# JAVA

# PROJECT

# FILE UTILITY

ALL IN ONE FILE MANAGER

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FILE UTILITY

ALL IN ONE FILE MANAGER

Introduction

A **file manager** or **file browser** is a [computer program](https://en.wikipedia.org/wiki/Computer_program) that provides a [user interface](https://en.wikipedia.org/wiki/User_interface) to manage [files](https://en.wikipedia.org/wiki/Computer_files) and [folders](https://en.wikipedia.org/wiki/Folder_(computing)). The most common operations performed on files or groups of files include creating, opening (e.g. [viewing](https://en.wikipedia.org/wiki/File_viewer), playing, editing or [printing](https://en.wikipedia.org/wiki/Computer_printer)), renaming, [moving or copying](https://en.wikipedia.org/wiki/File_copying), [deleting](https://en.wikipedia.org/wiki/File_deletion) and searching for files, as well as modifying [file attributes](https://en.wikipedia.org/wiki/File_attribute), properties and [file permissions](https://en.wikipedia.org/wiki/File_permissions). [Folders](https://en.wikipedia.org/wiki/Folder_(computing)) and files may be displayed in a [hierarchical tree](https://en.wikipedia.org/wiki/Tree_structure) based on their [directory structure](https://en.wikipedia.org/wiki/Directory_structure). Some file managers contain features inspired by [web browsers](https://en.wikipedia.org/wiki/Web_browser), including forward and back navigational buttons.

Some file managers provide [network](https://en.wikipedia.org/wiki/Computer_network) connectivity via [protocols](https://en.wikipedia.org/wiki/Communications_protocol), such as [FTP](https://en.wikipedia.org/wiki/File_transfer_protocol), [NFS](https://en.wikipedia.org/wiki/Network_File_System_(protocol)), [SMB](https://en.wikipedia.org/wiki/Server_Message_Block) or [WebDAV](https://en.wikipedia.org/wiki/WebDAV). This is achieved by allowing the user to browse for a [file server](https://en.wikipedia.org/wiki/File_server) (connecting and accessing the server's file system like a local file system) or by providing its own full client implementations for file server protocols.

Concepts Used:

* Java Swing Class.
* File Handling in Java.
* Multi-Threading in Java.
* Zip-Unzip Library.

Compiler Used:

J. Creator (BY XINOX SOFTWARE)

Hardware Requirements:

Windows Device with:

At least 512 MB ram &1 GB Storage space.

Working:

The Application consists of 4 Functions namely 🡪

* File Zipper 🡪 The Application consists of a file zipper.**ZIP** is an [archive file format](https://en.wikipedia.org/wiki/Archive_file_format) that supports [lossless data compression](https://en.wikipedia.org/wiki/Lossless_compression). A .ZIP file may contain one or more files or directories that may have been compressed. The .ZIP file format permits a number of compression [algorithms](https://en.wikipedia.org/wiki/Algorithms), though [DEFLATE](https://en.wikipedia.org/wiki/DEFLATE) is the most common.The application zips the given file at a rate of 10MB.
* File Un-Zipper 🡪 The Application consists of a File Un-Zipper. It is a tool to unzip or de-compress the zipped files without any data loss.
* File Merger 🡪The application consists of a file merger which allows the user to merge two or more files of same format together without any data loss at a buffered rate of 10MB.
* File Splitter 🡪The application consists of a file splitter which allow the user to split a single file of any format into multiple files of fixed size in Bytes without any data loss while splitting.

Technical Feasibility

* Very handy for OS/ROM developers.
* Compression of multiple files in a single file to reduce size and make them easy to handle/store.
* Un-Compression of compress file from other applications like “WinZip”.
* We can break / split large files into smaller ones and move them easily if we have small moveable storage space and merge all splitted files on the other machine.

Development

The app is hardcoded in JAVA on JCreator. Java Swing is used to develop the user interface of the application and Zip-UnZip Library (java.util.zip) is used to compress and un-compress files.

We have also used multi-threading in the application to make it faster.

Scope for Future Enhancement

1. Password Protect the zip-unzip functionality. (Secure File Transfer)
2. Enhance the zip-unzip functionality by adding multiple compression algorithms (Eg. Huffman Compression, RLE Compression, LZ Compression).
3. Encrypt and Decrypt the files while splitting and merging.