



Project Portfolio

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Task #1:

System Vision Document:

Introduction:

The cosmetics industry is currently undergoing a remarkable transformation, driven by technological advancements, changing consumer preferences, and evolving beauty standards. This transformation has led to unprecedented growth and innovation within the sector, making it a dynamic and exciting space for both businesses and consumers. As of 2024, the industry is poised for continued expansion and global impact, with projections indicating substantial growth in market size and consumer demand.

Advantages of the Industry:

- **Innovative Products:** The industry's transformation has spurred innovation, leading to the development of advanced skincare, makeup, and hair care products. These innovations often incorporate cutting-edge ingredients and technologies, offering consumers more effective and customized solutions for their beauty needs.
- **Personalization:** With the rise of technology, beauty companies can now offer personalized products and experiences. This includes personalized skincare regimens, makeup shades tailored to individual skin tones, and virtual try-on tools that allow consumers to preview products before purchasing.
- **Diverse Representation:** There is a growing emphasis on inclusivity and diversity within the beauty industry. Many brands are expanding their shade ranges to cater to a wider range of skin tones and featuring diverse models in their marketing campaigns, promoting a more inclusive definition of beauty.
- **E-commerce Growth:** The digital age has revolutionized how beauty products are bought and sold. Online platforms and e-commerce websites have made beauty products more accessible to consumers worldwide, enabling convenient shopping experiences and access to a broader range of brands and products.
- **Wellness Integration:** Beauty is no longer just about aesthetics; it's also about holistic wellness. Many beauty brands are incorporating wellness elements into their products, such as skincare infused with calming ingredients or makeup that promotes skin health alongside beauty.

Drawbacks of the Industry:

- **Information Overload:** The abundance of beauty products and information available can overwhelm consumers. With countless brands, product variations, and marketing messages, it can be challenging for consumers to navigate and make informed choices.
- **Misleading Marketing:** Some beauty marketing tactics may be misleading, exaggerating product claims or promoting unrealistic beauty standards. This can lead to consumer skepticism and disappointment when products do not meet their expectations.
- **Environmental Impact:** The beauty industry's reliance on packaging, particularly plastic packaging, contributes to environmental concerns such as waste generation and plastic pollution. Additionally, the production and disposal of certain beauty products may have environmental implications.

- **Beauty Pressure:** Despite strides in inclusivity, beauty standards remain a concern for many. Unrealistic portrayals of beauty in media and advertising can contribute to societal pressures and impact individuals' self-esteem and body image.
- **Ingredient Safety:** Some consumers are concerned about the safety of ingredients used in beauty products, particularly synthetic chemicals. This has led to a demand for clean and natural beauty products, although defining what constitutes "clean" or "natural" remains a debated topic.

Problem Description:

The beauty industry is growing vastly which makes it difficult for consumers to decide which products to choose. Many consumers also buy products based on their packaging with little to no information including what ingredients are in it or what kind of concerns it helps with resulting in wasted time and money on products that don't deliver as expected. Also, the cosmetics market is highly competitive, with well-established brands such as L'Oreal, Estee Lauder, Elf, and Dior. These companies have extensive product portfolios and global reach. While there are competitors and existing systems in the cosmetics app. Our app "Glow Guide" stands out with a unique blend of features and capabilities:

- **Product Description:** Offers detailed product information, including ingredient lists and potential allergens, giving users the items they really need.
- **Barcode Scanning:** Glow Guide provides a barcode scanning feature that allows users to access product details instantly by scanning the product's barcode. This feature eliminates the need for manual searches and provides real-time information.
- **Offline Mode:** Premium members can scan products even when offline, ensuring uninterrupted access to essential product information, a feature not available in most competitor's apps.
- **Product Rating & Recommendation:** We allow users to rate products based on their ingredients and suitability for various preferences. Users receive unique product recommendations based on their preferences and previous scans.
- **Customization:** Our app allows users to customize their experience based on their skin and hair preferences, offering filters for vegan, vegetarian, and more, ensuring they find products that align with their values.

Subsystem:

1. Profile Engine:

- a. **Create Customer Profile:** Users can click on this button to create a new profile or update their existing one.
- b. **Upload Profile Picture:** Users have the option to upload a picture of themselves, which they can select by clicking this button and personalize their profile
- c. **Edit Customer Profile:** By clicking on this button, customers can make changes to their profile information. It ensures that their profile remains up to date.
- d. **Upload Customer Profile:** This button allows users to view and confirm what their profile looks like once it's finalized. Also, a preview before saving the profile.

- e. **Change Account Password:** Users can change their account password by clicking on this button. Customers should be able to change their password if wanted or forgotten.
- f. **Delete Customer Profile:** If users decide not to use the app anymore, they can click on this button to delete their profile if they no longer wish to use the app.

2. **Scanning Module:**

- a. **Quick Scan:** Users can initiate a quick scan by clicking on this button. It captures cosmetic product barcodes efficiently, enhancing the user experience by providing instant access to product information.
- b. **Product Details:** Clicking on this button displays a short preview of product information when a barcode is scanned.
- c. **Allergen Alert:** Notifies users if a scanned product contains ingredients they have previously marked as allergens.
- d. **Add New:** Allows users to manually input details of new beauty products that are not yet in the system.
- e. **Quick Ratings:** Clicking this button displays customer reviews of the scanned product based on a 5-star rating.
- f. **Barcode History:** Users can access their history of scanned barcodes by clicking on this button.

3. **Premium Member Access:**

- a. **Offline Mode:** Premium members can activate this feature by clicking on a button. The ability to scan products even when their mobile device lacks internet signal. This feature ensures uninterrupted access to product information and ratings, enhancing the user experience.
- b. **Search:** Clicking this button allows premium members to search for any product by its name without the need to scan its barcode. It provides a quick and efficient way to access product details and ratings.
- c. **Preferences Filter:** Customize the app based on individual skin and hair preferences. They can select preferences such as vegan, vegetarian, no animal testing, and more. The app will then choose product recommendations and filters to align with these preferences.
- d. **Ad-Free Experience:** Premium members can enable or disable this feature through a button. When activated, it removes all banner ads and sponsored content from the app interface, providing an uninterrupted and ad-free browsing experience.
- e. **Exclusive Discounts and Offers:** By clicking on this feature, premium members gain access to exclusive discounts and unique offers from cosmetics brands and retailers partnered with the app.
- f. **Advanced Product Insights:** Premium members can access advanced product insights by clicking on this feature. It provides them with detailed information about product ingredients and their effects on specific skin and hair types

Business Model:

1.Premium Memberships:

Source of Revenue:

Premium memberships are a significant source of revenue for our cosmetics app. Users can subscribe to premium member access on a monthly or annual basis, unlocking a range of exclusive features and benefits.

Revenue collection and processing:

To collect revenue from premium memberships, we will implement a subscription-based model. Users can choose from different subscription tiers (monthly, or annual) with varying pricing levels.

2.Advertising Revenue:

Source of Revenue:

Advertising revenue is a key source of income for our cosmetics app. We will partner with cosmetics brands and related businesses to display targeted advertisements within the app.

Revenue collection and processing:

Advertisers will pay for ad placements based on various models, such as Cost-Per-Click.

Task #2:

Stakeholders

Stakeholder Name	Position	Internal/External	Role
Yaman Roumani	Project Manager	Internal	
Angle Lee	Team Leader	Internal	
Emma Galan	Member	Internal	
Noor Kriko	Member	Internal	

Functional Requirements

Requirement ID	Requirement Statement	Must /Want	Comments
FR001	The system shall create and upload new customer profiles for new users	Must	
FR002	The system shall upload a profile picture for users	Must	
FR003	The system shall allow users to edit their profile	Must	
FR004	The system shall allow users to change their user password in their profile settings	Must	
FR005	The system shall allow users to delete their user profile	Must	
FR006	The system shall allow users to customize notification settings in their profile	Must	
FR007	The system shall scan barcodes using a touchscreen device's camera	Must	
FR008	The system shall display a product preview of each item scanned	Must	
FR009	The system shall alert the user of any allergens with each product scanned	Must	
FR010	The system shall allow users to manually input any new products not yet in the system	Must	
FR011	The system shall allow users to view a quick rating of each product scanned	Must	
FR012	The system shall allow users to access their history of scanned barcodes	Must	
FR013	The system shall have an offline mode for premium members to scan products without internet access	Must	
FR014	The system shall allow premium members to search for any product by its name without scanning its barcode.	Must	
FR015	The system shall enable or disable an ad-free experience through a designated button.	Must	

FR016	The system shall customize the app based on individual skin and hair preferences by clicking on a preferences filter button.	Must	
FR017	The system shall allow premium members to gain access to exclusive discounts and offers from cosmetics brands and retailers by clicking on a designated feature.	Must	
FR018	The system shall allow premium members to access advanced product insights by clicking on a designated feature, providing detailed information about product ingredients and their effects.	Must	

Non-Functional Requirements

Usability Requirements

Requirement ID	Requirement Statement	Must /Want	Comments
UR001	The system shall maintain a user-friendly interface to facilitate ease of use.	Must	Ensures that users find the app easy to navigate
UR002	The system shall have a user profile tab	Must	
UR003	The system shall include an in-app User Guide and Frequently Asked Questions (FAQ) section.	Must	
UR004	The system shall support different languages changing to accommodate users from diverse backgrounds.	Want	
UR005	The system shall include a comprehensive "Terms and Conditions" section accessible to all users.	Must	
UR006	The system shall use Glow Guide Scanner's theme colors (#FFFFFF and #B041B0)	Must	Theme colors are white and purple
UR007	The system shall have a premium members information page	Must	
UR008	The system shall include gesture controls such as (Swiping, pinching, left, right, up, down) for user's interaction.	Must	

Reliability Requirements

Reliability Requirements	Requirement Statement	Must /Want	Comments
RR001	The system shall maintain an uptime of 99.99%.	Must	Link here
RR002	The system shall recover from system failure within less than 24 hours	Must	Link here

RR003	The system shall implement daily automated backups of user data, ensuring quick and reliable recovery in case of data loss or corruption.	Must	Link here
RR004	The system shall implement real-time error notification systems to promptly alert administrators of any issues, enabling quick response and resolution.	Must	Link here
RR005	The system shall utilize load balancing mechanisms to distribute incoming traffic evenly, maintaining stable performance under varying loads.	Want	Link here

Performance Requirements

Requirement ID	Requirement Statement	Must /Want	Comments
PR001	The system shall respond in 0.1 seconds	Must	Link for response time info here
PR002	The system shall shut down in 10-30 seconds	Must	Link
PR003	The system shall start up in 1.5 seconds or less for a hot start up and 5 seconds for a cold start up	Must	Link for startup time here
PR004	The system shall support 5,000 simultaneous client sessions with the same response time	Must	Link

Security Requirements

Requirement ID	Requirement Statement	Must /Want	Comments
SR001	The system must have a secure login process to protect user accounts.	Must	Includes minimum length of 8 characters and a combination of letters, symbols, and numbers
SR002	The system shall provide the option for users to enable Two-Factor Authentication (2FA) for an additional layer of account security.	Want	
SR003	The system shall encrypt locally stored data using robust encryption algorithms and methods, employing a minimum of 256-bit encryption keys.	Must	
SR004	The system shall use secure HTTP for communication among client and server nodes.	Must	

Design Constraints

Requirement ID	Requirement Statement	Must /Want	Comments
DR001	The system shall have a maximum app size of 35 MB for iOS, and 12 MB for Android	Must	Link here
DR002	The system shall have a maximum memory of 6,200 MB for iOS, and 16,000 MB for Android	Must	Link here
DR003	The system shall have a minimum CPU of Intel Core i5 for both iOS and Android	Must	Link here

Implementation Requirements

Requirement ID	Requirement Statement	Must /Want	Comments
IMR001	The system shall use Swift programming language for iOS	Must	
IMR002	The system shall use Java programming language for Android	Must	
IMR003	The system shall utilize a centralized database to store and manage product information, user data, and any other relevant information	Must	
IMR004	The system shall use Apples Xcode IDE for Swift development on the iOS platform and Android Studio as the primary integrated development environment for Java development on the Android platform	Must	

Interface Requirements

Requirement ID	Requirement Statement	Must /Want	Comments
INR001	The system shall use Facebook API for user login	Must	
INR002	The system shall use Apple ID API for user login	Must	
INR003	The system shall use Google API for user login	Must	
INR004	The system shall use API connection with cosmetic brands to enable automatic updates of the products	Must	
INR005	The system shall use a secure payment gateway API for processing premium membership subscriptions and facilitating secure transactions within the application	Must	

Physical Requirements

Requirement ID	Requirement Statement	Must /Want	Comments
PHR001	None		

Supportability Requirements

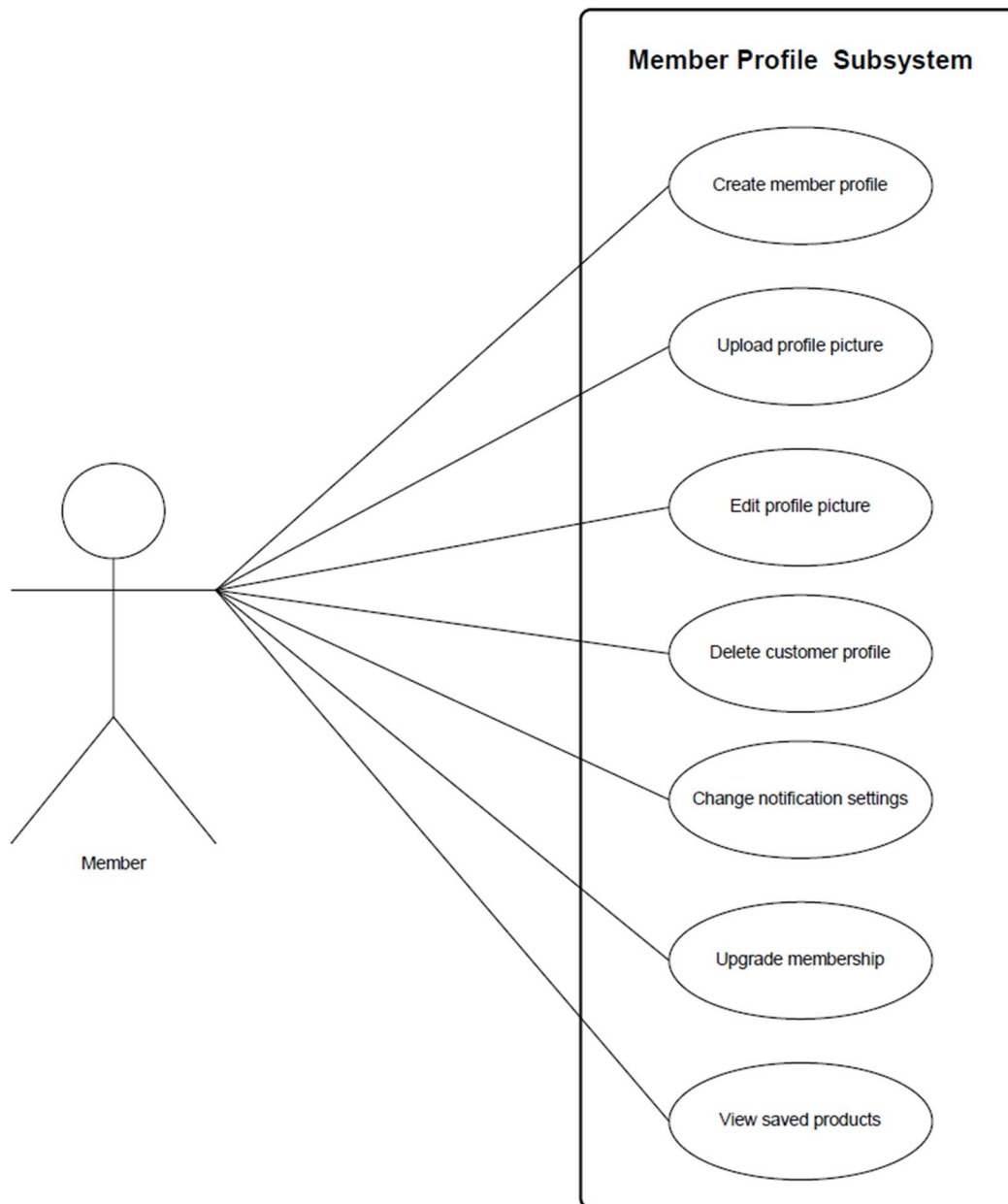
Requirement ID	Requirement Statement	Must /Want	Comments
SUPR001	The system shall be compatible with iOS and Android	Must	
SUPR002	The system shall regularly be updated to be compatible with latest operating system versions	Must	
SUPR003	The system shall use Google play store to be installed	Must	
SUPR004	The system shall use Apple store to be installed	Must	
SUPR005	The system shall regularly be updated to introduce new features and bug fixes.	Must	
SUPR006	The system shall regularly and automatically be tested	Must	

Task #3

Subsystem: Profile Engine

Use Case	Actor	Description
Create member profile	Member	The member clicks on this button to create a new profile.
Upload profile picture	Member	The member uploads a profile picture.
Edit customer profile	Member	The member edits their profile to make necessary updates or changes.
Delete customer profile	Member	The member deletes their profile.
Change notification settings	Member	The member changes the notification settings in their profile.
Upgrade membership	Member	The member upgrades their membership in their profile.
View saved products	Member	The member views saved products from their scans in their profile.

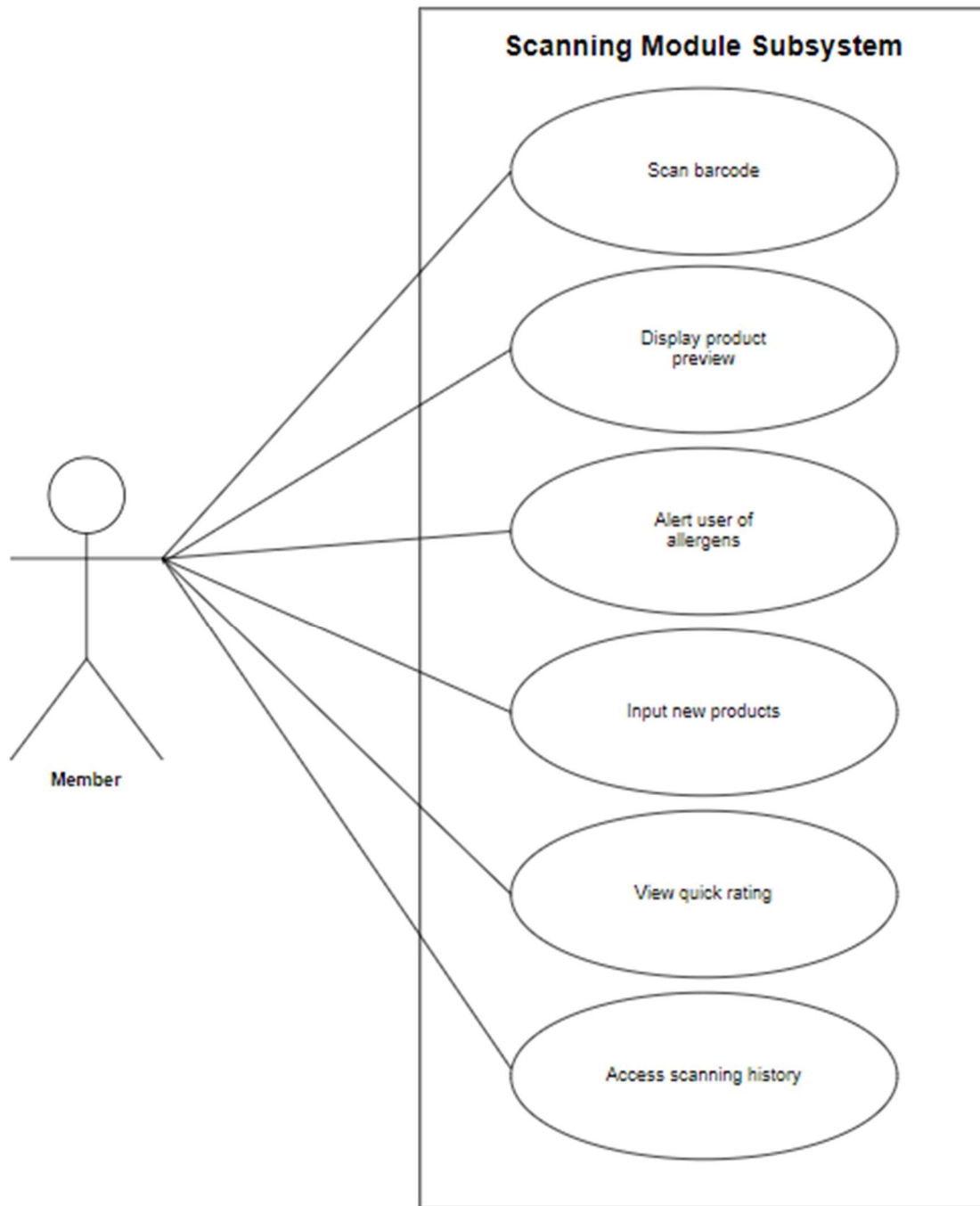
Profile Engine Diagram:



Subsystem: Scanning Module

Use Case	Actor	Description
Scan barcode	Member	The member scans product bar codes using their personal device.
Display product preview	Member	The member views the product they have scanned with their phone.
Alert user of allergens	Member	The member is alerted if an item scanned contains any allergens that are personal to the member.
Input new products	Member	The member manually input products that may not yet be in the system.
View quick rating	Member	The member views a quick rating of the product they have scanned with their phone.
Access scanning history	Member	The member accesses their product history of items scanned

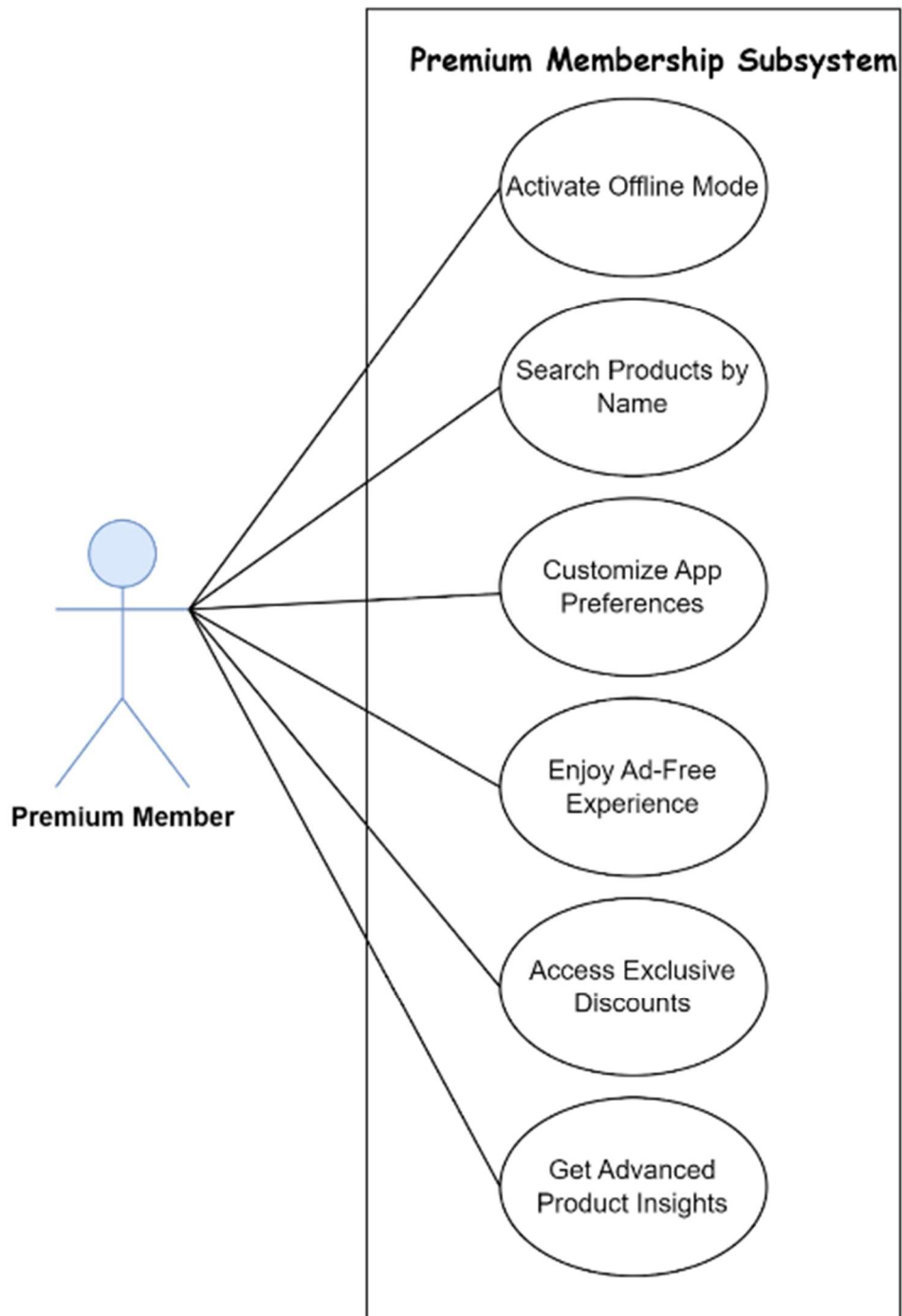
Scanning Module Diagram:



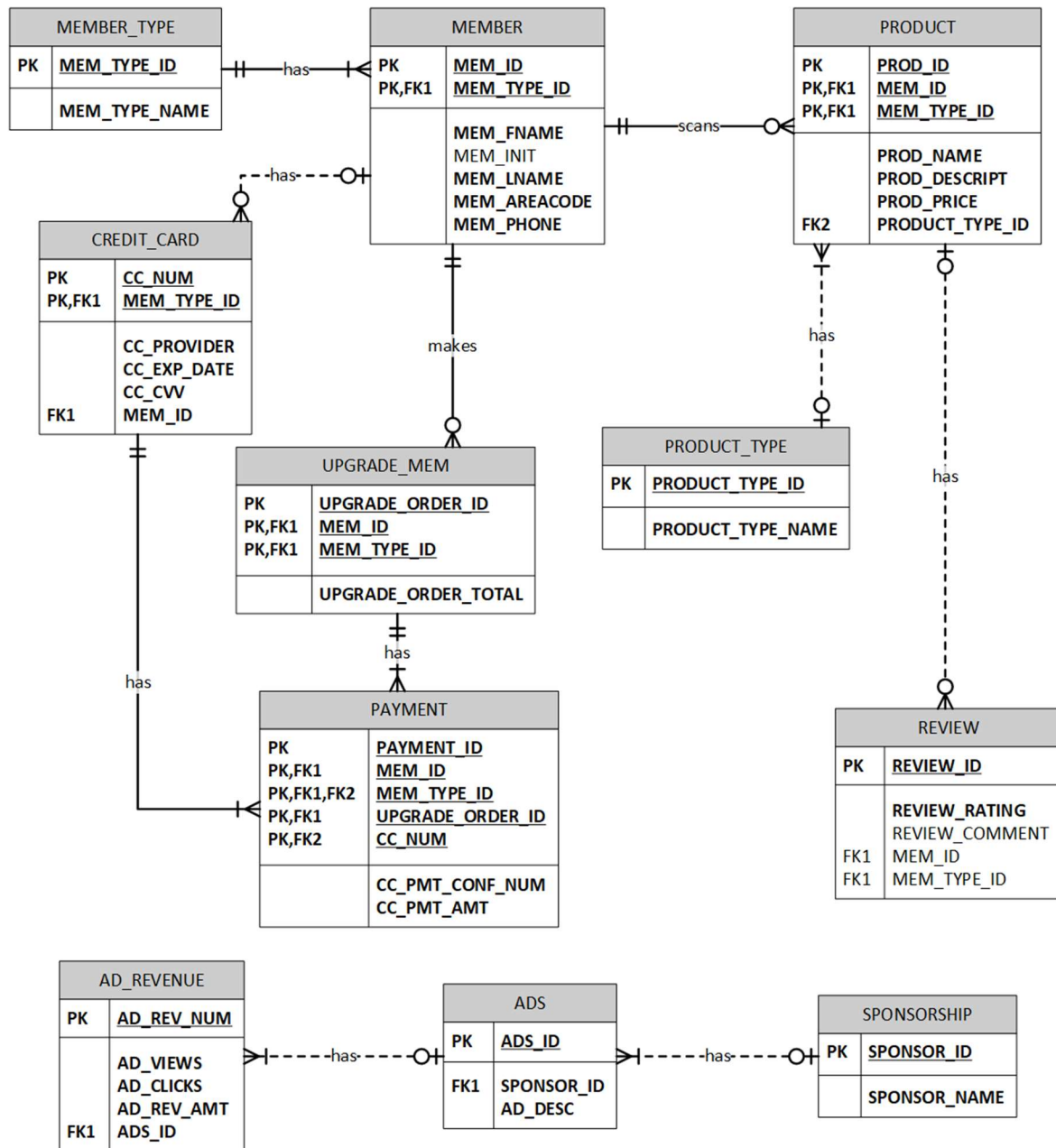
Subsystem: Premium Membership

Use Case	Actor	Description
Activate Offline Mode	Premium Member	The premium member activates offline mode, ensuring access to product information even without an internet connection.
Search Products by Name	Premium Member	The premium member uses the search feature to find products by name without the need for barcode scanning.
Customize App Preferences	Premium Member	The premium member enjoys browsing the app without interruptions from ads.
Enjoy Ad-Free Experience	Premium Member	The premium member explores exclusive discounts and offers from partnered brands and retailers.
Access Exclusive Discounts	Premium Member	The premium member explores exclusive discounts and offers from partnered brands and retailers.
Get Advanced Product Insights	Premium Member	The premium member explores advanced product insights, learning more about ingredients and effects on specific skin and hair types.

Premium Membership Diagram:



Task #4: Entity Relationship Diagram

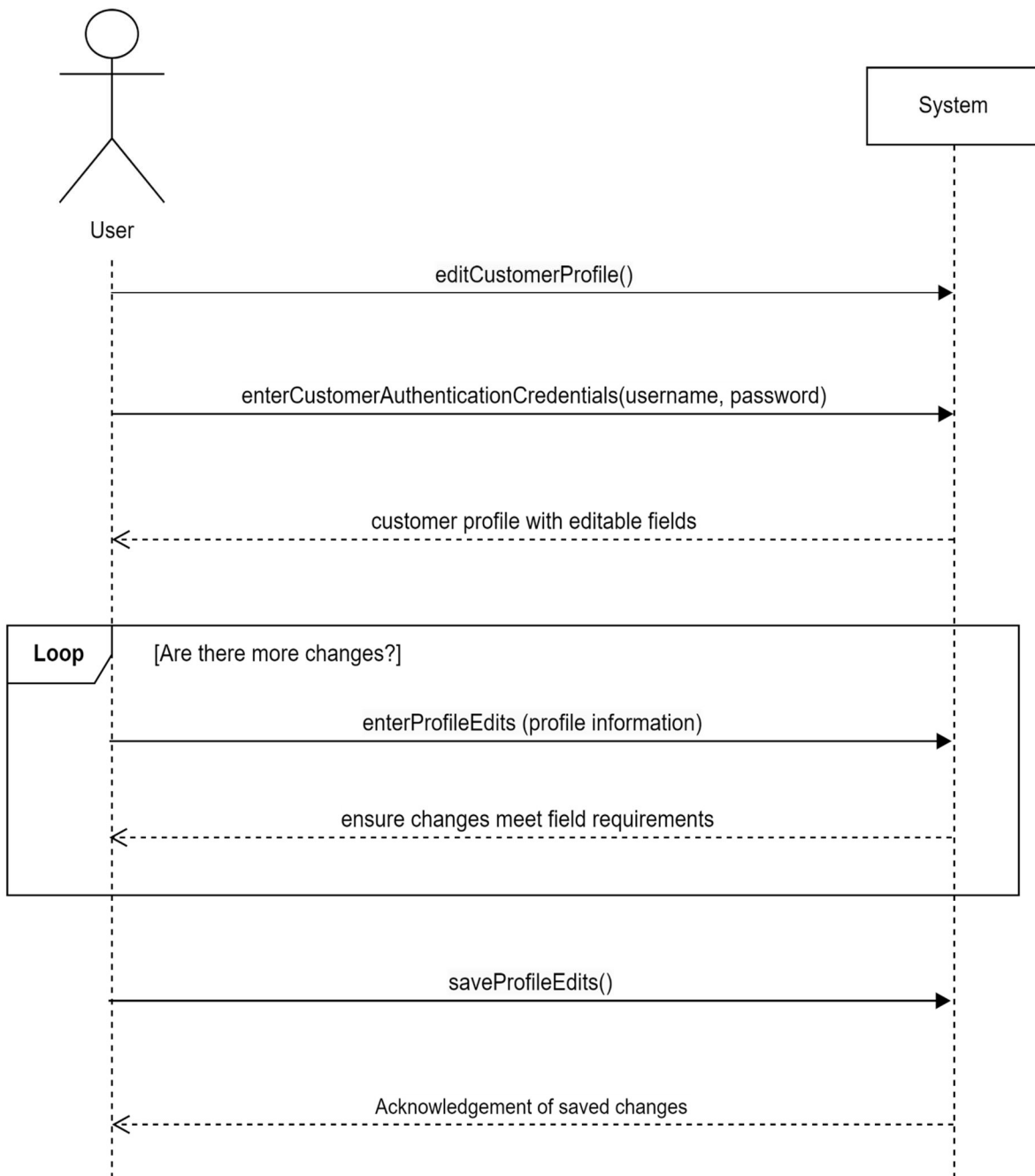


Task #5: Use Case Descriptions & System Sequence Diagram

Edit Customer Profile

Use Case Name:	Edit Customer Profile	
Scenario:	Edit customer user profile	
Triggering Event:	Current customer wants to edit profile	
Brief Description:	Customer enters the appropriate new information in the profile	
Actors:	Customer	
Related Use Cases:	Might be invoked by the Upload Profile Picture use case	
Stakeholders:	Marketing, Sales, Customer Service/Support	
Preconditions:	Customer must exist in the app system. Customer must be authenticated and authorized to edit profile. Customer Profile subsystem must be available.	
Postconditions:	Changes must be made in the profile. Changes must be validated and saved. System generates confirmation message of successful profile update.	
Flow of activities:	<p style="text-align: center;"><u>Actor</u></p> <ol style="list-style-type: none"> 1. Customer logs in to account and indicates desire to edit profile. 2. Customer enters changes to profile information. 3. Customer confirms changes and saves edited profile. 	<p style="text-align: center;"><u>System</u></p> <ol style="list-style-type: none"> 1.1 System validates customer profile. 1.2 System retrieves profile and prompts for editing in customer profile. 2.1 System presents interface with editable fields within the customer profile. 2.2 System validates data entered and ensures it meets specified criteria (i.e., data format, length, etc.) 3.1 System updates the customer profile in the database with the edited information. 3.2 System generates confirmation message indicating profile changes have been saved.
Exception Condition:	<ol style="list-style-type: none"> 1.1 Customer account does not exist in the database. 2.2 Customer data is incomplete or invalid. 3.1 System runs into database error. 	

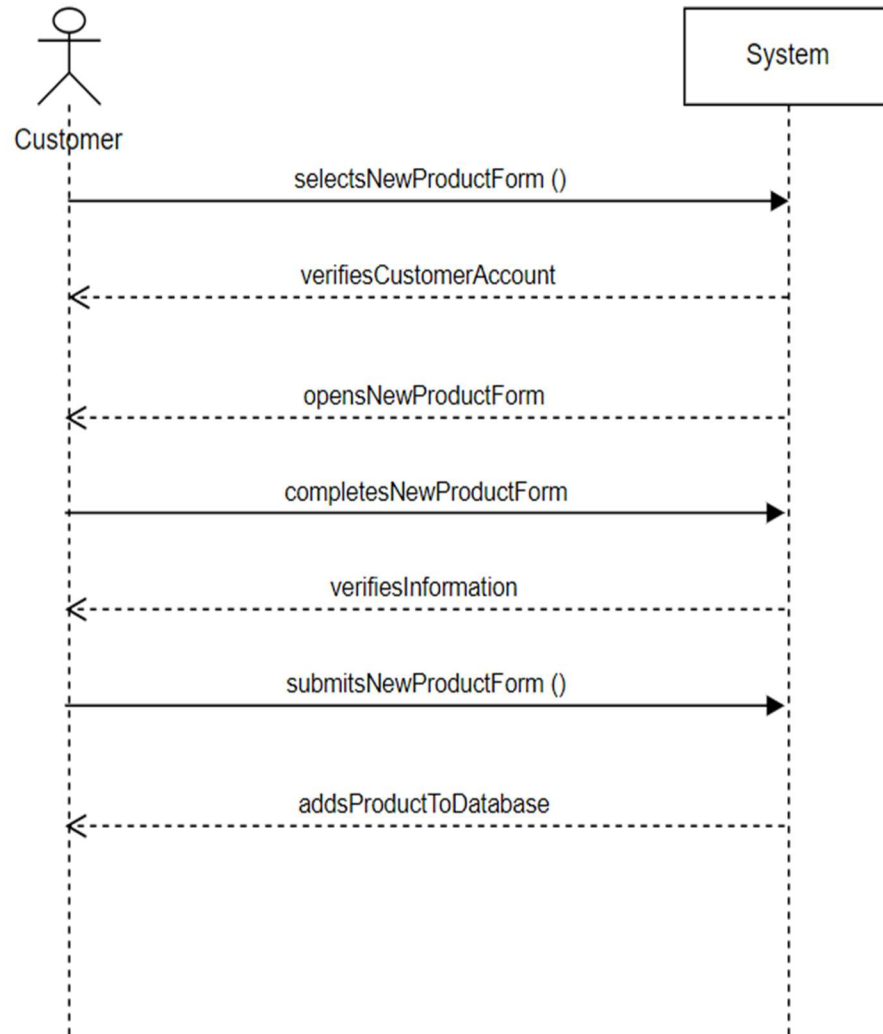
System Sequence Diagram: Edit Customer Profile



Input New Products

Use Case Name:	Input New Products	
Scenario:	The customer wants to input new products that are not yet in our system by manually entering all the information for a product.	
Triggering Event:	The customer adds a new product to the app.	
Brief Description:	During the input process of new products, the customer inputs all required information of a new product that is not in our system. The customer will provide details like name, description, category, price, etc.	
Actors:	Customers, premium customers	
Related Use Cases:	Might be invoked if the customer wants to verify the accuracy and completeness of the information entered for a newly added product before finalizing its inclusion in the system.	
Stakeholders:	App administrators, Marketing, Sales, Product Development	
Preconditions:	The customer must have an account with us. The customer must be logged into their account to add new products. The product must not already exist in the app.	
Postconditions:	The new product is successfully added to the app. The customer receives confirmation that the new product has been added. The new product is accessible to other users on the app.	
Flow of activities:	<p style="text-align: center;"><u>Actor</u></p> <ol style="list-style-type: none"> 1. The customer selects the option to input a new product. 2. The customer fills out the required fields to add a new product (name, description, category, price, etc.). 3. The customer submits the product information. 	<p style="text-align: center;"><u>System</u></p> <ol style="list-style-type: none"> 1.1 The system verifies the customer has an account with the app. 1.2 The system opens the product input form to the user. 2.1 The system acknowledges the input of new products and verifies information entered. 3.1 The system adds the new product to the database
Exception Condition:	<ol style="list-style-type: none"> 1.1 If the customer lacks the necessary permissions (does not have an account with the app) to add new products, the system denies the action and notifies the customer. 2.1 If the system encounters technical issues during the addition process, it informs the customer and attempts to resolve the problem. 	

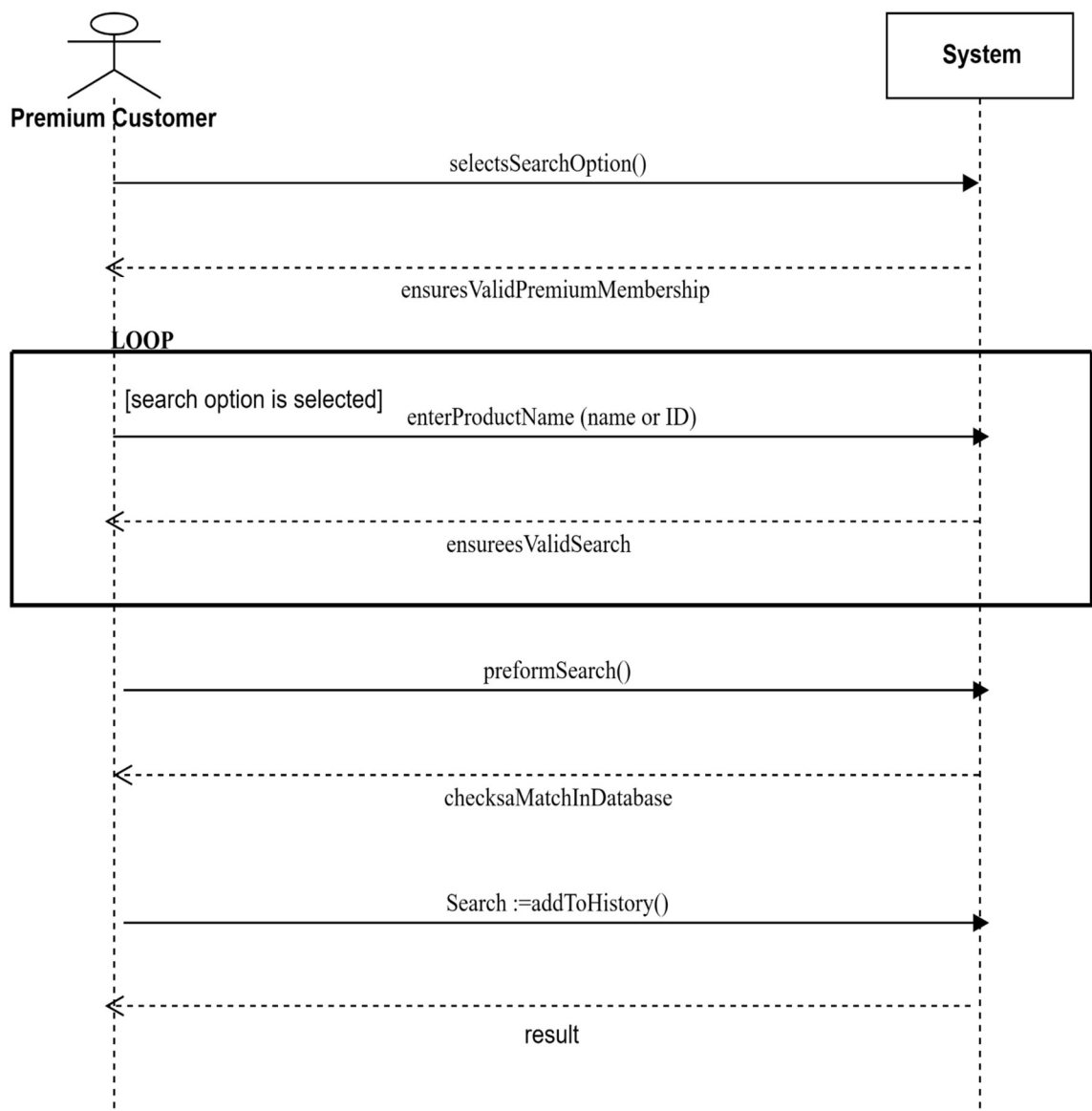
System Sequence Diagram: Input New Products



Search Products by Name

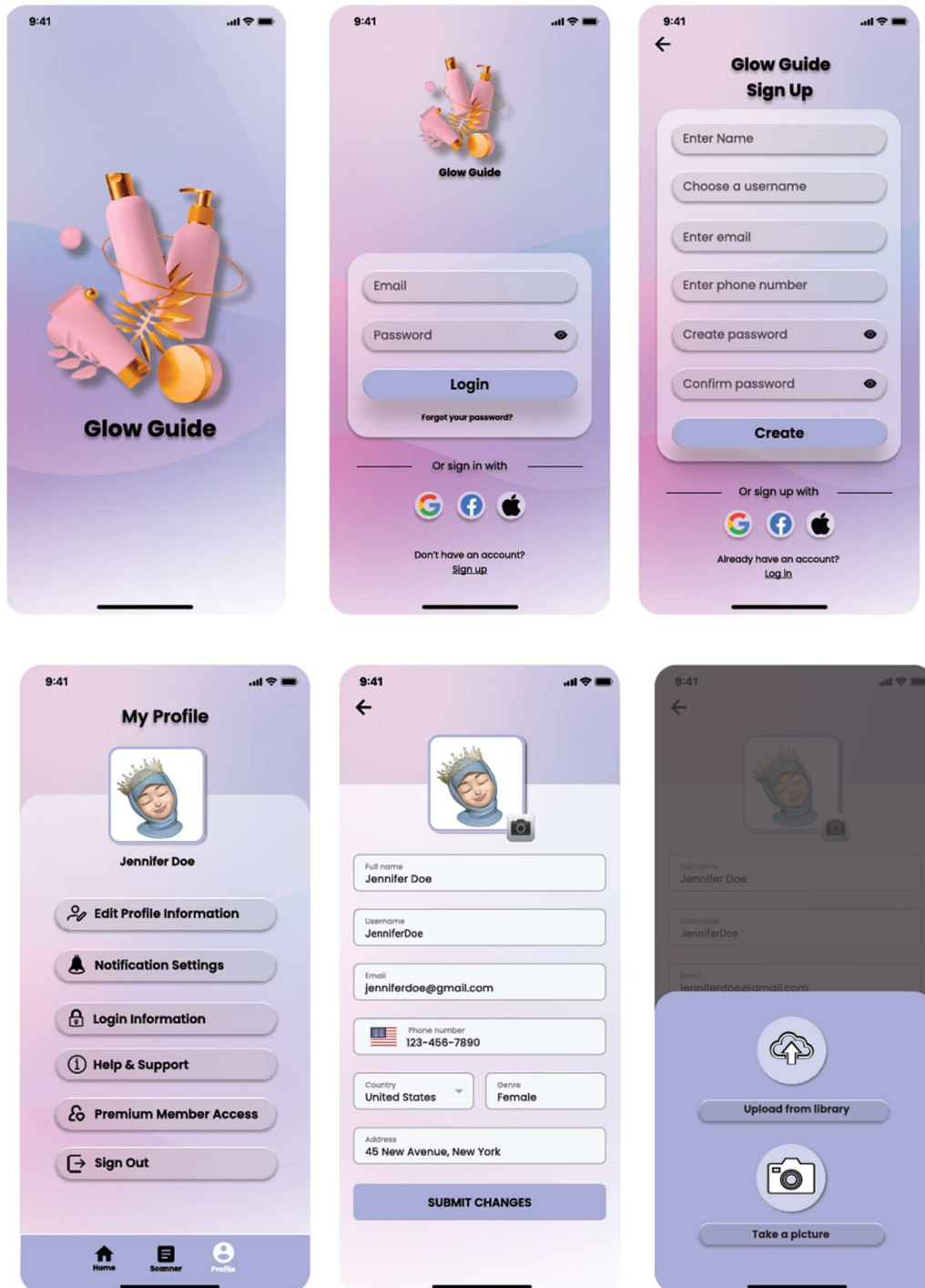
Use Case Name:	Search Products by Name	
Scenario:	A Premium Customer wants to search for products by entering product names.	
Triggering Event:	The Premium customer initiates the product search process.	
Brief Description:	Allows premium customers to search for products by entering the product names without the need to scan it.	
Actors:	Premium Customer	
Related Use Cases:	It may be invoked when a customer with non-premium membership attempts to search for products by name.	
Stakeholders:	App Administrators, Sales Team, Finance Department	
Preconditions:	The premium customer is logged in. The customer must have premium membership.	
Postconditions:	The system displays the search results based on the product names entered.	
Flow of activities:	<u>Actor</u> 1. The Premium Customer selects the search option. 2. The Premium Customer enters the product name 3. The Premium Customer reviews the search results displayed by the system.	<u>System</u> 1.1 The system ensures the customer has a valid premium membership. 1.2 The system recognizes the search request. 1.3 The system prompts the premium customer to enter the product name. 2.1 The system performs a search based on the product name entered. 2.2 The system validates the entered information. 2.3 The system checks if the entered product name matches any in the database. 3.1 The system adds the search term to the search history.
Exception Condition:	1.1 The customer does not have premium membership. 1.1 The membership has expired. 2.1 The product name entered contains invalid characters or exceeds the character limit. 2.3 The product name entered does not match any in the database.	

System Sequence Diagram: Search Products by Name

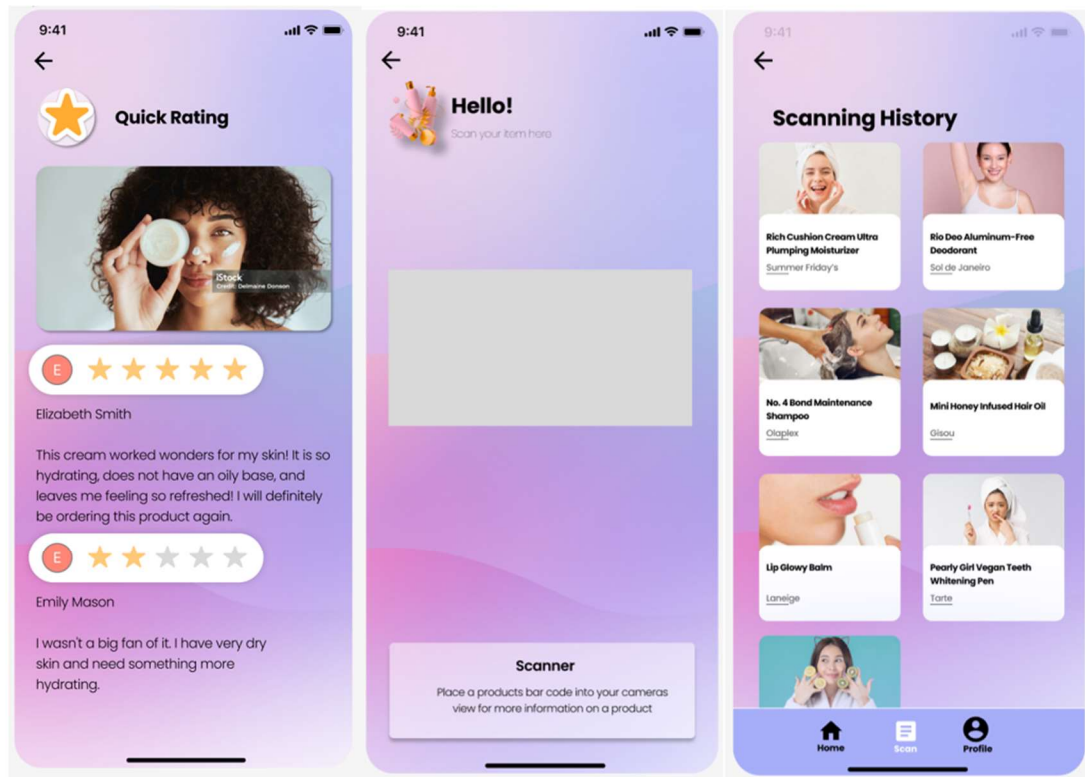


Task #6: User Interfaces

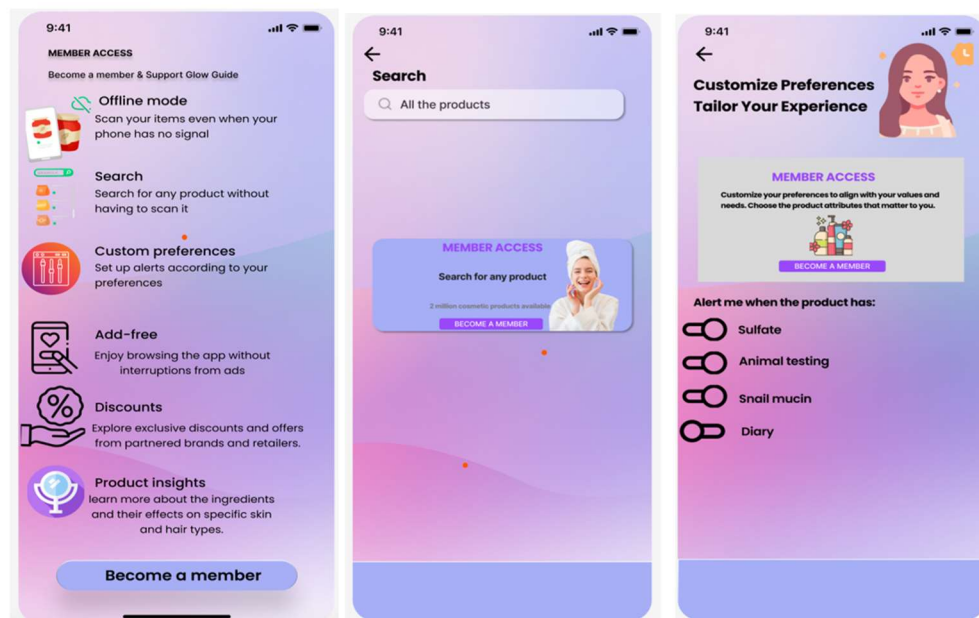
Profile Subsystem Use Cases: Create member profile, edit profile, upload profile picture



Scanning Module Use Cases: View Quick Rating, Scan Barcode, Scanning History



Premium Member Access Use Cases: Membership Access, Search Products by Name, Customize Product Preferences



Task #7: Design Class Diagram

