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GITHUB LINK: https://github.com/Pavankumarpenta/INT301CA3.git

**QUESTION**

Use any available open-source software to generate a report on recovery of deleted photos from your system and emails from your email account.

# CHAPTER 1

## 1.INTRODUCTION

When files or photos are accidentally deleted, they are not completely removed from the system or storage device. Instead, the data still exists on the device until it is overwritten by new data. This means that it is possible to recover deleted photos and files using specialized data recovery software. There are various open-source data recovery software available that can help you to recover deleted photos from your system. These tools are designed to scan the hard drive and identify recoverable files, even if they have been deleted or formatted. Similarly, you can also use open-source email recovery software to recover accidentally deleted emails from your email account.

To generate a report on the recovery of deleted photos from your system and emails from your email account using open-source software, you need to follow certain steps. Firstly, you need to identify the appropriate open-source software that can perform the task. Secondly, you need to install the software and configure it properly to scan your system or email account for deleted data. Finally, you need to analyze the generated report to determine the recoverable data and take appropriate action to recover the data.

Overall, using open-source software to recover deleted photos and emails is a cost-effective and efficient solution for data recovery. With the right software and configuration, you can recover important data that was accidentally deleted and generate a report to help you manage your recovered files.

## 1.1 OBJECTIVE OF THE PROJECT

- **Recover deleted photos:** The project aims to recover deleted photos from the system using open-source data recovery software. The software will scan the hard drive to locate and recover deleted photos that are still recoverable.
- **Recover deleted emails:** The project also aims to recover deleted emails from the email account using open-source email recovery software. The software will scan the email account to locate and recover deleted emails that are still recoverable.

- **Generate a report**: The project aims to generate a detailed report on the recovery of deleted photos and emails. The report will provide information on the recovered data, including the file name, location, size, and condition. The report will also identify the software used to recover the data and provide a summary of the recovery process.
- **Ensure data privacy:** The project will ensure that the recovered data is kept private and secure. The project will use open-source software that is trusted and reliable to recover the data and will take appropriate measures to protect the data during the recovery process.

Overall, the objective of the project is to use open-source software to recover deleted photos and emails and generate a report that provides valuable information on the recovered data. The project aims to ensure that the recovered data is kept private and secure throughout the recovery process.

## 1.2 DESCRIPTION OF THE PROJECT

- **Install and configure the software:** Once the appropriate open-source software has been identified, it needs to be downloaded, installed, and configured on the system. The software needs to be configured to scan the hard drive or email account for deleted photos and emails and recover them.
- **Scan the system and email account:** The software needs to be run to scan the system and email account for deleted photos and emails. The software will identify all deleted photos and emails that are still recoverable and create a list of recoverable data.
- **Recover the data:** Once the recoverable data has been identified, the software can be used to recover the deleted photos and emails from the system and email account.
- **Generate a report:** After the data has been recovered, a detailed report needs to be generated to provide information on the recovered data. The report should include the file name, location, size, and condition of the recovered data, as well as the software used to recover the data and a summary of the recovery process.
- **Analyze the report:** Finally, the generated report needs to be analyzed to determine the recoverable data and take appropriate action to recover the data. The report will help to identify any gaps in the data recovery process and provide valuable information on how to improve the process.

In summary, the project involves using open-source software to recover deleted photos from a system and emails from an email account and generating a detailed report on the recovery

process. The project aims to ensure that the recovered data is kept private and secure throughout the recovery process.

## 1.3 SCOPE OF THE PROJECT

The scope of an open-source software project to generate a report on recovery of deleted photos from your system and emails from your email account would involve the development of a software tool that can scan a user's system and email account to detect any deleted photos or emails that can be recovered. The software would need to be able to scan the system's storage devices and email servers to identify any deleted data. Once the data has been identified, the software would need to be able to recover the deleted data and generate a report that provides the user with information about the recovered files. The project would involve developing software for multiple platforms, including Windows, MacOS, and Linux, as well as integrating with various email providers such as Gmail, Yahoo, and Outlook. The software would also need to be compatible with various file types, including JPEG, PNG, and RAW image files. Other important aspects of the project would include developing a user-friendly interface for the software, ensuring the security and privacy of user data during the scanning and recovery process, and providing robust documentation and support for users.

Overall, the scope of this project is significant and would require a team of experienced developers with expertise in data recovery, email protocols, and cross-platform software development.

# CHAPTER 2

## 2.1 TARGET SYSTEM DESCRIPTION

For Windows, the software would need to be compatible with Windows 10, Windows 8, and Windows 7, and would need to support both 32-bit and 64-bit architectures. For MacOS, the software would need to be compatible with MacOS 10.15 (Catalina), MacOS 10.14 (Mojave), and MacOS 10.13 (High Sierra).

For Linux, the software would need to be compatible with multiple distributions, including Ubuntu, Debian, Fedora, and CentOS.

The software would also need to be able to integrate with various email providers such as Gmail, Yahoo, Outlook, and others, using industry-standard protocols such as IMAP, POP3, and SMTP.

The target system would also need to support various file types commonly used for storing photos, including JPEG, PNG, and RAW image files. Additionally, the software would need to be able to handle different file systems such as NTFS, FAT32, HFS+, and Ext4.

Overall, the target system for this project would need to be robust, versatile, and capable of running on a wide range of platforms and configurations, to ensure that users can recover their deleted photos and emails regardless of their operating system or email provider.

## 2.2 DATA SET USED IN SUPPORT OF YOUR PROJECT

## PHOTOREC:

Photo Rec is a free and open-source data recovery software designed to recover lost files including photos, videos, documents, and archives from a wide range of storage media such as hard drives, USB flash drives, and memory cards. Photo Rec is developed by CG Security, a company that specializes in data recovery software. The software is available for Windows, MacOS, and Linux, and supports a wide range of file systems including NTFS, FAT32, ext2/3/4, HFS+, and many others.

Overall, Photo Rec is a powerful and versatile data recovery software that can help users recover lost files, including photos, from a wide range of storage media and file systems.

## MAIL STORE HOME:

Mail Store Home supports popular email protocols such as POP3, IMAP, and Microsoft Exchange Server, and it can archive emails from email clients such as Microsoft Outlook, Mozilla Thunderbird, and many others. It can also archive emails from web-based email services such as Gmail, Yahoo, and Outlook.com. Mail Store Home provides an easy-to-use interface and various features that allow users to search and access their archived emails quickly. It also has an integrated export function that allows users to export their emails to various formats such as PDF, HTML, and XML.

Overall, Mail Store Home is a reliable and user-friendly email archiving software that can help users to backup and manage their email archives effectively.

# CHAPTER 3

## 3.ANALYSIS REPORT

### 3.1 SYSTEM SNAPCHAT AND FULL ANAYLYSIS REPORT

Here are the step-by-step instructions on how to install Photo Rec and generate a report on the recovery of deleted photos:

## PHOTO REC

### STEP 1: Download Phot Rec

The first step is to download Photo Rec from the CG Security website. Make sure to download the appropriate version for your operating system.

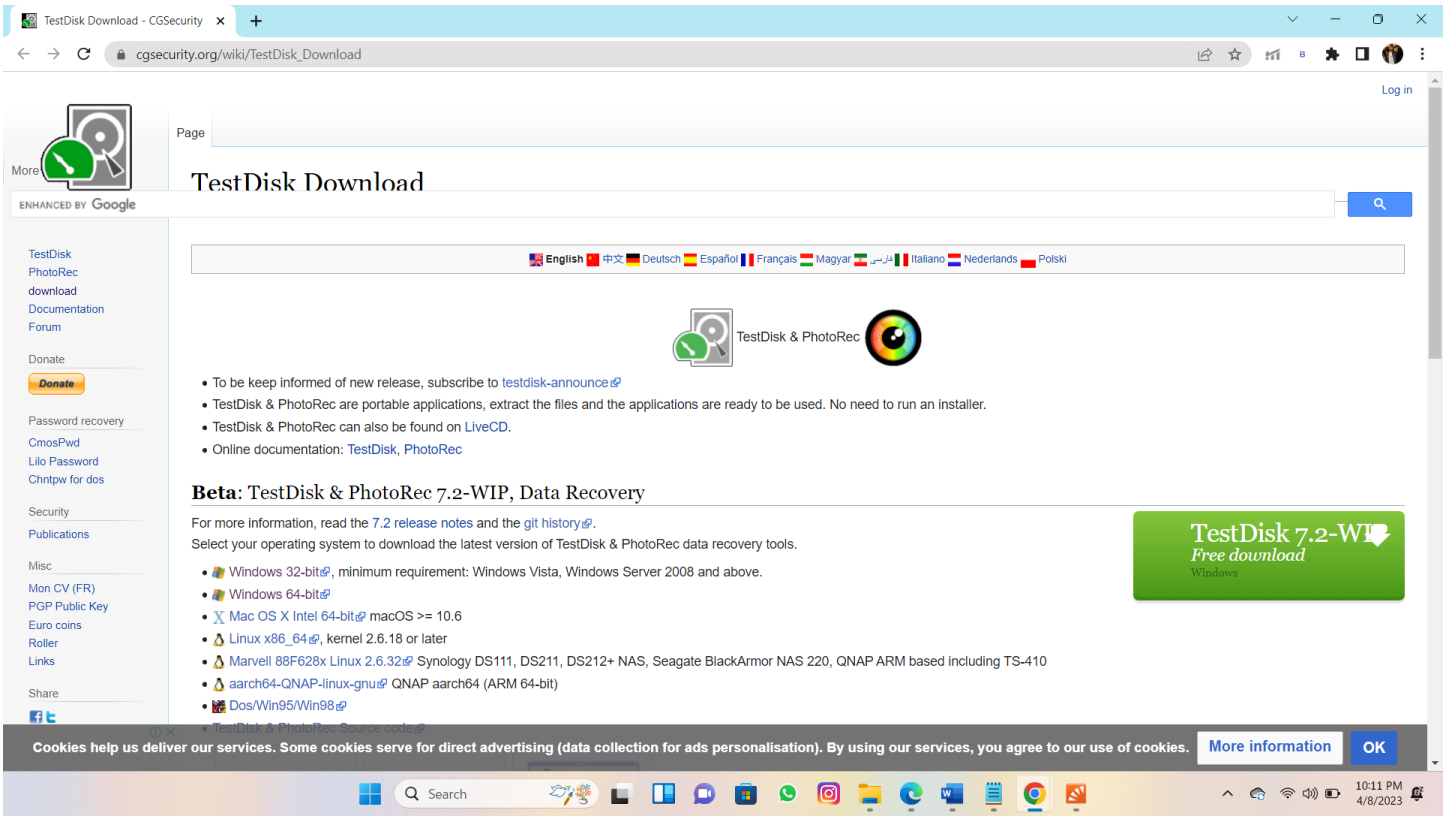


Figure 1.1: Test disk CG Security.

## STEP 2: Install Photo Rec

Once the download is complete, extract the files from the downloaded archive and save them to a location. There is no installation process for Photo Rec as it is a portable application.


Figure 1.2: Photo Rec zip file.

## STEP 3: Launch Photo Rec

To launch Photo Rec, open the extracted folder and run the executable file (photorec_win.exe on Windows). Alternatively, you can launch Photo Rec from the command line by navigating to the extracted folder and typing photo rec.

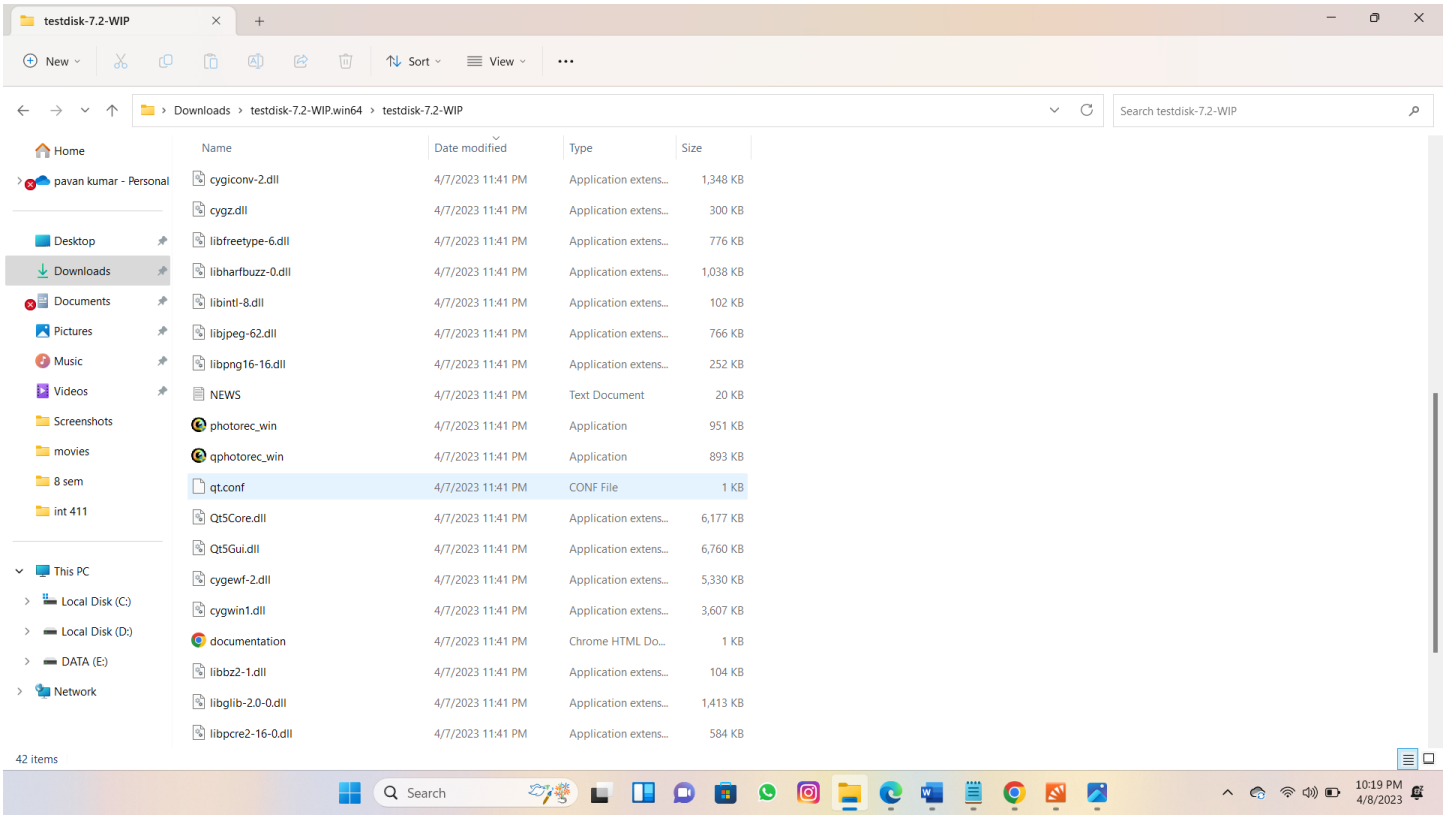


Figure 1.3: Launch Photo rec.

## STEP 4: Select the Disk or Partition to Recover From

When Photo Rec starts, it will display a list of available disks and partitions. Select the disk or partition that you want to recover photos from, and press Enter.

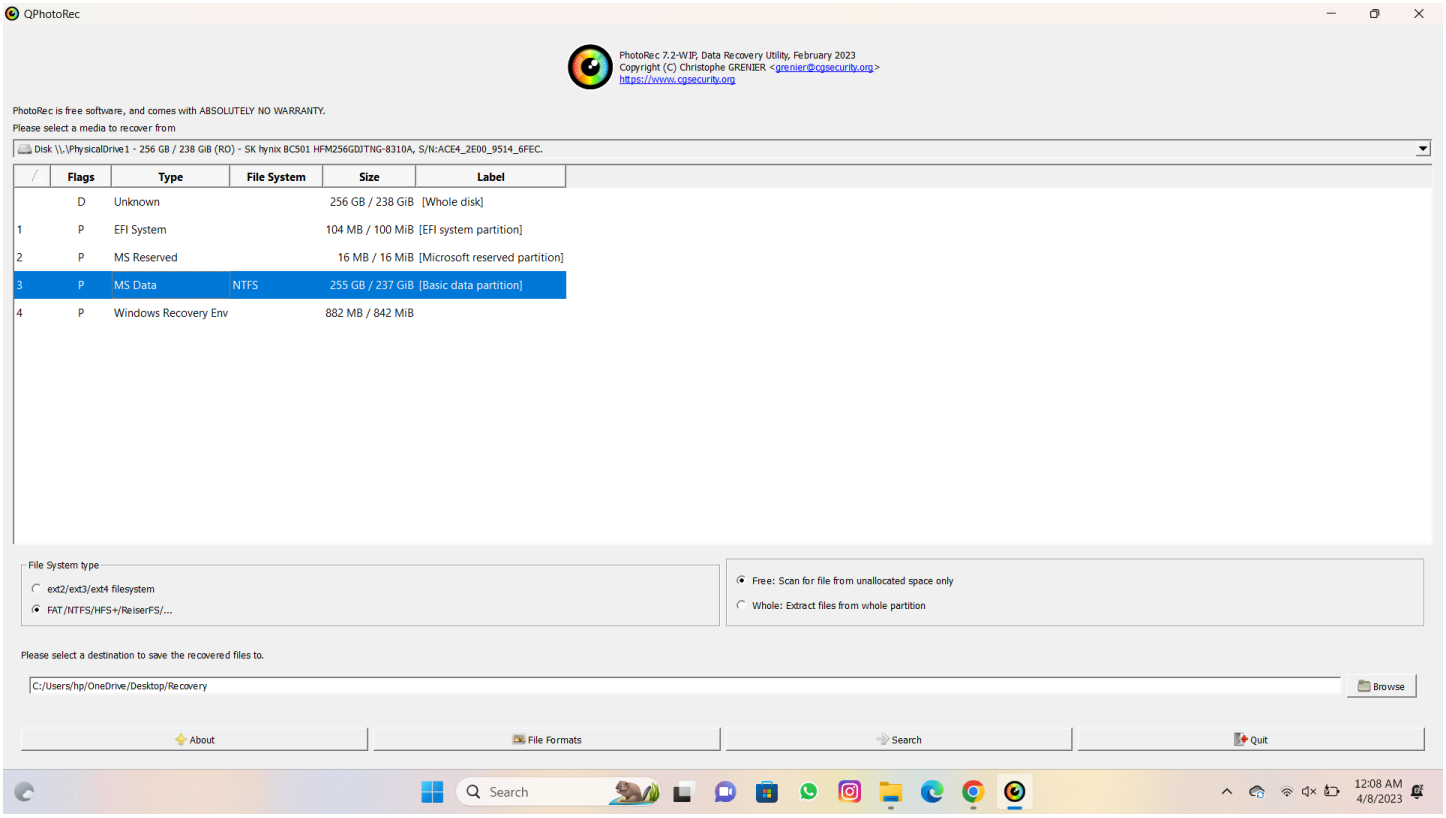


Figure 1.4: Available Disk.

## STEP 5: Choose File Formats to Recover

Next, you will be prompted to select the file formats that you want to recover. Photo Rec supports a wide range of file formats, so you can choose the ones that are relevant to your situation.

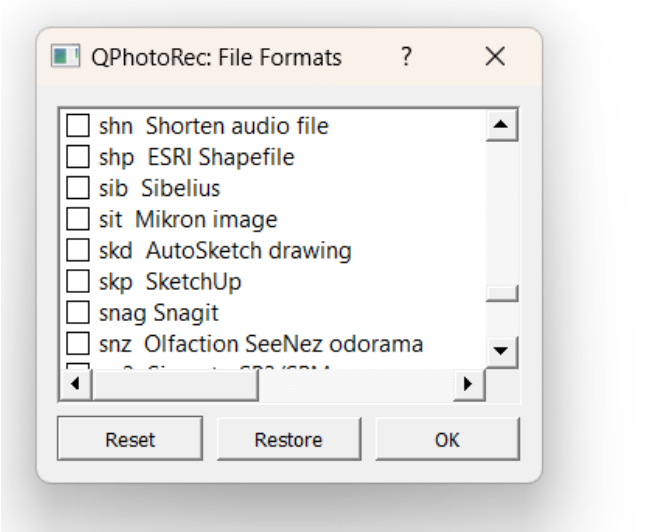


Figure 1.5: File format.

## STEP 6: Choose a Recovery Destination

After selecting the file formats, you will be prompted to choose a destination for the recovered files. It is recommended to choose a different drive or partition than the one you are recovering from to avoid overwriting any data.


Figure 1.6: Browse Destination

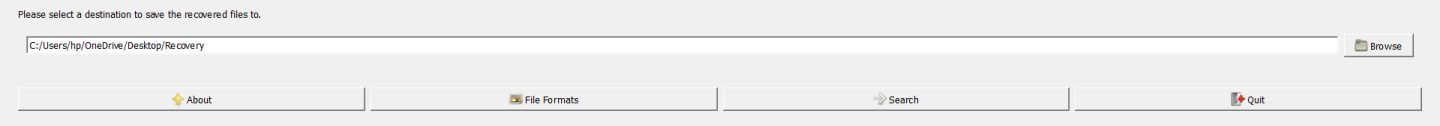


Figure 1.7: Destination to save the recovered files to.

## STEP 7: Start the Recovery Process

Once you have selected the recovery destination, PhotoRec will begin the recovery process. This may take some time depending on the size of the disk or partition and the number of files to be recovered.

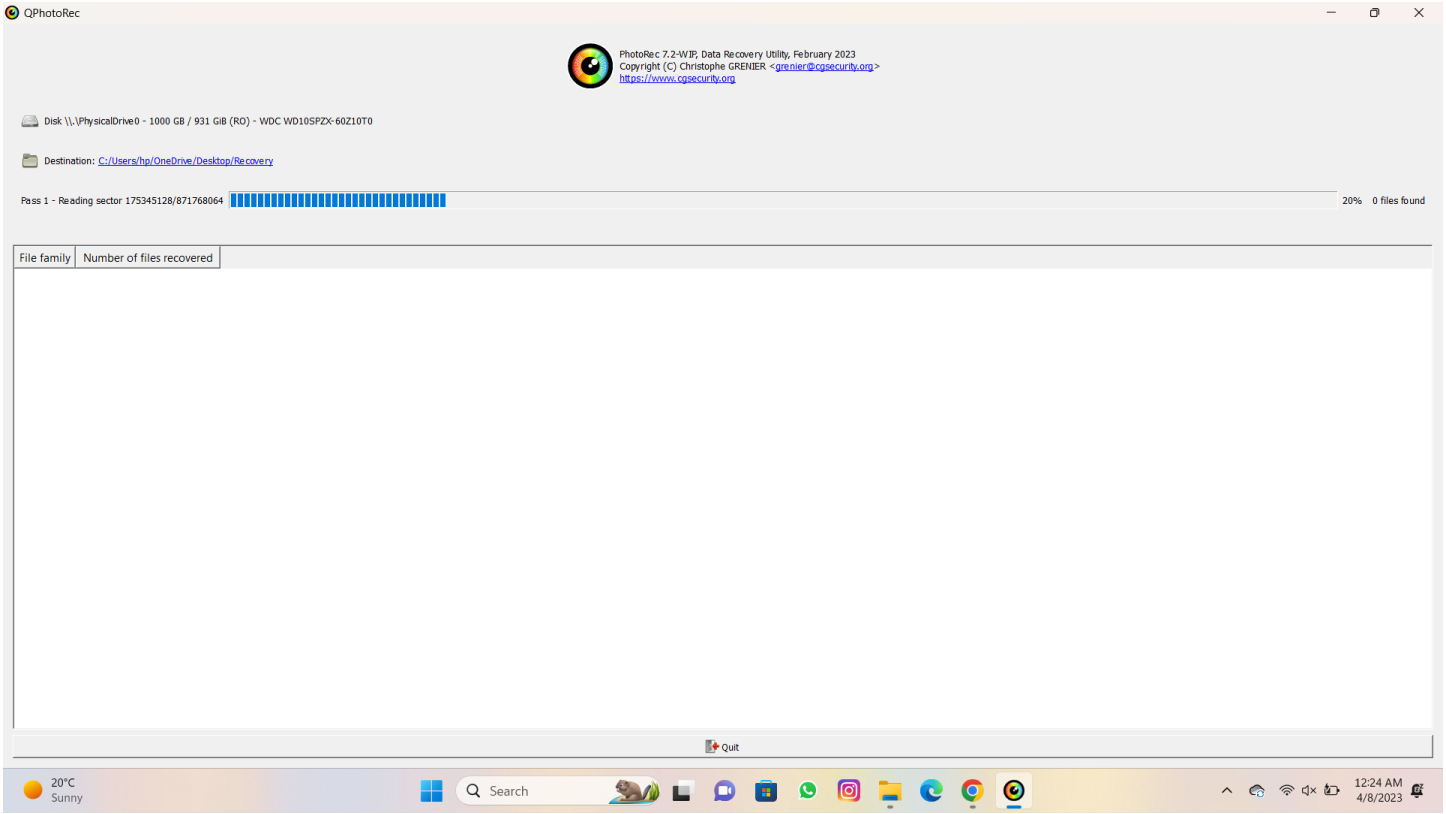


Figure 1.8: Begin Recovery Process.

## STEP 8: Analyze the Recovered Files

After the recovery process is complete, you can analyze the recovered files to determine which ones are photos. Photo Rec does not provide a graphical user interface, so you will need to browse the recovered files manually to find the photos.

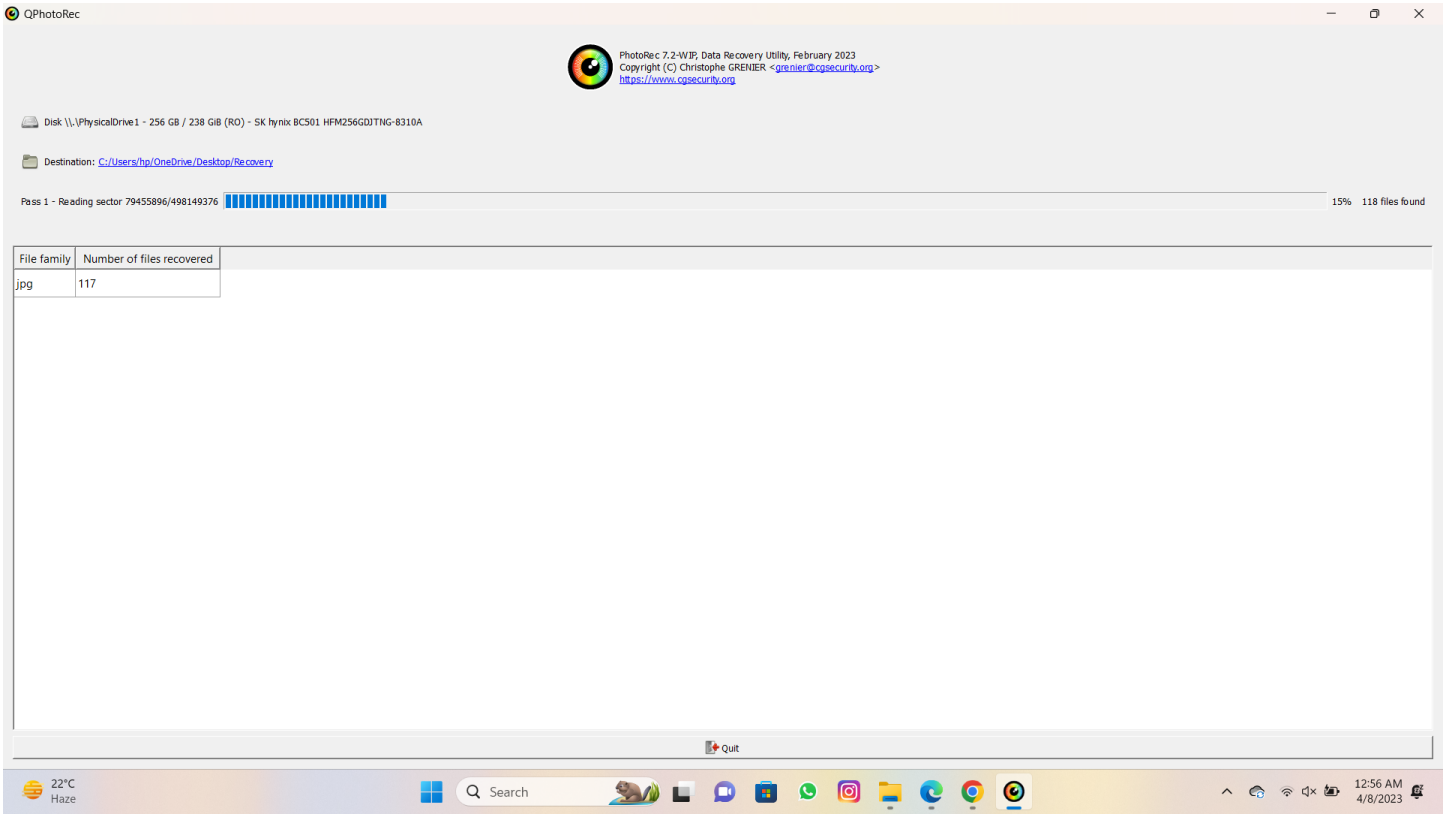


Figure 1.9: Recovered files.

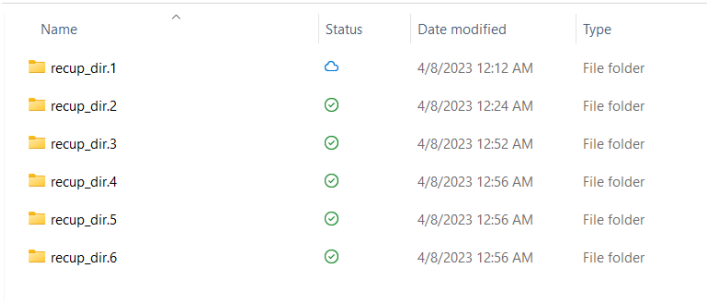


Figure 1.10: Recovery files folder

## STEP 9: Generate a Report

To generate a report on the recovery of deleted photos, you can use a file reporting tool such as Scalpel or Foremost. These tools can analyze the recovered files and generate a report on the files that match specific criteria such as file type or name.

# MAIL STORE HOME

## STEP 1: Download Mail Store Home

The first step is to download Mail Store Home from the official website. The software is available for free and can be downloaded for Windows and macOS.

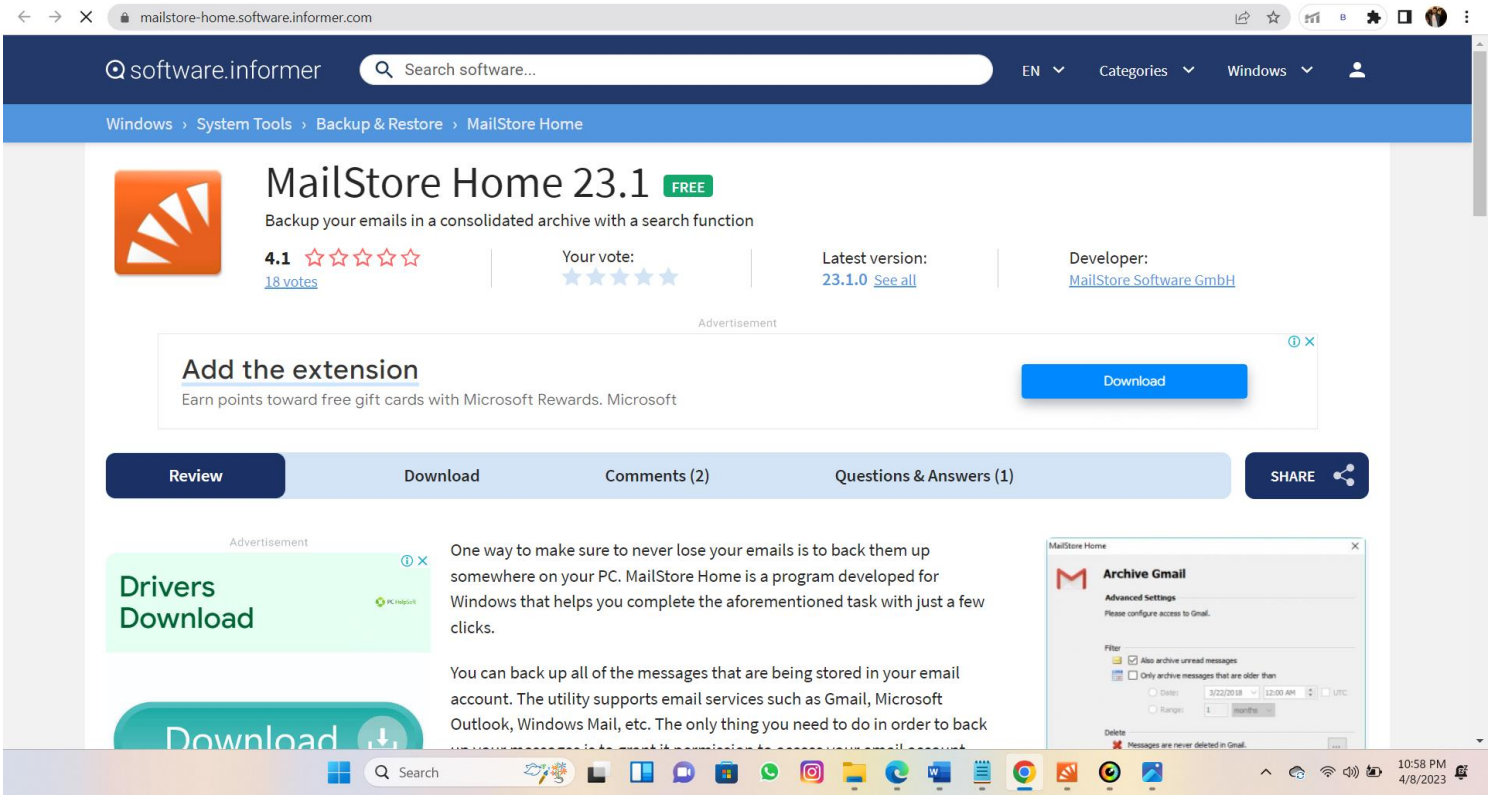


Figure 2.1: Mail Store Home

## STEP 2: Install Mail Store Home

Once the download is complete, run the installation file and follow the on-screen instructions to install Mail Store Home on your computer.

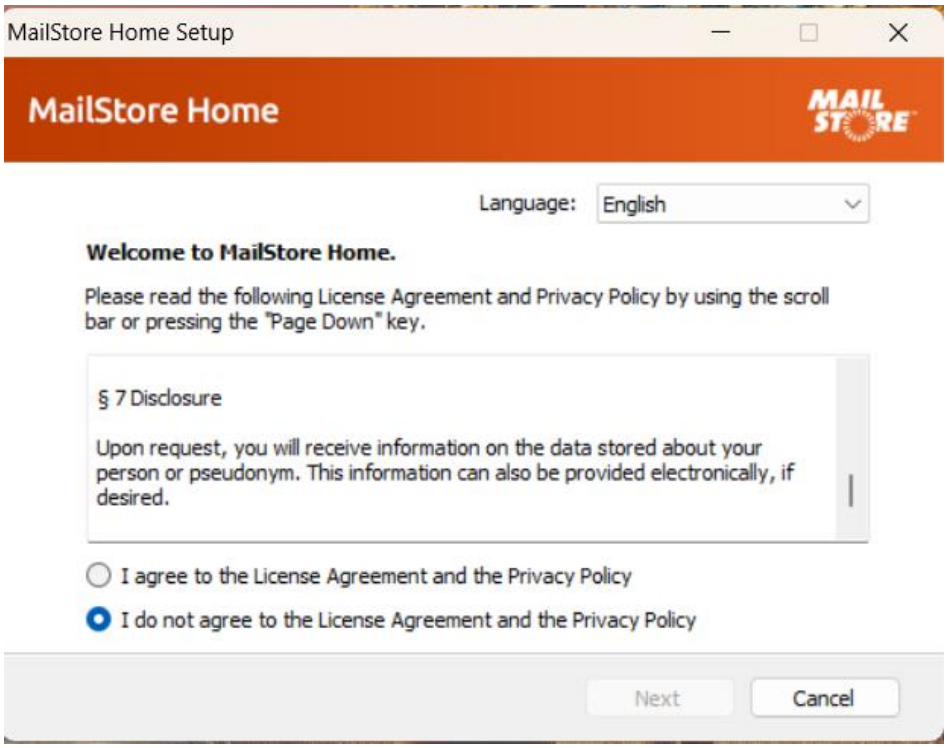


Figure 2.2: Installation

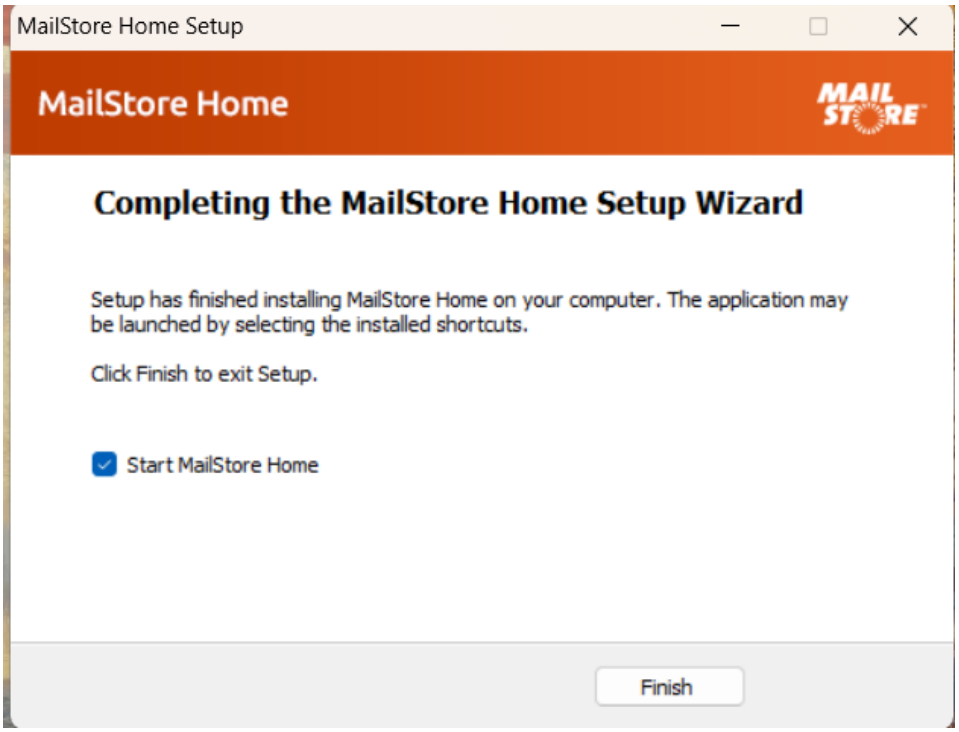


Figure 2.3: Installation

## STEP 3: Configure Mail Store Home

After installation, launch Mail Store Home and configure it to connect to your email account. You will need to provide the login credentials for your email account and the settings for the email provider.

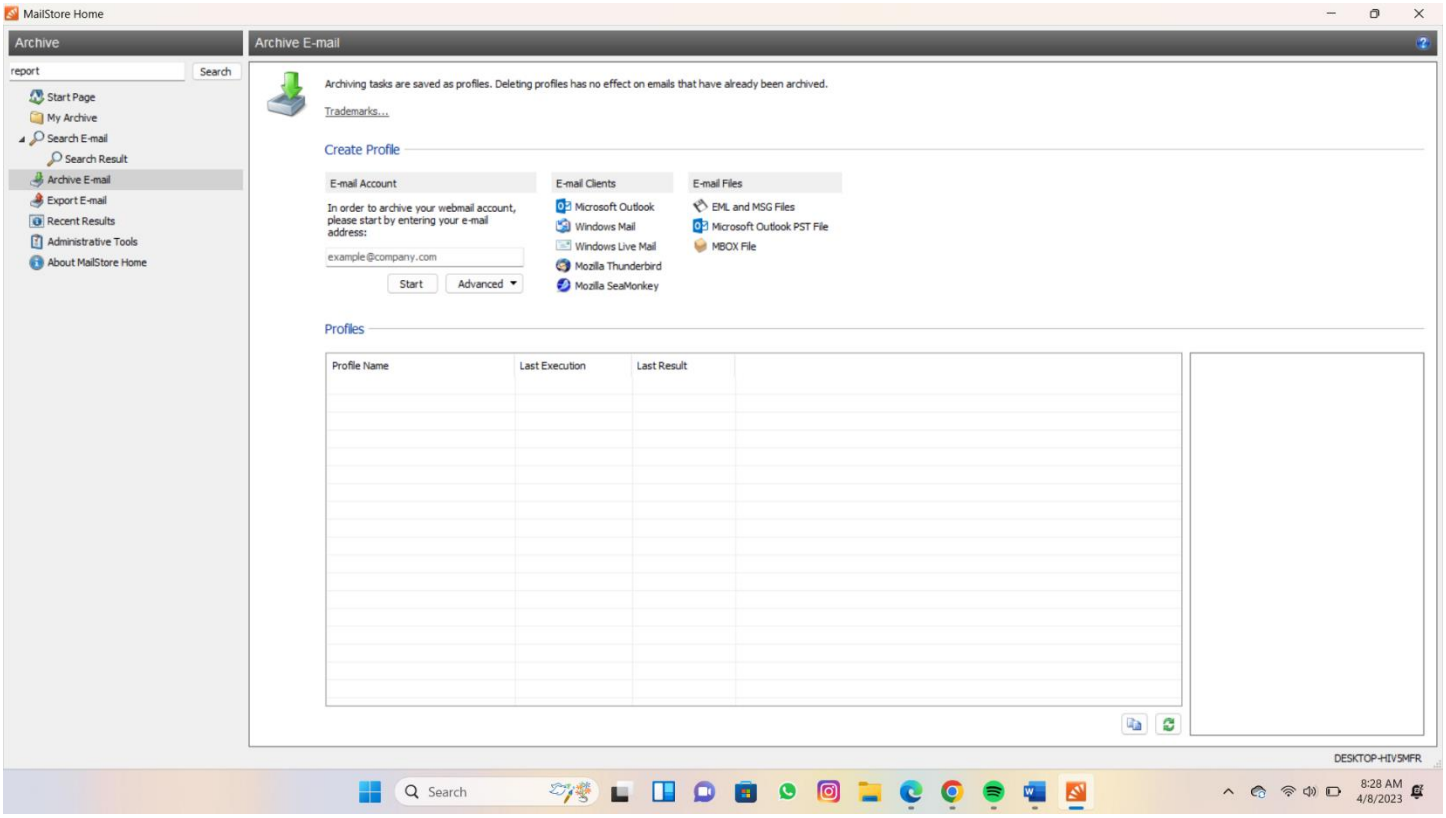


Figure 2.4: Configure mail.

## STEP 4: Archive Emails

Once Mail Store Home is configured, you can begin archiving your email messages. Mail Store Home allows you to archive emails from multiple email accounts and providers.

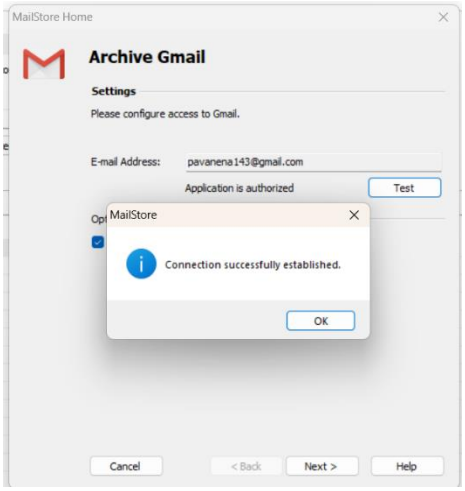


Figure 2.5: Archive Gmail.

## STEP 5: Search for Deleted Emails

To search for deleted emails, go to the "Search" tab in Mail Store Home and enter the search criteria such as sender, recipient, subject, or keywords.

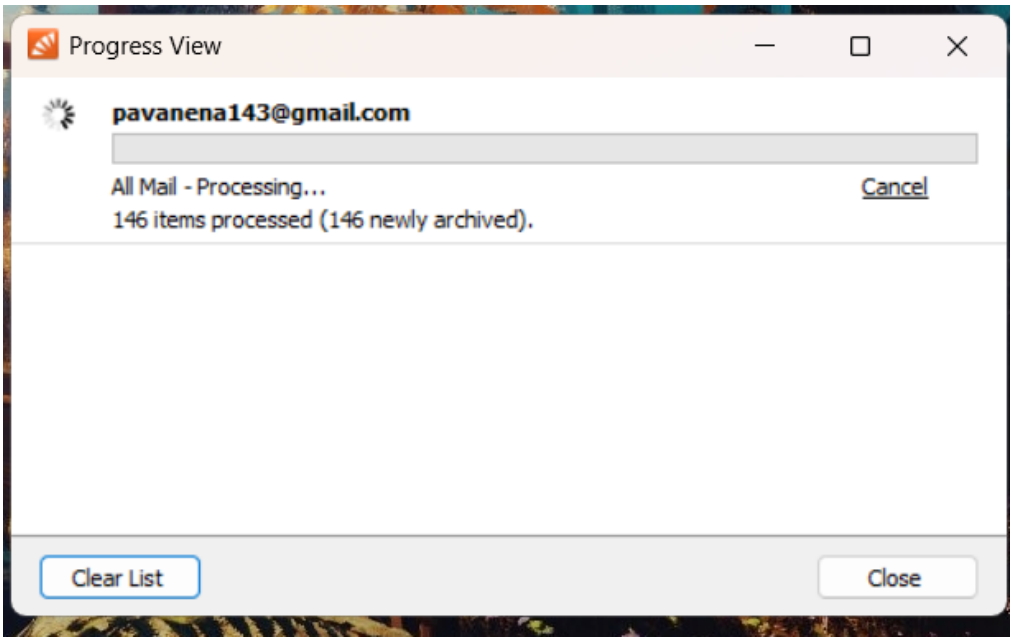


Figure 2.6: Searching

## STEP 6: Generate a Report

To generate a report on the recovery of deleted emails, select the emails that you want to include in the report and click on the "Export" button. Mail Store Home allows you to export emails in various formats such as PDF, HTML, or CSV.

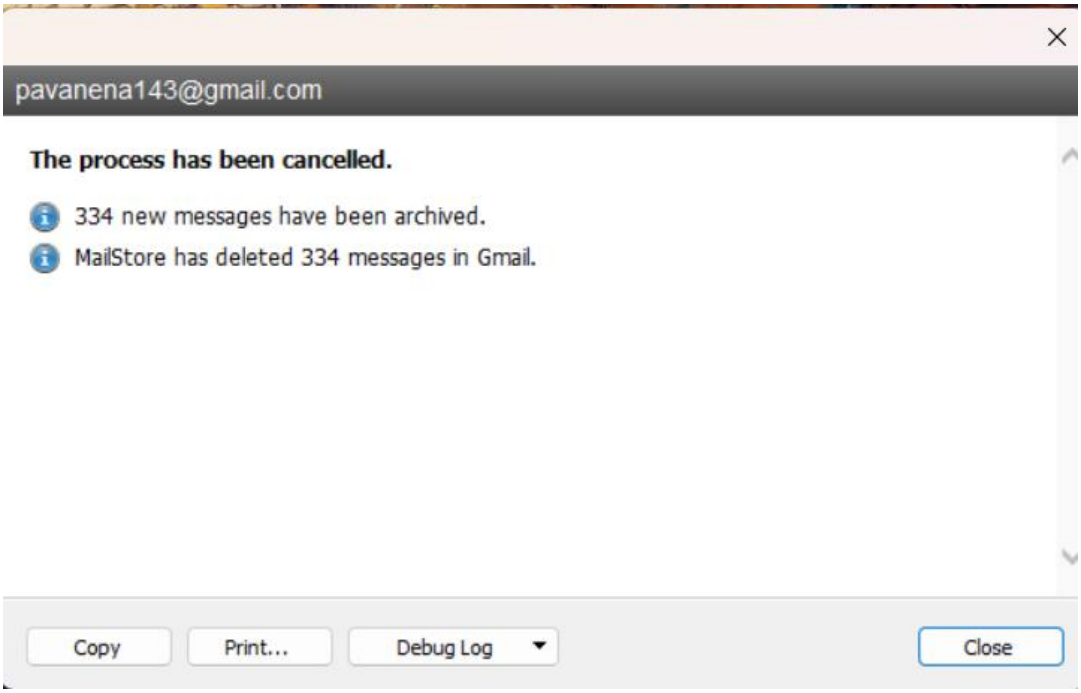


Figure 2.7: Generate Report

**REFERNCES**

https://mailstore-home.software.informer.com/

https://www.cgsecurity.org/wiki/TestDisk_Download