Project Pitch

Apollo 57

Team

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Overview

For our *Software Design* project we are making a file archiver that will manage the archives on the machine of our user. Our main type of user will be someone who needs to efficiently combine several files into a single archive, an example compression format would be a ZIP.

The file archive will be designed with a JavaFX graphical user interface and will be simple but very functional. The file archive will have a home-page where the user can easily navigate to their archives. Aside from the home-page, our file archive will have a settings page where the user can customize all their settings and a report page for when the user wants to have a printable report summarizing their archives content.

Our file archiver will include the following basic features:

- Add several files/folders to a new archive
- Extract all contents of an archive into a user-defined folder
- Support for password-based encryption of created archives (and support decryption when an archive is extracted)
- Provide functionalities for exploring the contents of an archive without extracting them
- Support of multiple compression formats (at least ZIP should be present by default) with the possibility of adding new compression formats with low effort
- Support of basic configurations for each supported compression format, e.g., the compression level

Overview

As bonus we will add the following features

- Generate a printable report that visualizes and summarizes in a nice way the contents of an archive and computes some metrics about it, e.g., number of files per type, etc.
- Functionality that analyses all files contained inside a folder and suggests the best of the implemented compression formats in terms of storage space, compression efficiency, compression duration, etc.

In the upcoming slides we will thoroughly detail each feature and assign champions. After the features, we will show our time log for the assignments and our signed team contract.

Feature 1 – Add Files/Folders to Archive

Name: Add Files/Folders to Archive

Description:

- Users should be able to add multiple files and folders to a new archive.
- Users should be able to add metadata to the ZIP file (e.g., how many files are available, or any user created data).
- Users should be able to view a preview of what files and or folders are selected before finalizing the archiving process.
- The system should support adding multiple files or folders from one or multiple directories into a new archive.
- The system should have a drag-and-drop functionality to allow users to drag files and or folders directly into the archive (Bonus).

Champion: Dennis Moes

Feature 2 – Extract Contents

Name: Extract Contents

Description:

- The system should provide options for file handling.
- The system should show progress indicators that guide the process.
- Users should be able to access archive extraction via the system's context menu.
- Users should be able to customize extraction settings. This includes specifying a destination folder and choosing whether to preserve folder structures.
- Users should be able to specify the destination folder and handle popular formats (like ZIP).
- Users should be able to swiftly extract archive contents, preserving original folder structures.

Champion: Simon Vriesema

Feature 3 – Password-based Encryption

Name: Password-based Encryption

Description:

- The system should allow users to set and change passwords.
- The system should enable password-based encryption for archives.
- The system should have user-friendly interfaces for password management to enhance ease of use.
- The system should have seamless integration with the file organizer application to ensure a cohesive user experience.

Champion: Simon Vriesema

Feature 4 – Explore Archived Contents

Name: Explore Archived Contents

Description:

- Users should be able to explore archived contents without needing to decompress the archive.
- Users should be able to see within the archive the following when selecting archived content:
    - Metadata
    - The archive hierarchy

Champion: Joli-Coeur Weibolt

Feature 5 – Multiple Compression Formats

Name: Multiple Compression Formats

Description:

- Users should be able to select multiple different compression formats.
- Users should be able to add new compression formats with low effort.
    - The default compression format will be ZIP
    - Other compression formats we will add are
        - JAR
        - GZIP
        - BZIP2

Champion: Joli-Coeur Weibolt

Feature 6 – Configuration Support

Name: Configuration Support

Description:

- Users should be able to customize compression settings:
    1. Compression level
    2. Encryption location
- Users should be able to create and apply preset configuration profiles as default settings for common use cases:
    1. Fast archiving
    2. Smallest file size
- Users should be able to define and set their default settings, allowing them to personalize based on their preference.

Champion: Dennis Moes

Feature 7 (Bonus) – Generate Printable Report

Name: Generate Printable Report

Description:

- Users should be able to visualize the content of the report using charts, graphs, or/and tables.
- Users should be able to automatically generate a printable report summarizing archive contents.
- The system should first analyse the contents of an archive and afterwards extract necessary information when a user selects the option to generate a report. The following information should be extracted:
    - File names
    - Types
    - Sizes
    - Other relevant metadata

Champion: Jaïr Telting

Feature 8 (Bonus) – Compression Format Analysis

Name: Compression Format Analysis

Description:

- The system should analyse files and suggest optimal compression formats.
- The system should consider storage space, compression efficiency, and duration.
- The system should provide detailed reports on the performance of various compression algorithms.
- The system should offer recommendations based on the specific characteristics of each file type and user preferences.

Champion: Simon Vriesema

Time Log Assignment 1

Team number	57		
Member	**Activity**	**Week number**	**Hours**
Jaïr Telting	Defining the techincal requirements of feature #8	2	2
Jaïr Telting	Defining the techincal requirements of feature #7	2	1
Dennis Moes	Defining the team contract	1	3
Dennis Moes	Defining the techincal requirements of feature #1	2	1
Dennis Moes	Defining the techincal requirements of feature #6	2	1
Simon Vriesema	Defining the techincal requirements of feature #2	2	1
Simon Vriesema	Defining the techincal requirements of feature #3	2	1
Simon Vriesema	Defining the techincal requirements of feature #9	2	1
Joli-Coeur Weibolt	Defining the techincal requirements of feature #4	2	1
Joli-Coeur Weibolt	Defining the techincal requirements of feature #5	2	1
		TOTAL	13

Time Log Estimate Assignment 2

Member	Activity	Week number	Hours
Dennis	Designing Feature 1 and 6	2, 3, 4	8
Simon	Designing Feature 2 and 3	2, 3, 4	8
Joli-Coeur	Designing Feature 4 and 5	2, 3, 4	8
Jaïr	Designing Feature 7 and 8	2, 3, 4	8

Time Log Estimate Assignment 3

Member	Activity	Week number	Hours
Dennis	Implementing Feature 1 and 6	5, 6, 7, 8	32
Simon	Implementing Feature 2 and 3	5, 6, 7, 8	32
Joli-Coeur	Implementing Feature 4 and 5	5, 6, 7, 8	32
Jaïr	Implementing Feature 7 and 8	5, 6, 7, 8	32

Documents

- Time Log
- Team Contract