EXTRACTED DELETED DATA FROM A HARD DRIVE

GitHub Link: https://github.com/sarthak22122000/Open-Source-Project

1. Introduction:

Data loss is a common problem that can occur due to various reasons such as hardware failure, system crashes, human error, virus attacks, and more. The loss of important data can have severe consequences, especially for businesses and individuals. Fortunately, there are several data recovery software available in the market that can help in recovering lost or deleted data. One such software is Recuva.

a. Objective of the Project:

The objective of this project is to explore the features and functionalities of Recuva, an open-source data recovery software, and provide a comprehensive report on its capabilities in recovering deleted data from hard disk drives. The report aims to provide detailed information about Recuva's performance and how it can be utilized to recover deleted data.

b. Description of the Project:

The project involves using Recuva software to recover deleted data from a hard disk drive and analyzing its features, functionalities, and benefits. The project also includes collecting snapshots of the recovery process to provide a detailed analysis of the software's performance. The report covers the different steps involved in using Recuva, from launching the software to storing the recovered files, and highlights the software's strengths and weaknesses.

c. Scope of the Project:

The scope of the project is limited to using Recuva software for recovering deleted data from a hard disk drive. The report focuses on the software's features, functionalities, and benefits, along with the analysis of the recovery process. It is important to note that the report does not cover data recovery from physically damaged hard disk drives.

2. System Description:

Recuva is an open-source data recovery software developed by Piriform, a UK-based software company. The software is designed to recover deleted files from hard disk drives, memory cards, and other storage devices. Recuva has a user-friendly interface and

a wizard-based approach that makes it easy for users to recover deleted data without the need for advanced technical skills.

a. Target System Description:

Recuva is compatible with Windows operating systems, including Windows 10, 8, 7, Vista, and XP, both 32-bit and 64-bit versions. The software requires a minimum of 256 MB of RAM and 100 MB of free disk space to install and operate. It is important to note that Recuva is not available for other operating systems such as Mac OS and Linux.

b. Assumptions and Dependencies:

The project assumes that the hard disk drive is accessible and not physically damaged. The project also assumes that the data recovery process is carried out in a timely manner to avoid data overwriting. It is important to note that Recuva's performance also depends on the computer's hardware specifications, such as RAM and processor speed.

c. Functional/Non-Functional Dependencies:

Recuva's functionality depends on the state of the hard disk drive and the type of files being recovered. The software's performance also depends on the computer's hardware specifications, such as RAM and processor speed. It is important to note that the speed and success rate of the data recovery process may vary based on these factors.

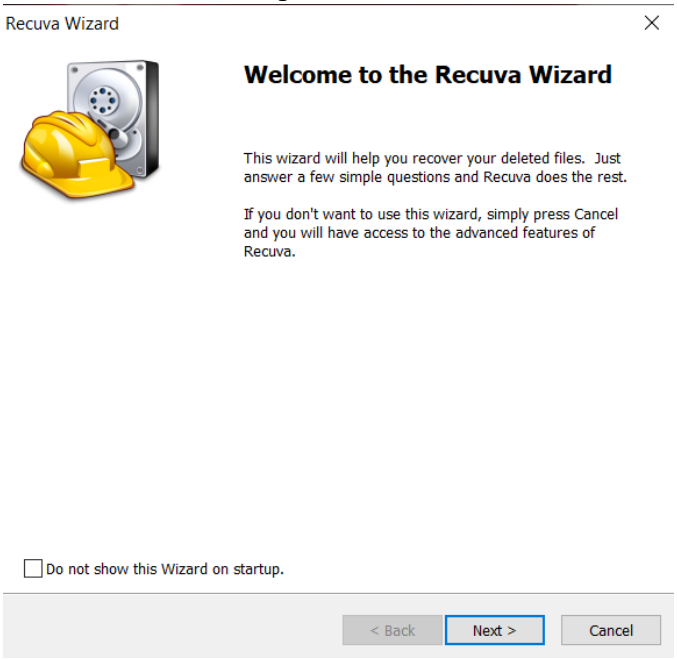
d. Data Set Used in Support of Your Project:

The project uses a sample data set that includes various types of files, such as documents, images, videos, and audio files, to test Recuva's capabilities in recovering deleted data. The data set has been intentionally created to mimic the conditions of a typical data loss scenario and includes files that have been deleted, formatted, or lost due to other issues.

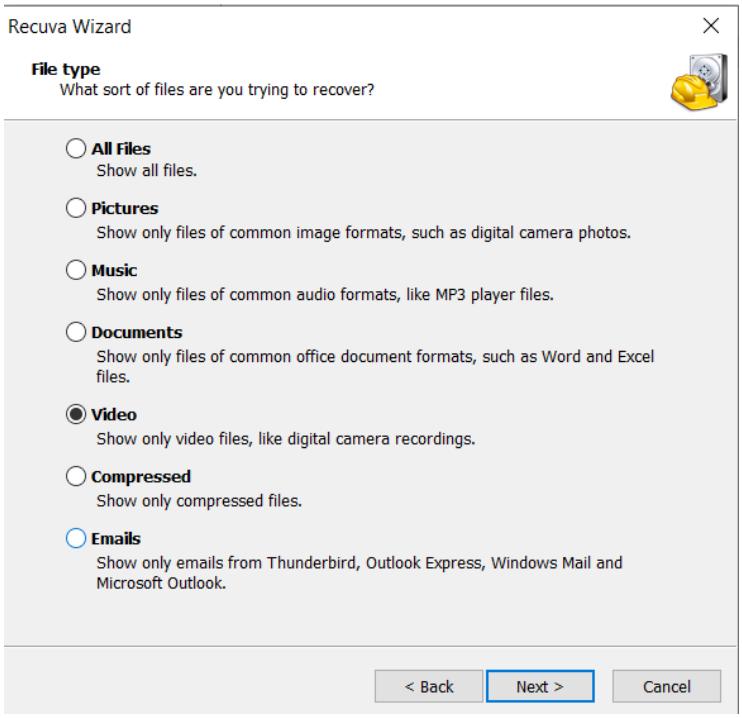
3. Analysis Report:

Recuva is a powerful data recovery software developed by Piriform that provides a range of features and functionalities for recovering deleted data from hard disk drives and other storage devices. In this project, we explored Recuva's capabilities in recovering deleted data from a hard disk drive and analyzed its features, functionalities, and benefits.

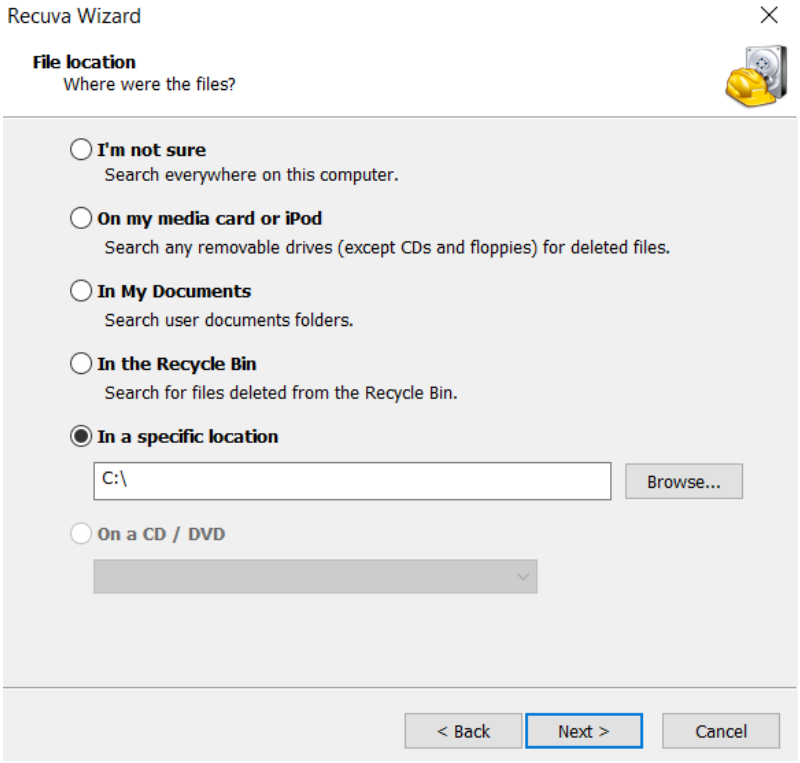
- Start Application: To initiate the file recovery process, we launched the Recuva software on our computer. The user-friendly interface of the software made it easy for us to navigate and locate the relevant options.



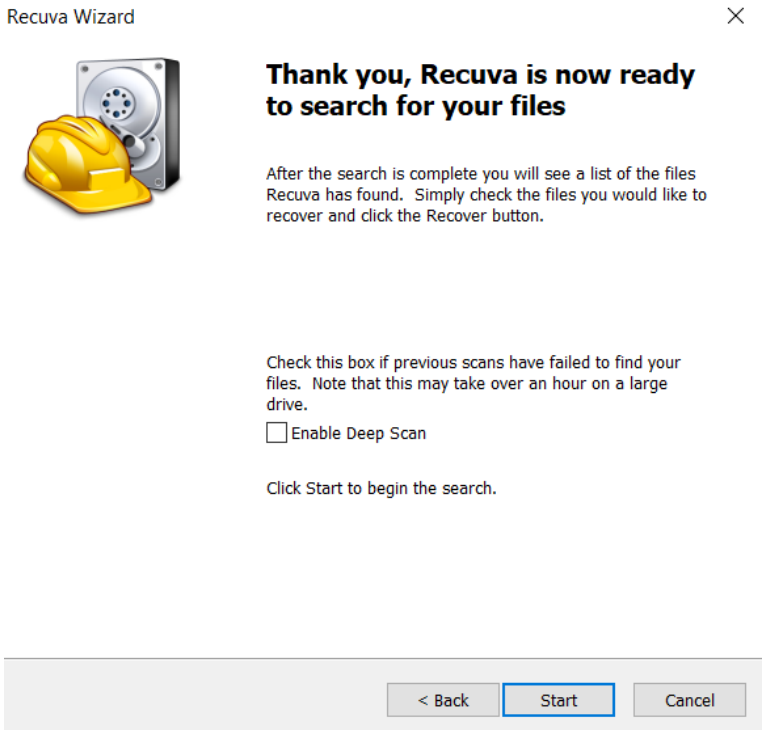
- Select File Type: Recuva allows users to select the type of files they want to recover. We selected "All Files" as we wanted to recover any deleted files, regardless of their type.



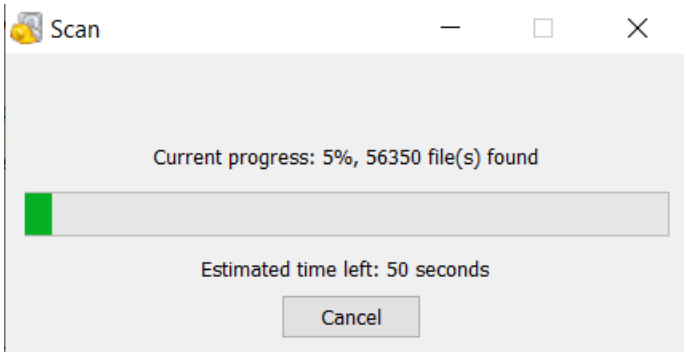
- Select File Location: We specified the location where the deleted files were located. This could be a specific folder or the entire hard drive.

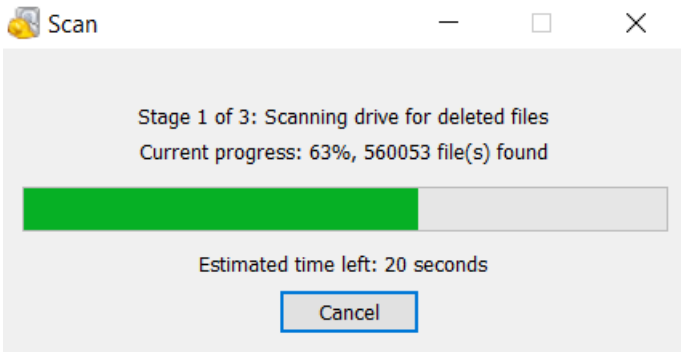


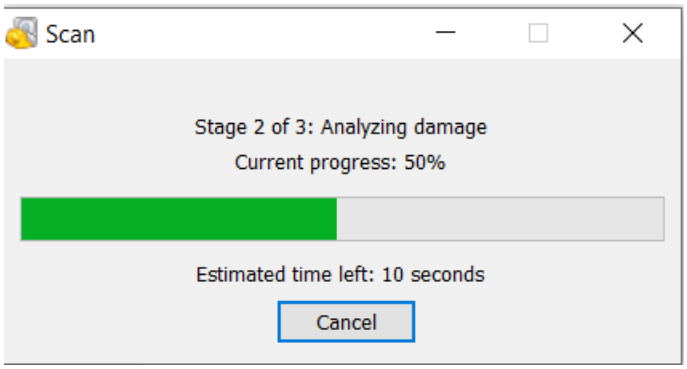
- Press Start to Start Recovery: Once we had selected the file type and location, we pressed the "Start" button to begin the recovery process.



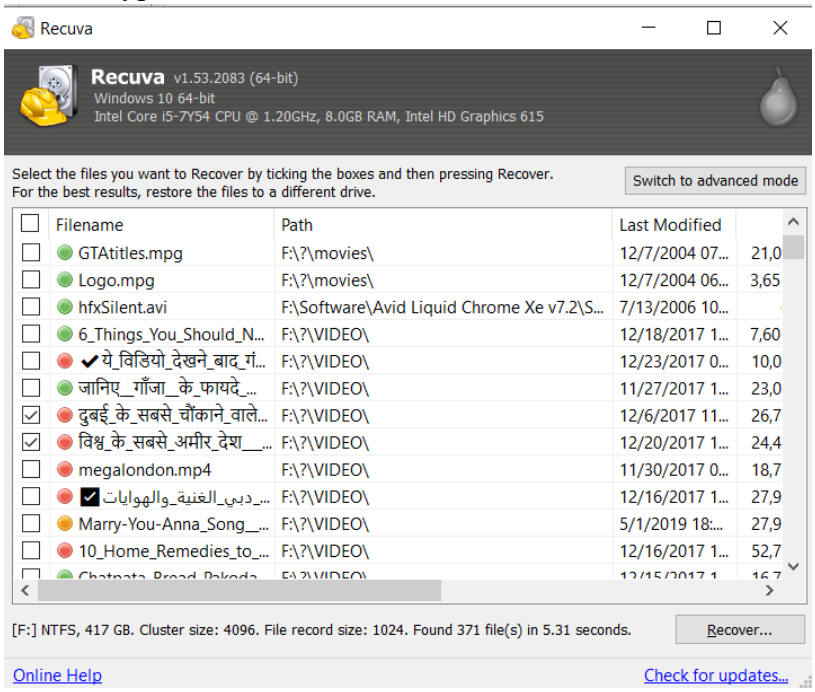
- 3 Step Scanning Process: Recuva uses a three-step scanning process to locate and recover deleted files. The software first performs a quick scan to locate recently deleted files. If the quick scan is unsuccessful, Recuva proceeds with a deep scan to locate files that have been deleted for a longer period. Finally, a thorough scan is performed to locate any remaining deleted files.



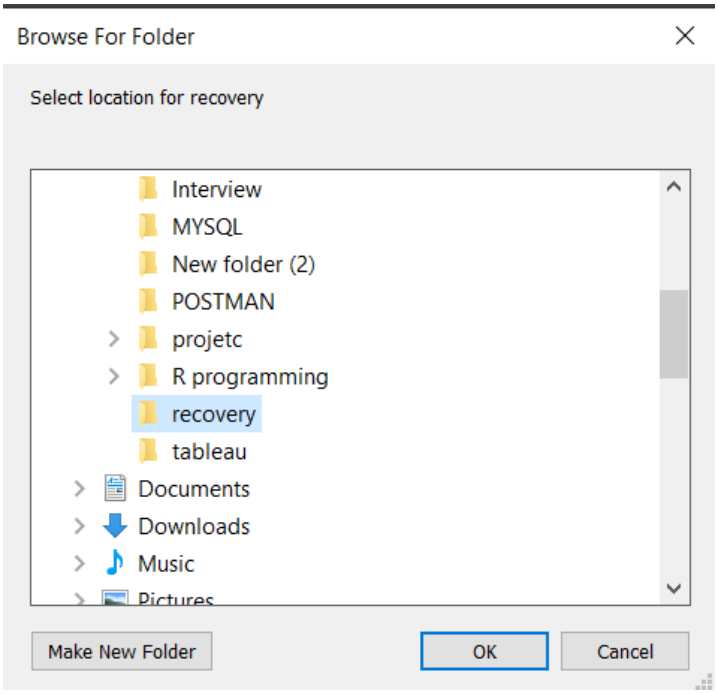




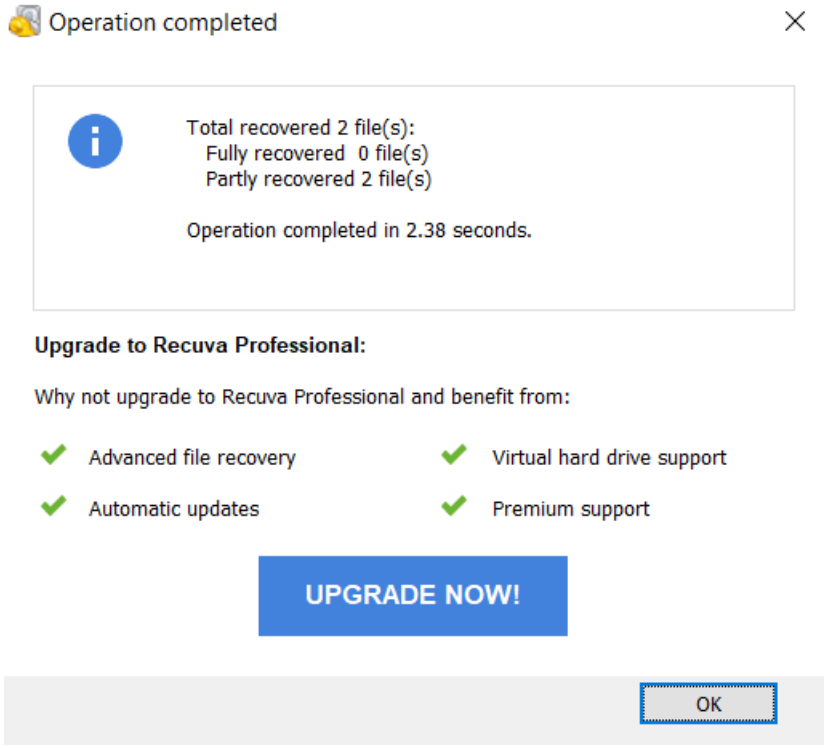
- Showing All the Deleted Files: After the scanning process was complete, Recuva displayed a list of all the deleted files that it had located. We were able to filter the results based on file type, size, and modification date.



- Browse Folder to Store Recovered Files: We selected the folder where we wanted to save the recovered files. It's important to save the files to a different location than the one where they were originally located to avoid overwriting any other deleted files that may still be recoverable.



- Operation Complete: Once we had selected the folder to save the recovered files, Recuva began the process of restoring the deleted files. A progress bar displayed the status of the recovery process, and once it was complete, we received a confirmation message that the operation was successful.



4. Reference/Bibliography:

Recuva User Guide - https://www.ccleaner.com/docs/recuva/introducing-recuva/about-recuva

Piriform - https://www.piriform.com/recuva

How to Use Recuva for Data Recovery - https://www.lifewire.com/how-to-use-recuva-data-recovery-tool-2622875