UNIVERSITY MALAYSIA TERENGGANU

FACULTY OF OCEAN ENGINEERING TECHNOLOGY & INFORMATICS

CSM3114
FRAMEWORK-BASED MOBILE APP DEVELOPMENT

PROJECT REPORT

STUDENT HEALTHCARE SYSTEM

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LINK FOR GITHUB:

https://github.com/ArunMugilan/FlutterDevProjects/tree/main/student_healthcarecare

Bachelor of Computer Science Mobile Computing with Honors

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Introduction

We have developed a state-of-the-art technology called the Student Healthcare App to help students take charge of their healthcare and wellbeing. Designed with the rigours of a classroom setting in mind, the software smoothly incorporates healthcare tracking into everyday activities. Students' specific demands are met by features like daily check-ins and tracking of menstrual cycles. Healthcare management is fascinating and easy to use because to its broad functions and user-friendly design. The application guarantees seamless user experience and cross-platform compatibility because it is built with Flutter technology. The aim to empower students to prioritize and boldly take control of their healthcare by promoting a proactive attitude to well-being. Welcome to a new era of student healthcare management and join us on this path towards healthcare consciousness.

Executive Summary

The "Student Healthcare App" project is a comprehensive healthcare-tracking application designed for students. Developed using Flutter, the app features an intuitive user interface, incorporating functionalities such as swipe gestures and network images to enhance user experience. It allows students to record and monitor various healthcare parameters, offering insights into their well-being.

Key components include a streamlined student information screen, a menstruation cycle tracker tailored for females, and a healthcare-tracking screen with interactive questions. The app encourages users to proactively manage their healthcare by providing actionable insights and a record of healthcare-related data.

While the project has seen success in implementing core functionalities, further refinements could enhance the user interface's aesthetics and additional features could be explored. The app has the potential to make a positive impact on students' healthcare awareness, providing a valuable tool for healthcare tracking and management.

In conclusion, the "Student Healthcare App" demonstrates a strong foundation in healthcare-focused mobile application development. Future iterations and improvements can leverage user feedback to enhance its impact on student well-being.

Prototype Design

Wireframe

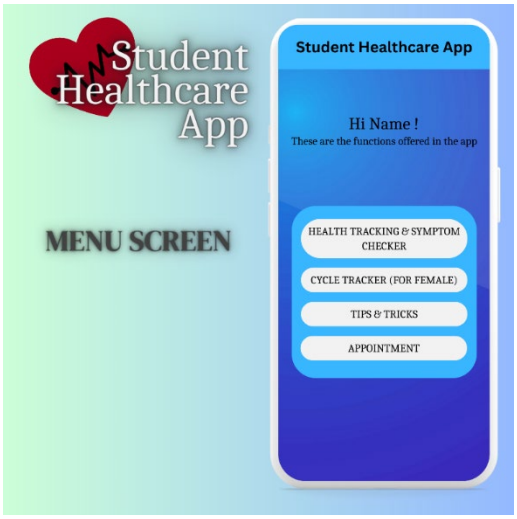
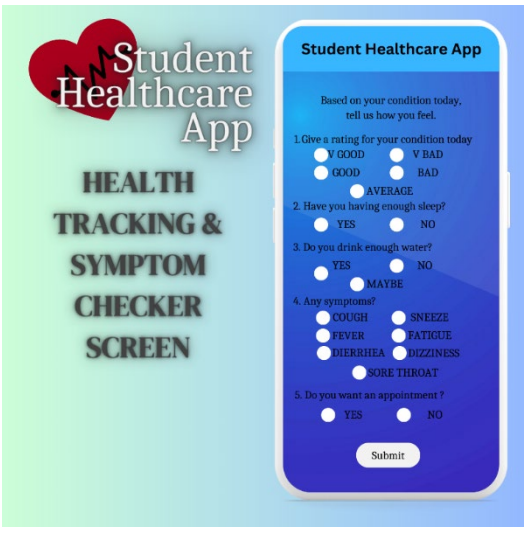


Figure 1.1 & 1.2



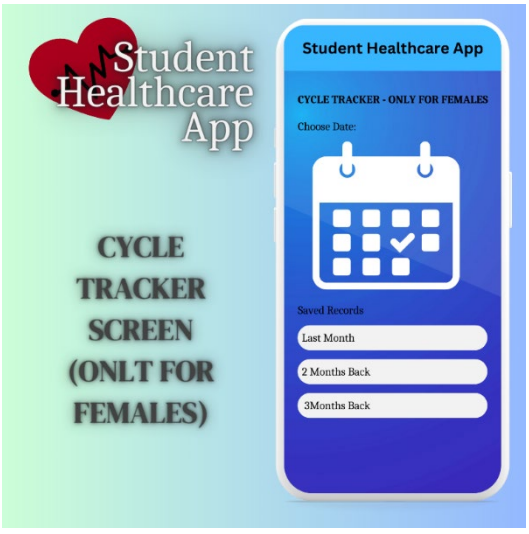


Figure 1.3 & 1.4

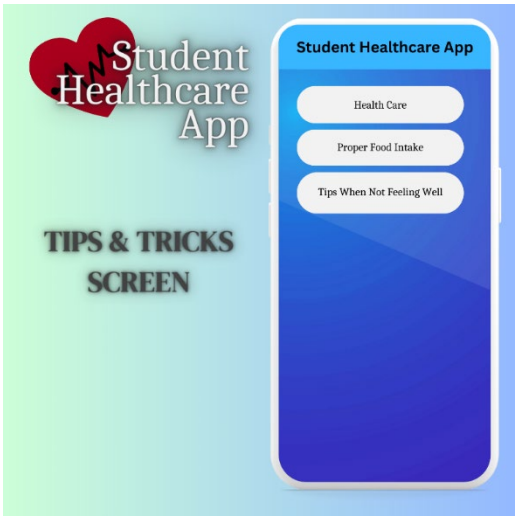
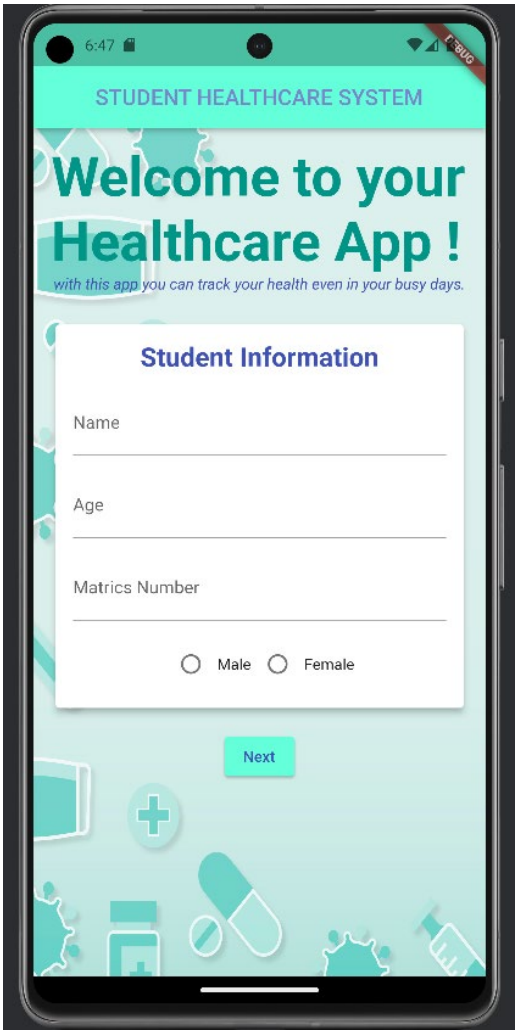
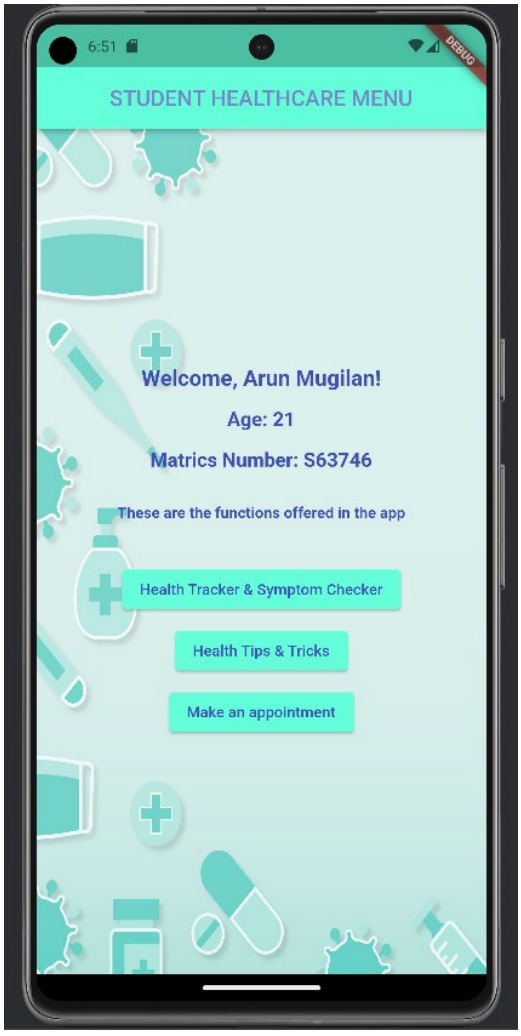
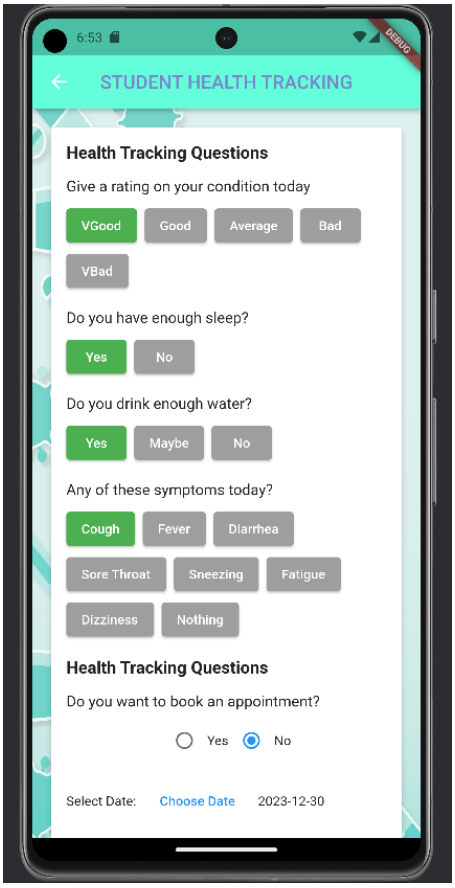


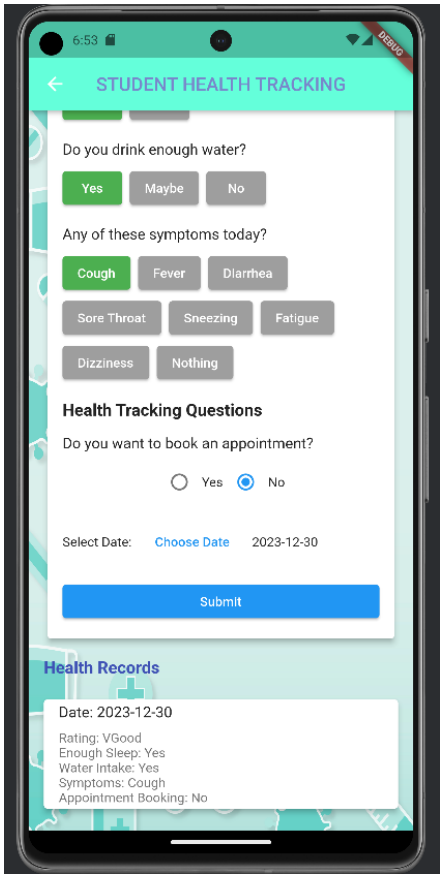
Figure 1.5 & 1.6

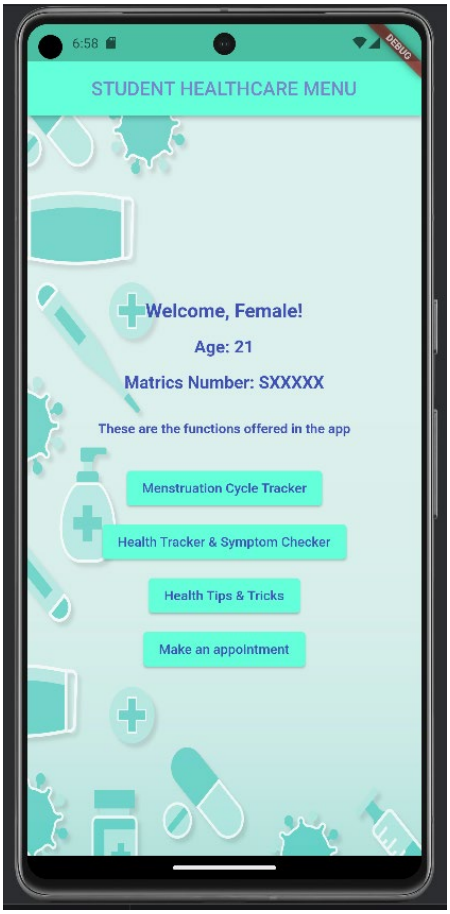
Design & Layout of Student Healthcare App

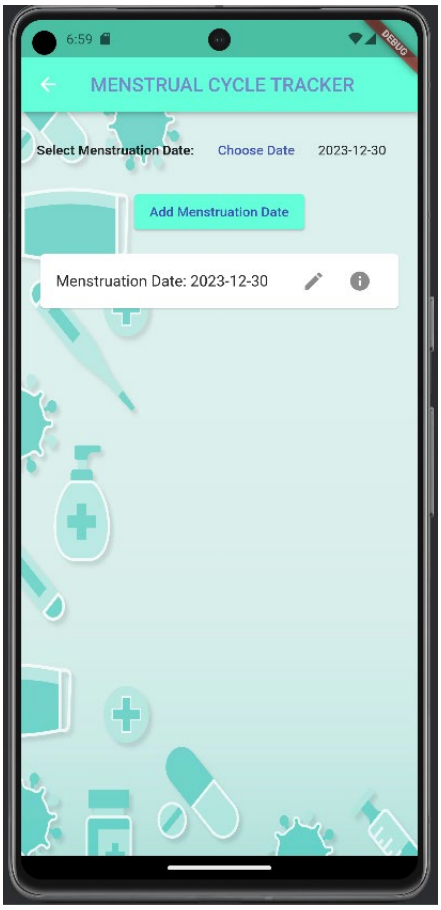


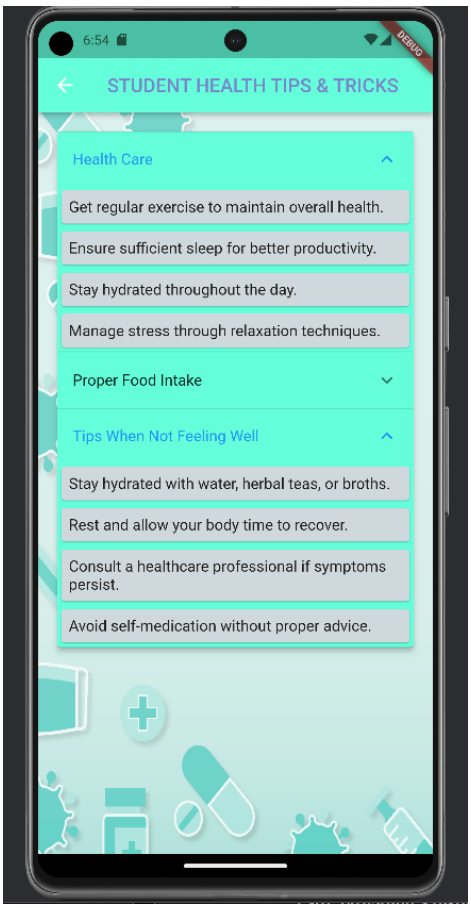


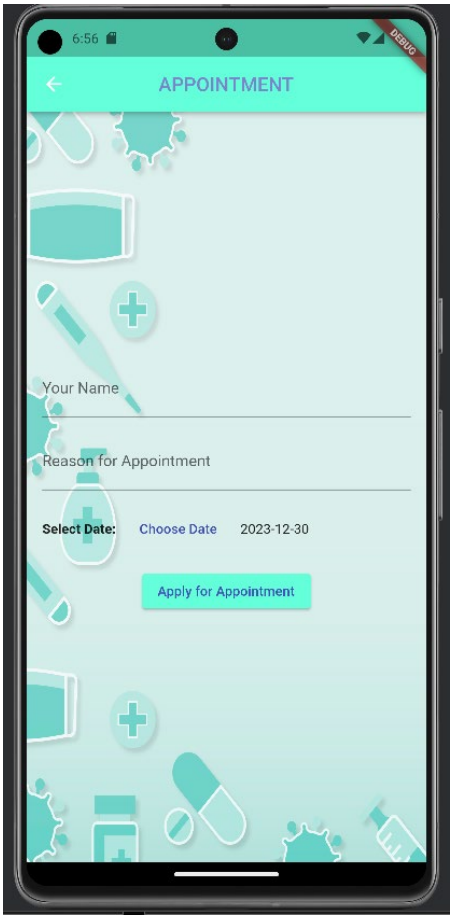

6:53
STUDENT HEALTH TRACKING
Health Tracking Questions
Give a rating on your condition today
VGood
Good
Average
Bad
VBad
Do you have enough sleep?
Yes
No
Do you drink enough water?
Yes
Maybe
No
Any of these symptoms today?
Cough
Fever
Diarrhea
Sore Throat
Sneezing
Fatigue
Dizziness
Nothing
Health Tracking Questions
Do you want to book an appointment?
Yes
No
Select Date:
Choose Date
2023-12-30


6:53
STUDENT HEALTH TRACKING
Do you drink enough water?
Yes
Maybe
No
Any of these symptoms today?
Cough
Fever
Diarrhea
Sore Throat
Sneezing
Fatigue
Dizziness
Nothing
Health Tracking Questions
Do you want to book an appointment?
Yes
No
Select Date:
Choose Date
2023-12-30
Submit
Health Records
Date: 2023-12-30
Rating: VGood
Enough Sleep: Yes
Water Intake: Yes
Symptoms: Cough
Appointment Booking: No


6:58
STUDENT HEALTHCARE MENU
Welcome, Female!
Age: 21
Matrics Number: SXXXXX
These are the functions offered in the app
Menstruation Cycle Tracker
Health Tracker & Symptom Checker
Health Tips & Tricks
Make an appointment


6:59
MENSTRUAL CYCLE TRACKER
Select Menstruation Date:
Choose Date
2023-12-30
Add Menstruation Date
Menstruation Date: 2023-12-30





This app has a systematic flow to its navigation. Users fill out the ‘StudentInfoScreen’ at first, and then the app uses ‘Navigator.pushReplacement’ to go to the `MenuScreen’ when they finish the form. Certain choices in the menu may be conditionally shown based on the gender of the user which is the Cycle Tracker Screen which is only accessible when the user is female. From the menu, users may select the ‘HealthcareTrackingScreen’ to enter and submit healthcare data. The app goes to the ‘AppointmentScreen’ when users indicate that they would want to make an appointment. There is also a Tips & Tricks Screen which displays some details on how the user should take care of themselves on a daily basis. The device's back button or modified back button logic facilitates back navigation. The ‘Navigator’ class is used by the app's navigation, which offers a simple, intuitive user experience with a linear flow between displays.

The UI for the Application with Explanation

The Student Healthcare App boasts an intelligently crafted User Interface (UI) that blends aesthetics with functionality, offering users a seamless and visually pleasing experience. The UI is designed to be intuitive, ensuring that users can effortlessly navigate through the app's various features. Let's take a closer look at the UI components, providing detailed insights into their design and functionality:

1. Welcome Screen:

   The Welcome Screen serves as the entry point to the app, featuring a visually captivating display with a welcoming message. The choice of a bold font, such as Playfair Display, enhances the elegance, immediately capturing the user's attention and setting a positive tone for their interaction with the app.

2. User Input Form (Student Information Screen):

   The Student Information Screen adopts a card-based design, utilizing a darker background to create a visually appealing and cohesive aesthetic. The user is prompted to enter key information, including name, age, matriculation number, and gender. The card format neatly organizes the input fields, contributing to a clean and organized layout.

3. Healthcare Tracking Screen:

   The Healthcare Tracking Screen follows a card-based layout, ensuring a consistent design language throughout the app. Each healthcare-related question is presented within an elevated card, providing a distinct visual separation between questions. Users can effortlessly respond using well-designed buttons, such as radio buttons, which dynamically update based on user selections.

4. Appointment Screen:

   The Appointment Screen exhibits a clean and responsive interface for booking appointments. The design prioritizes clarity, offering users a straightforward process for selecting preferences and confirming their appointments. The UI elements are carefully aligned to enhance the overall usability of the screen.

5. Menstruation Cycle Tracker Screen:

   Specifically designed for female users, the Menstruation Cycle Tracker Screen features a card-based iace. The screen incorporates functionalities like adding, editing, and viewing details for each menstruation date. The seamless integration of swipe gestures and dismissable cards ensures an intuitive and efficient user experience.

6. Menu Screen:

   The Menu Screen acts as a central hub, dynamically adapting based on user inputs during the initial setup. For female users who select 'Female,' the option to track menstruation dates is seamlessly integrated, demonstrating a personalized and context-aware UI.

7. Healthcare Records Screen:

   The Healthcare Records Screen employs card-based widgets to display recorded healthcare data. Each healthcare record is presented within an elevated card, showcasing essential details such as the date, rating, sleep information, water intake, symptoms, and appointment preferences. The use of Dismissable widgets allows users to delete records effortlessly with a swipe gesture.

8. Background Images:

   Throughout the app, background images are strategically implemented to enhance the visual appeal. The choice of network images provides a dynamic and thematic backdrop, contributing to an engaging and immersive user experience.

In summary, the Student Healthcare App's UI is meticulously designed with a focus on clarity, consistency, and user engagement. The cohesive use of card-based layouts, elevated buttons, and thematic background images collectively create an environment that is both aesthetically pleasing and highly functional, ensuring an enjoyable and informative user journey.

Potential Commercial Value and Pricing of the Prototype

The Student Healthcare App concept has significant economic potential since it meets students' specific demands for healthcare tracking in a novel way. The software stands out in the market thanks to its extensive healthcare tracking capabilities, personalised user interface, and easy-to-use design. Students of all educational levels are the main target audience, providing them with a practical platform to keep track of and manage their healthcare information. The recommended monetization approach is a freemium business model, giving away the basic functions and charging a premium tier that includes comprehensive analytics and an ad-free experience. Because of the app's capacity to produce data-driven insights, there are prospects for joint ventures with healthcare organisations and student-focused advertising. Competitive subscription options are included in the suggested price structure, guaranteeing student affordability. The goal of strategic promotional activities like social media campaigns and partnerships with educational institutions is to increase user interaction and raise awareness. In summary, the Student Healthcare App prototype has a strong business case and shows promise in the healthcare and wellness app sector.

Lessons Learned

The "Student Healthcare App" project provided valuable lessons in user-centric design, emphasizing intuitive interfaces tailored to user needs. Efficient data handling using Flutter's SharedPreferences showcased the significance of maintaining accuracy and consistency in user data. UI/UX best practices, including visually appealing designs and consistent interfaces, were highlighted. The project underscored the importance of form validation for accurate information and smooth navigational transitions using Flutter's Navigator.

State management, swipe gesture handling with Dismissable, integration of network images, and organized code structures were essential aspects covered. The project also stressed the iterative nature of development, emphasizing continuous improvement through feedback.

Overall, the project offered insights into effective UX, data management, Flutter best practices, and maintaining organized code, providing a solid foundation for future endeavors.

Conclusion

The "Student Healthcare App" project successfully implemented a user-friendly design and intuitive features for healthcare tracking. Utilizing Flutter functionalities such as swipe gestures and network images enhanced the app's visual appeal. Key findings suggest potential improvements in UI aesthetics and the addition of advanced features. The app empowers students to proactively manage their healthcare, making it a valuable tool in the healthcare domain. Continuous refinement and user feedback will further enhance its impact, promoting healthcare awareness among students.

References

1. *Student healthcare app*. Expert Self Care. (2022, May 17). https://www.expertselfcare.com/healthcare-apps/student-healthcare-app/
2. Amberstudent. (2023, August 29). *10 best healthcarecare apps for students in 2023: Amber*. RSS. https://amberstudent.com/blog/post/best-healthcarecare-mobile-apps-for-students
3. *Student healthcare matters app*. Student Healthcare Matters App | Irish Student Healthcare Association. (n.d.). https://www.isha.ie/article/student-healthcare-matters-app-15