"Anamay – Free From Disease"

Prof. Shubham Gaikwad
D Y Patil School of Engineering & Technology, Ambi
Pune, India
shubham.gaikwad@dypatiluniversitypune.edu.in

Shlok Mahajan
Department of B. Tech in Computer Engineering
D Y Patil School of Engineering & Technology, Ambi
Pune, India
shlokmahajan0124@gmail.com

Roshan Hinge
Department of B. Tech in Computer Engineering
D Y Patil School of Engineering & Technology, Ambi
Pune, India
roshhan1121@gmail.com

Ishika Pahire
Department of B. Tech in Computer Engineering
D Y Patil School of Engineering & Technology, Ambi
Pune, India
ishikapahire2@gmail.com

Dhiraj Gaikwad
Department of B. Tech in Computer Engineering
D Y Patil School of Engineering & Technology, Ambi
Pune, India
dhirajgaikwad226@gmail.com

This project focuses on the development of a mobile application designed to empower consumers in making informed, safer choices regarding the cosmetics they use. The core functionality of the app is to allow users to scan the barcode or manually input the ingredients of cosmetic products, which are then analyzed and cross-referenced against a comprehensive database of known allergens, irritants, and harmful substances. The system utilizes an advanced algorithm to assess the compatibility of the product with the user's specific skin type, medical history, and any known allergies, providing personalized recommendations to ensure optimal safety and effectiveness. The application is structured around two main modules: a User Details Module and a Summarization Module. The User Details Module is designed to collect and store important information about the user, such as skin type, known allergies, and relevant medical conditions, all in a secure and privacy-conscious manner. This data forms the basis for the app's personalized safety evaluations. The Summarization Module then evaluates the product's ingredient list in relation to the user's profile, highlighting any potential risks or adverse reactions. If a product contains ingredients that could pose a threat based on the user's personal data, the app generates a list of safer alternative products that are better suited to the individual's needs. This solution aims to address the growing consumer demand for transparency in cosmetic product ingredients and to reduce the risk of skin reactions or other health issues caused by unsuitable products. By providing real-time safety assessments and actionable alternatives, the app not only enhances the user's ability to make informed decisions but also promotes greater confidence in daily skincare routines. Ultimately, this project seeks to improve overall consumer safety and well-being in the rapidly growing beauty and personal care industry.

Keywords:

1. Cosmetic product scanner 2. Skin type 3. Allergies 4. Medical history 5. Personalized recommendations 6. Ingredient analysis 7. Allergens 8. Harmful substances 9. User profile 10. Product safety evaluation 11. Database of allergens 12. Personalized skincare 13. Barcode scanning 14. Product safety 15. Skincare routine 16. Alternative products 17. Mobile application 18. Consumer safety 19. Real-time analysis 20. Transparency in cosmetics

INTRODUCTION

In today's world, where skincare and cosmetic products are more popular than ever, understanding the safety and compatibility of these products with individual skin types and medical conditions is crucial. Many people are unaware of potentially harmful ingredients that may trigger allergies or adversely affect their skin. This is where our Cosmetic Product Scanner application comes in.

Our app is designed to empower users to make informed choices about their cosmetics by providing personalized insights based on their unique skin type, allergies, and medical history. Users can easily scan a product's barcode or manually input ingredients to check the product's safety. The app then cross-references the ingredient list with a comprehensive database, identifying any potential allergens or harmful substances. By delivering tailored information, our Cosmetic Product Scanner helps users confidently select products that suit their needs while avoiding ingredients that could be harmful, paving the way for safer, healthier beauty choices.

This introduction highlights the app's purpose, user benefits, and functionality, setting the stage for a deeper dive into its features and impact on user well-being.

I. EASE OF USE

The Cosmetic Product Scanner application is designed with user-friendliness at its core, making it easy and intuitive for users to make safe cosmetic choices. Here are some key features that enhance the app's accessibility and ease of use:

Seamless Scanning: Users can simply scan the product's barcode to instantly retrieve information about its ingredients, saving time and effort. The scanning interface is designed to be quick and accurate, making it accessible even for those new to the app.

Personalized Profiles: Users can create a profile detailing their skin type, allergies, and medical history. This information is securely stored and used to personalize ingredient assessments, ensuring users see only the most relevant information for their unique needs.

Clear Warnings and Visual Indicators: For each ingredient, the app provides clear, color-coded indicators showing safety levels (safe, caution, avoid). Visual cues make it easy to understand a product's compatibility at a glance, reducing any guesswork.

Comprehensive Ingredient Database: Users can manually input ingredients if scanning isn't possible. The app's vast database ensures that even niche ingredients are covered, helping users make informed choices with any product.

Educational Insights: The app includes brief, easy-to-understand descriptions for ingredients, helping users understand why certain ingredients may or may not be compatible with their skin type or health profile. This foster learning and informed decision-making.

Data Privacy: All user data, including medical history and preferences, is stored securely with high standards of data privacy, giving users peace of mind while using the app.

With these user-friendly features, the Cosmetic Product Scanner app makes it simple for users to confidently select safe and compatible cosmetics, enhancing both convenience and safety in their personal care routines.

A. Figures

Sr.no	Anamay *Free From Disease, free from Illness*
Fig.1	Anamay Concept Map
Fig.2	Anamay App Schematic

Figure 1. Anamay Concept Map

Figure 1: Displays Concept Map of the project ANAMAY
User Details: General Information: Name, Age, Gender, DOB, Height, Weigh

Preferences: Appetite, Diet Preference

Medical History: Allergies, Medical Conditions

2. Database:

Stores user details, medical history, ingredients data, and health impact data.

3. Summarization Data:

Lists ingredients used, their amounts, safety information, and code words.

4. Computation:

Compiles scanned data, summarizes it, and displays it in a user-friendly format.

5. Scanner:

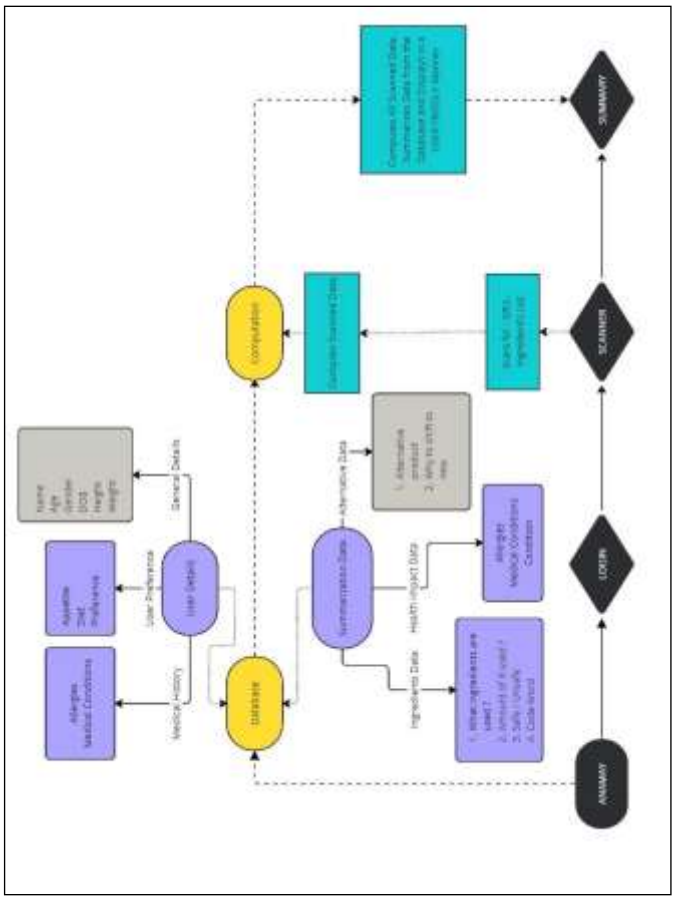

Figure 1 - Anamay Concept Map

Scans QR codes and ingredient lists.

6. Summary:

Provides personalized recommendations based on user's medical conditions and dietary preferences.

Workflow:

User logs in, scans QR codes or ingredient lists, and receives a personalized summary with recommendations.

FIGURE 2. ANAMAY APP SCHEMATIC

The Figure 2 is a flowchart describing the process of using app "ANAMAY." The flowchart outlines the steps a user takes from starting the app to the end of the process. Here is a detailed description of the flowchart:

1. Start: The process begins with the user opening the app "ANAMAY."
2. User scans QR: The user scans a QR code using the app.
3. Retrieve info: The app retrieves information based on the scanned QR code.
4. Display summary: The app displays a summary of the retrieved information.
5. Check allergies: The app checks for any allergies the user might have.
6. Allergic? A decision point where the app determines if the user is allergic to any of the retrieved information.
    - Yes: If the user is allergic, the app alerts the user.
    - No: If the user is not allergic, the app shows more details.
7. Review options: If the user is alerted about an allergy, they can review their options.
8. Continue: If the user is not allergic, they can continue with the details shown.
9. End: The process ends.

This flowchart provides a clear and structured overview of how the app "ANAMAY" functions, particularly focusing on user interaction and allergy checks

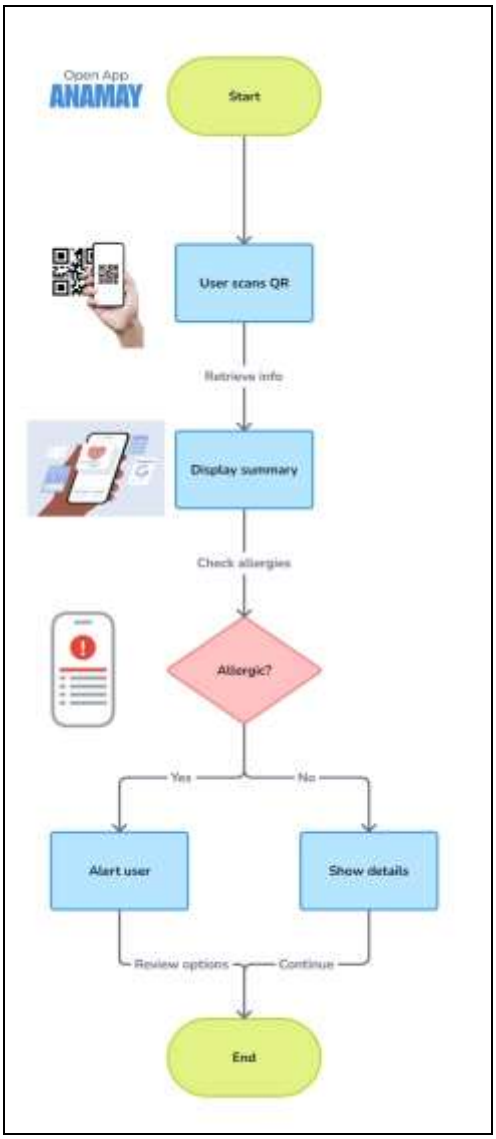

Figure 2 - Anamay App Schematic

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