LOVELY PROFESSIONAL UNIVERSITY

PHAGWARA, PUNJAB

CONTINUOUS ASSESSMENT 3

OPEN-SOURCE TECHNOLOGY (INT 301)

SUBMITTED TO

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CHAPTER 1

1.1 OBJECTIVE OF THE PROJECT

The objective of data recovery in Photorec is to recover lost or deleted data from various storage devices, such as hard drives, memory cards, USB drives, and CD/DVDs. Data recovery is critical processes that can help users retrieve important files and documents that may have been accidentally deleted or lost due to hardware failure or other issues.

Photorec is a powerful data recovery tool that is designed to work with damaged or formatted partitions, and it can recover data even if the file system is damaged or missing. The program works by analyzing the data on the storage device and searching for file signatures, which are unique patterns of bytes that identify specific file types. Once a file signature is identified, Photorec can reconstruct the file based on the data found.

One of the key objectives of data recovery in Photorec is to recover as much data as possible without causing further damage or loss of data. When a storage device is damaged or corrupted, it is important to take precautions to prevent further damage to the data. For example, if a hard drive is making unusual noises, it may be necessary to stop using the drive and seek professional assistance to prevent further damage to the data.

Another important objective of data recovery in Photorec is to minimize the impact of data loss on the user. Losing important data can be a frustrating and stressful experience, and it is important to recover as much data as possible to minimize the impact on the user. Photorec is designed to be user-friendly programs that can help users recover their data in a variety of scenarios.

Photorec is capable of recovering a wide range of file types, including photos, videos, documents, and archives. The program is constantly updated to support new file formats and storage devices, ensuring that users can recover their data regardless of the type of device they are using or the type of files they have lost.

To use Photorec effectively, it is important to follow some best practices for data recovery. For example, it is important to stop using the storage device as soon as data loss is detected to prevent further damage or loss of data. It is also important to choose a secure location to save recovered data to prevent accidental overwriting or corruption of the recovered files.

In addition to data recovery, Photorec also has several other features that can help users manage their data. For example, the program includes a secure file deletion tool that can securely erase sensitive data to prevent it from falling into the wrong hands. Photorec also includes a disk image tool that can create an exact copy of a storage device for backup purposes.

Overall, the objective of data recovery in Photorec is to help users recover their lost or deleted data in a safe and effective manner. The program is designed to be easy to use and can be a valuable tool for anyone who has experienced data loss due to hardware failure, accidental deletion, or other issues. By following best practices for data recovery and using Photoset effectively, users can increase their chances of recovering their important files and documents.

CHAPTER 2

1.2 DESCRIPTION OF THE PROJECT

PhotoRec is an open-source software that is designed to recover lost or damaged multimedia files. It is a powerful data recovery tool that can restore lost or accidentally deleted photos, videos, and music files from your system. The software uses advanced algorithms to scan your hard drive and find any recoverable data. It can also recover data from damaged, formatted, or corrupted storage devices.

If you have lost your multimedia files due to accidental deletion, formatting, or virus attack, PhotoRec can help you recover them quickly and easily. The software is available for free and can be downloaded from the official website. It is compatible with Windows, Mac, and Linux operating systems.

To use PhotoRec, you need to download and install the software on your system. Once installed, you can launch the software and select the storage device from which you want to recover the lost data. The software will then scan the selected device and display a list of recoverable files.

PhotoRec works by searching for file signatures or headers that are unique to specific file types. It then reads the sectors of the storage device and extracts the recoverable data. The software can recover a wide range of file formats, including JPEG, PNG, BMP, GIF, MP4, AVI, MOV, and many others.

The recovery process may take some time, depending on the size of the storage device and the amount of data that needs to be recovered. Once the scan is complete, you can preview the recovered files and select the ones that you want to restore. The software will then save the recovered files to a specified location on your system.

One of the best features of PhotoRec is its ability to recover data from damaged or corrupted storage devices. If your storage device is physically damaged or has bad sectors, PhotoRec can still recover the data by skipping over the damaged areas and extracting the readable data.

In addition to recovering multimedia files, PhotoRec can also recover other types of data, including documents, emails, and archives. The software supports a wide range of file systems, including FAT, NTFS, exFAT, and HFS+. It can also recover data from CD-ROMs, DVDs, and other optical media.

PhotoRec is a powerful and reliable data recovery tool that can help you recover lost or damaged multimedia files from your system. The software is easy to use and can be downloaded for free from the official website. If you have lost your multimedia files due to any reason, PhotoRec is the perfect solution to get them back.

CHAPTER 3
SCOPE OF PROJECT

Photorec is an open-source data recovery software that is designed to recover lost files from various types of storage media, including hard disks, memory cards, USB drives, and other removable media. It is available for free and can be used on multiple operating systems, including Windows, Linux, and macOS.

As an open-source technology, Photorec has a wide scope in the field of data recovery. It can be used by individuals and businesses alike who need to recover lost data due to accidental deletion, formatting, or system crashes. Its open-source nature allows for continuous improvement and development by a community of developers worldwide, ensuring that the software remains up-to-date and relevant in a rapidly evolving technological landscape.

Furthermore, the availability of Photorec's source code allows developers to modify the software according to their specific needs or to integrate it into their own software projects. This makes it a valuable resource for developers who are working on data recovery solutions or related technologies.

Overall, Photorec's open-source nature makes it a versatile and accessible tool for data recovery and an excellent example of how open-source technologies can be used to benefit individuals and businesses alike.

CHAPTER 4
TARGET SYSTEM DESCRIPTION

PhotoRec is a free and open-source data recovery software designed to recover lost or deleted files from various storage devices such as hard disks, USB drives, memory cards, and digital cameras.

The software is compatible with multiple operating systems including Windows, Linux, and macOS. PhotoRec uses file signatures to identify and recover data from various file formats such as photos, videos, documents, and archives.

PhotoRec is a command-line tool, which means it is operated through a text-based interface. It does not require installation and can be run from a USB drive or a live CD. The tool is designed to work with damaged or formatted drives and can recover data even if the file system is damaged or non-existent.

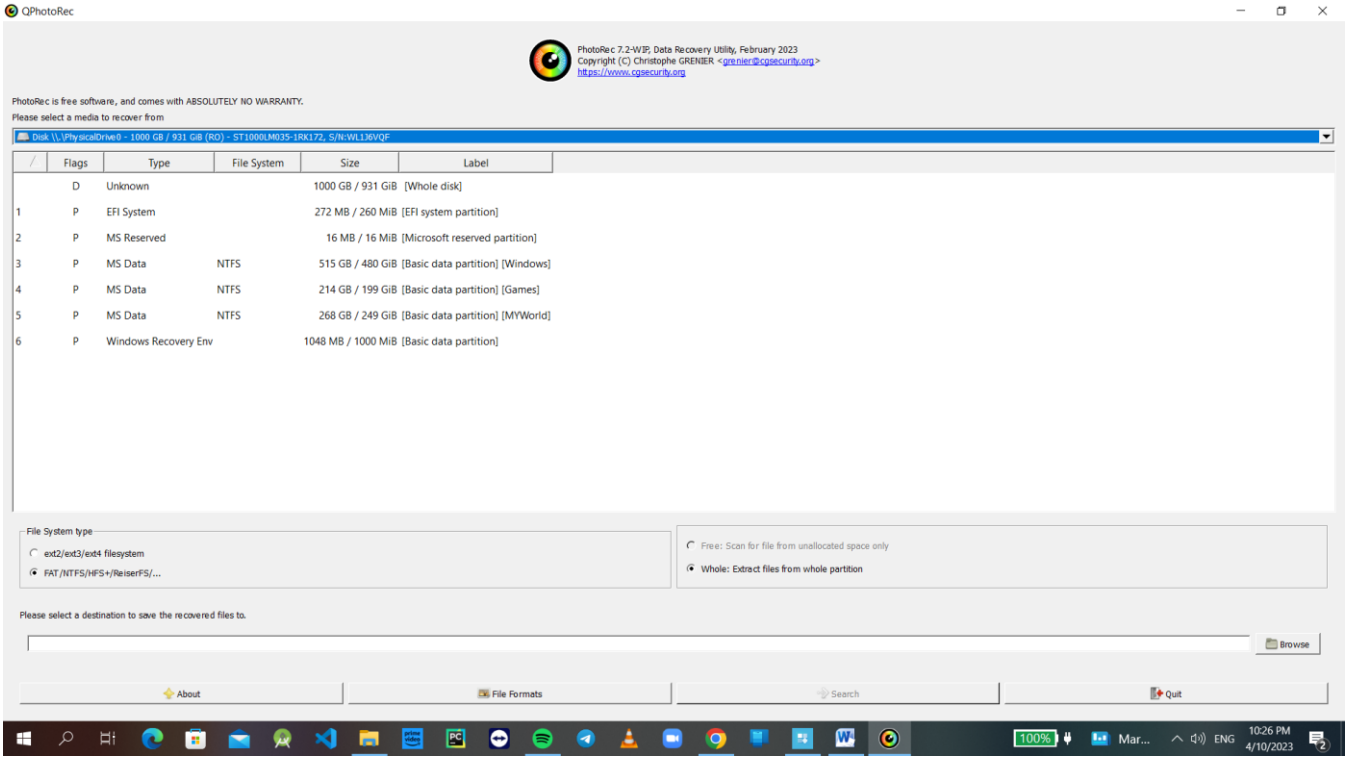
The software operates by analyzing the drive and searching for file signatures that match the pre-defined signatures of various file formats. It then attempts to reconstruct and recover the identified files.

PhotoRec is a powerful tool that can recover a variety of data types from various storage devices. However, due to its command-line interface, it may not be suitable for users who are not comfortable with using terminal-based applications.

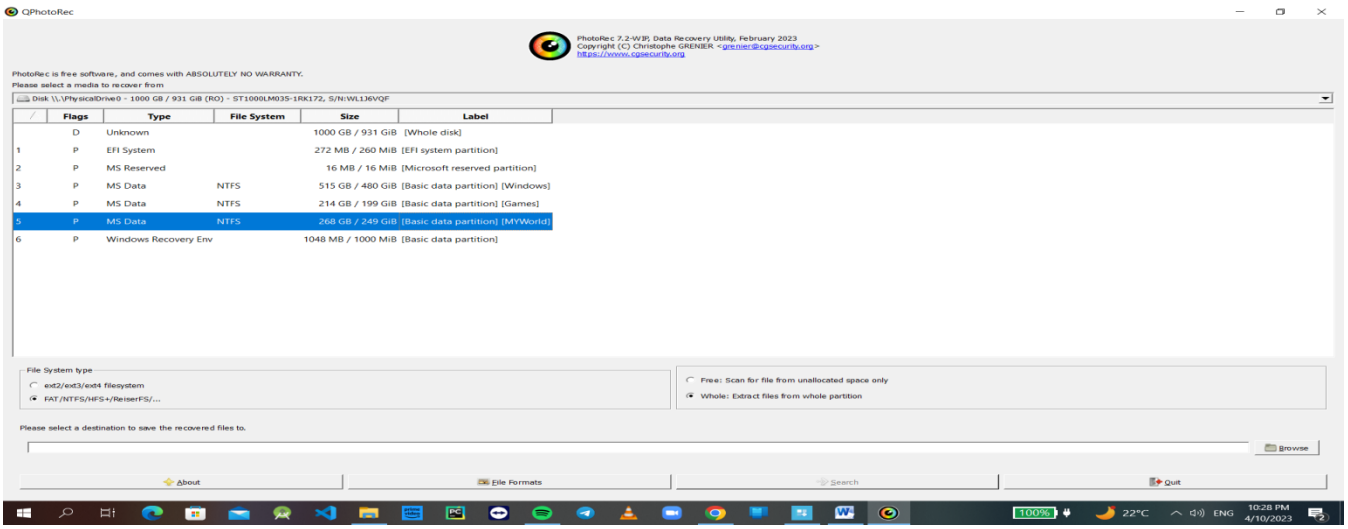
CHAPTER 5

1.2 SNAPSHOTS AND ANALYSIS

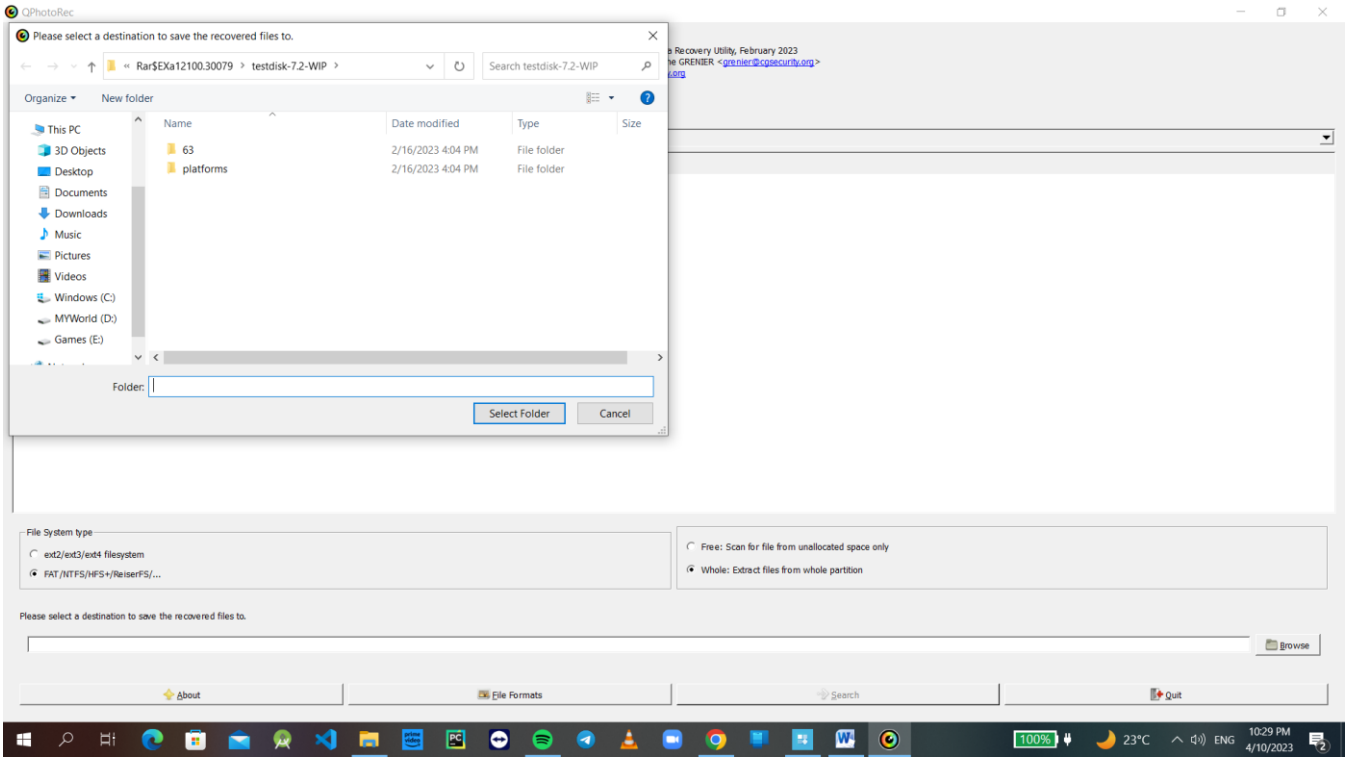
Step1- We had to choose the drive from where we had to recover the file in top of the software and according to which the list of the following partition of the drive will get displayed



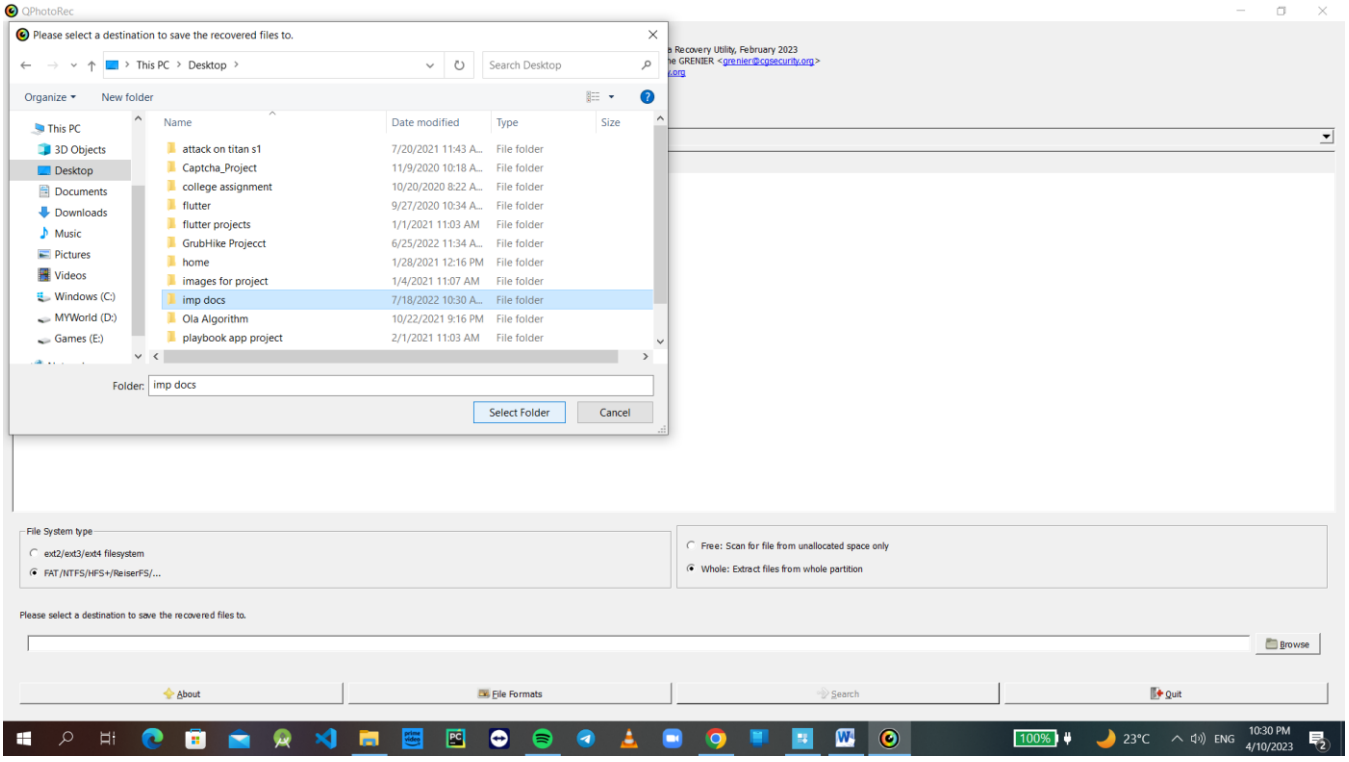
STEP 2- We had selected the file partition from where we had to recover the deleted files and in this we had my world to recover the files.

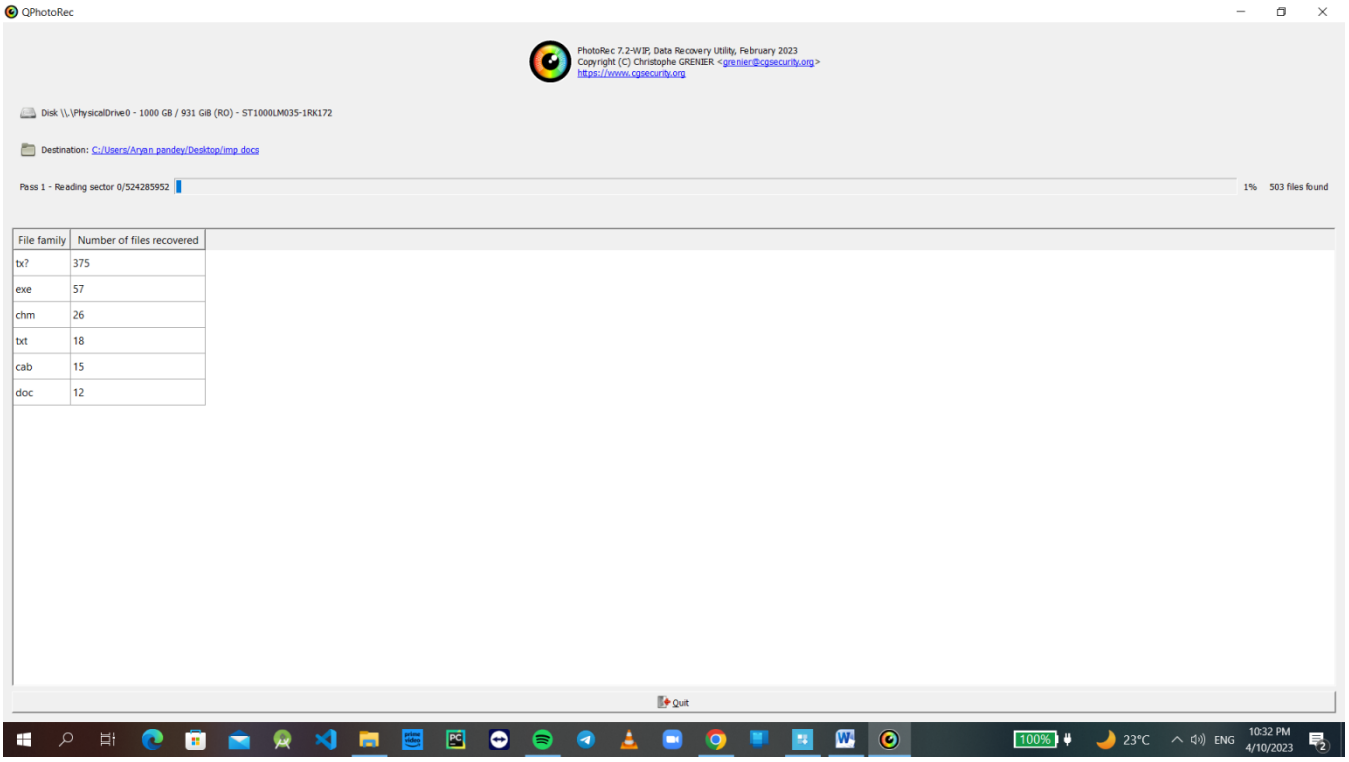


Step 3 There are two options given 1) scan for file from unallocated space only and 2) whole: Extract files from whole partition and we will select the second option through which we can recover all files from past .



Step 4: we will select the folder where we want to save the deleted files.





Step4 – once done, click on select folder and the process of recovery will start and the table will appear which will show you the number of files which recovered along with there format

CHAPTER 6
CONCLUSION

In conclusion, PhotoRec is an excellent choice for anyone looking to recover lost or deleted data from their storage devices. It is easy to use, flexible, and highly effective at recovering a wide range of file types, including photos, videos, documents, and archives. Its powerful scanning algorithm can detect and recover data even from damaged or formatted disks, making it a valuable tool for data recovery professionals and DIY enthusiasts alike.

One of the key advantages of PhotoRec is its cross-platform compatibility, which means it can be used on different operating systems, including Windows, Mac, and Linux. It also supports a wide range of file systems, including NTFS, FAT, ext2/3/4, and HFS+, making it a versatile tool for data recovery.

Overall, PhotoRec is a reliable and effective data recovery tool that can help you recover lost or deleted files from your storage devices quickly and easily. Whether you're a professional data recovery specialist or a regular user, PhotoRec is an essential tool to have in your toolkit.

CHAPTER 7
REFERENCES & BIBLIOGRAPHY