Final Report

for

Marshal

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# 1. Introduction

The purpose of this software is to work off existing software, such as text editors, file managers, task managers, calendars, etc. and create a unified organizational tool. The system was proposed as a replacement to multiple existing tools. Generally, organization of work at a personal level tends to involve multiple different tools, frequently on multiple different platforms. This system will provide a single platform where all the organizational features of those tools will be able to co-exists, while also being simple to use.

The basic capabilities of the software are:

* Rich text editor.
* Basic organizational tools, such as calendars and reminders.
* Collaboration tools, such as file-sharing.
* Online backup of user files.

# 2. Functionality

* Take notes on rich text files.
* Add subfiles to create a hierarchical, folder-like structure for notes.
* Backup files.
* Send files to other users.
* Add external documents as attachments.
* Track events and add reminders to calendars.
* Manage one or more of the above tasks within the same document.

# 3. Functional Goals

## 3.1 Create and Modify Rich Text Files

Users can create and modify rich text files to take notes on. All the features supported by rich text, such as bold, italic and underlined text, will be available to users. The user can create a new file from the option available in the toolbar. If the user is currently within a file, this will create a nested file. Modifications to the file will be saved in real time, with no intervention from the user.

## 3.2 Create a Hierarchical Structure

The user can create a hierarchical, folder-like structure using nested rich text files. The complete hierarchy is visible in a sidebar. The user can create a new file from the sidebar or from the toolbar. This will create a link to the new file within the parent file and the new file will be opened for editing. The new file will be shown as a subfile under the parent file in the sidebar, thus creating a hierarchical structure.

## 3.3 Attach Local Files

The user can add links to locally stored files within rich text files. Clicking a link will cause the locally stored file to be opened in the default application for that file format.

## 3.4 Transfer Files to Other Users

The user can send files to another user, provided the user already has an account. The files will be downloaded to the other user’s device when they are online.

## 3.5 Create Calendar Events and Reminders

The user can create calendars and add events and reminders to the calendars. The reminders will send notifications to the user at the specified time. The user can choose to attach a calendar using the option from the toolbar. Each date of the calendar will have its own cell. The user will be prompted to add an event when they hover over a cell. The user can add an event and specify the title of the event and optionally, a time to set a reminder.

## 3.6 Backup Files Online

All local user files are backed up in an online server. If the user has an account, they can login into a different device and access all their files.

# 4. Non-Functional Goals

## 4.1 User-Friendly Interface

The interface was designed to be intuitive and with a low learning curve, thus maximizing the user’s ability to start working quickly without having to go through a frustrating introductory phase.

## 4.2 Instant Saving

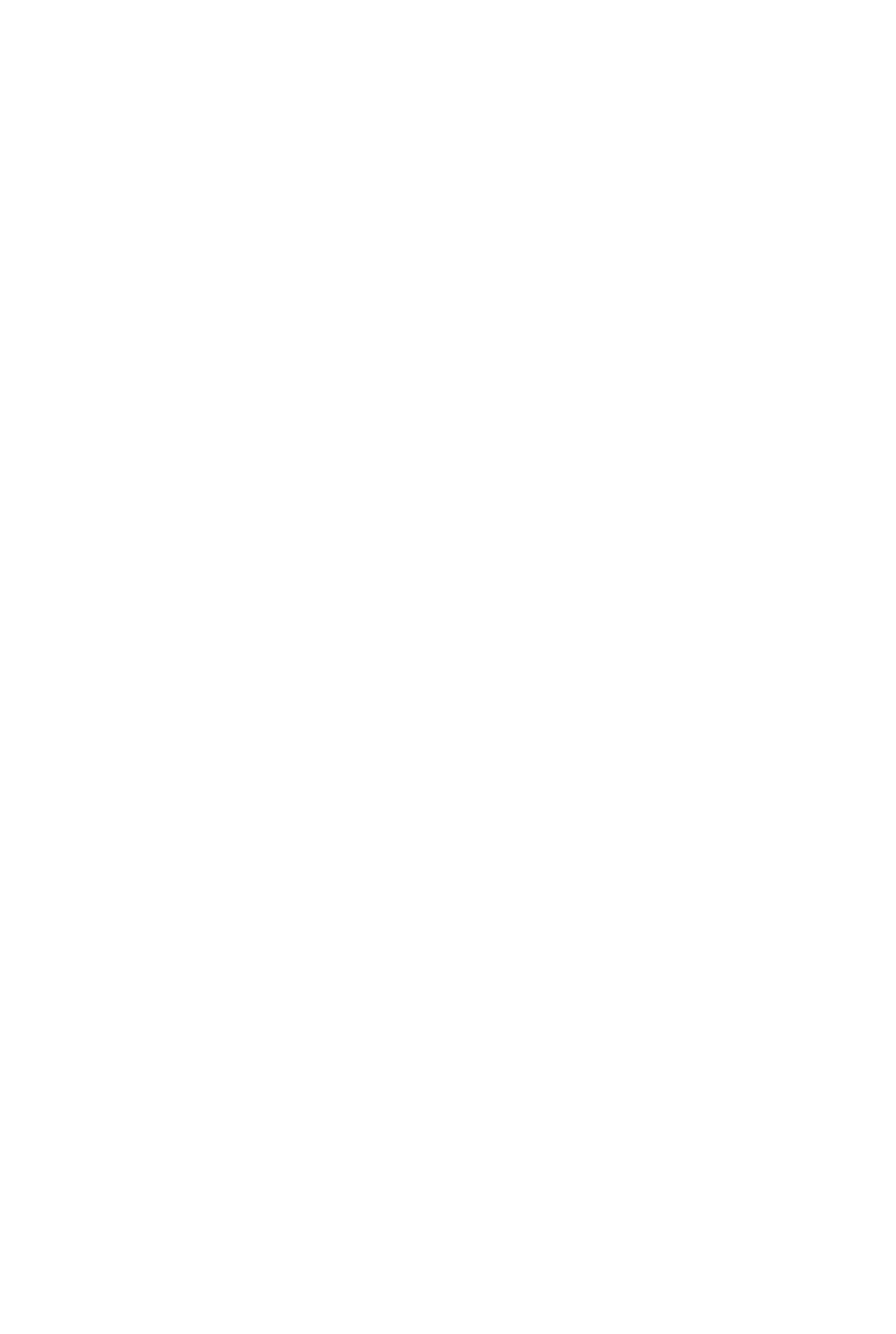
The files being used by the end-user save changes instantly and without intervention by the user. This results in a constant flow of smaller changes being saved rather than a lengthy process when the user is done making changes, thus improving performance. It further makes the system robust, since any changes lost due to power-loss is likely to be minimal.

## 4.3 Account Security

Some security was provided to user accounts in the form of password encryption.

# 5. Design and Construction

A flowchart with the different possible user actions is provided below to assist in understanding how the software works.



# 6. Testing and Evaluation

The testing and evaluation of the software was performed manually. There was no separate testing team involved, so most of the concentration was on the unit testing performed by the development team. Some basic integration testing and system testing was also attempted, albeit not to an extent that can ensure that the software is error-free.

# 7. Conclusion

The most major takeaway from this project has been the development of general object-oriented programming skills, especially in Qt’s environment. The development team started with no knowledge about the IDE and came away feeling comfortable working with at least the basics. The extensive set of features the IDE provides will surely be useful in future endeavours.