GNG 2101 (E13)
Faculty of Engineering – University of Ottawa
Deliverable J-User Manual

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Abstract

This deliverable will cover the main purpose of Simple Reminder, it also contains a user manual with different descriptions of how to use the app. This deliverable also contains recommendations for future work.

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Introduction

- **Importance of the Problem**

    After holding several meetings with the client, our group was able to conclude that people with ADHD generally have a hard time organizing the tasks that they have to accomplish. Whether it's forgetting to take their insulin after supper or forgetting to fill up their car with gasoline before going on a road trip or even forgetting to pay the rent, not being able to remember to do these tasks can severely affect the life of a person that suffers from ADHD.

    In the meantime, from what our group gathered, people with ADHD will either try and remember to accomplish tasks by using traditional pen and paper methods, such as calendars or day planners, which can be effective, according to the client. However, this solution can be expensive and also cumbersome.

    Another manner in which people who suffer with ADHD will try and manage their tasks is with digital reminder software/applications (e.g. Google Calendar, Asana, etc). However, these apps can have busy displays, complicated to use features or simply lack the ability for reminders to be connected to one another. In result, these applications can simply make the life of a user with ADHD harder than it already is.

    From this, our team was able to conclude that there is a need for a simple and easy to use reminder application with the target audience being people with ADHD.

- **Basic User Requirements**

    As previously stated, our team was able to deduce that there was a need for a simple and easy to use reminder application.

    Since our client has ADHD and he struggles to find a reminder or calendar application which suits his needs, our team was able to assume that there were also other people who suffer from ADHD that share the same predicament. Furthermore, since time management issues are not only a struggle that people who suffer from ADHD have, there is also a wider audience which could benefit from our solution to this problem.

    From this, we were able to focus our project on benefiting primarily people with ADHD who need a solution which is hassle-free. We were also able to deduce that other people who do not have ADHD but that struggle with time management issues could also benefit from our software.

- **Differentiation Between Our Product and the Competition's**

    Most of the competition had similar features as our application. However, most other applications did not have a colour based prioritization system, ours does. The most important feature is the active reminder. Basically, once a reminder is set off, the user has to go into the app to disable the reminder whilst most other reminder apps have notifications that can be disabled through the notification. The notification will repeat after a user specified interval if the reminder is not disabled.

<u>**User Manual**</u>

- **Important Features, Function and Capabilities**

    The features that make our app unique from a standard reminder app is the Stackable reminders, and the linked reminders. Stackable reminders refers to the active reminder feature referred to above, where each reminder that is currently 'Active' will be in the same tab in the app, and while any reminder is active, the app will create a notification constantly, after a certain interval specified by the user. The linking of reminders is done at reminder creation, and each linked reminder will be delayed by a set interval, to allow the user to delay many daily reminders at a time, should a delay occur in the user's schedule.

    The function of the app is a reminder app, it allows the user to create reminders, and creates an alarm and a notification when the time is up for the reminder.

- **How the Prototype was Made**

    The first prototype was mostly made to be an interactive flow chart for the app. It was a simple app made using Android Studio and written in Java. It had no reminder creation feature. You could only scroll from the menu screen to the different reminder list screens and to the reminder creation screen.

    The second prototype was a fully functional reminder app. It was also made using Android Studio and written in Java. The app featured the same screens featured in the first prototype but they were functional. To be more specific, the user could create a reminder and select a priority for it, the tier they wanted it to be in and the frequency of the reminder. The software would then save the user input in a SQLite database. The lists would then see if the information in the database matched the information that was required for it to be put in the corresponding list. The prototype could also send push notifications regarding the information which was inputted. In non-technical terms, an alarm would be displayed as a push notification at the certain time at which it had been selected to be set off. However, the second prototype lacked the ability of sending notifications as email attachments. It also lacked the ability for geocached features (i.e reminders attached to a global coordinate system). It also had no way for one reminder to be linked to another reminder.

    The third and currently final prototype is mostly a tweaked version of the second prototype. This prototype contains the ability to link one reminder to another and contains all the previous features included in the previous app. However, it still lacks the ability to geotag a reminder and the app is not compatible with home assistants.

- **How it Works**

Once the app is launched, the user will be greeted with a menu screen where they will be greeted by different buttons. They will then have 6 buttons which they will be able to select (Figure 1).

To create a reminder, they will have to press the create new reminder button. They will then have to name their reminder by inputting text into the "Reminder Name:" scanner. They will then have to insert a date and an hour at which they will like their reminder to be set off at. They will then select a priority for the reminder which will assign it either a higher or lower rank in the lists. They will then select a tier of frequency for which the reminders will be inserted into the selected tier list. The user will then select the frequency at which they would like to be notified for the push notification (Figure 2).

To view the active reminders (i.e. all the reminders have gone off, but have yet to be cancelled), they simply have to press the "Active Reminders" in the menu screen.

To view the reminders coming up this week, they simply have to click the "This Week" tab.

To view the macro, meso and micro reminders, they simply have to click on the corresponding buttons.

- **How to Install and Operate**
  - **Installing**

    Currently, the app can only be installed using the APK file found in the project, be downloading the APK file and selecting install on the file that is created in the phones download folder. After installation, the app will function as a standard app from the Google play store.

    Ideally, the user will eventually be able to download the app through the Google Play store. They will be able to find and download it like any other app on the Google Play store. Once it is installed, they will simply have to open the app and use it as aforementioned.

  - **Operating**

    After the APK file is installed, the user should open their native file explorer app, go to the downloads section and open the apk application. At this point, the phone will send a prompt "for security reasons, your phone is set to block installation of apps obtained from unknown sources" with 2 options "cancel" and "settings". Click the settings button and search for unknown sources option. Enable

it and click ok (you can select the optional button that says "allow this installation only")

The next step will lead you to a screen that displays "Do you want to install the application? It will not require any additional access", and the user can click "Install". The app will begin installing and should be done in a few seconds. You can close the screen prompt with either "Done" or "Open".

- **Maintenance Instructions**

  Assure the app is up to date, and report all bugs to the developers.

- **Health and Safety Guidelines**

  Since the app is a piece of software and not a piece of hardware, there are not a lot of health risks associated with using the app. However, strain on the eyes is often an associated risk with looking at a screen for too long. Thus, the user should avoid looking at the reminder app for long periods of time. Furthermore, the user should avoid putting their phone close to their ear at full volume in case if a reminder goes off. This could cause irreversible ear damage.

  Another risk associated with the app is only relying on the app to remember critical information. The user should not only use this app for critical reminders which could cause a risk if they forget about it. Thus, the user should not solely rely on this app for their reminders.

- **Troubleshooting**

  From our testing, the current app has been able to work without errors thus, the need for troubleshooting is hypothetically minor. However, if there is a bug which causes the app to crash while launching which is the only bug that we have seen with the final iteration, the user should simply close the app and relaunch the app. If this problem persists, the user should turn their device off and restart it, and report the bug to the developers.

Conclusion

Throughout the semester, we had to learn many new things to complete the project. We had to learn Java and Android Studio, we had to learn how to create an app, we even had to learn to work in a team during the quarantine. Even through these challenging times, we were able to learn many skills which were useful in the creation of this app and also acquire skills which will help us later on in our careers whether it is based on the application itself, time management, working from home, etc. Through these trials and tribulations, we have created a fully functional application which will hopefully be helpful for our client and we have also had the experience of creating an engineering project using design theory, time management and economics theory.

Recommendations

_____If this project was to be worked on and expanded in the future, the geo tagging ability and the ability to send a reminder as an email or text should be the priority since our client specified that these were needed. We were however not able to accomplish this due to a lack of skill and time. Another task that could be done would be to change the frequency of the repeating reminder (Active Reminders) based on the priority designated when the reminder is created. Another recommendation would be to simplify the logic since it is quite complicated at the moment and could lead to further challenges for future feature implementation. Finally, another recommendation would be to also create this version of the app for iOS to gain more users. This would however be currently quite complicated to do since the app is written in Java in an IDE that is primarily used for Android. One way of getting around this would be to rewrite the application in Kotlin and create the app using Swift which is an IDE similar to Android Studio but made for iOS development. Another feature that could be expanded upon would be the linked reminders. The user is currently only able to link one reminder to another. The user wanted to have the ability to link multiple reminders to multiple reminders. Another feature would be including a calendar in the app which shows all the reminders on said calendar.