**Health and Wellbeing App - Testing Report**

**Introduction**

The Glow Up Health and Wellbeing App is designed to support Sustainable Development Goal (SDG) 3: ensuring healthy lives and promoting well-being for all ages. The app aims to strengthen health systems by addressing key health challenges, including maternal and child health, disease prevention and mental well-being.

Many individuals struggle with maintaining a healthy lifestyle due to a lack of structured guidance and accessible resources. Glow Up serves as a digital health companion, offering users insights, progress tracking, and expert-backed resources to encourage and support healthier lifestyle choices. Through interactive features, the app promotes physical and mental wellness, empowering users to make informed health decisions.

**Changes to Initial Prototype**

Some of the key features proposed in the original Health and Wellbeing App pitch was to include trackers to log and record progress over time, a resource hub containing local health clinics, mental health support and access to mobile hotlines. A community hub would also include community challenges, virtual group activities and discussion chats. Notifications with questions to encourage the user to complete their daily trackers, tips and motivational quotes. Data integration included smart watch support and data visualisation with charts and diagrams.

While most of these ideas have been implemented into the mobile app, some have been difficult to implement such as the smart watch data integration and notifications, some of the simpler features such as hotlines, mental health support and local health clinics could be easily implemented in the future as a new section for the recommendations. Despite these changes to the initial prototype, the application is fully functional, interactive and user-friendly, resulting in a great baseline application ready to be released with small areas of improvement in the form of future updates.

**App Installation and Visual Showcase**

A screen shot of a phone

AI-generated content may be incorrect.

To simulate a real-user experience and demonstrate visual polish, a release version of the app was compiled and installed on an Android emulator using the command-line tools. The application icon and title ("Glow Up") now appear on the emulator’s home screen, just like a typical Android app.

Launching the app opens directly into a sleek home dashboard with stat cards for Physical, Mental, Nutrition, and Stories. All UI elements are fully responsive, visually spaced for mobile screens, and styled with a modern, minimal design language.

Screenshots from the emulator were captured to illustrate the user experience. The visuals showcase smooth navigation, structured layout, and aesthetic consistency across all pages. The application behaves like a production-ready Android app and is suitable for showcasing in a portfolio or demo setting.

**Coded Prototype**

The app was developed using:

* **Flutter & Dart** – Core frameworks for Android platform mobile development.
* **Firebase Authentication** – Secure user login and data storage.
* **Firestore Database** – Real-time data storage for user progress tracking.

**Implemented Features & Functionality**

1. Images Imported and used for all pages.

A screenshot of a computer program

AI-generated content may be incorrect.A screenshot of a phone

AI-generated content may be incorrect.

1. Top Navbar with Logo, Settings and Account Icon.

A green and orange text

AI-generated content may be incorrect.

1. Bottom Navbar Selectable buttons that change state when selected.

A blue square academic cap with yellow tassel

AI-generated content may be incorrect.

1. Carousel with alternating images every 4 seconds.

A person with their arms out

AI-generated content may be incorrect.

1. Trackers Form that tracks data and inserts into firestore database (Sleep, Exercise, Meditation, Productivity, Nutrition).

A purple and green symbol

AI-generated content may be incorrect.A purple and yellow icons

AI-generated content may be incorrect.



A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a phone

AI-generated content may be incorrect.

1. Accessibility Options – Dark Mode, High Contrast Mode, Font Size, Enable Button Animations.

A screenshot of a phone

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1. Tracker data displayed using this week’s data from Firestore database e.g. Average Durations, Top Activities, Average Sleep/ Quality, etc.

A screenshot of a graph

AI-generated content may be incorrect.A screenshot of a phone screen

AI-generated content may be incorrect.

1. Bar Charts displaying data from each tracker.

A graph showing a number of steps and calories burned

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1. Community Chat enabling users to send messages (including removing their own message). This inserts into database and removes from database when removed.

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a chat

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1. Upcoming Events with Google map’s location of events. Events can be created and will create event in database to store longitude and latitude points for the pin of the map for different events. Data for the events are inserted into Firestore database using form. They are clickable and will automatically move to the location of the event. They can be removed by the creator and after the event ends, the event will be automatically removed.

A screenshot of a phone

AI-generated content may be incorrect.A screenshot of a phone

AI-generated content may be incorrect.

1. Daily/ Weekly/ Monthly Challenges that give points on completion. They have their own timer, however, have not been fully implemented since this is more complex feature. Challenges database has been created but criteria checking if challenge has been completed has been much more difficult to implement.

A screenshot of a computer

AI-generated content may be incorrect.

Screens screenshot of a phone

AI-generated content may be incorrect.

1. Monthly Leaderboard showing the Top 3 users, their names and their points gained this month.

A screenshot of a phone

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1. Rewards Page that logs transactions in the Firestore database. Based on the user’s points, they can redeem gift cards and rewards. Points are deduced and code is sent to the user through email.

A screenshot of a computer

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A screenshot of a gift card

AI-generated content may be incorrect.A screenshot of a gift card

AI-generated content may be incorrect.

Screens screenshot of a phone

AI-generated content may be incorrect.

1. Login, Register pages creates an email and password, generates unique user UID and inserted into Firebase Authentication database.





1. Forms during registration process that prompts the user to add user details and their goals which are stored in Firestore database.

A screenshot of a computer

AI-generated content may be incorrect.

1. Profile Page gives options to log out, delete account, update user details, update goals and update their password. This will send an email verification link to reset your password in the Firestore authentication.

A screenshot of a phone

AI-generated content may be incorrect.A screenshot of a login screen

AI-generated content may be incorrect.A screenshot of a login box

AI-generated content may be incorrect.

**Testing**

**User 1**

|  |  |  |  |
| --- | --- | --- | --- |
| **Feature Tested** | **Successes** | **Issues Encountered** | **Solution Recommended** |
| Trackers (Sleep, Exercise, Nutrition, etc.) | Easy to log data, clean UI | No notifications to remind user to complete trackers | Implement daily tracker reminders |
| Challenges System | Looked exciting and motivating | Did not track or mark completion properly | Fix completion criteria in database |
| Profile and Customisation | UI was smooth, easy to navigate | Could not import profile picture | Add image upload feature for profile pictures |
| Data Charts and Visualisations | Clear and insightful data | Overflow issues when large text size is enabled | Adjust chart scaling for accessibility settings |

**User 2**

|  |  |  |  |
| --- | --- | --- | --- |
| **Feature Tested** | **Successes** | **Issues Encountered** | **Solution Recommended** |
| Challenges System | Wanted to participate in challenges | Could not complete challenges or earn points | Debug challenge progress tracking |
| Notifications & Reminders | Liked motivational quotes | No reminders for goals or tracker completion | Add custom notifications for unfinished tasks |
| Event System | Google Maps integration worked well | No option to save events for later | Implement save/favourite event feature |
| Nutrition Tracker | Thought entering food manually was tedious | No barcode scanner for food tracking | Integrate barcode scanning feature for easier food logging |
| Community Chat and Stories | Fun to engage with | No reactions to messages or stories | Add emoji reactions for chats & stories |

**User 3**

|  |  |  |  |
| --- | --- | --- | --- |
| **Feature Tested** | **Successes** | **Issues Encountered** | **Solution Recommended** |
| Challenges System | Found the idea interesting | Unable to track completion | Improve challenge tracking logic in Firestore |
| App Customisation | Enjoyed dark mode and accessibility settings | App icon on Android does not have Glow Up logo | Add app icon on Android to fit app |
| Goal-Based Content Personalisation | Liked setting personal goals | Stories and resources were not tailored to help meet goals | Implement goal-based content recommendations |
| Profile Page | Simple and easy to update details | No way to create personal articles/stories | Allow users to write and upload their own stories with images |
| Multi-Language Support | Wanted app in different languages | No language options available | Add multi-language support |

**User 4**

|  |  |  |  |
| --- | --- | --- | --- |
| **Feature Tested** | **Successes** | **Issues Encountered** | **Solution Recommended** |
| Nutrition Tracker | Easy to track meals | Entering food manually is time-consuming | Add barcode scanner for nutrition tracking |
| Challenges System | Found leaderboards motivating | Could not complete challenges | Fix challenge completion tracking in Firestore |
| Data Visualisation | Liked weekly & monthly reports | Charts overflow with large text size | Make graphs responsive to text size changes |
| Events and Community Page | Enjoyed participating in community activities | No way to save events for later | Add event bookmarking feature |
| Push Notifications | Found motivational messages helpful | No notifications for tracker reminders | Implement custom tracker notifications |

**Reflections and Future Improvements**

**Reflections on User Testing**

The user testing phase provided valuable insights into both the strengths and limitations of the current implementation. Users responded positively to the intuitive design, real-time data tracking and engaging features like leaderboards and challenges. However, testing also highlighted critical areas for improvement and refinement, particularly in challenge completion tracking, content personalisation, accessibility and ease of data entry.

A common theme across user feedback was the need for improved automation and customisation. Users wanted notifications to encourage daily habit tracking, goal-driven content recommendations, and more streamlined ways to log nutrition and activity data. Additionally, community interaction features such as reactions to stories and chats were highly requested to enhance engagement.

**Future Improvements**

Based on user feedback, the following key improvements will be prioritised in future updates:

1. Challenge System Fixes

* Issue: Challenges do not track completion properly.
* Solution: Revise Firestore database logic to correctly update, verify challenge progress and randomise the order in which they appear in.

2. Push Notifications & Tracker Reminders

* Issue: Users forget to complete trackers without reminders.
* Solution: Implement customisable notifications for daily habit tracking and goal progress.

3. Nutrition Tracker Enhancements

* Issue: Manually entering food data is time-consuming.
* Solution: Integrate a barcode scanner to automatically fetch nutritional data.

4. Content Personalisation & Tailoring

* Issue: The app does not display content tailored to user goals.
* Solution: Implement a recommendation system to suggest stories, challenges and tips based on user-set goals during registration.

5. Profile Customisation & Community Engagement

* Issue: Users cannot upload profile pictures or interact with community content.
* Solution: Enable profile picture uploads and add reactions to community chats & stories. To store images Firebase premium would need to be purchased resulting in an extra cost.

6. Accessibility & UI Enhancements

* Issue: Some charts overflow when large text size is enabled.
* Solution: Adjust UI scaling to ensure charts and elements are fully responsive.

7. Event & Reward System Improvements

* Issue: Users want to save/favourite events and track past reward redemptions.
* Solution: Add a "Saved Events" feature and implement a redemption history for rewards.

8. Multi-Language Support

* Issue: No language options available.
* Solution: Implement multi-language support in the settings menu.

9. Subscription Model

* Issue: No Subscription Model currently implemented meaning no revenue generated from app.
* Solution: Implement subscription model that allows the user to register their account. Store this securely and encrypt this data into the Firebase database and then allow them to access premium features of the app. Restrict user’s access without account to these pages (trackers, health, community, rewards pages).

**Conclusion**

The Glow Up Health and Wellbeing App has successfully provided users with an interactive and engaging platform to track their physical and mental wellbeing. Through extensive user testing, we have confirmed that the app offers navigation, real-time data visualisation and motivational features that encourage users to build healthy habits.

However, testing has also revealed key areas for enhancement, particularly in challenge tracking, automation of reminders, nutrition logging and content personalisation. Addressing these concerns will significantly improve user experience, making the app more dynamic, efficient and offering a more personalised experience.

Moving forward, future updates will focus on bug fixes, feature expansions and accessibility improvements to ensure the app continues to evolve in response to user needs. By refining the existing features and integrating new engagement tools, the Glow Up app will become a more powerful and adaptive health companion for users seeking to enhance their overall wellbeing and helping achieve the sustainable development goal of achieving healthy wellbeing.

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