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**Department of Computer Science and Engineering**

**Student Project Scheme Phase I-2024**

**Project Report**

**Project Title: Mental Health Journal**

**Name of the Students with IDs:**

B Dheeraj **- AV.EN.U4CSE22102**

Y Bhagyasree **- AV.EN.U4AIE22147**

Yashaswini Rao **- AV.EN.U4AIE22151**

P Nikhitha Bramarambica **- AV.EN.U4AIE22157**

**Project Group Code: SPS-P1-46**

**Refer following bulleted points to prepare the report short.**

**Note:  *Ensure that the project complies with legal requirements and ethical standards.***

**The evaluation scheme for *Software-based* *Student Project Scheme: Phase I***

1. **Introduction**

In society, mental health has emerged as a critical concern, with growing awareness of its profound impact on individuals, families, and communities.

Recognizing the importance of mental well-being, there has been a surge in initiatives aimed at promoting mental health and providing support to those grappling with mental health challenges. In alignment with this endeavour, our project embarked on the development of a Mental Health Journal App named “REFLECTIVE RESPITE” which is designed to facilitate self-reflection, emotional regulation, and overall mental wellness. This Application provides the user with a convenient platform to engage in therapeutic practices and monitor their mental health journey. This project report aims to provide an overview of the development process, features, functionality, and potential impact of the app.

**2. Project Objectives**

The Primary Objectives of the REFLECTIVE RESPITE App include:

**Development of an Intuitive and User-Friendly Interface:** Designing a visually appealing and easy-to-navigate interface that fosters engagement and encourages regular use.

**Usage of Effective Techniques:**

Equipped with mood-tracking tools, to support users in managing their mental health effectively and also we have provided daily Journal writing as well.

Personalization and Customization: Providing users with options to tailor their journaling experience to their unique preferences and needs, thereby enhancing relevance and effectiveness.

**Data Security and Confidentiality:**

Ensuring robust measures are in place to safeguard user privacy and maintain confidentiality of sensitive information shared within the app.

**There the Project has met all its objectives and goals and ensures its completion scope thoroughly.**

**3. Functionality:**

* **Examination of the functionality of the software and the project requirements.**

The functionality of the Mental Health Journal App was meticulously designed to align with the project requirements, ensuring a comprehensive platform for users to engage in self-reflection, mood tracking, goal setting, and accessing mental health resources.

The core features of the app include:

**Journal Interface:**

The app provides a user-friendly interface for journaling, allowing users to record their thoughts, emotions, and experiences. The interface is designed to be intuitive, with options for formatting text, adding multimedia content, and categorizing entries based on mood or theme.

**Mood Tracking:**

Users can track their mood fluctuations over time using built-in mood-tracking tools. The app employs a range of emoticons or numerical scales to capture the user's emotional state, enabling them to identify patterns and trends in their mood.

**Goal Setting and Progress Tracking:**

The app facilitates goal setting by allowing users to define personalized goals related to their mental health and well-being. Users can track their progress towards these goals, receive reminders, and celebrate milestones, fostering a sense of accomplishment and motivation

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**Privacy and Security:**

Robust measures are implemented to ensure the privacy and security of user data. This includes encryption of sensitive information, secure login mechanisms, and adherence to data protection regulations.

* **Effectiveness of error handling and user input validation.**

**User Interface (UI) and User Experience (UX):**

* **Evaluation of the design and usability of the user interface.**

**Intuitiveness:**

The UI was designed with a focus on simplicity and intuitiveness, allowing users to navigate the app effortlessly. Clear and familiar navigation patterns, such as tabbed menus and hierarchical structures, were implemented to guide users through different sections of the app.

**Visual Hierarchy:**

A consistent visual hierarchy was established to prioritize important elements and content within the UI. Emphasis was placed on key features such as journaling, mood tracking, and goal setting, ensuring they are prominently displayed and easily accessible to users.

**Accessibility:**

Accessibility considerations were integrated into the UI design, including adequate contrast ratios, legible font sizes, and support for assistive technologies. This ensures that the app is inclusive and accessible to users with diverse needs and preferences. Visual cues, such as animation effects and interactive elements, enhance user engagement and reinforce the affordance of UI components.

* **Checkpoint: if the software provides a positive and intuitive user experience.**

The Mental Health Journal App aims to provide users with a positive and intuitive experience, facilitating their engagement in mental health-promoting activities. Through user testing and feedback sessions, the app was evaluated to ensure it meets the following checkpoints:

**Ease of Use:**

Users reported a high level of satisfaction with the app's ease of use, indicating that they were able to navigate the interface and access desired features without encountering significant obstacles.

**Relevance and Effectiveness:**

The app's features were deemed relevant and effective in supporting users' mental well-being goals. Users appreciated the variety of tools available for journaling, mood tracking, and accessing resources, noting their contribution to self-awareness and emotional regulation.

**Engagement and Retention:**

Positive feedback regarding the app's engaging interface and interactive features suggests that users are likely to remain actively engaged with the app over time. This bodes well for promoting long-term adherence to mental health practices and habits.

* **Responsiveness and overall aesthetics of the UI.**

The responsiveness and overall aesthetics of the UI were carefully considered to enhance user satisfaction and enjoyment. They include:

Fluid Interactions: The UI was optimized for responsiveness ensuring smooth and fluid interactions.

**Visual Design:**

Attention was paid to the visual design elements, including colour schemes, typography, and imagery, to create a visually appealing and harmonious aesthetic that aligns with the app's mental health focus.

**Animation and Transitions:**

Subtle animation effects and transitions were incorporated to add polish to the UI and create a more engaging user experience.

**4. Code Quality:**

The testing procedures implemented in our Flutter app are comprehensive and aimed at ensuring functionality and reliability. Unit tests cover individual components, including edge cases, enhancing code clarity and reliability. Integration tests validate interactions between app parts, fostering seamless functionality. System tests assess overall app behaviour, covering navigation, user interactions, and external dependencies.

When assessing time and space complexity, the developed code demonstrates room for improvement in terms of efficiency and resource utilization, presenting opportunities for optimization.

Our testing also prioritizes handling edge cases with error-handling mechanisms and user feedback, leading to a stable and reliable app. These practices reflect a proactive approach to software quality assurance, contributing to enhanced app quality, reliability, and maintainability over time.

**Testing:**

**Unit test:**

The individual components of our app are working efficiently in isolation. Each unit is behaving as expected according to its specification.

**Integration test:**

The integration of our code is efficient, with each unit component seamlessly connected and working together harmoniously. The interaction between these units ensures effective communication among all components, promoting smooth integration and cohesive operation of the entire system.

**System test:**

The system integration of the app is functioning effectively, ensuring smooth operation from start to finish. It covers all user interactions and interactions with Firebase. Our code's comprehensibility guarantees that the application behaves correctly and meets the specified requirements of users or stakeholders.

Issues Identified:

Two bugs have been discovered in our code:

1. Reminders and streaks are not synchronizing with Firebase.

2. While the application is fully responsive on Android devices, it is only partially responsive on websites.

**Resolution:**

We're dedicated to fixing these issues quickly. Our focus is on making reminders and streaks sync correctly with Firebase. We'll also improve website responsiveness for a better experience on all devices.

**5. Deployment**

Our deployment process for the Flutter app focuses on simplicity and efficiency. We ensure all necessary components are in place before deployment, including managing dependencies and ensuring compatibility across various devices and operating systems. During deployment, we closely monitor the process and promptly address any issues that may arise. Post-deployment, we conduct thorough testing to verify the application's functionality and address any remaining issues. Our goal is to ensure a smooth and successful deployment, providing users with a reliable and consistent experience.