A

Mini Project Report

on

SkinXpert: Decode Your Skin, Unlock Your glow

Submitted in partial fulfillment of the requirements for the degree.

Second Year Engineering – Computer Science Engineering (Data Science)

by

Azra A	ttar	23107037

Sharvari Kadam 23107026

Vaishnavi Jadhav 23107051

Sanjana Naik 23107035

Under the guidance of

Ms. Richa Singh



DEPARTMENT OF COMPUTER SCIENCE ENGINEERING (DATA SCIENCE)

A.P. SHAH INSTITUTE OF TECHNOLOGY G.B. Road, Kasarvadavali, Thane (W)-400615 UNIVERSITY OF MUMBAI

Academic year: 2024-25

CERTIFICATE

This to certify that the Mini Project report on SkinXpert: Decode your skin, Unlock your glow has been submitted by Azra Attar(23107037), Sharvari Kadam(23107026), Vaishnavi Jadhav(23107051) and Sanjana Naik(23107035) who are bonafide students of A. P. Shah Institute of Technology, Thane as a partial fulfillment of the requirement for the degree in **Computer Science** Engineering (Data Science), during the academic year 2024-2025 in the satisfactory manner as per the curriculum laid down by University of Mumbai.

Ms. Richa Singh Guide

Ms. Anagha Aher **HOD, CSE(Data Science)** Dr. Uttam D. Kolekar **Principal**

External Examiner:

Internal Examiner:

1.

1.

Place: A. P. Shah Institute of Technology, Thane

Date:

Singh . Expressing gratitude towards our HoD, Ms. Anagha Aher , and the Department of Computer Science Engineering (Data Science) for providing us with the opportunity as well as the support required to pursue this project. We would also like to thank our project coordinator Ms. Aavani N	
This project would not have come to fruition without the invaluable help of our guide Ms. Richa Singh. Expressing gratitude towards our HoD, Ms. Anagha Aher, and the Department of Computer Science Engineering (Data Science) for providing us with the opportunity as well as the support required to pursue this project. We would also like to thank our project coordinator Ms. Aavani N who gave us her valuable suggestions and ideas when we were in need of them. We would also like	ACKNOWLEDGEMENT
Singh . Expressing gratitude towards our HoD, Ms. Anagha Aher , and the Department of Computer Science Engineering (Data Science) for providing us with the opportunity as well as the support required to pursue this project. We would also like to thank our project coordinator Ms. Aavani N who gave us her valuable suggestions and ideas when we were in need of them. We would also like	ACINIOWEEDGENIENT
	This project would not have come to fruition without the invaluable help of our guide Ms. Richa Singh. Expressing gratitude towards our HoD, Ms. Anagha Aher, and the Department of Computer Science Engineering (Data Science) for providing us with the opportunity as well as the support required to pursue this project. We would also like to thank our project coordinator Ms. Aavani N who gave us her valuable suggestions and ideas when we were in need of them. We would also like to thank our peers for their helpful suggestions.

TABLE OF CONTENTS

1.	Introduction
	1.1. Purpose
	1.2. Problem Statement
	1.3. Objectives
	1.4. Scope
2.	Proposed System
	2.1. Features and Functionality
3.	Project Outcomes 6
4.	Software Requirements
5.	Project Design
6.	Project Scheduling. 10
7.	Results
8.	Conclusion
Re	ferences

Introduction

In the modern age, skincare has become an integral part of self-care, health, and lifestyle. With increasing awareness about personal grooming and skin health, people are more conscious of their skincare routines than ever before. The global skincare market is expanding rapidly, offering a multitude of products that cater to a variety of skin types, conditions, and cosmetic goals. These products range from cleansers and moisturizers to serums, sunscreens, and specialized treatments, each claiming to resolve specific skin concerns such as acne, dryness, oiliness, pigmentation, aging, sensitivity, and more.

Despite this abundance, choosing the right skincare products remains a daunting task for most individuals. The diversity in skin types oily, dry, combination, sensitive, and normal combined with lifestyle, environmental factors, and genetics, makes skincare highly personal. What works for one person may not work for another. Due to this complexity, many individuals resort to experimentation, often relying on marketing advertisements or unverified online advice to select products. This trial-and-error approach not only leads to financial waste but can also result in ineffective skincare routines or adverse skin reactions, including breakouts, irritation, or long-term skin damage.

The need for a reliable, personalized skincare recommendation system has therefore become more pressing. As technology continues to influence all aspects of daily life, it presents an opportunity to innovate within the skincare industry by combining health sciences with smart computing.

1.1 Purpose

The purpose of this project is to create a desktop-based application called **SkinXpert**, which is designed to help users understand their skin better and make informed decisions regarding their

skincare routines. The application focuses on personalized skincare by collecting relevant information from users through an interactive quiz. This data includes skin type, visible concerns, daily habits, and sensitivities. Based on these inputs, the system generates customized product recommendations that suit the user's specific skin needs.

SkinXpert aims to **simplify the skincare selection process**, enhance user confidence in product choices, and promote healthier skin practices. It bridges the gap between the user and accurate skincare knowledge without the need for consulting a dermatologist for basic skin guidance. By leveraging a structured quiz, a recommendation algorithm, and a curated product database, the application makes it easier for individuals to follow a skincare routine that is both safe and effective.

1.2 Problem Statement

The sheer volume of skincare products available today makes it extremely difficult for users especially beginners to identify what suits them best. Most consumers lack the dermatological knowledge required to assess which ingredients and product formulations will benefit their specific skin types and concerns. As a result, individuals either follow general advice found online or imitate others' routines, which might not be compatible with their skin.

Incorrect usage of products such as applying exfoliants on already sensitive skin or layering incompatible ingredients can lead to more harm than good. Moreover, the fear of wasting money on unsuitable products discourages many from trying new or potentially helpful solutions.

This project addresses the challenge of **skincare personalization** by offering a simple, guided solution. The application ensures that users receive product suggestions that align with their skin's needs, helping them to establish a routine that works and avoids common skincare mistakes.

1.3 Objectives:

The main objectives of the SkinXpert project are:

• To develop an interactive quiz-based interface using Python's Tkinter library, through which users can provide input about their skin type, issues, and preferences.

- To analyze user responses
- and generate a personalized skincare routine tailored to their specific skin needs, focusing on both daily care and targeted treatments. To display a curated list of skincare products matched to the user's profile, ensuring the inclusion of key ingredients that are scientifically known to address the user's identified skin problems.
- To implement basic e-commerce functionalities such as "Add to Cart" and "Delete Item" to simulate an online shopping experience, thus enhancing user interaction and convenience.

1.4 Scope

The scope of this project involves designing and implementing a desktop application that can act as a **virtual skincare advisor**. The project uses **Python** as the core programming language, with **Tkinter** for the graphical user interface and **MySQL** for managing and retrieving product data from a structured database.

The key features and functionalities include:

- A user-friendly interface that guides users through a step-by-step quiz to determine their skin type and primary concerns.
- A recommendation logic that maps quiz responses to appropriate product suggestions using a predefined set of rules.
- A well-organized product database, including details such as product names, categories, active ingredients, and usage instructions.
- A visual display of recommended products, categorized based on the type of skincare step (e.g., cleanser, toner, serum, moisturizer, sunscreen).
- Basic cart functionalities to add or remove products, simulating real-time e-commerce behavior.

The project is designed with **expandability in mind**, allowing for future enhancements such as:

• Integration with e-commerce platforms like Amazon or Nykaa for real-time purchasing.

- **AI/ML-based recommendation models** that learn from user feedback and improve recommendations over time.
- A built-in **chatbot** to answer user queries related to skincare.
- Support for **multiple user profiles**, enabling recurring users to track their skincare routines and updates.

This project, while currently operating at a fundamental level, lays the foundation for a more intelligent and accessible skincare solution that can benefit a broad audience.

Proposed System

The proposed system, titled SkinXpert, is a desktop-based skincare application designed to provide users with personalized skincare product recommendations based on their individual skin type and concerns. The system leverages a quiz-based analysis to evaluate the user's skin profile and offers curated product suggestions and basic skincare routines tailored to the user's unique needs.

The primary objective of this system is to reduce the guesswork involved in skincare selection and offer a user-friendly, informative experience that supports better skincare management. By integrating a structured database of skincare products, the system ensures accurate mapping between user responses and product features, making the experience both personalized and reliable.

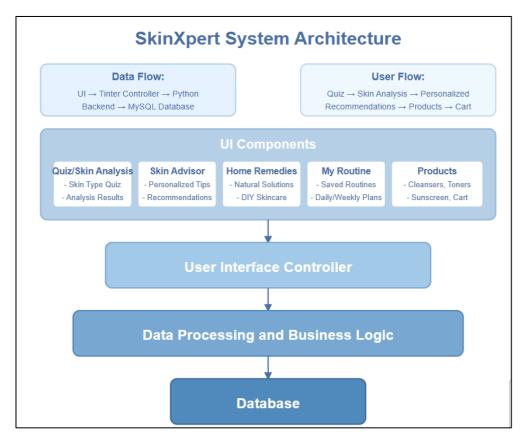


Figure 2.1: Block Diagram of SkinXpert

Figure 2.1: The various blocks shown in this diagram are:

Block 1: Data Flow

Explains how data travels within the system. UI \rightarrow Tkinter Controller \rightarrow Python Backend \rightarrow MySQL Database. This shows the communication path from the front end (UI) to the backend and finally to the database.

Block 2: User Flow:

Summarizes the user journey through the application. Quiz → Skin Analysis → Personalized Recommendations→Products→Cart. This highlights the app's logic from gathering skin data to recommending products and ending with cart management.

Block 3: UI Components Block (Middle Layer)

Represents the major user interface elements available to users.

- 1. Quiz/Skin Analysis: Includes the skin type quiz and displays analysis results.
- 2. Skin Advisor: Provides personalized skincare tips and product recommendations.
- 3. Home Remedies: Offers natural, DIY skincare solutions.
- 4. My Routine: Displays saved daily or weekly skincare routines.
- 5. Products: Allows users to browse items like cleansers, toners, and sunscreens, and add them to the cart

Block 4: User Interface Controller Block

Description: Acts as the intermediary between the UI and backend logic. It captures user inputs from the UI components and directs them appropriately to the processing layer.

Block 5: Data Processing and Business Logic Block

This layer handles the logic behind data operations, such as:

- 1. Analyzing quiz responses
- 2. Generating recommendations
- 3. Preparing data for display or storage
- 4. Managing business rules for routines and purchases.

Block 6: Database Block

A MySQL database that stores:

1. User profiles and quiz responses

- 2.Skin analysis results
- 3. Product information
- 4. Cart contents and saved routines.

2.1 Features and Functionalities

1. Interactive Quiz

The application begins with a user-friendly quiz interface consisting of five simple questions. These questions are designed to capture essential information about the user's skin type, visible concerns (e.g., acne, dryness, sensitivity). The quiz is the foundation of the personalization process, as the answers form the basis for all subsequent suggestions.

2. Quiz Results

Upon completion of the quiz, users are presented with a **detailed analysis** of their skin profile. This includes identification of the **skin type** (such as oily, dry, combination, or sensitive), potential **skin issues**, and an estimation of **acne-prone tendencies**. The system provides clear and easy-to-understand language so users can interpret their results confidently.

3. Key Ingredients

Once the skin concerns are identified, the application displays a curated list of **key skincare ingredients** that are effective for the user's specific skin type and issues. For each ingredient, a short explanation is provided detailing **how it benefits the skin**, why it is suitable for the user, and what results can be expected. This educational approach helps users understand **why** certain ingredients are being recommended.

4. View products

Based on the selected ingredients, the system displays a **list of skincare products** that contain those ingredients. The product list includes essential information such as the **product name**, **type**, **usage**, and **benefits**. This feature allows users to explore a variety of options that are scientifically matched to their needs, improving their chances of choosing effective products.

5. Skin Care Routine

To further support the user, the application offers a **basic and easy-to-follow skincare routine** that corresponds to the user's skin type. This routine is structured step-by-step — from cleansing to moisturizing — and includes **practical tips** to follow during each step. This personalized routine serves as a daily guide and helps users stay consistent, track their progress, and work toward long-term skin health goals.

6. Skin Advisor

SkinXpert features a built-in **chatbot**, referred to as the **Skin Advisor**, which can answer **frequently asked questions** related to skincare. The chatbot is trained to respond to common queries such as "How to deal with acne?", "Can I use two serums together?", or "What is the correct order of applying skincare products?" This feature enhances user engagement and offers a virtual consultation experience.

7. Filter and search

To improve product navigation, the system provides **filter and search functionalities**. Users can apply filters to narrow down product results based on **price range**, making it easier to find items that fit within their budget. Additionally, a **search bar** allows users to look up specific products by name, enabling quick access to known or preferred items.

8. Add to Cart

The system includes an "Add to Cart" feature that allows users to select and store their desired products in a virtual cart. This functionality mimics a real shopping experience by enabling users to review their selected items before confirming their choice. The cart also includes an option to delete items, giving users flexibility to modify their selections before checking out.

9. Home Remedies Page

The application also includes a **Home Remedies** section for users who prefer natural skincare alternatives. This page offers a **predefined list of DIY skincare recipes** made from commonly available ingredients. Additionally, users have the option to **mark their favorite remedies** for easy future access and even **create and add their own personalized remedies** to the list. This feature encourages natural skincare practices and offers a flexible, customizable experience.

Project Outcome

This chapter presents the outcomes of the skincare application, evaluating its effectiveness in achieving the objectives outlined in the proposed system. The results are based on functionality, user feedback, and the system's ability to provide personalized skincare recommendations. The system was tested for accuracy, usability, and user satisfaction, ensuring a seamless experience for individuals seeking tailored skincare solutions.

1. User Quiz & Skin Analysis:

- Users are guided through a **detailed**, **skin type and concern-based quiz**, designed to assess various aspects of their skin condition and lifestyle habits.
- The system accurately determines the user's **skin type**, such as oily, dry, combination, or sensitive.
- Based on quiz responses, it categorizes specific skin concerns, such as acne, pigmentation, dryness, sensitivity, or aging.
- The quiz outcome helps establish a clear skin profile, which forms the foundation for all further suggestions within the app.

2. Product System

The application suggests **curated skincare products** that match the user's skin type, concerns, and additional preferences (such as fragrance-free, cruelty-free, or budget- friendly options). Each product listing includes:

• Key ingredients

- Skin benefits
- Proper usage instructions

The intelligent mapping of quiz results to product data ensures that suggestions are both **personalized** and **scientifically aligned** with user needs.

3. Home Remedies Section:

A dedicated **Home Remedies** page provides users with **natural skincare solutions**, curated based on their skin type and concerns.

Remedies are sourced from both **dermatological research** and **traditional skincare practices**, ensuring a holistic approach.

Users can:

- Browse from a **predefined list of remedies**
- Save favourite recipes for future use
- Add their own custom remedies to personalize their experience

Ingredients suggested are **easily accessible and safe**, allowing users to try effective DIY treatments at home.

The application also offers a **comparison between natural and commercial solutions**, helping users make **informed choices** tailored to their comfort and preferences.

4. Interactive UI/UX:

The application features an intuitive design with an aesthetically pleasing interface and easy navigation. A step-by-step onboarding guide helps users understand the app's features efficiently. Interactive elements such as animations, progress tracking, and visual representations enhance user engagement.

5. Skin Advisor:

The application includes a **Skin Advisor**, a built-in chatbot trained to answer **frequently asked skincare questions**. Overall, the SkinXpert application effectively combines technology, skincare science, and user-centered design to provide a comprehensive, personalized, and educational platform for users looking to improve their skincare routine.

Software Requirements

This chapter outlines the software technologies utilized in the development of the **SkinXpert** application. The selection of tools was based on factors such as ease of use, reliability, functionality, and compatibility with the project's objectives. The system is built using a combination of front-end and back-end technologies that ensure a smooth, interactive user experience and efficient data management.

4.1 Front-End Technology Tkinter Library (Python)

Tkinter is Python's standard **Graphical User Interface** (**GUI**) library and serves as the core front-end technology for the SkinXpert application. It provides a platform to develop visually interactive components such as windows, buttons, labels, text entry boxes, frames, and images. The following are key benefits of using Tkinter:

- User-Friendly Interface Design: Tkinter allows developers to build intuitive and aesthetically pleasing interfaces that enhance the overall user experience.
- **Rich Widget Support**: It offers a comprehensive set of widgets which are used to implement quiz forms, result displays, navigation buttons, product listings, and chatbot interfaces.
- **Rapid Development**: Due to its simplicity and minimal learning curve, Tkinter enables quick prototyping and development of GUI applications.
- Cross-Platform Compatibility: Applications developed using Tkinter can be executed on major operating systems such as Windows, macOS, and Linux without requiring significant code modifications.
- **Lightweight Framework**: Tkinter is natively included in Python distributions, reducing dependency issues and making it highly accessible for student and beginner-level development projects.

Tkinter was chosen for this project due to its balance between simplicity and functionality, making it ideal for creating the skin analysis quiz, displaying skincare routines, product recommendations, and managing navigation between application modules.

4.2.Back-End Technology

MySQL Shell (Database Management)

The application uses MySQL Shell as its back-end database interface to manage and store data related to users, skincare products, quiz results, and home remedies. MySQL is a widely used relational database management system (RDBMS) that offers high performance and reliability.

Key reasons for selecting MySQL Shell include:

- Multiple Language Support: It supports SQL, JavaScript, and Python execution modes, giving developers flexibility to interact with the database in a variety of ways.
- Efficient Data Handling: All application data, including user inputs, product details, quiz outputs, and saved remedies, is stored and retrieved using structured SQL queries.
- Scripting and Automation: Developers can automate routine database tasks, such as backup, data insertion, and updating records using custom scripts.
- Support for JSON and Relational Data: MySQL Shell enhances standard SQL functionalities by supporting JSON document storage, making it suitable for flexible and modern data structures.
- **Developer-Friendly Environment**: With an intuitive command-line interface and detailed output formatting, MySQL Shell simplifies the development and debugging process.

Project Design

This chapter illustrates the design and functional flow of the SkinXpert application. The project design focuses on creating an intuitive user journey by aligning core features in a logical sequence. The system ensures a seamless experience from the moment a user accesses the platform to the point of receiving customized skincare recommendations and guidance.

The design process emphasizes **usability**, **modularity**, **and clarity**, ensuring that users can navigate the application with ease, regardless of their technical background. This chapter presents both the flow of interaction and the modular structure of key functionalities.

5.1 User Flow Description

The following steps outline the primary user interaction with the application, demonstrating how users navigate through different modules:

1. User Authentication

The user begins by signing up with basic credentials (e.g., name, password). If the user already has an account, they can simply log in to access the dashboard.

2. Homepage Access

After logging in, users are directed to the homepage. From here, they can view introductory information, available features, and select their desired activity.

3. Quiz Module

Users can initiate the skincare assessment quiz directly from the homepage. The quiz includes a set of well-crafted questions related to skin type, lifestyle etc. Upon completion, the system analyzes the input and generates a personalized skin profile.

4. Product Recommendations

Based on the skin profile, a tailored list of skincare products is displayed. Each product includes detailed information, such as key ingredients, usage instructions, and pricing. Users can add

selected products to their cart for future consideration or checkout.

5. Additional Functionalities

Users have access to a variety of support features, including:

• Home Remedies Section:

View and save from a list of natural remedies; users can also contribute their own.

• Skincare Routine Module:

Receive a step-by-step basic skincare regimen tailored to their skin needs.

• Skin Advisor Chatbot:

Ask questions and receive instant responses related to skincare practices, product usage, and tips.

5.2 Visual Representation

The flow of the application is represented in the following diagram:

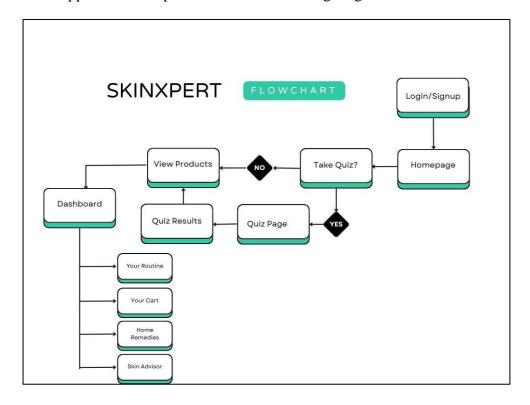


Figure 5.1: Flowchart of System

The Figure 5.1 is flowchart representing the user journey within the SkinXpert application. It begins at the login/signup screen, leading to the homepage. Users are prompted to take a skin-related quiz. Based on their choice, they either proceed to the quiz page and receive personalized results, or directly view product recommendations. From the dashboard, users can access features like "Your Routine," "Your Cart," "Home Remedies," and consult the "Skin Advisor." The flow ensures a customized skincare experience based on user input. The flowchart ensures a smooth, logical navigation path that prioritizes personalization and user convenience, aiming to enhance the overall skincare experience through an intuitive UI.

Project Scheduling

Project scheduling is a vital aspect of managing any software development lifecycle, as it ensures that all tasks are completed in an organized, timely, and efficient manner. For the **SkinXpert** application, a well-structured timeline was created to guide the development process from start to finish.

The scheduling approach involved breaking the project down into distinct phases such as planning, design, development, testing, and deployment. Each phase was carefully outlined with specific deliverables and deadlines. Tasks within these phases were then assigned to team members based on their areas of expertise, ensuring balanced workload distribution and clarity of responsibilities.

Estimated timeframes were allocated to each task after evaluating their complexity and the resources available. This helped in setting realistic expectations and avoiding unnecessary delays. Regular progress tracking was also conducted through periodic reviews and updates, allowing the team to stay aligned with the timeline and make adjustments whenever necessary.

By following a structured scheduling process, the SkinXpert development team was able to streamline workflows, monitor progress effectively, and meet project goals within the expected timeframe.

6.1 Gantt Chart Overview

A **Gantt Chart** is a powerful project management tool that visually maps out the project's schedule. Each task is displayed as a horizontal bar, where the length of the bar represents the duration of the task. This helps in tracking progress and ensuring deadlines are met.

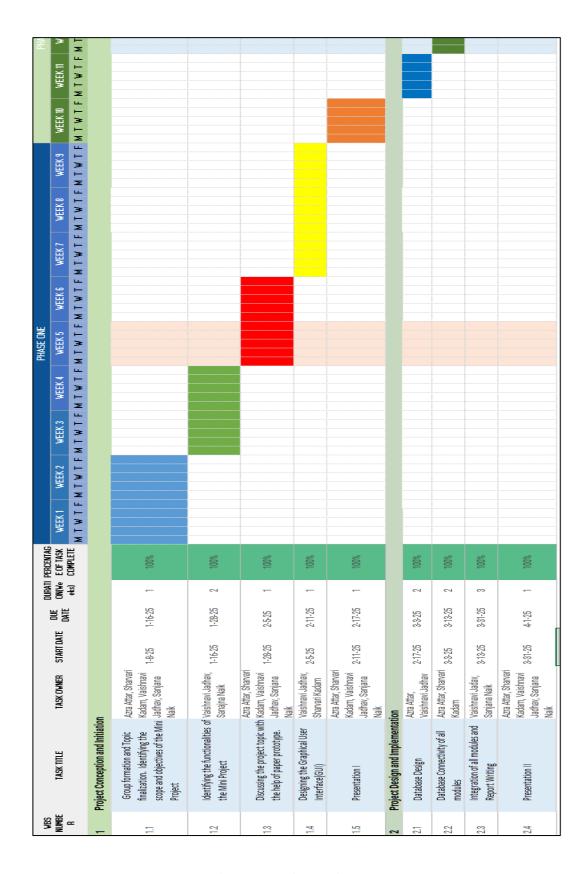


Figure 6.1: Gantt Chart

Figure 6.1: This figure demonstrates the work distribution throughout the duration of the entire project

6.1 Weekly Breakdown of Activities Week 1: Initiation Phase

- Formation of the project group.
- Finalization of the mini project topic: **SkinXpert**.
- Defining the overall scope and objectives of the project.
- Allocation of responsibilities among team members.

Weeks 2 and 3: Functional Planning

- Identification and listing of all core and additional functionalities.
- Breakdown of the system into modules for better task distribution.
- Initial brainstorming on features such as interactive quiz, product system, chatbot, and remedies section.

Week 4: Design Phase

- Creation of a **paper prototype** to visualize application flow and user interface elements.
- Group discussions on the prototype to refine features and improve usability.

Week 5: User Interface Development

- Designing the **Graphical User Interface** (**GUI**) using the Tkinter library.
- Implementing screens for user login, quiz, product recommendations, and remedies.

Week 6: Back-End Integration and Finalization

- **Database Design** using MySQL: Structuring product data, user preferences, and quiz results.
- Establishing database connectivity between the front-end (Tkinter) and back-end (MySQL).
 Integration of all modules into a single working system.
- Writing of the **final project report** and preparation for submission.

This structured scheduling approach ensured that the team remained organized and completed the project efficiently, meeting all milestones on time. Each phase was executed with clear goals and timely collaboration, minimizing delays and confusion. Regular discussions and task reviews helped the team stay aligned with the project vision, ensuring a smooth workflow from development to deployment.

Result

This chapter presents the outcomes and deliverables of the SkinXpert application, highlighting the successful implementation of features and functionalities defined in the earlier stages of the project. The system was evaluated based on its ability to fulfill the project objectives, provide a seamless user experience, and deliver accurate, personalized skincare suggestions.

7.1 Functionality Achieved

The primary goal of the SkinXpert application was to offer a customized skincare solution based on individual skin types and concerns. This objective has been successfully achieved. The application incorporates all planned features, such as:

- An interactive quiz system for skin analysis.
- A product recommendation engine.
- A home remedies section for natural skincare tips.
- A user-friendly graphical interface.
- Cart functionality for product selection.
- A skin advisor chatbot for answering common skincare queries.

These components work cohesively to provide users with a personalized and informative skincare experience.

7.2 Quiz System

The core of the application is its **interactive quiz module**, which:

 Asks users a series of simple, yet insightful questions to determine their skin type (e.g., oily, dry, combination, or sensitive).

- Identifies common skin issues like acne, pigmentation, redness, dry patches, or oiliness.
- Calculates the user's acne-prone level and evaluates factors that influence skin health.
- Generates a personalized result screen summarizing the user's skin profile, which becomes the basis for product and routine recommendations.

7.3 User Interface (UI)

The application features a clean and aesthetically pleasing **Graphical User Interface** (**GUI**) developed using Tkinter. The UI is designed with the following qualities:

- **Minimalistic Layout:** Clear menus and navigation tools make it easy for users to interact with different modules.
- **Engaging Design:** Visual elements like product images, quiz illustrations, and step- by-step guides enhance the overall user experience.
- Ease of Access: Buttons, search filters, and tabs are intuitively placed for fast access to desired features such as quiz, home remedies, product recommendations, and skin advisor.

7.4 Database Management

The application integrates with a **MySQL database** that efficiently handles:

- Storage of user quiz responses and analysis results.
- Management of **skincare product data**, including names, key ingredients, product types, and pricing.
- Recording and retrieval of **home remedies**, both predefined and user-added.
- Support for cart functionality by storing items selected by the user for review or checkout.

The robust backend ensures data persistence, security, and smooth interaction between the user interface and stored data. With all these systems implemented and functional, the SkinXpert project has met its expected goals and serves as a practical tool for users seeking clarity in skincare decisions.

7.5 Implementation Snapshots

The following images demonstrate key modules and interfaces of the SkinXpert application. These implementation screenshots validate the successful execution of the project's planned features.

1. Login page:



Figure 7.1: Login Page: Demonstrates what the user will see when they first open the app.

This is the entry point of the SkinXpert application. Users are prompted to enter their registered username and password to access their personalized skincare dashboard. The page also includes a "Sign Up" button for new users who do not have an account. The elegant green-themed background with skincare elements reflects the app's focus on beauty and wellness.

2. Home Page:



Figure 7.2: Home Page: Demonstrates what users will see after logging in

The figure 7.2 home page welcomes users with a warm and vibrant design, encouraging them to begin their skincare journey. It introduces the main features of the app—offering a quick quiz to determine skin type and concerns. Based on the quiz results, users receive a personalized skincare routine and product suggestions. The goal is to help users achieve healthy, glowing skin with ease. Navigation buttons like "Take the Quiz" and "Go to Home" ensure a smooth user experience.

3. Quiz Interface:



Figure 7.3: Quiz Interface: Interactive quiz

This figure 7.3 presents a multiple-choice question to help users determine their skin type based on how their skin feels after washing.

4. Quiz Results:



Figure 7.4: Result Message box: Result of quiz

The figure 7.4 Displays the user's personalized skin profile after completing the quiz, including skin type, acne-prone level, sensitivity, and main skin concern.



Figure 7.5: Result Page: Detailed list of ingredients useful to users

5. Products list:

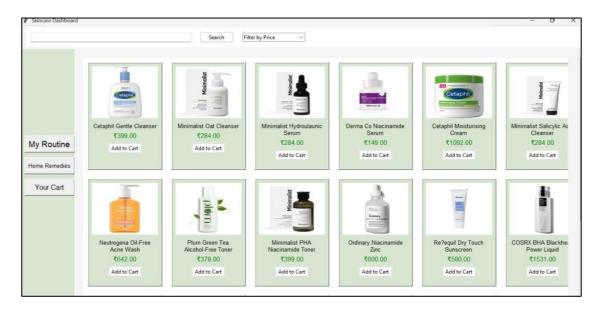


Figure 7.6: Product List: Products containing those ingredients

This figure 7.6 showcases a curated list of skincare products tailored to the user's skin profile. Each product is recommended based on the quiz results.

6. Dashboard:



Figure 7.7: Dashboard: Interface to navigate various sections

The figure 7.7 serves as the central hub of the SkinXpert app, allowing users to navigate through key sections like personalized routines, skincare quizzes, home remedies, and more. Its intuitive layouts and engaging visuals enhance the user experience while promoting consistent skincare habits.

7. Home Remedies:

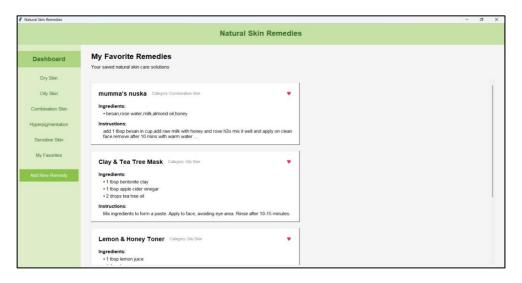


Figure 7.8: Home Remedies: Various recipes for home remedies

8.My Routine:

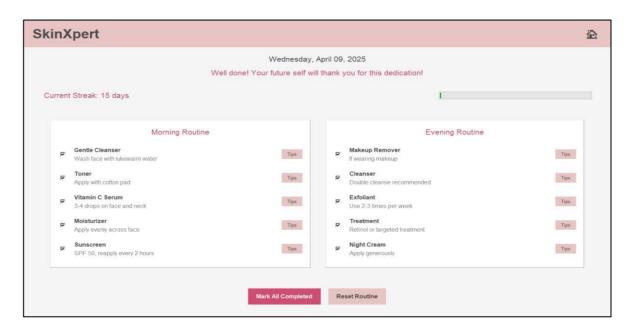


Figure 7.9: My Routine: daily skincare routine

9.Skin Advisor:

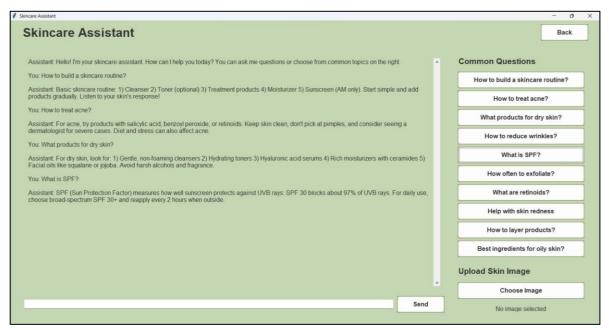


Figure 7.10: Skin Advisor: FAQs

10. Add to Cart:



Figure 7.11: Add to cart page: Demonstrates what user will see when the click the add to cart button

11. Filter by price:

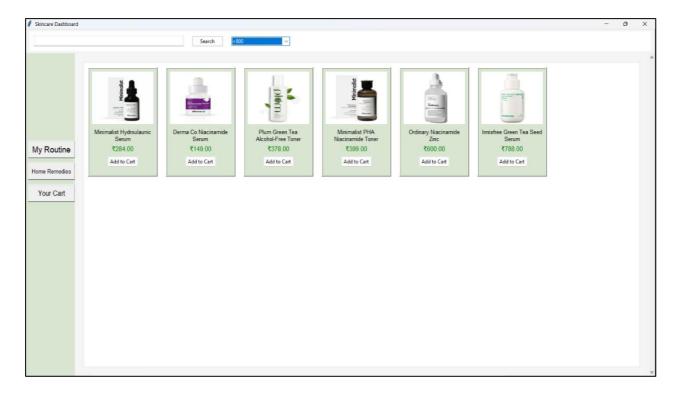


Figure 7.12: Filtering: Shows what will happen when user sets the filter to products under 800

The figure 7.12 allows users to refine product recommendations based on their budget. By setting a maximum price, users can view and choose skincare products that fall within their preferred price range, ensuring affordability without compromising on quality.

Conclusion

The **SkinXpert** skincare application successfully meets its objective of offering a personalized and user-centric solution for skincare management. By incorporating an interactive quiz-based system, the app enables users to gain insight into their skin type and concerns, delivering customized product recommendations tailored to individual needs. The application's intuitive design, coupled with a structured database, ensures a smooth and responsive user experience, promoting both accessibility and reliability.

Through features such as the Skin Advisor chatbot, home remedies module, and curated skincare routines, the system empowers users to make informed decisions, track their skincare progress, and explore holistic skin health approaches. The use of MySQL for data storage ensures that user information is securely managed, supporting long-term functionality and retrieval.

Looking ahead, the potential for future enhancements is significant. The integration of AI- driven analytics can further refine recommendation accuracy, while features such as ingredient-based product filtering and real-time dermatologist consultations can elevate the application's practical value. Strengthening data security and user privacy will remain paramount to maintaining user trust and system integrity.

With ongoing development and strategic improvements, SkinXpert has the potential to become a comprehensive digital skincare companion, bridging the gap between professional skincare guidance and user convenience.

References

- 1. **Timothy Falla**, "Skincare Bootcamp: The Evolving Role of Skincare" Google Scholar, March 2016, pp.882-886.
- 2. **Hyo Jeong Son.,** "Trends in the Efficacy and Safety of Ingredients in Acne Skin Treatments" ResearchGate, May 2018, pp.99-100.
- 3. **Joshi M., Korrapati N. H., Reji F., Hasan A., Kurudamannil R. A.,** "The Impact of Social Media on Skin Care" ResearchGate, September 2022, pp. 85-87.
- 4. **Felicia Himawan., Yonathan Handoyo.,** "Enhancing User Interface and Experience in Skin Type Classification and Skincare Product Recommendation System for Young Adults" IEEE, December 2024, pp. 85-87.