

Wellness Wise
2242-CSE-5320-001-Special Topics in Software Engineering, Spring 2024

Final Report

By,

Team 7,

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Objective:

The main goal of our app is to promote healthy lifestyle to users by providing a way to track their daily tasks and motivating them by a scoring system that builds a healthy competition and pushes each user to do their very best.

Introduction:

Keeping a balanced lifestyle becomes more difficult in the modern era, because the demands of profession, education, and personal duties periodically collide. Wellness Wise presents to be an essential resource that can be easily dealt with into everyday activities to improve overall well-being and productivity in response to this modern scenario.

Wellness Wise is an extensive mobile application that has been extensively developed to aid individuals on achieving their goals for overall wellness. The purpose of it fits apart from basic scheduling management; it is a proactive companion that helps users dedicate time and resources wisely to various elements of their lives, such as family time, education, fitness, and more.

Through the process of the promotion of efficient time scheduling and insightful participation in tasks, Wellness Wise seeks to promote a sense of satisfaction, balance, and fulfilment in users.

As a key resource, Wellness Wise delivers a systematic structure for effectively planning time, monitoring performance in each area of life, and keeping track of activities. It helps individuals to give importance to their well-being via promoting mindfulness and purposeful living, which gradually stimulates productivity and develops a more balanced lifestyle.

Existing Systems:

Systems nowadays developed to facilitate both work and personal well-being differ widely with regard to their accessibility, features, and efficiency. Several platforms and apps focus on particular aspects of well-being, such as managing time, mental health support, and fitness tracking. Fitness tracking applications, such as Fitbit and Strava, are popular examples. These focus mainly with tracking exercise, tracking physical activity, and evaluating health variables. These tools are excellent at boosting physical well-being, but they frequently fall short when it comes to broader aspects of holistic well-being, such mental health and personal improvement.

Asana, Trello, and Todoist are examples of task management and productivity apps that fall under another area of present-day systems. These systems make it simple for teams to work together, manage tasks, and plan and schedule tasks. These systems succeed in maximizing efficiency and output, but they might not be capable to deal with the emotional and psychological dimensions of wellbeing, like minimizing stress and work-life balance.

Although there are numerous approaches currently in place to address productivity and wellness, they are all crippled by separation and a lack of integration. In order to manage different aspects of their daily lives, users are frequently finding themselves moving between multiple apps, that leads to inaccuracies and cognitive overload. Demand for comprehensive solutions like Wellness Wise, which carefully combine task management, time tracking, wellness approaches, and social support into only one platform, has increased in response to this challenge. These integrated approaches have the power to completely alter people's daily

lives by overcoming the gap across productivity and mental health, which leads to a more balanced, worthwhile, and enjoyable lifestyle existence.

Features and Functionality:

1. Leaderboard:

With the leaderboard feature, users can compare their progress in real time with other users and see how they rank in relation to other app users. Based on a variety of variables, like total points earned or goals completed, users can view their standing on the leaderboard.

The leaderboard encourages individuals to be involved and active in reaching their health objectives by acting as a source of accountability and inspiration. It encourages users to compete with one another and build relationships which motivates them to keep improving.

2. User Profile & Home Screen:

With the help of the user profile function, users can create and personalise their profiles, upload photos, establish unique preferences, and monitor their advancement over time. Additionally, this information in the profile is kept private for the user, except their Last Name and Score which is used for ranking them in the leaderboard.

Moreover, users can track their daily activity and update their account settings all from the simplicity of their Home Screen. It offers a customised experience based on the interests and objectives of every user.

3. Login/Register:

To safely access the app's features, users must either establish an account or log in using the login/register option. Users can create a password-protected account and sign up using their email address.

By having a register and login feature we can save profiles of a user and update their progress. This also helps build a community of individuals thus making the app a little interactive with the leader board.

4. Timeline:

The timeline feature displays tasks/goals with their respective time limits, and keeps tracks of daily, and monthly activity of the user.

The timeline helps users stay organized and focused by providing a visual representation of their health journey. It allows users to plan their activities and monitor their progress over time, ensuring they stay on track towards achieving their desired outcomes.

This helps users stay organized and motivated through their fitness processes and track their journey.

5. Customizable Tasks:

The feature of customisable tasks enables users to include and customise chores pertaining to self-care, diet, and fitness. Individuals can establish their own objectives, monitor their advancement, and get prompts to stay on course.

Users are able to modify the app to suit their own requirements and tastes thanks to customisable tasks. It empowers people to take charge of their health and make significant adjustments that fit their own situation and way of life.

User Interface and User Experience (UI & UX):

Simple and Attractive UI: The app's UI is designed to be visually appealing in order to inspire users. The usage of common fonts and iconography makes it easier for users to comprehend how the programme works.

Gamification and Rewards: Users can create personalised objectives, monitor their advancement, and receive points for reaching milestones. A leaderboard system is also included to provide players more incentive to accomplish their objectives.

Technical Specifications:

Platform:

Android based app. App store link:

https://play.google.com/store/apps/details?id=com.syed_saboor.WellnessWise

Technology Stack:

JavaScript (React Native expo): React Native is used for developing mobile application for android Application. Expo provides a platform to develop react native application, share it and also manage it through expo-cli, it is also used for bundling and the project into '.apk' for testing and '.aab' for deployment.

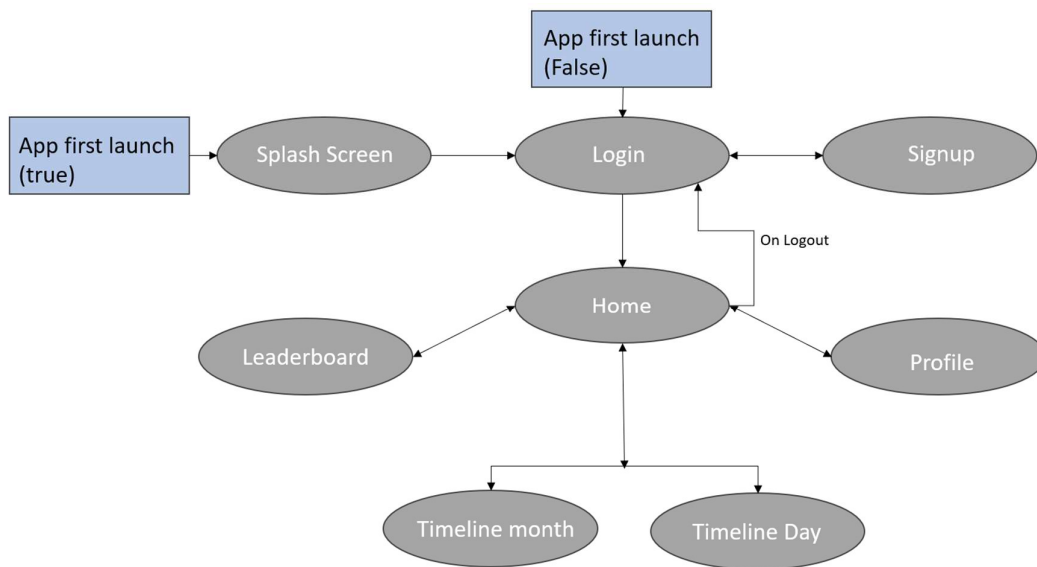
Major libraries used in the project are:

- @expo/vector-icons,
- @react-navigation/drawer,
- react-native-calendars,
- @react-navigation/native,
- @react-native-async-storage/async-storage etc.

Fire Base: Firebase is an online tool by google used for handling database and user authentication.

- Authentication: Users can safely register, log in, and manage their accounts with Firebase Authentication's user-friendly and safe authentication solution. It supports a multitude of authentication techniques, such as phone number authentication, social authentication (including Google, Facebook, and Twitter), and email and password authentication.
- Firestore for Real-time Data Updates: Firebase offers Firestore, a scalable, adaptable, and real-time NoSQL database. It is perfect for creating interactive and collaborative apps since it enables developers to store and synchronise data in real-time across different clients. Firestore facilitates the creation of dynamic and responsive user experiences by developers by offering robust querying capabilities, automatic scalability, and offline data durability.

Basic app layout:



- This is the general layout of all the screens in the app, If the app is first launch or the cache of the app is reset then users will be directed to Splash Screen which gives user a brief description of what the app is all about, other wise users will be directed to login screen.
- New users can toggle to signup screen for signing up, Users already signed up can directly login to home screen using their Email, Password credentials.
- From home screen users can go to profile, leaderboard, and Timeline screens. A drawer navigation is set up in all the screens after login through which users can easily navigate any screen of their choice.

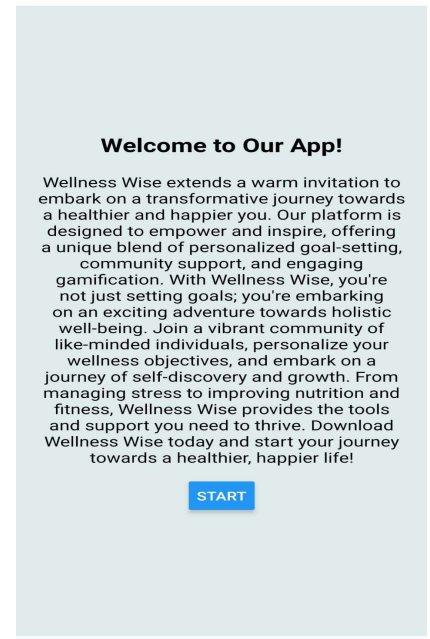
Screens detail description:

Splash screen:

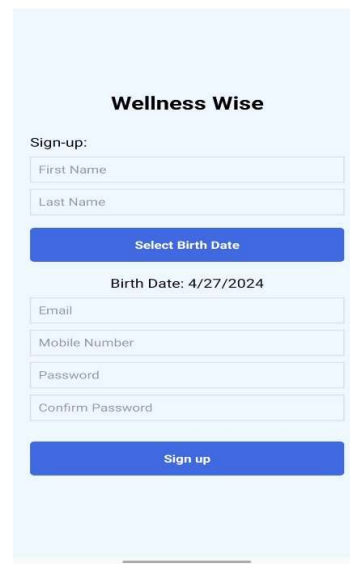
This is the first screen that pops up when user opens the app for the first time (First Launch). It outlines the purpose of this app and how it helps the community. This is like a brief Welcome screen and users can start using app after pressing the start button.

Once the user presses the start button, they will be navigated to the login screen and Splash screen will not be visible in further launches.

Note: If the user reinstalls the app or reset the cache this screen pop again and user can just press start to use the app.



Login and Signup:

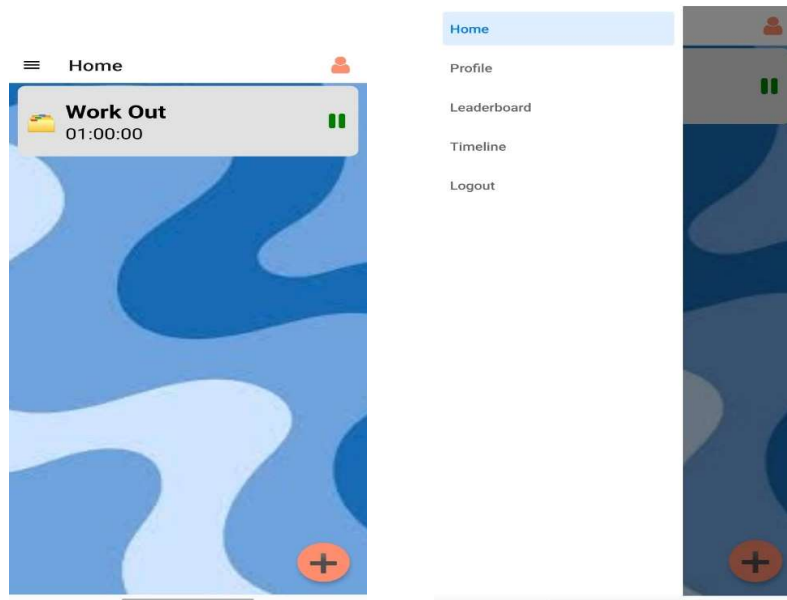


The login and sign-up screen are required for managing the data associated with each user, a new user can go to the signup screen where he/she can sign up by filling the above form. And once signed up they can log into the account using the Email and password they generated.

After user sign up, they are navigated to the home screen.

Note: All the fields in the profile screen are mandatory except the Mobile number field, and user can choose not to enter anything instead.

Home Screen and drawer navigation:



Home screen consists of the list of tasks a user has to complete in the day, each task is assigned certain duration by the user while setting up the task and on completion of the task the user will be given points based on the duration of the task. For instance, a user will gain 3600 points on completion of a 1-hour long task. (1point = 1Sec). Points will be assigned only on the completion of the entire task.

Apart from that the home screen also have a Add button at the bottom of the screen from where the user can add new tasks. Our app also offers a drawer navigation for users to navigate between different screens once they log in.

Logout option is also provided in the sider drawer which will help user sign out of their account if they choose to.

Components used:

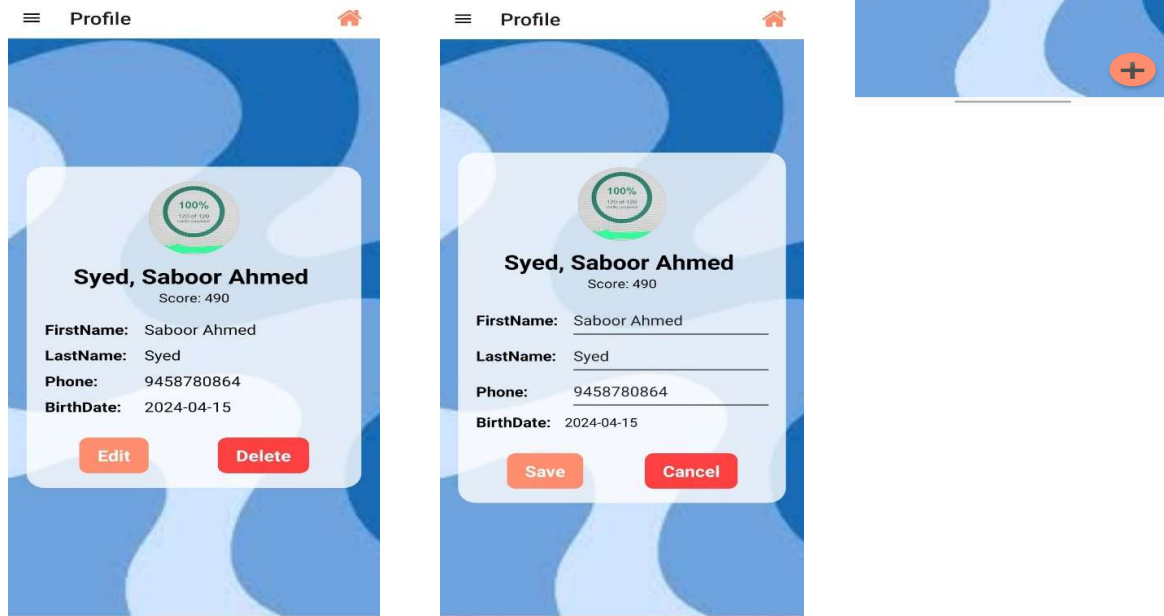
- TaskCard.js: The task card component deals with the task name, task duration and play/pause button. All the code have been implemented in the TackCard.js. When user is routed to home screen the app first fetches the data from the Firestore data and updates the tasks information in the home screen which is then sent to the TaskCard.js where handling of play and pause button and display is handled.
- AddTime.js: This component is used for adding of new task. It implements a model component which is a react native built-in component which handles a pop-up form where user can enter the new task information and add the task.

Adding Goals:

This option is given to user to add new goals, you can add any custom goal like education etc. and then click on pick time to add time duration for the given task. Once the user is satisfied with the goal, they can add the goal or cancel it if they are not satisfied.

Note: users can't add and delete goal. They have to set up goal each day and they can't change the goal throughout the day. This is done so that users can't abuse the scoring system by deleting the goal when they fail to complete that goal.

Profile Screen:



User profile is just visible to user for personalization of their account. User can edit their Name, Phone number, birthdate, and also their profile picture if they choose to. Profile screen also have a delete button that gives user an option to delete their account. This is included in accordance to the data privacy policy for the user to have control of their data.

At the top right there is a home icon that give user an option of easily navigating back to home screen.

Component Used:

- YesNoPopup.js: Here, a model is used to pop-up yes no alert for the user when they click on deletion of the account. This gives user a change to confirm if they want to permanently delete the account of want to cancel the request.

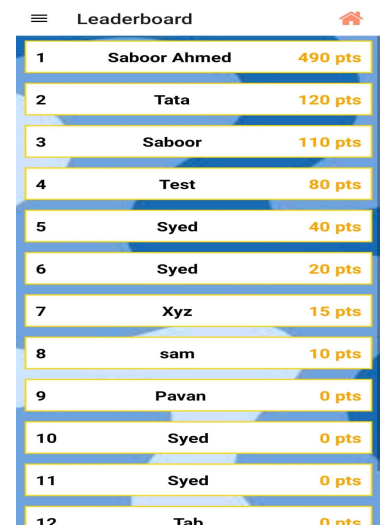
Leaderboard:

This screen is like a ranking screen that shows each user first name, their points scored and their ranking, this screen aims to motivate user by building a healthy competition like environment.

Users can see their ranking and also other users ranking and try to aim for the top which will shape their psychology to achieve more in a day.

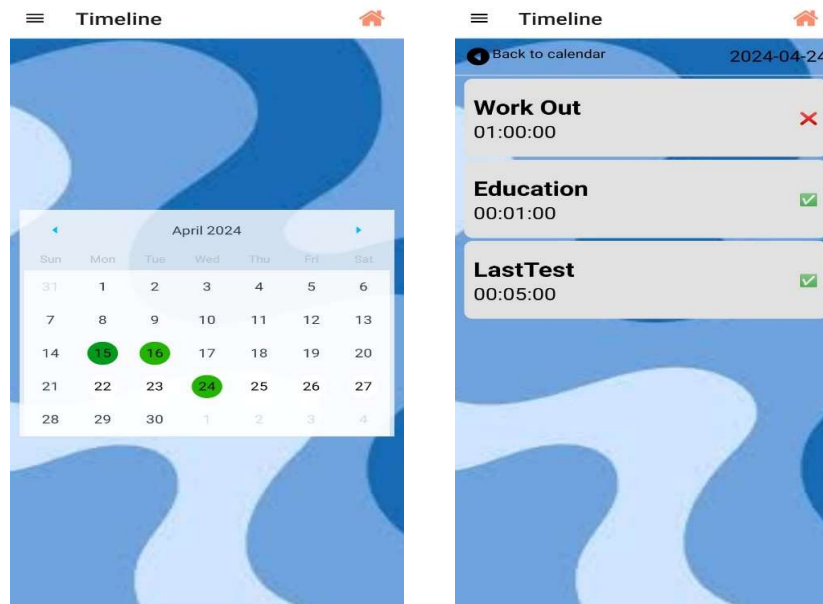
Component used:

- **LeaderBoardItem.js:** This component is used to display each item that is each user ranking, points gained and their rank, along with the styling. This is then passed in the FlatList in leaderboardScreen.js for the rendering of the list/array.



Leaderboard		
1	Saboor Ahmed	490 pts
2	Tata	120 pts
3	Saboor	110 pts
4	Test	80 pts
5	Syed	40 pts
6	Syed	20 pts
7	Xyz	15 pts
8	sam	10 pts
9	Pavan	0 pts
10	Syed	0 pts
11	Syed	0 pts
12	Tah	0 pts

Timeline Screens:



Timeline screens are there for user to track their progress over a period of time, User will be directed to the Calander timeline where they can know how much they accomplished in each day by the shade of green for that day. This also helps users under their consistency and always strive to improve it.

Component Used:

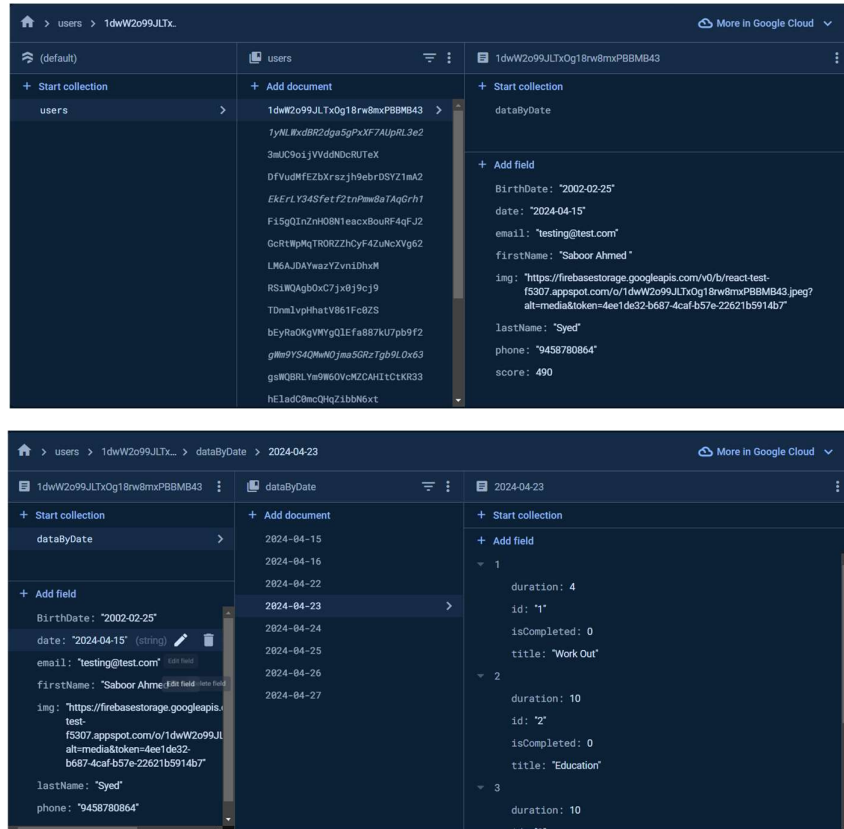
- **RenderTaskTimeline.js:** This component is responsible for the rendering of timeline screen by date. When user presses on any specific date on the Calander all data associated with the data is retrieved in the TimelineScreen.js and then a FlatList is used

to render the tasks as seen above, where green tick means completed and red cross means not completed tasks on that date.

Data Base:

This project uses firebase data base. Fire base offer an easy to implement authentication and the data base is stored in a NoSQL manner.

Data structure:



The data base structure is shown above, each user will have different values mapped like Name, Date of birth, image (profile image) etc. Apart from the primitive data a collection called “dataByDate” will also be mapped which have information of all the tasks done on each date and based on that time line screen is rendered.

Code File Format:

In this project all the major screens are under a `src/Screens` folder. These screens use files from `src/images` and `src/Components` for full functionality. All the naming is done in a self-understandable manner.

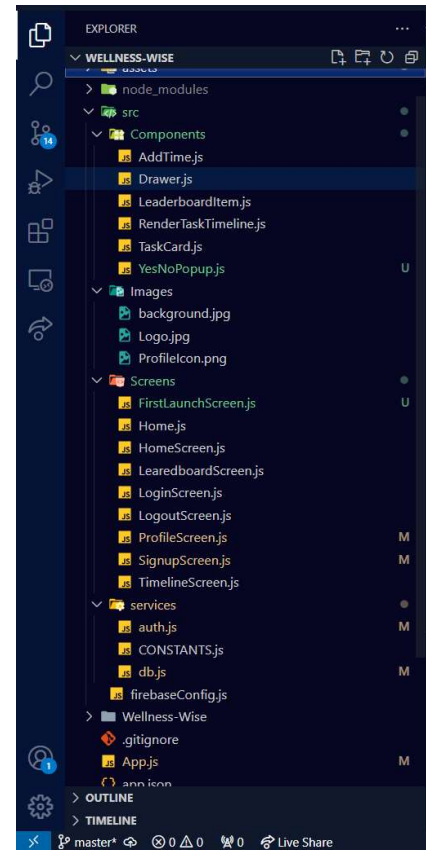
The `src/services` folder include all the constant functions, firebase authentication logic and also database read and write logic used throughout the project.

Navigation Logic:

This app uses 2 navigations throughout the project, [React Native Stack Navigation](#) and [Drawer Navigation](#).

Stack Navigation is implemented in the App.js for the Splash Screen, Login Screen and Signup Screen. Once user logs in the stack navigator direct the screen to Home.js screen which have all the Drawer Navigation for the rest of the screens. This way we have implemented an easy-to-use navigation for the users throughout the project.

{Note: drawer.js in src/Components is a dummy java script file used for testing of the code while development process.



Division of Work among team mates:

We divided the group into sub groups with Saboor and Rohith working together and Praveen K. Rimmalapudi, Y. Amulya and Aravind Yalla as other team.

Syed Saboor Ahmed:

- They worked on front-end part for home screen, and profile screen, add item logic and helped with timer logic.
- Handled navigation in the screens. (before login and after login)
- He was responsible for making sure our tasks team was on right track and achieved major functionalities from project preliminary report.

Rohith Sajjan:

- Worked on functionalities in the home screen and profile screen like adding tasks editing profile etc.
- Responsible for implementing timer logic.
- He was responsible for clear team communication.

Y. Amulya:

- Worked on leaderboard screen both front end and back end.

- Helped with firebase set up.
- Helped in major Report writing along with Praveen throughout the project.

Praveen K. Rimmalapudi:

- Worked on Login and sign-up screen.
- Handled both front end and back end of the Login/Signup along with splash screen.
- Helped in major Report writing along with Amulya throughout the project.

Aravind Yalla:

- Worked on TimeLine screen along with all the data retrieval from firebase.
- Created conditional rendering of Calander or day timeline screen.
- He always helped with other tasks and was punctual with his tasks.

All the team members collaborated will to achieve our final project.

Privacy Policy: <https://sites.google.com/view/team7-wellness-wise/home?authuser=1>

Collecting and Using Personal Data:

- Name: This information is taken for your profile and leaderboard where other users can see your name and your score for ranking purposes.
- Email: You can create your custom email while signing up, this information is only used for login purpose and will be hidden from other users and third-party organizations.
- Date of Birth: This information is just for your profile and no one else can see this except you. You will have the option to edit this later.
- Phone Number: This information is just for profile purpose and user can choose to not fill this, this will not be used in any place and is there just for the profile of the user.

Permissions:

You may be asked to give access to your media for uploading of your profile picture, we will only save your current profile picture and every time you change it we will keep the updated one with us for the profile.

All this information is secure and will not be disclosed to anyone in any circumstances.

User Deletion:

Users can delete their account from within the app. An option for account deletion is provided in the app under user profile.

Steps: Login -> Profile -> Delete

If users have any problem then they can look at detailed information at: <https://sites.google.com/view/team7-wellness-wise-deletion/home>

For further queries you can contact our developers at syed.saboor14@gmail.com

Children's Privacy:

Our application doesn't address anyone under the age of 13. We don't collect any information from children through our application.

About this app - App store:

Wellness Wise: Your Path to Personal Well-Being

App Type: App

Category: Productivity

Wellness Wise invites you on a transformative journey toward enhanced health and productivity. This innovative app combines goal-setting, personal tracking, and gamification to motivate and guide users towards their wellness objectives. From fitness and nutrition to mental health and stress management, Wellness Wise equips you with the tools you need to succeed in all aspects of life.

Personalized Goal Setting:

Tailor your health and wellness journey with personalized goal-setting. Whether you aim to improve your diet, increase physical activity, or reduce stress, Wellness Wise helps you create SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goals that cater to your unique needs.

Data Privacy and Security:

Your privacy is paramount. Wellness Wise ensures that your data is securely stored, protected with the latest encryption technology.

Leaderboard Motivation:

Wellness Wise includes a competitive leaderboard feature. This allows you to see how your progress stacks up against others in terms of points earned from completed activities. Watching others achieve their goals can provide an extra boost of motivation, pushing you to stick to your wellness plans and strive for the top of the rankings.

Download and Discover:

Begin your wellness journey with Wellness Wise and discover how integrating comprehensive health management into your daily routine can significantly enhance your quality of life. It's not just about achieving fitness goals—it's about paving the way for lasting well-being.

Testing:

Closed Testing: The App went closed testing by generating an apk and sharing with members out side of our team to try the app. This helped us understand if the app was understandable by all for general users.

Internal Testing: All the functions of the app were checked manually by out team member to make sure there were no crashes or errors in the app.

Conclusion:

First of all, “Wellness Wise” is an innovative app that aims to provide a user focused platform for people looking to incorporate health and useful habits. Due to its intuitive interface and

unique features, the app can make a significant difference on how the user get more involved with their well-being and provide resources to help them maintain healthier lifestyle.

Secondly, "Wellness Wise" uses social interaction and gamification aspects to motivate a user's to adopt and maintain good and healthy lifestyle. The apps leaderboard feature makes it interactive for user and they can compete with other user and help each other be motivated towards achieving their goals. Users can also modify their daily task that suits their own preferences and needs, which adds interest and a sense of individuality to their health journey.

Moreover, "Wellness Wise" is designed to be inclusive and user-friendly, so people of various ages, backgrounds can make use of it. Thanks to its user-friendly interface and simple navigation, anyone can get started with their wellness journey. Regardless no matter whether their objectives is to improve their level of fitness, diet, or general well-being, the programme provides users with the tools and information they need to succeed.

Finally, "Wellness Wise" provides a method for developing and sustaining healthy habits, which has the ability to completely change how users see wellbeing and health. The software's innovative features, attractive design, and commitment to user satisfaction put it in a position to impact users' lives and help them lead the healthiest and most satisfying lives possible.