Period Tracking App "SAKHI"

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Abstract: *Sakhi is a female empowerment app that serves as a period tracking and wellness companion app, helping women take charge of their physical and mental health. Wellness and well-being into their own hands. The app offers you a tailored period tracking experience, as well as giving users properties of a dynamic breath advice on adopting healthy habits. We are here to challenge the stigma around menstruation through a safe and supportive Sakhi shared with a community of women to make those connections. Menstruation is a normal part of life but remains a taboo subject in a lot of cultures. Women often shamed, stigmatized and embarrassed to speak up about their menstrual health causing to be unaware and uninformed about their bodies.*

The Sakhi app wants to change this by helping women keep track of their periods, and providing insights and advice for a healthier lifestyle. In our "Sakhi Period Tracking App" project, we have devised a mobile app which helps women monitor their menstrual cycles. The app provides tailored insights and forecasts that leverage the user's data to assist them in scheduling their reproductive health. Myths include that menstruating women and girls shouldn't touch certain foods. Or enter places of worship, or that they must be alone. Not only women cannot be a mothers but this is a God-given opportunity given only to women to bear a child. Sakhi is celebrating womanhood!

Sakhi is not just a period tracking App but it is an emotion for females who has to go through this hardship every month, it highlights that mensuration is not just a biological process but also a powerful aspect that should be celebrated and embraced. The app "SAKHI" inspires womens to embrace their body and their capacity for motherhood, seeing it as cherished opportunity rather than a burden. It is also an platform that helps the teenage girls to get an overview about this biological process.

Keywords: SAKHI, Menstrual App, tracking

I. INTRODUCTION

Introduction In today's digital age, mobile applications have become an essential part of our Daily lives. With the increasing use of smartphones, mobile apps have made it. Possible to access various services and information at our fingertips. One such Area where mobile apps have made a significant impact is in the field of women's Health, particularly in menstrual health and hygiene. Menstruation is a natural and essential part of a woman's life, yet it is often Stigmatized and neglected. Many women face difficulties in managing their Menstrual cycles, which can lead to various health issues, emotional distress, And social problems. To address these challenges, our team has developed a Mobile application called "Sakhi Period Tracking App". The Sakhi Period Tracking App is designed to provide women with a Comprehensive and user-friendly platform to track their menstrual cycles, Ovulation, and fertility. The app aims to empower women with knowledge and Insights about their reproductive health, enabling them to make informed Decisions about their bodies and well-being. The app's name "Sakhi" is derived from the Sanskrit word "सखी" meaning "friend" Or " companion". Our app is designed to be a trusted companion for women, Providing them with a safe, secure, and supportive environment to manage their Menstrual health. The Sakhi Period Tracking App is not just a tool for tracking menstrual cycles; it Is a holistic platform that offers a range of features and services to support Women's reproductive health and well-being.

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DOI: 10.48175/IJARSCT-23530

ISSN
2581-9429
IJARSCT

208

Problems being addressed:

- Lack of Awareness: Many women lack awareness about their menstrual cycles, Ovulation, and fertility. This lack of awareness can lead to unplanned Pregnancies, menstrual irregularities, and other reproductive health issue
- Social Stigma: Menstruation is often stigmatized in many cultures, leading to feelings of Shame, embarrassment, and isolation among women.
- Limited Access to Healthcare: Many women, particularly in rural or underserved areas, Have limited access to healthcare services, including reproductive health services issues.
- Emotional Distress: Menstruation can be a source of emotional distress for many Women, particularly those who experience symptoms such as anxiety, depression, and Mood swings.

II. LITERATURE SURVEY

Conducting a literature survey is a crucial step when one is embarking on a project involving menstrual health and hygiene. This document will allow us to understand the existing technologies, and best practices present in the field. The primary objective of a literature survey is to gain a deep understanding of the current state of knowledge in a particular field, identify gaps, trends, and emerging research areas, and evaluate the credibility and relevance of the sources. Here's a brief overview of key areas to explore: Menstrual Health and Hygiene: Understanding of the latest advancements or researches done by the people around the globe in menstrual health and hygiene. Period Tracking Apps: Before the development of this project, we have done some research related to period tracking apps, including their features, functionality, and user engagement. User Behaviour and Adoption: Whenever we are developing such kind of project, we need to study literature on user behaviour and adopt according to the requirements of customer. We have identified the factors that influence user engagement so that we could reach masses. Menstrual Health Awareness: We understood and reviewed the importance of menstrual health awareness and its impact on women's lives. As we mentioned it as our benefits, we must also assess the reduction in menstrual health issues and other benefits. Regulatory and Policy Frameworks: This factor is one of the major steps which highlights that we must follow regulations and policies, including data protection and user privacy. Understanding of the legal framework may impact your project.

III. METHODOLOGY

People who will use SAKHI Period Tracking App are no more likely to have basic knowledge of their cycles than those who don't use them. The methodology of sakhi involves following key features

1. Personalized login- users are provided with secure login credentials to access and track their progress

2. Cycle length and days left-understand your cycle and its pattern and shows your next Period

Profile management-allow users to update their personal information

Feedback-allow user to give Feedback base on their experience also gives their suggestions for the app.

IV. IMPLEMENTATION

1. Backend infrastructure :The backend infrastructure is developed using android studio. It is a free open source integrated development environment (IDE) for developing android apps. An android studio is chosen for its scalability, reliability and ease of integration. And for storing users information and logged periods SQLite database is used.

2. User interface design: The user interface is designed to be intuitive and visually appealing ,enhancing user experience. XML and java were utilized to create responsive UI and navigation flows, ensuring compatibility across differ devices.

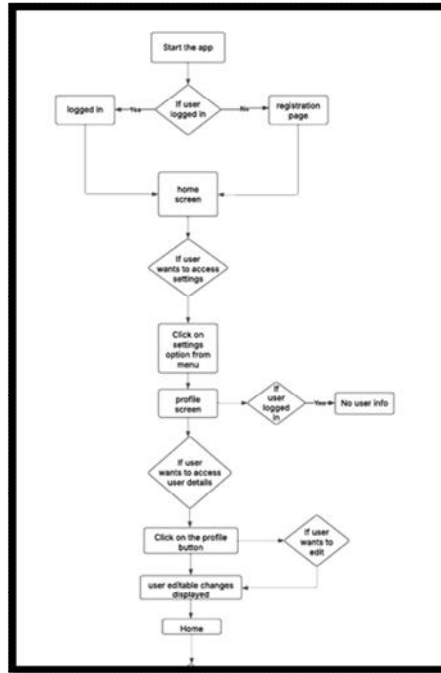3. General flow chart of Sakhi app:

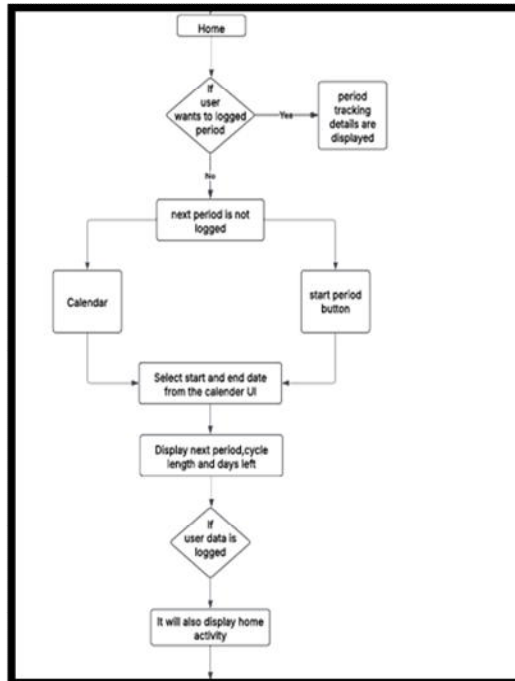Fig 1. Flow chart which includes login and registration page

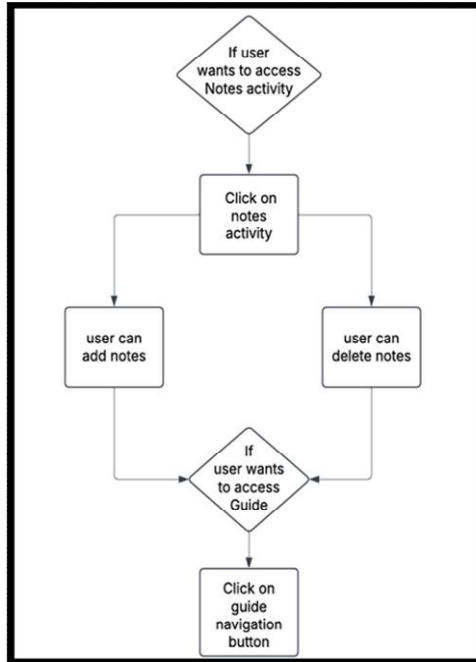Fig 1.1 Flow chart which includes logging period and calendar page

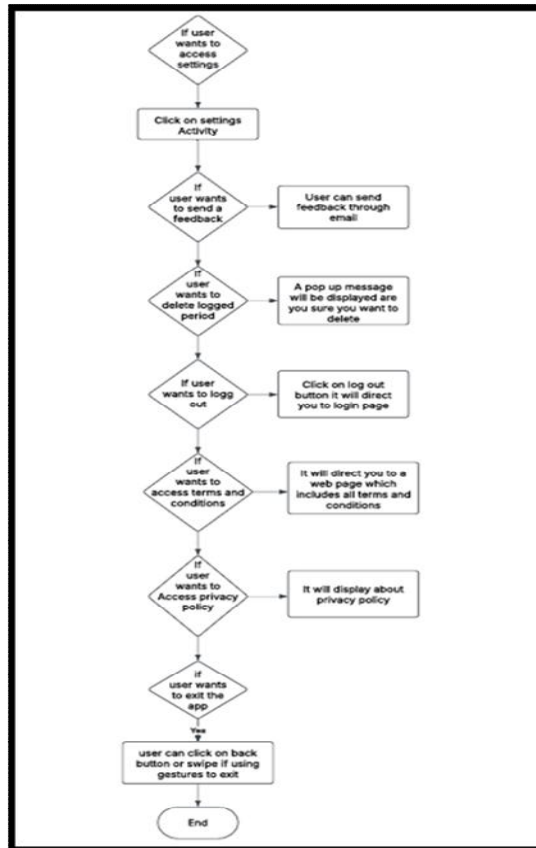Fig 1.2 Flow chart which includes notes activity page

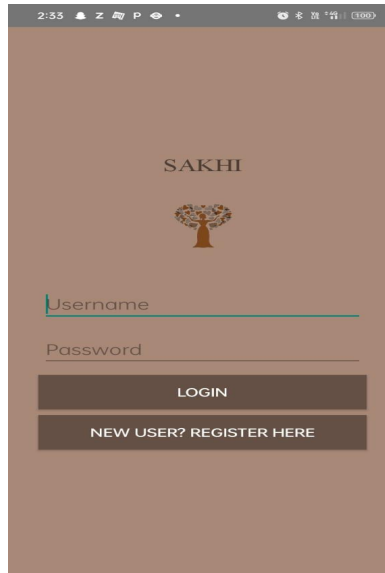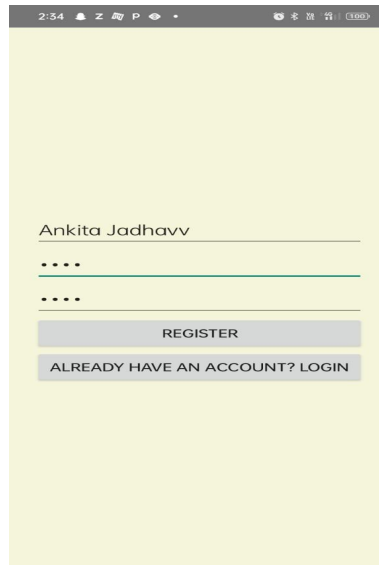Fig 1.3 Flow chart which includes settings page
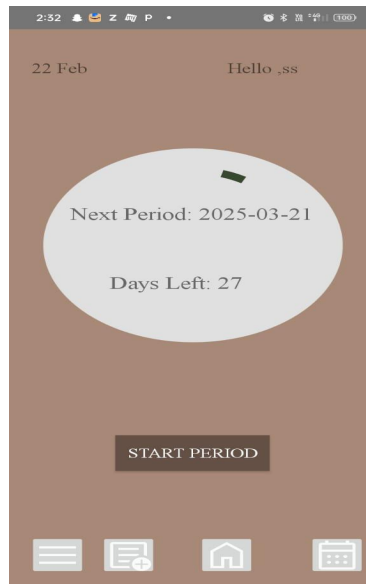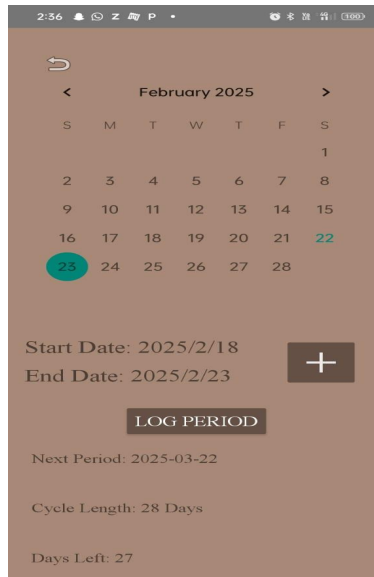
211

4. Overview:

A. SAKHI logo

B. Login page

C. User Registration Page
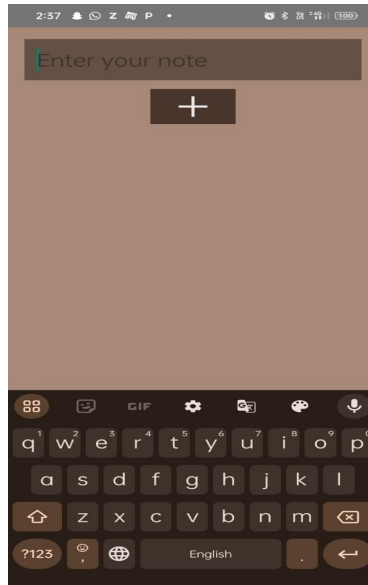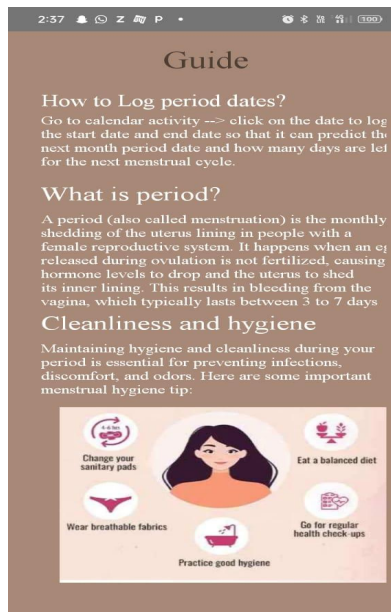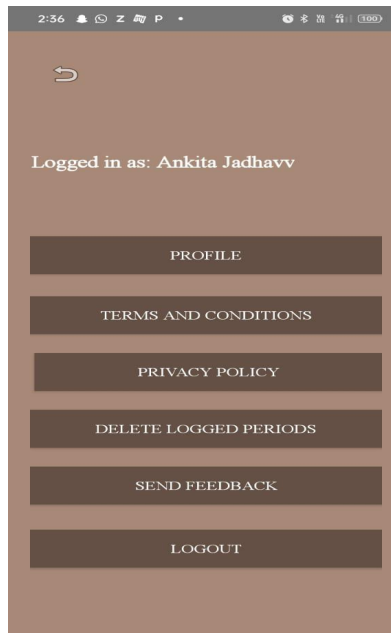

D. Home Page

E. Calendar Page

F. Notes Page

G. Guide Page

H. Settings Page

5. Testing and validation of software

A. User Acceptance Testing (UAT): The implemented functionalities underwent Extensive testing to ensure compliance with User requirements and expectations. Feedback from users was collected and Incorporated into iterative improvements.

B. Performance Testing: Performance testing Was conducted to assess the platform's Scalability, responsiveness, and reliability Under varying load conditions. Benchmarks Were established to measure and optimize Key performance indicators.

C. Security Testing: Security testing Measures, such as trying to access the Features which should not be accessed if a User is not logged in.

D. Integration Testing: Integration testing Was performed to validate the seamless Interaction between hardware and software Components, ensuring interoperability and Functionality across the entire system.

V. DISCUSSION

The achieved results closely aligned with the overarching goals of the SAKHI project. Centered around promoting biological process of women called as menstruation.

Strengths and weakness

Strengths:

1. Easy to log periods dates
2. Easy to track
3. Notes management
4. Guidance for begginers

Weakness:

1. The user first has to log previous month date to predict next moth date.
2. The user has to have a device with them to use this application.
3. Platform dependent(Works only on android)

VI. FUTURE SCOPE

The scope of our project Sakhi Period Tracking App refers to the expansion in terms of functionality, features and services that our application will provide to the users. We have some future expansion points for our Sakhi project. The below mentioned points will greatly contribute towards growth and success for our project. The points are:

- Integration with Wearable Devices: We can integrate our app with wearable devices, such as fitness trackers and smart-watches, to track physical activity and other health metrics.
- Personalized Recommendations: We can provide personalized recommendations for users based on their menstrual cycle, including suggestions for exercise, diet, and stress management. Community Building: We can create a community feature that allows users to connect with each other, share their experiences, and provide support.
- Educational Content: We can provide educational content, such as videos, blog posts, and infographics, to educate users about menstrual health and hygiene.
- Partnerships with Healthcare Providers: We can partner with healthcare providers to offer users access to medical professionals and resources.

VII. CONCLUSION

In conclusion, the Sakhi period tracking app serves as a vital tool for individuals seeking to manage their menstrual health with ease and confidence. By providing a user-friendly interface, personalized tracking features, and educational resources, Sakhi empowers users to gain a deeper understanding of their menstrual cycles and overall reproductive health.

The app not only promotes awareness and self-care but also fosters a sense of community and support among users. As we continue to prioritize women's health and well-being, Sakhi stands out as an essential companion in navigating the complexities of menstrual health, ultimately contributing to informed choices and improved quality of life. With ongoing updates and user feedback, Sakhi is committed to evolving and enhancing its features to meet the diverse needs of its users, ensuring that every individual feels supported and informed throughout their menstrual journey.

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