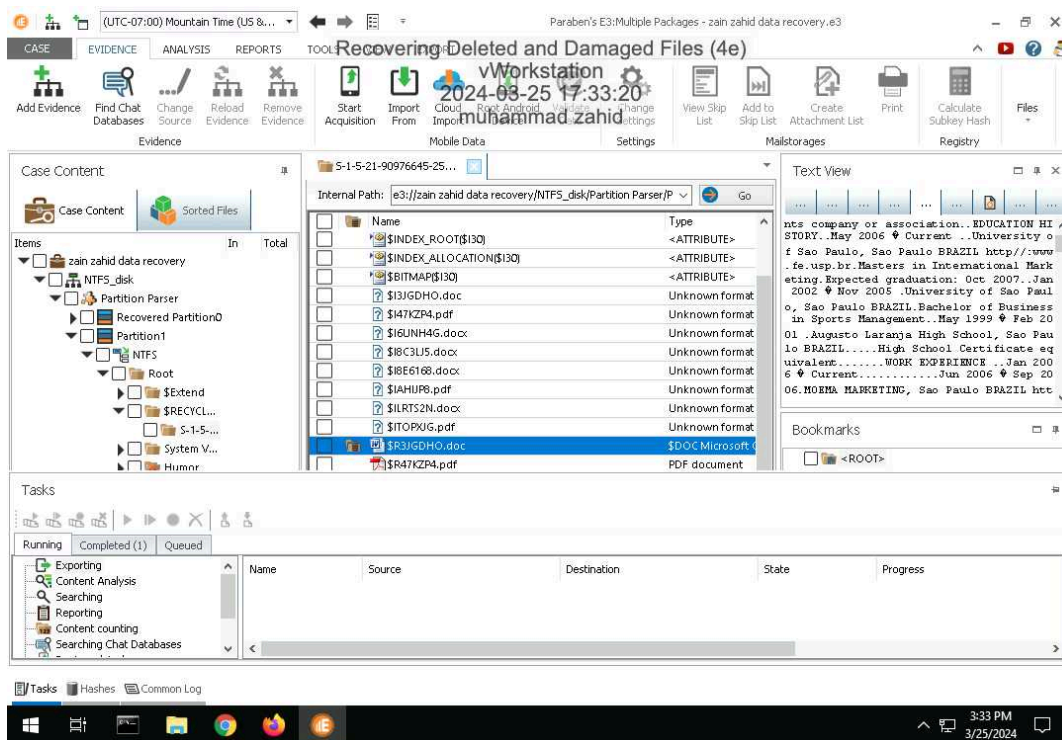
13. **Make a screen capture** showing the **list of recovered files and folders in the E3 Trash folder**.



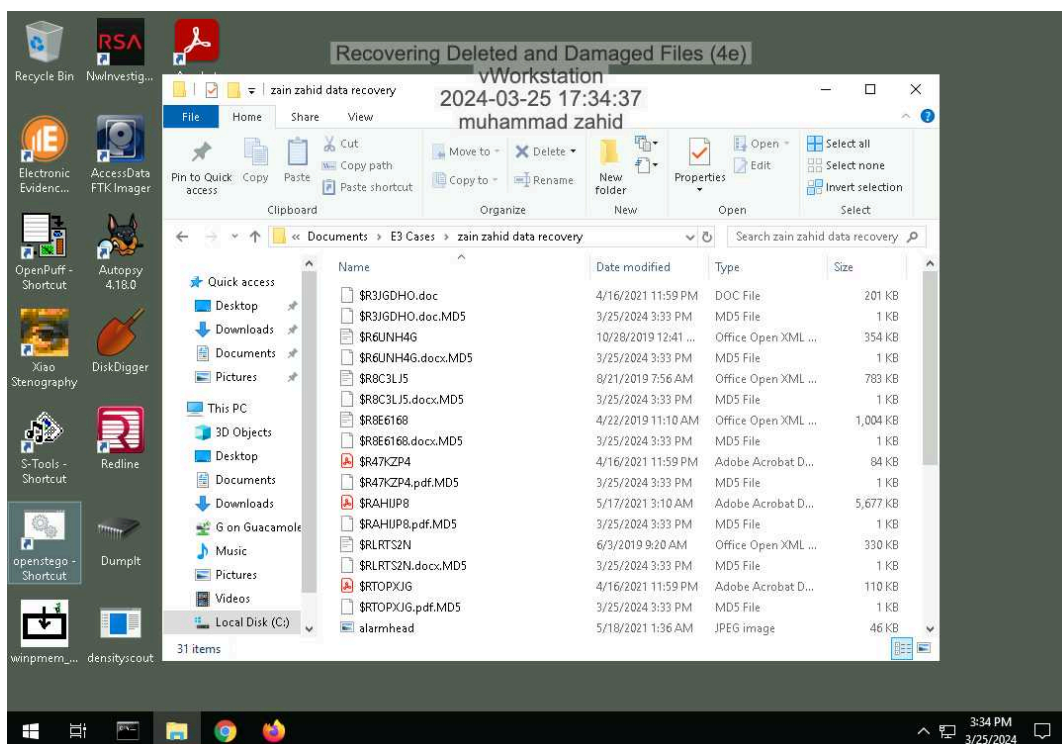
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## 20. Make a screen capture showing the patent file in the File Viewer.

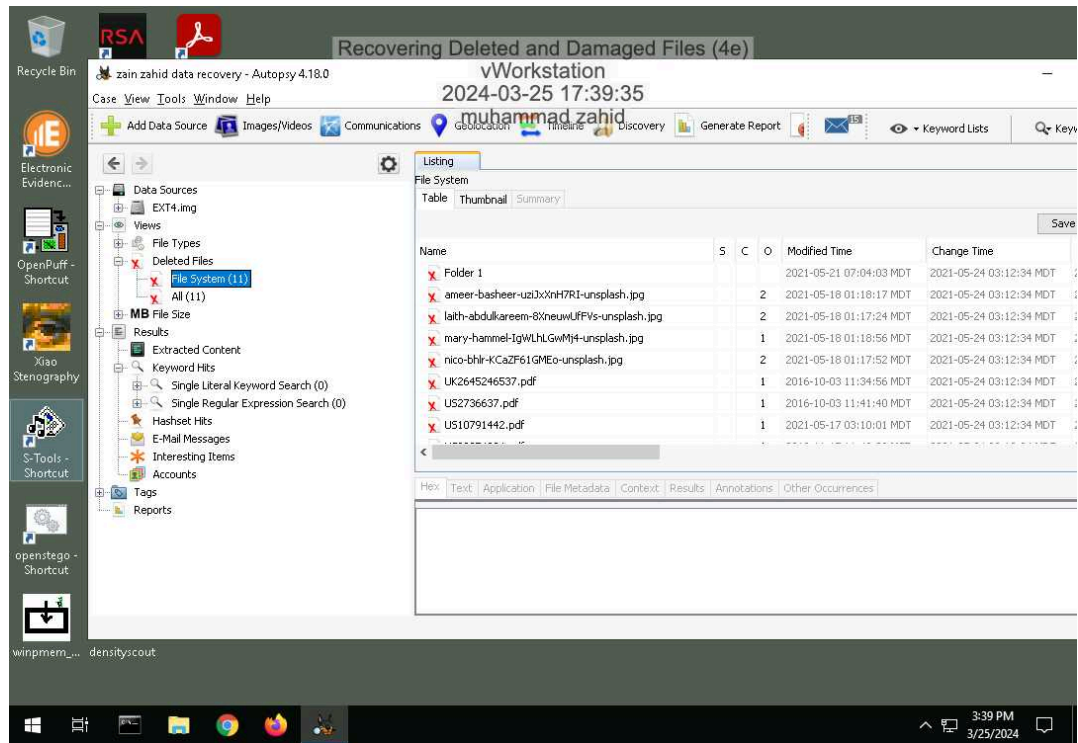


## 25. Make a screen capture showing the recovered files in the File Explorer.



### Part 2: Recover Deleted Files from an Ext4 Drive Image with Autopsy

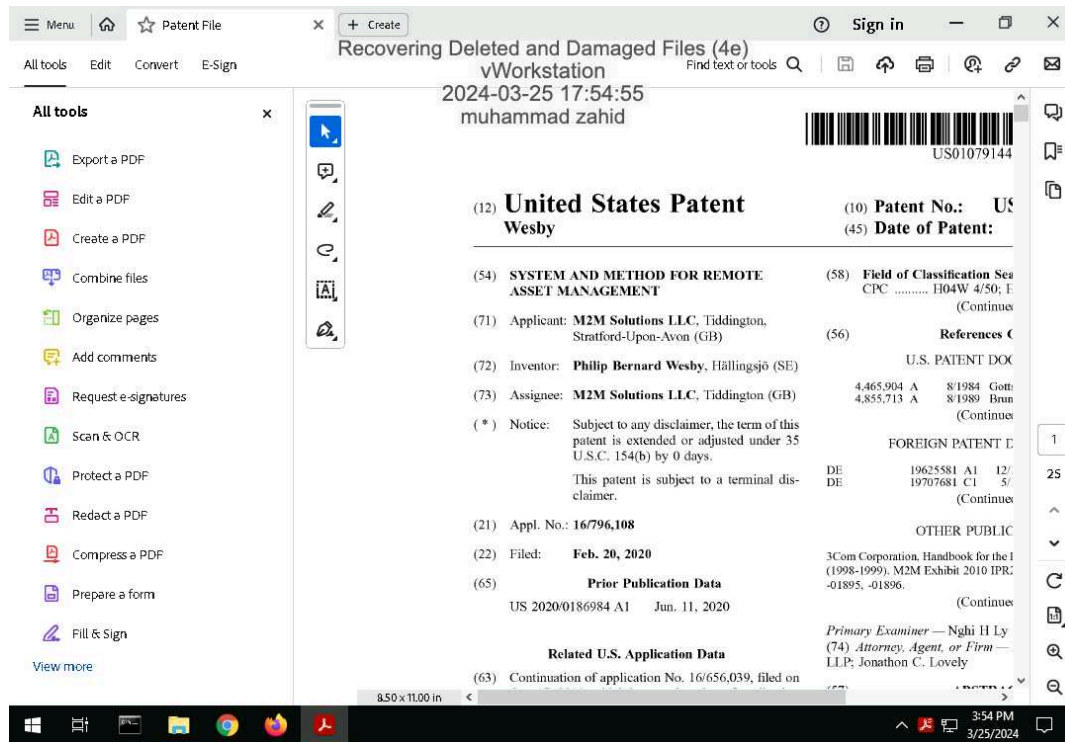
14. Make a screen capture showing the contents of the list of deleted files in Autopsy.



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## 22. Make a screen capture showing the recovered patent file.

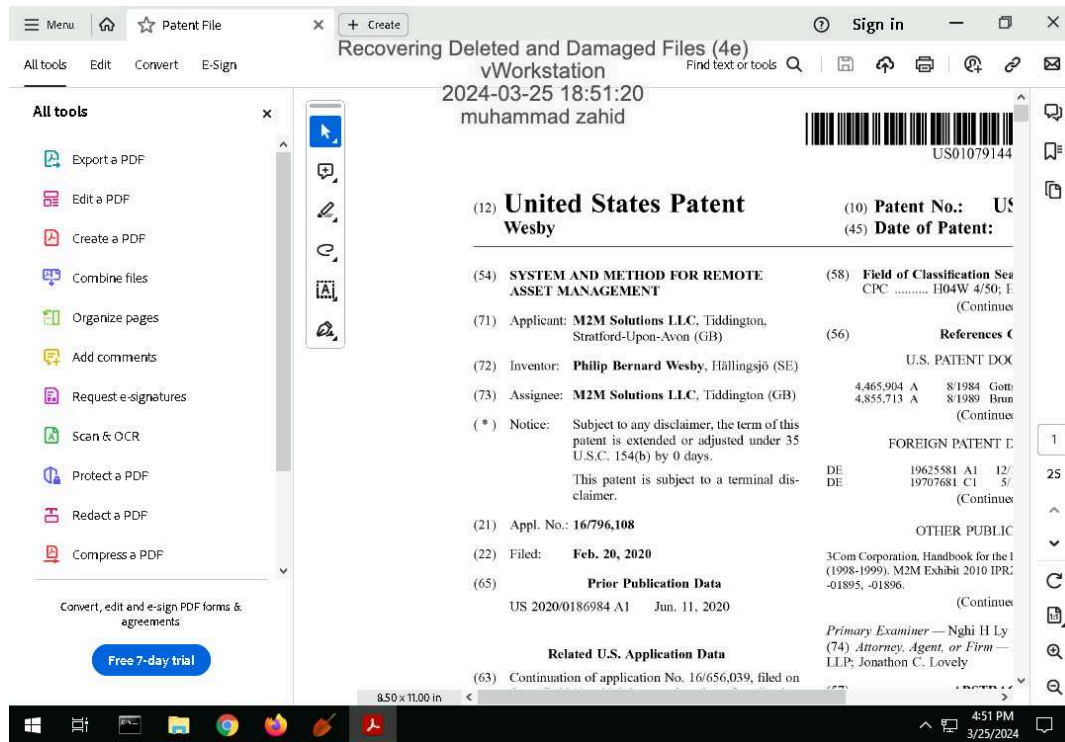




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## 15. Make a screen capture showing the recovered patent file.



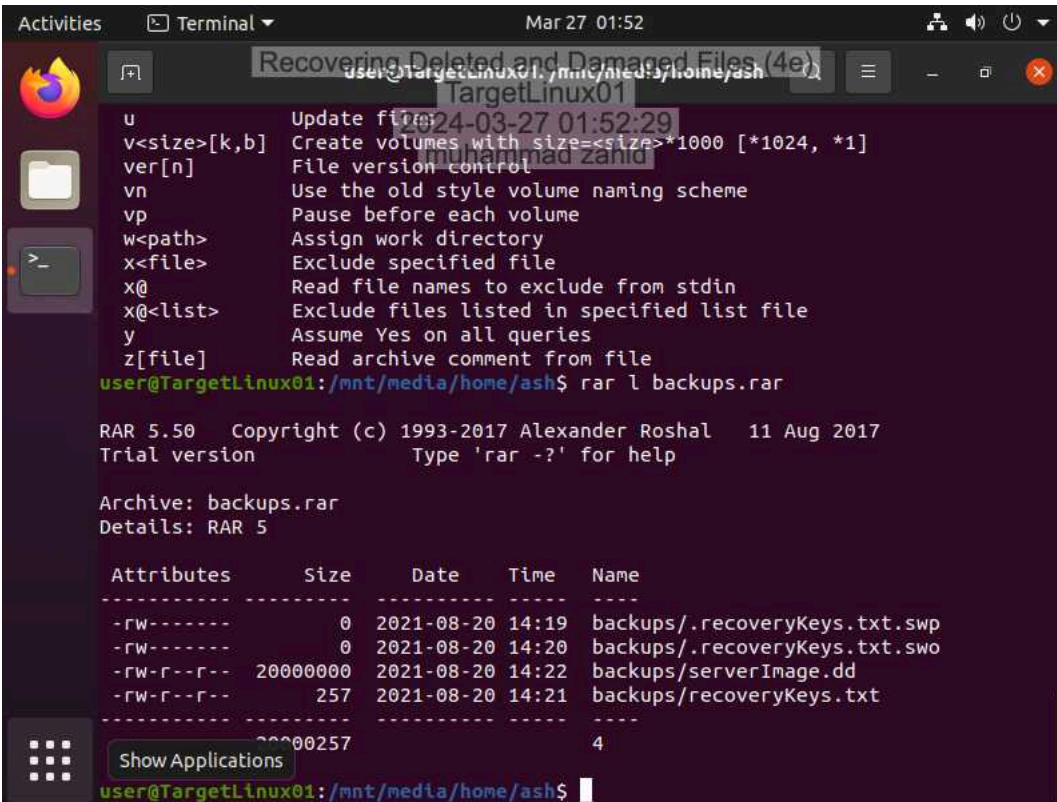
## Part 2: Recover Deleted Files in Linux with PhotoRec



## Recovering Deleted and Damaged Files (4e)

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9. Make a screen capture showing the contents of the RAR archive in the `/mnt/media/home/ash` directory.



The screenshot shows a terminal window titled "Recovering Deleted and Damaged Files (4e)" with the user "user@TargetLinux01" in the directory "/mnt/media/home/ash". The terminal displays the output of the command `rar l backups.rar`. The output shows the RAR 5.50 version information and a list of files in the archive. The files are:

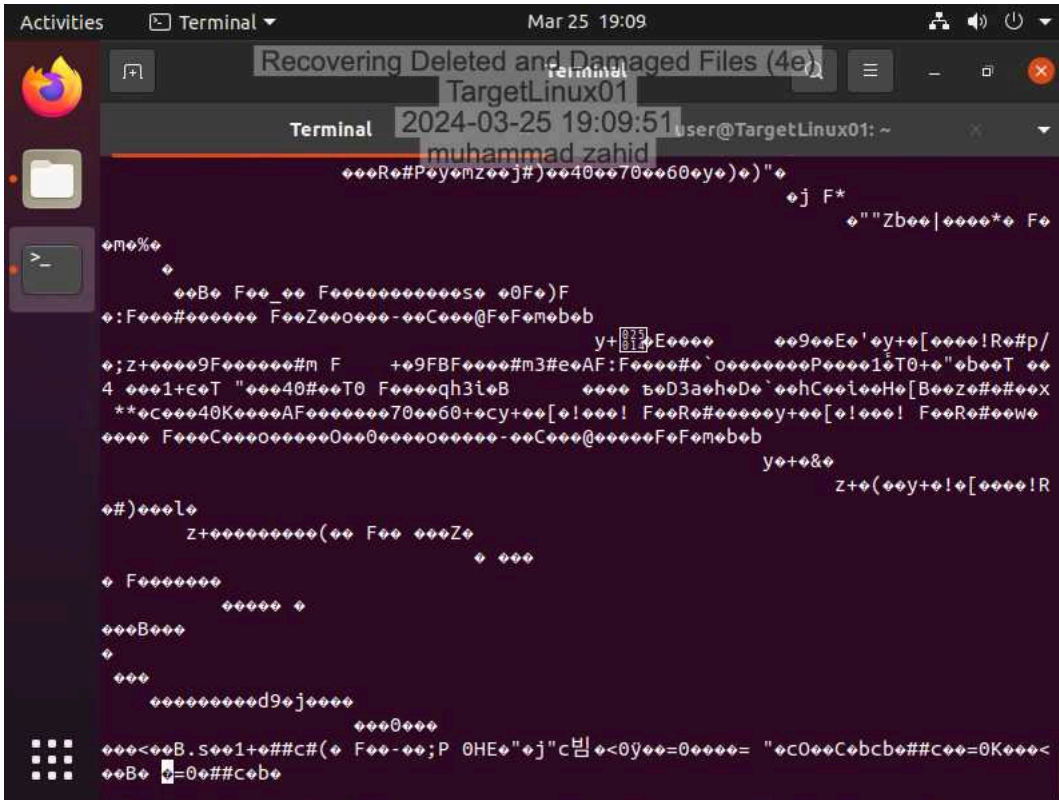
Attributes	Size	Date	Time	Name
-rw-----	0	2021-08-20	14:19	backups/.recoveryKeys.txt.swp
-rw-----	0	2021-08-20	14:20	backups/.recoveryKeys.txt.swo
-rw-r--r--	20000000	2021-08-20	14:22	backups/serverImage.dd
-rw-r--r--	257	2021-08-20	14:21	backups/recoveryKeys.txt

The terminal also shows the command `rar l backups.rar` and the output of the `rar` command, including the RAR 5.50 version information and the list of files in the archive. The user is currently in the directory `/mnt/media/home/ash`.

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15. Make a screen capture showing the failed mount attempt on the /dev/sdb2 device.



The screenshot shows a terminal window titled "Terminal" with the subtitle "TargetLinux01". The terminal output displays a failed mount attempt on the /dev/sdb2 device. The output is as follows:

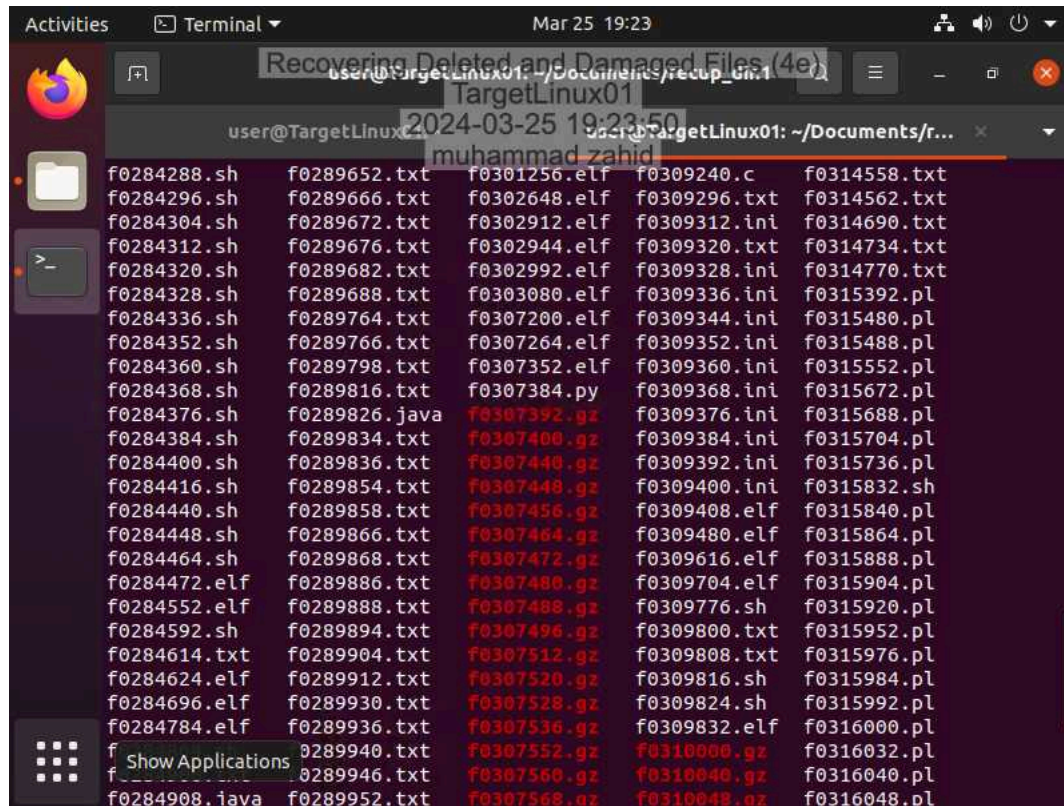
```
Recovering Deleted and Damaged Files (4e)
TargetLinux01
Terminal 2024-03-25 19:09:51 user@TargetLinux01: ~
muhammad zahid
***R#PoyomZ#)407060ye)***
  j F*
  "Zb|*** F
m%
  B F _ F*****s F)F
  :F#### FZ####-C@Ffmbb
  ;z+9F####m F +9FBF####m3#eAF:F####'oP####1T0+beT 4
  4 1+eT "40#T0 F####qh3iB  bD3aheD`ehCeeH[Bz#x
  **C40K####AF####7060+cy+[]! F#y+[]! FRe#we
  F#C####O#0####-C@####Ffmbb
  y+&
  z+(y+![]!R
  #)l
  z+####( F  Z
  F
  B
  d9j
  B.S+##C#( F-P 0HE"j"c뵆<0y==0== "c0Cbcbb##c=0K<
  B=0##cb
```



## Recovering Deleted and Damaged Files (4e)

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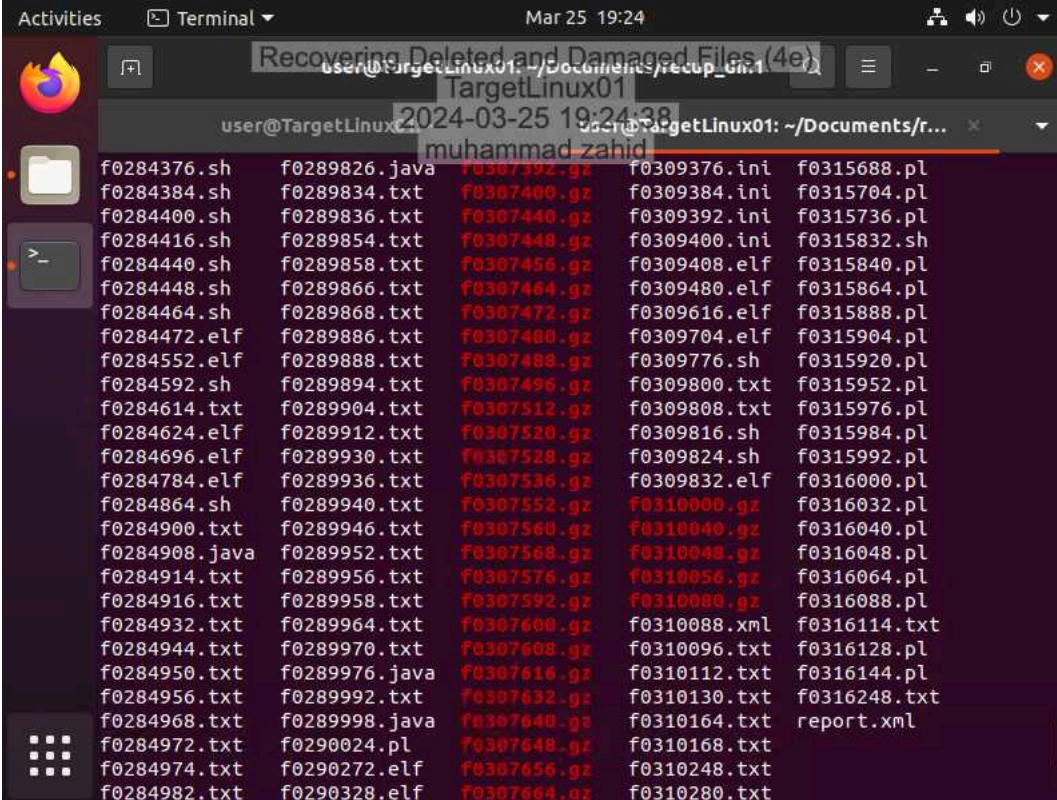
32. Make a screen capture showing the **compressed files recovered by PhotoRec**.



## Recovering Deleted and Damaged Files (4e)

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35. Make a screen capture showing the backup files recovered from the RAR archive.



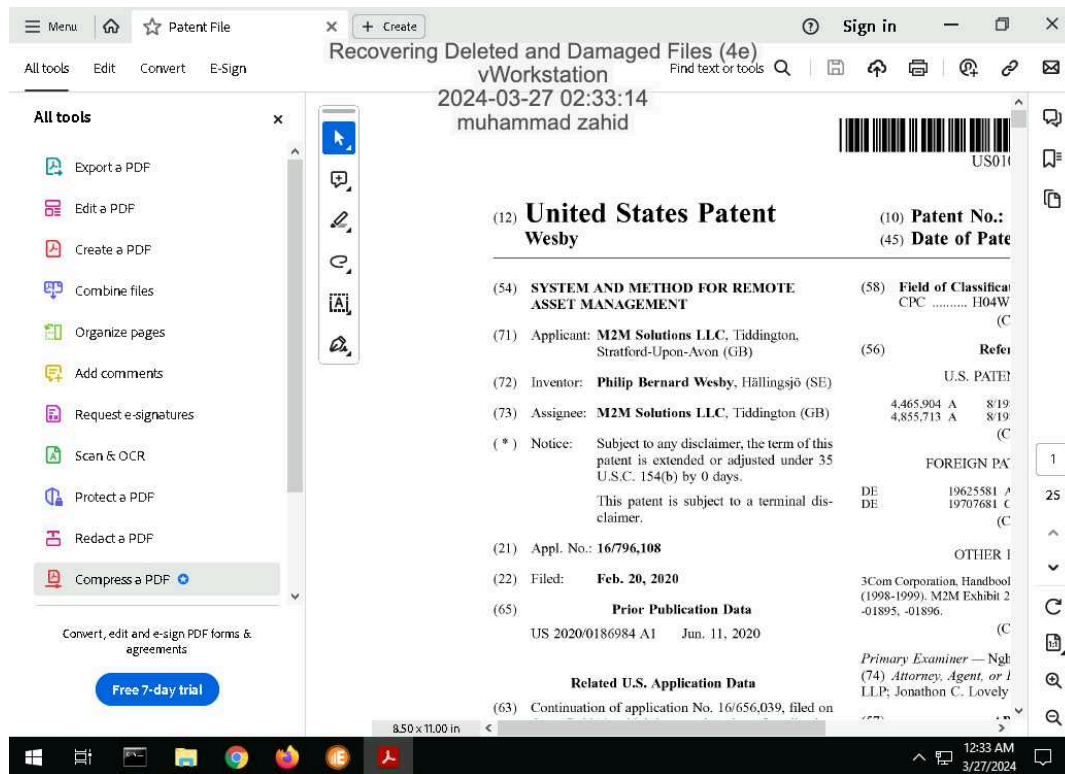
The screenshot shows a Linux terminal window titled "Recovering Deleted and Damaged Files (4e)". The terminal displays a list of recovered backup files, organized in four columns. The files are named with a prefix (e.g., f0284376) followed by an extension (e.g., .sh, .txt, .gz, .ini, .pl, .elf, .xml). The terminal output is as follows:

f0284376.sh	f0289826.java	f0307392.gz	f0309376.ini	f0315688.pl
f0284384.sh	f0289834.txt	f0307400.gz	f0309384.ini	f0315704.pl
f0284400.sh	f0289836.txt	f0307440.gz	f0309392.ini	f0315736.pl
f0284416.sh	f0289854.txt	f0307448.gz	f0309400.ini	f0315832.sh
f0284440.sh	f0289858.txt	f0307456.gz	f0309408.elf	f0315840.pl
f0284448.sh	f0289866.txt	f0307464.gz	f0309480.elf	f0315864.pl
f0284464.sh	f0289868.txt	f0307472.gz	f0309616.elf	f0315888.pl
f0284472.elf	f0289886.txt	f0307480.gz	f0309704.elf	f0315904.pl
f0284552.elf	f0289888.txt	f0307488.gz	f0309776.sh	f0315920.pl
f0284592.sh	f0289894.txt	f0307496.gz	f0309800.txt	f0315952.pl
f0284614.txt	f0289904.txt	f0307512.gz	f0309808.txt	f0315976.pl
f0284624.elf	f0289912.txt	f0307520.gz	f0309816.sh	f0315984.pl
f0284696.elf	f0289930.txt	f0307528.gz	f0309824.sh	f0315992.pl
f0284784.elf	f0289936.txt	f0307536.gz	f0309832.elf	f0316000.pl
f0284864.sh	f0289940.txt	f0307552.gz	f0310000.gz	f0316032.pl
f0284900.txt	f0289946.txt	f0307560.gz	f0310040.gz	f0316040.pl
f0284908.java	f0289952.txt	f0307568.gz	f0310048.gz	f0316048.pl
f0284914.txt	f0289956.txt	f0307576.gz	f0310056.gz	f0316064.pl
f0284916.txt	f0289958.txt	f0307592.gz	f0310080.gz	f0316088.pl
f0284932.txt	f0289964.txt	f0307600.gz	f0310088.xml	f0316114.txt
f0284944.txt	f0289970.txt	f0307608.gz	f0310096.txt	f0316128.pl
f0284950.txt	f0289976.java	f0307616.gz	f0310112.txt	f0316144.pl
f0284956.txt	f0289992.txt	f0307632.gz	f0310130.txt	f0316248.txt
f0284968.txt	f0289998.java	f0307640.gz	f0310164.txt	report.xml
f0284972.txt	f0290024.pl	f0307648.gz	f0310168.txt	
f0284974.txt	f0290272.elf	f0307656.gz	f0310248.txt	
f0284982.txt	f0290328.elf	f0307664.gz	f0310280.txt	

## Section 3: Challenge and Analysis

### Part 1: Recover Deleted Files from a FAT Drive Image

Make a screen capture showing the patent file recovered from the FAT32 drive image within E3.



### Part 2: Recover Deleted Files from a APFS Drive Image

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Make a screen capture showing the patent file recovered from the APFS drive image within Autopsy.

