

Glo.

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THE POTENTIAL OF UX/UI DESIGN.

What is User Experience?

User Experience (UX) includes the feelings, and overall satisfaction that users feel while interacting with a product. UX designers attempt to make interactions as smooth and effortless as possible by eliminating complexity and cognitive strain. UX is more than just usability. It also considers the emotional and psychological responses of users.

I will perform user research to learn about the target users' behaviors, goals, and pain areas. This research will help me to create intuitive and user-friendly interfaces during the design and development phase. I will also use usability testing approaches, such as user testing sessions, to get input and identify areas for improvement. This feedback will be utilized to update the system's design and improve the user experience iteratively. In general, I aim to provide a product that gives a positive and satisfying experience for its users by prioritizing user experience throughout the development lifecycle.

I will focus providing a exceptional user experience in my system. I designed a smart mirror that will revolutionize the skincare industry. The mirror uses modern technology to analyze the user's skin, make specific product recommendations, and walk them through a thorough personalized skincare routine. My system seeks to empower people by providing personalized advice and support in developing healthier and more confident skin.

Steps for creating a well-rounded UX design.

An idea can be transformed into a user-friendly interface that caters to the needs of your customers by following a set of established steps. These steps are outlined as follows:

Define

During this phase, our focus is to develop a clear grasp of the desired creation and its objectives. We strive to identify the market need for the product, determine its target audience, and pinpoint the specific problems it aims to address. This crucial information is primarily gathered through engaging with stakeholders, including investors and customers. Furthermore, this stage involves ideation, where we foster creative thinking through brainstorming sessions and create low-fidelity concept sketches that will guide us in the subsequent steps of the process.

The way I employed this phase is by defining the process of creating a UX design to help me have a structured process to my journey. I also looked at problems that people face to provide a solution that is desired and needed in the market. I did a lot of brainstorming, and I sketched some ideas.

Research

Here designers conduct research to fully understand users and their needs. This fosters empathy and outlines the needs to be addressed in the product or service. To gather valuable insights, designers employ various user testing methods, such as customer journey mapping and usability testing. These approaches involve interacting with participants through interviews, questionnaires, focus groups, and even ethnographic studies. This allows the designers to collect feedback directly from the users, enabling them to refine their understanding of user needs. Additionally, market research should be conducted to comprehend market trends and competitors.

In my project, I conducted thorough research to understand my target users by comprehending their needs, goals, and preferences through customer journey mapping and usability testing. I held interviews, and observed users while they interact with my product.

Analysis and planning

Designers use all the data they obtained during the research phase to plan how to fulfill those needs during the planning phase. Here high-level plans are used to create user personas, user stories, wireframes, etc. To add, technologies required for the product are also considered. In this phase, designers create a project roadmap that outlines the project's trajectory and establishes key milestones to track progress and ensure timely completion of tasks.

Here I planned what tools I need to use to achieve the user interface and experience from the information I gathered from my research. I created user personas, user stories and wireframes.

Design

Once the target users have been identified and a plan has been established, the following stage is to brainstorm ideas for how they will interact with the interface. We carefully analyze the overall layout, navigation, and particular items we want included on each page during this stage. We mainly focus on the user experience considering how they will interact with the interface and what should they find easily to give us a clearer idea on how the user interface will look like. After creating the basic wireframes, we evaluate color schemes, typography, and iconography to further refine the design.

In this step I will incorporate visual elements (colors, typography, imagery, and branding) to improve the user interface. I will also specify the structure that will organize information in my product.

Prototyping

Once the user interface is planned, it is transformed into a prototype. Prototyping allows us to present a more realistic experience for usability testing, resulting in more accurate insight and feedback. Tools like Justinmind, InVision and Figma are used to create low fidelity and high-fidelity prototypes.

I created a prototype to outline the user interface's layout, functionality, and flow using Visily.

Testing

It is critical to test the solution to ensure that it is operating as expected and to identify areas that need to be improved. Gathering feedback from potential consumers can assist us in creating exactly what they want and are most likely to purchase. Enough time should be set up to make the necessary changes.

I created test scenarios and objectives, visualized the end-to-end user experience, and planned their interactions, touchpoints, and emotions throughout their journey with the product. I also chose the observation testing method. In addition, I conducted usability tests with real users, encouraging them to think aloud while executing tasks and recording their responses to uncover typical usability difficulties, user struggles, and positive user experiences. I recorded data during the testing sessions using audio recordings and observation notes.

Launch

Once testing is done and the necessary feedback is integrated into the high-fidelity user interface, the product is given to the development team so that it can be implemented and published.

In my project I won't launch.

Iteration

After launch, the product is not finalized. The design process is an ongoing cycle that is supposed to be repeated as users interact with the product and provide input. The goal is to improve the user experience over time by making incremental modifications and refinements. We ensure that the product remains usable and relevant to the target audience for years to come.

I will analyze the results of my testing plan to understand the users' pain to improve and explore new opportunities for improvement. I will integrate the feedback gathered from the users, iterate, and refine the design to decrease usability issues and improve the satisfaction with my product (enhance user experience).

What is user centered design?

User-centered design focuses on creating products that consider the needs and preferences of users throughout the whole design process by actively incorporating users in the design and decision-making process and soliciting their feedback and insights on a regular basis. The term "user-centered design" refers to the idea of putting the user at the center of the design process. We don't only want to create a product that we use but also a product that is needed, meaningful and catered for the intended user segment. This approach mitigates the risk of producing a product that won't be used, cutting the costs of human and time resources. Just as described above, this iterative process involves understanding the concept, specifying user requirements, designing the solution, and evaluating against requirements where the user is put in the center of each step.

Why UX/UI?

The significance of the UX/UI field

User Experience (UX) and User Interface (UI) are crucial in the design process. By understanding the wants and interests of consumers, they aim to create seamless and engaging experiences catered to them. Employing effective UX/UI increases user satisfaction, usability and accessibility, and user engagement and retention. When employing UX/UI correctly, it enhances conversions, sales, and customer loyalty by aligning with business goals. Additionally, well-designed, and thought-out experiences set your business apart from rivals which strengthens the brand image, and foster customer trust. In other words, effective UX/UI design is crucial for developing influential digital products that connect with users and promote economic success.

Why UX/UI is so important in the Software Development Life Cycle

UX/UI design is crucial to the SDLC. First and foremost, UX/UI design makes sure that the software satisfies the requirements and expectations of its users. UX/UI designers obtain a thorough understanding of the target market through user research, persona creation, and user flow design. With this knowledge, we are able to create interfaces that are simple to use, intuitive, and suited to the needs of the users. Moreover, usability and the user experience of the software will be continuously improved by incorporating user feedback and iterative testing throughout the development process.

Second, UX/UI design has a role in the software's success and adoption. By giving customers a favorable first impression, a visually appealing user interface captures their attention and motivates them to interact with the product. It increases consumer satisfaction and encourages user retention by offering a seamless and pleasurable user experience.

Lastly, UX/UI design reduces the cost and setbacks during the development phase of the SDLC. Potential challenges and usability issues will be discovered and addressed prior to the development phase by investing in UX/UI design early in the software development life cycle (user-centered design). This proactive approach saves time and money by preventing redoing work after development.

How investing in the UX/UI field will reduce costs in other stages with examples

It enables the early identification and resolution of difficulties prior to the development phase. It also reduces the number of iterations after development, saving both time and resources.

A positive user experience, aided by effective UX/UI design, increases satisfaction with the product and customer retention, reducing the need for costly customer acquisition efforts.

Furthermore, UX/UI ensures intuitive and user-friendly interfaces, reducing the need for continuous and extensive customer support resulting in cost savings.

Simultaneously, increased user engagement and loyalty distinguishes you from competition, attracting new consumers and growing revenue and market share.

Real-world proof of this

Airbnb recognized the importance of incorporating UX/UI and was able to reduce costs and improve their overall business performance. One example is their simplified booking process. They created a user-friendly interface and reduced the steps needed to book a listing, making it quick and easy for users. As a result, booking abandonment rates decreased significantly, as users were more likely to finish their bookings. Moreover, consumers (hosts and renters) found the platform simple to use, which reduced the requirement for customer care help, resulting in cost savings for the organization. Furthermore, Airbnb's emphasis on UX/UI design distinguishes them from competition. The visually appealing and easy design, together with personalized recommendations and customized search results, has helped to build a favorable brand image and customer trust.

In organizations that frequently focus on enhancing UI/UX, the typical rule of thumb is that every dollar invested returns \$10-\$100. This is because according to a study, resolving a problem in development costs 10 times as much as repairing it in design, and 100 times as much if you're trying to solve the problem in an already-released product.

THE JOURNEY.

As clearly outlined in the beginning of the report, it is sensible to follow a series of well-defined steps to create a UX design. In this part of the report, I will clearly document what was done in each step to reach my final system.

Definition

Problem definition

Clear skin is a sign of overall health and well-being. It is frequently connected with youthfulness and makes people feel more self-assured. Many people struggle to understand their skin condition and develop a routine that is appropriate for their skin type. If they are not properly guided, they may end up using ineffective products and routines, resulting in dissatisfaction and potential skin problems. Furthermore, the market's vast selection of skincare products makes it difficult for consumers to make informed decisions.

Solution and its objectives

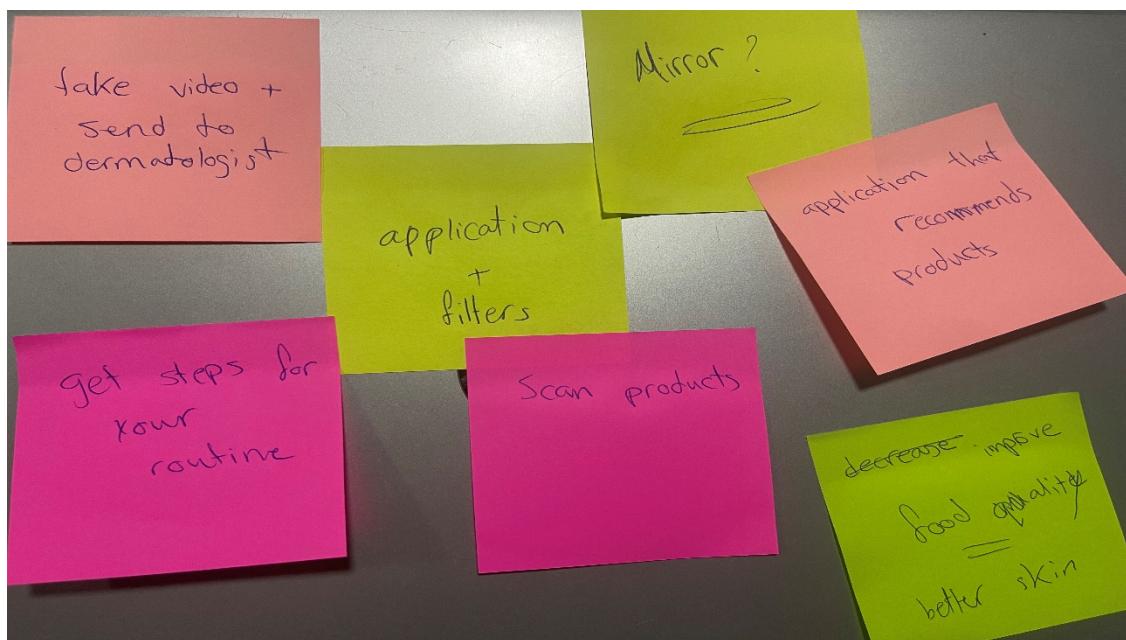
I want to create a cutting-edge mirror that revolutionizes the skincare process by assessing the user's skin health, scans the skincare products they are using, and guiding them through the appropriate routine. The main aim is to simplify the skincare routine and encourage consumers to attain healthier, more glowing skin. Its objective is to give an accurate skin evaluation (hydration level, texture, pigmentation, wrinkles). It will also allow the user to input which products they are using and can recommend different products. From the skin assessment and the products scanned, it will create a personalized skin care routine and guides the user through it.

Market needs for the product

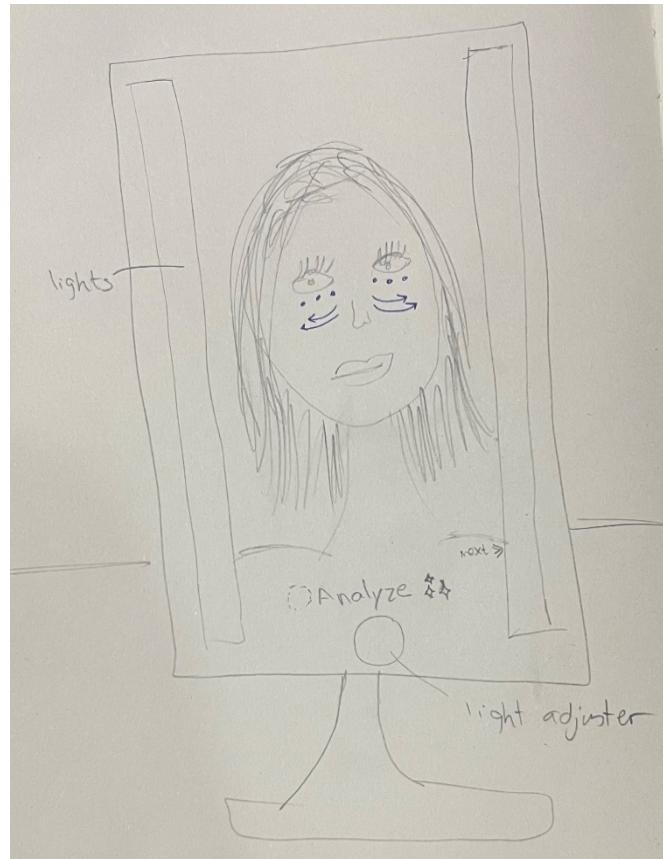
The market needs a comprehensive and user-friendly answer to the issues that skincare enthusiasts encounter. This mirror has the potential to change the skincare industry by meeting this market demand and becoming a must-have device for skincare aficionados, beauty professionals, and anybody seeking a tailored and effective skincare journey.

Brainstorming process

I thought of ways to solve this issue that I face so I wrote down sticky notes of random ideas that came to mind.



low-fidelity concept sketches



Research

User research conducted.

I interviewed 5 women and 2 men from different ages to have a casual conversation about their skin, what their struggles are and how they fix their needs.

The series of questions were listed below:

1. What is your current skincare routine, and how often do you use it?
2. How sure are you that your current routine is effective?
3. How do you decide what skincare products to use?
4. What features do you think would be useful in (explain the product) a skincare mirror designed to simplify and improve your skincare routine?
5. Do you have concerns about this technology?
6. What tools, resources, or knowledge do you use now to improve the health and appearance of your skin?

I noted the responses of the participants and from those I was able to conclude their needs, goals and preferences. The responses were as follows:

Firstly, women:

Subject 1:

1. I wash my face with non-scented soap and then moisturize. I sometimes use vitamin c and collagen serum.
2. Pretty confident.
3. I saw them on TikTok, tried things and kept using what worked.
4. I think it should give me a step by step on how much and where to apply each product and if I should add more products to decrease aging.
5. Not really, I think the technology we are already using is dangerous.
6. I use INCI beauty which scans products and gives a rating to how good it is. I use it in supermarkets to see which one I should buy. I also use it to see which product to buy next.

Subject 2:

1. I cleanse, tone, moisturize and put sunscreen on every morning and before bed.
2. Very confident (showed me before and after pics).
3. I visited a dermatologist, which was expensive but worth it in my opinion.
4. I think I saw a mirror that had that feature, but people hated it because it was too harsh. It was honest but we don't need numbers. So, I think it shouldn't give numbers like fine lines, wrinkles. I think giving clear up to date tips and plan is beneficial. Also UV amount to remember to apply sunscreen.
5. I think as I said if it was too harsh.
6. Social media sometimes is like influencers that I trust.

Subject 3:

1. Currently I am on medicine for acne. I only wash my face, put my medication then moisturize a bit.
2. Not very confident, I have tried a lot of solutions proposed and none seem to work.
3. I look on YouTube and google mainly. I think it is horrible because there are so many conflicting ideas.
4. I think It should see my skin and tell me what I should get products and why and walk me through how, where and how much to put from each product and in what sequence.
5. Inaccurate recommendations that make my skin worse.
6. Honestly, I get all my information from the internet, but I ask pharmacists sometimes.

Subject 4:

1. I wash my face in the morning.
2. I look good.
3. I honestly have good genes, so I never had to use any.
4. I saw a mirror that allows you to change the light to have different settings (yellow, white, mixed) which is so cool in my opinion.
5. Privacy if there is a camera used.
6. None

Subject 5:

1. I double cleanse after makeup, I make sure to moisturize always, I put sunscreen, I use caffeine for my under eyes and I apply retinol at night. I sometimes apply face masks.
2. My skin looks good, so I think it is working.
3. I ask people that I know.
4. Remind me of when I need to do my routine and if there are any problem areas and how to work on them.
5. Inaccuracy.
6. I always do my research before buying products by checking if anyone I know has used the products.

Secondly, Men:

Subject 1:

1. Nothing
2. I don't really care how my face looks, as long as I don't have pimples, I am okay.
3. I don't
4. Put music on
5. I don't think people will use it.
6. None

Subject 2:

1. I wash my face with soap and water well.
2. I don't really know.
3. I use whatever is available in the bathroom.
4. How to shave correctly guide.
5. How expensive will it be.
6. I am not that into skincare.

I was able to find the product that one person mentioned. The stated mirror (HiMirror) was primarily a makeup mirror, but it also included a feature that analyzes the number of fine lines, wrinkles, and pigmentation spots. I read the reviews, which were divided but mostly unfavorable for the skin care component. I was able to learn my target customers' needs, goals, and preferences by reading these products reviews and having these conversations with a varied set of people.

Needs:

1. Clear step-by-step instructions on product application and skincare routine.
2. Integrated voice command because when their hands have product it is hard to touch the mirror.
3. Personalized recommendations.
4. Be able to hide the numerical evaluation.
5. The sign-up and syncing process should be so quick and seamless.
6. Recommendations for additional products to target specific concerns.
7. UV reminder to apply sunscreen.
8. Simplify skincare routine and eliminate conflicting advice.

Goals

1. Simplify and improve their skincare routine.
2. Improve the health and appearance of their skin.
3. Increase confidence.
4. Avoid getting harsh or critical criticism from the mirror that will make them even more self-aware.

Preferences:

1. If a camera will be used it should have a closing added privacy
2. Take a picture every day to focus on the improvement rather than what needs to change.
3. Voice commands should be seamless and reliable.
4. Not bulky and aesthetically pleasing.
5. Camera can be closed for privacy.
6. Simplify skincare routine and eliminate conflicting advice.
7. Reminders for skincare routine
8. Music functionality
9. Mood lighting to see how you would look like in different lighting settings.
10. Length of mirror should be fully adjustable

User personas



Zeena Shaban Student

Age: 21
 Children: None
 Annual income: 2,000 JD

Personal Traits



Bio

She goes to university, hangs out with her friends, goes back home to study again and socialize with her family.

Needs

- Zeena wants to have better skin without having to spend too much money.
- She wants to be happier.

Frustrations

- Feeling self-conscious
- Studying
- Unorganized room

Free Time

Usually, Zeena does not have any free time. Her average free time is 40 to 50 minutes. Where she watches TikTok



Fatima Azzi

Accountant

Age: 37
 Children: 2
 Annual income: 23,000 JD

Personal Traits



Bio

She is a working mother of two who spends her time occupied with chores and work. She finds it hard to find some personal time.

Needs

- Wants to take care of her skin so that she doesn't look older than she is.
- She wants to have time for herself.

Frustrations

- Laziness
- Low income
- Dirty house

Free Time

No free time.

Analysis and planning

During the planning phase, the following strategy can be constructed based on the data collected and the needs, goals, and preferences identified.

- 1- I will create a user-friendly skincare mirror interface that gives clear, brief instructions on product application and skincare routines.
- 2- Outline the use of machine learning algorithms to analyze the user's skin health and offer items based on their individual needs and aspirations.
- 3- I will outline the voice command capabilities that allow users to interact with the mirror without touching it, making it easier to follow instructions while handling skincare items.
- 4- I will make sure that the camera can be covered.
- 5- Streamline the initial setup procedure so that customers can create an account and sync their skincare data with the mirror quickly and easily.
- 6- Display the UV strength of the day and prompt users to apply sunscreen based on the UV level. Additionally, based on the user's skin type, recommend appropriate sunscreen products and how much.
- 7- Allow users to hide or disable the numerical evaluation of their skin condition if they find it uncomfortable or unneeded. Instead, use visual representations of progress over time to promote confidence and motivation.
- 8- Design a mirror that simplifies skincare procedures by giving personalized plans and directions based on the user's individual needs and goals.
- 9- design an application that will help control the mirror and keep the mirrors interface extremely simple. Allow music integration.

Conduct user testing throughout the planning process and iterate on the design and functionality depending on input and user preferences.

A user story.

Meet Sarah:



Ambitious

Feminine

Anxious

Name: Sarah Hyde

Age: 35

Occupation: Data analyst

Sarah's skincare journey began with a desire to find a solution to her skin issues. She always had difficulty understanding her skin type and finding the appropriate products and routines. It left her dissatisfied and dissatisfied, with no idea how to get the clear, radiant complexion she wanted.

Sarah felt a flicker of joy when she first saw the skincare mirror. At the same time, she was concerned that it would be another failed attempt. She carried it with her, unaware that it would become her regular companion on her journey to healthy skin.

After the first use, Sarah noticed the mirror's simple design and straightforward directions. It gently walked her through each stage of her skincare routine, simplifying a once-confusing process. The voice command feature on the mirror was a game changer, allowing her to engage with it while her hands were full of skincare supplies.

But it wasn't just the mirror's functionality that captivated Sarah. It was the emotional connection she began to feel. She felt that the mirror validated her feelings, understood her difficulties, and provided individualized recommendations and solutions adapted to her needs. It evolved from a tool to a source of comfort and support. She even gave her a name: Koi.

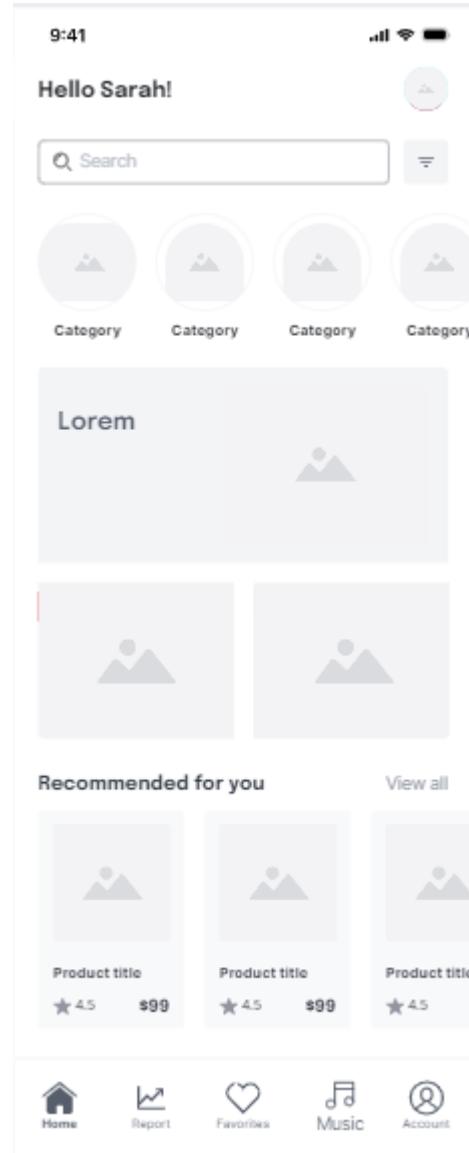
Every time Sarah stood in front of the mirror, she felt a thrill. For her, it became a ritual, a few moments of self-care and reflection. She even started including affirmations and breathing exercises during her skincare routine, which set the tone for the remainder of her day.

Sarah began to notice favorable improvements in her skin as the weeks grew into months. It was no longer about the mirror's advice; it was about the transition she was going through. The mirror reflected her progress and served as a reminder of her own attractiveness and worth. The mirror's impact went beyond skincare; it bolstered her confidence and self-assurance, reminding her that self-care was important.

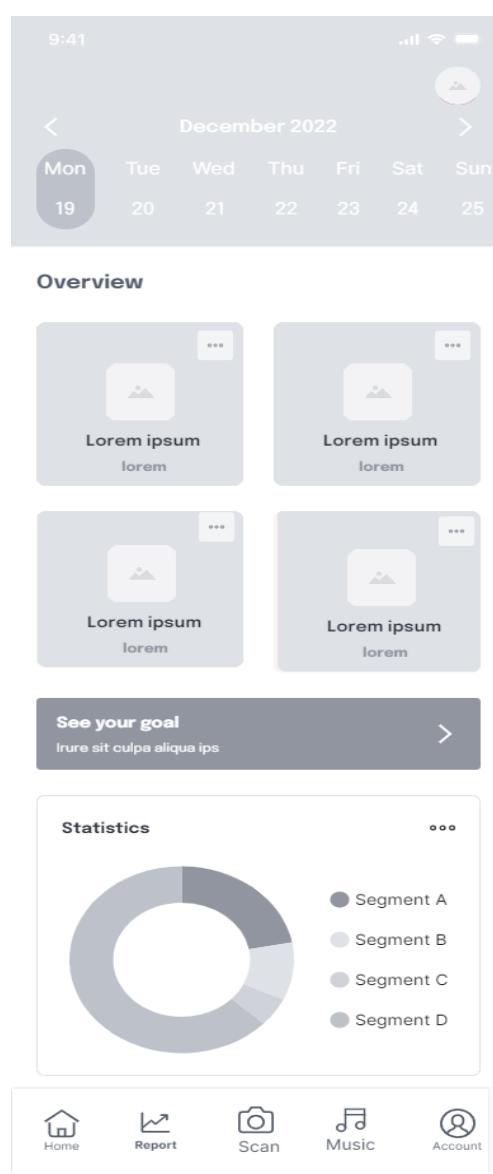
Sarah now believes that the mirror is a part of her daily life, seamlessly blending into her routine and enhancing her overall well-being.

Wireframes:

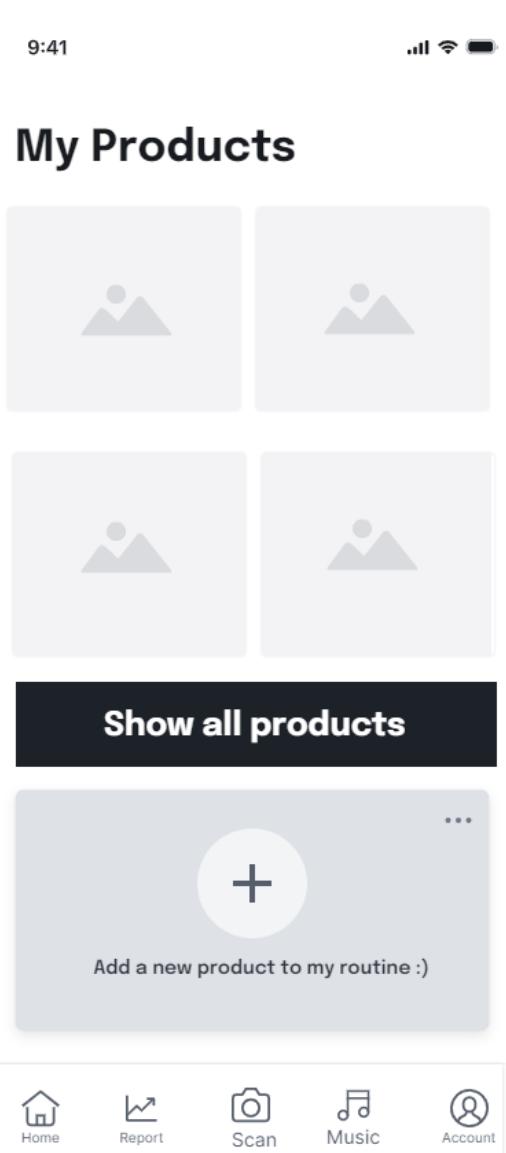
Low-fidelity application wireframe



Home page



Analysis page



Scan page

9:41

9:41

9:41

9:41

9:41



Scan QR Code

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Home



Report



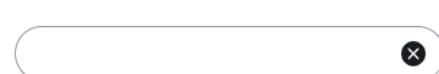
Scan



Music



Account



All Tracks Albums Artists

- Lorem ipsum
Lorem ...



Home



Report



Scan



Music



Account

Scan page

Music page

Account page



Settings

Account

Change name

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Change avatar/logo

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Manage access

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Notification

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Home



Report



Scan

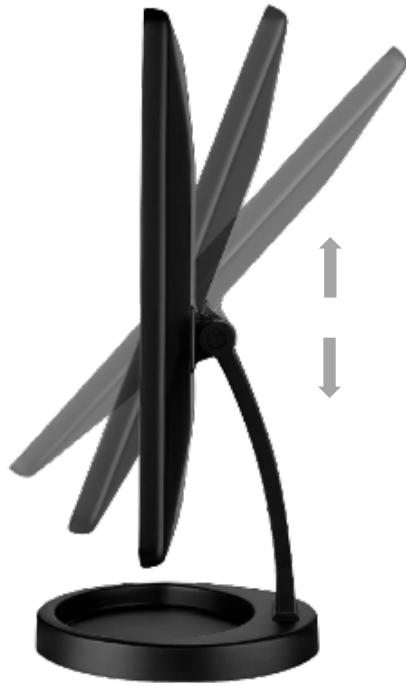


Music



Account

Mirror design:



It will be angle and height adjustable.



It will have adjustable lights.

It will be offered to have the modern look seen above or a more antique look. (Same features as above).



This is only an illustration the mirror will reflect the person.

Low-fidelity mirror interface:

After analysis, the mirror will create a personalized process. Below is an example of a skin routine that the mirror will walk you through. All the lines are augmented onto the face.

Voice output: Would you like me to give you voice directions for the process?

Voice input: Yes.

Voice output: Absolutly, now lets get you started.



Voice output: First, wet your face with warm water. When you're ready say next

Voice input: Next.

Voice output: Place a dime-sized amount of cleanser onto your fingertips.

Voice input: Next.

Voice output: massage it around your face in a circular motion, starting in the center and working outwards.

Voice input: Next.

Voice output: Finish by rinsing with cool water



Voice output: now grab you eye cream and tap a pea-sized dab of cream underneath each eye using your ring finger.

Voice input: Next.

Voice output: smooth it over your skin, going on and around the orbital bone, taking care not to get too close to eyes.

Voice input: Okay, done.



Voice output: Take a quarter-sized amount on your fingertips.

Voice input: Done.

Voice output: gently rub the product upwards.

Voice input: next.



Voice output: Most people forget this step, but it's super important because the neck is often one of the first places to show aging. Now grab your neck cream.

Voice input: done.

Voice output: gently rub it upward until the product is evenly distributed

Voice input: done.

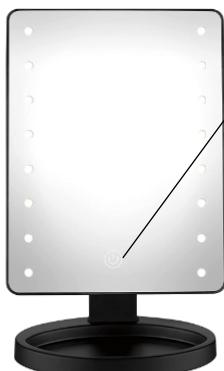


Voice output: Were almost done! The UV index today is 9 so we need to apply sunscreen.

Voice input: next.

Voice output: Starting at the base of your neck, slather on a quarter-sized dollop in a circular motion. The direction doesn't really matter just make sure you are fully covering your neck and face.

Voice input: done.



When the user taps the power button the mirror turns on.



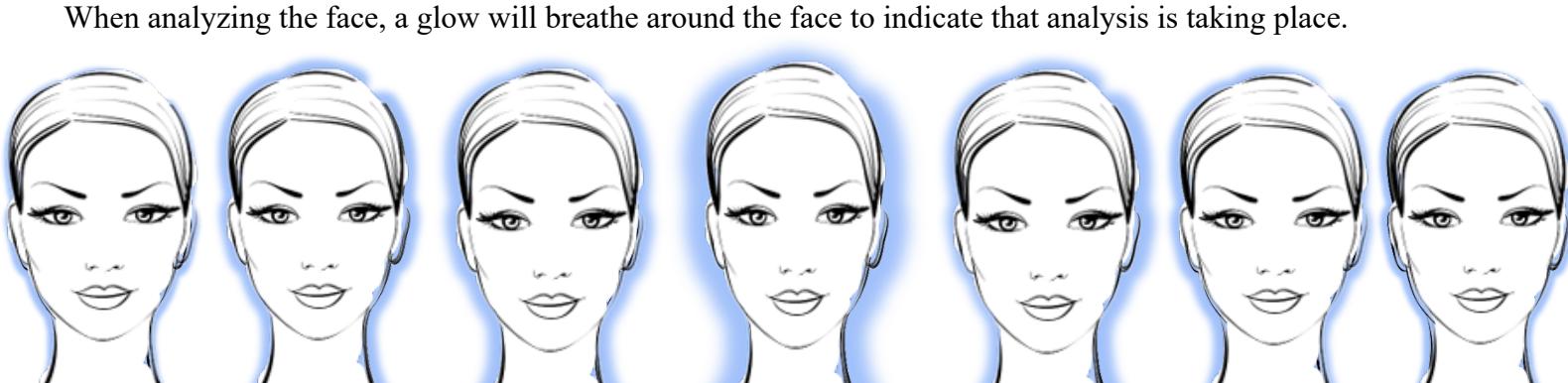
When this button is pressed the light turns on and a bar will appear underneath it.

To change the light color (mood), press the button again.



The user drags their finger left to decrease brightness and right to increase brightness.

After some time, it disappears.



When analyzing the face, a glow will breathe around the face to indicate that analysis is taking place.

Story boards:

STORY BOARD

Scenario: daily mirror use



SCENE 1
Wake up and look in the mirror



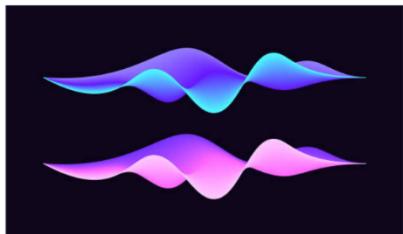
SCENE 2
Put music on your phone and connect it by bluetooth



SCENE 3
Analyze your skin through UV



SCENE 4
Follow the mirror's steps



SCENE 5
Say next to move on to the next step



SCENE 6
Go to work

STORY BOARD

Scenario: First use



SCENE 1
Finds an advertisement for the product



SCENE 2
Purchases it



SCENE 3
scans the QR code to download app and sign up



SCENE 4
Scans the product they are using



SCENE 5
Analyse skin



SCENE 6
Recommend additional products

Technologies required.

Machine learning technology will enable the mirror to learn from user data and deliver customized skincare routines and product recommendations. The mirror can continuously improve its recommendations over time by studying user feedback and historical data.

Natural language processing (NLP) will allow users to receive instructions, ask questions, and control the mirror without having to physically touch it.

Image capture and processing technology will be used to capture photos of the user's skin using a high-resolution camera and will be analyzed to extract relevant data and generate individualized skincare suggestions.

A mobile application will be developed that will allow users to control and change settings, examine skincare data, and receive messages and reminders.

Third-party APIs such as skincare product databases, weather services for UV strength information, and music streaming platforms can be integrated into the mirror.

To provide an interactive user interface, **touchscreen capabilities** are required.

Tools that I need to use to achieve the user interface and experience.

I will use the same website that I used to achieve my wireframes which is Visily to produce my application prototypes.

Design

How users will interact with the interface.

Voice Interaction:

Users can interact with the mirror by communicating orders into it. At the same time, the mirror should provide users with voice feedback and directions to help them with their skincare routine.

Mirror adjustment:

The user can adjust the lighting settings, height and angle of the mirror to get the best view of themselves.

Through the application:

Users can scan the barcodes or QR codes of their skincare goods using the application's camera capability. The application will process the scanned information and incorporate the products into the user's skincare routine within the mirror's interface.

The program will analyze the user's skin health and preferences using machine learning algorithms and data collected from the mirror. The program will provide the user with customized product recommendations, which the user can inspect via the application's UI and choose to buy it (not through the application). The application will have a music integration function that will allow users to listen to music while performing their skincare routine. To pick and play music, users can use the application.

The application will show the mirror analysis of the user's skin health and progression over time. users can access precise information on their skin state, including hydration level, wrinkles, eyebags, redness and the percentage of each acne type (Whiteheads, blackheads, Papules, Pustules). This analysis is shown through visual representations like charts, and cards.

Design refinement

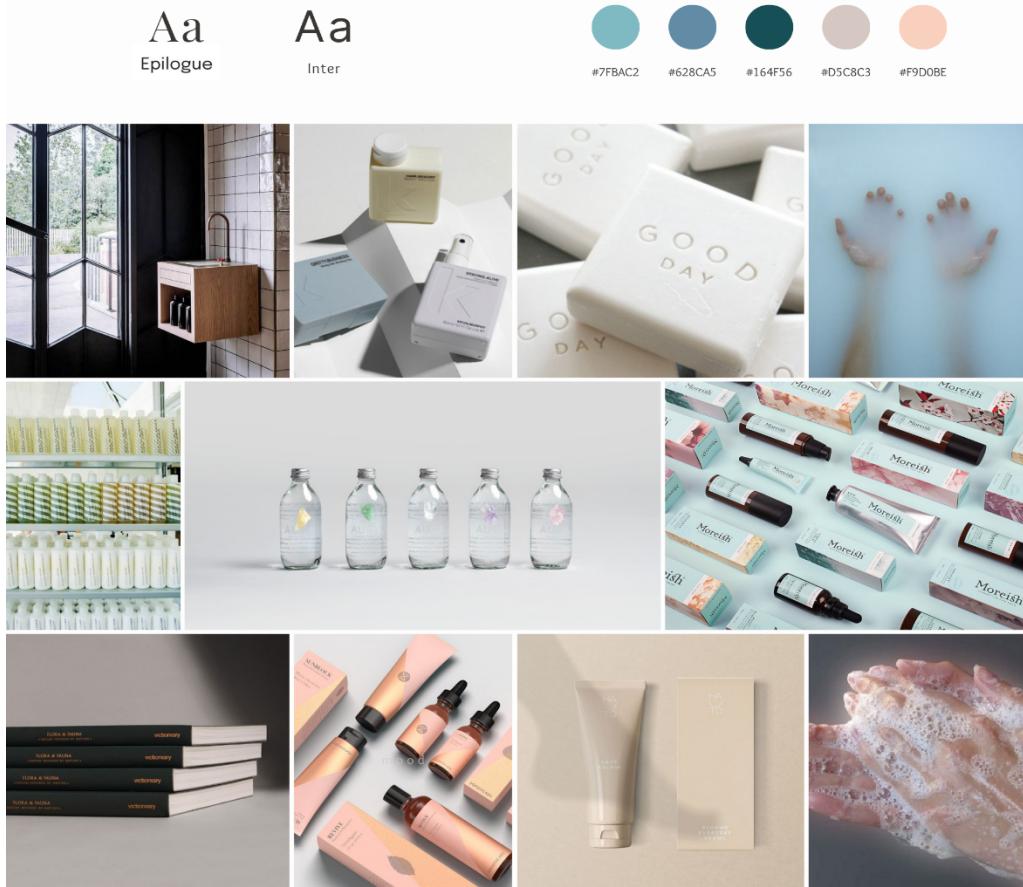




GLO

BRAND OBJECTIVE

Our goal is to empower people to accept their individual beauty and promote glowing skin. We believe that everyone deserves access to effective and individualized skincare solutions. We aim to change people's perceptions of skincare by providing a seamless and intuitive experience that encourages users toward a personalized skincare routine.



Color scheme:



#7FBAC2



#164F56



#628CA5



#D5C8C3



#F9D0BE

Typography:

Heading: Epilogue

Body: Inter

Iconography:

I relied on real images of the skin care products and used icons in the skin analysis report.



Eye bags



Wrinkle



Redness



Navigation

Branding:

Simplicity can be seen all over the application and mirror because it signifies cleanliness.

The colors are clam and not overly vibrant, the name of the product is also very short, and the logo is simple.

The logo:



Information organization.

Overall layout, navigation, and particular items we want included on each page during this stage. Develop a clear and intuitive structure for organizing information within the product or service.

Navigations

1. To navigate through the skin care routine steps, the user simply says next, or done keyword.
2. To analyze their face, they simply say analyze face.
3. The user can drag up and down to change the light intensity.
4. The user adjusts the height and angle of the mirror but adjusting it manually.
5. To download the application the user will scan the QR code found on the paper provided in the product's box and it will direct it to the application in the store.
6. When a user opens the app initially, they will be asked to sign up.
7. When the user logs into the app they will be faced with the recommended products on the home page of the application.
8. The user presses the analysis report in the navigation section to see the numerical analysis report. (They can choose to remove the numbers if they want only an evaluation will be shown)
9. Users can press on the can button in the navigation section where the user can see all the products that they currently use and have scanned.
10. To add a product to their routine they will go to a scan button in the navigation section and will press the add new product to my routine button.
11. The user can navigate to the music in the navigation section to search for songs and play them while doing the routine.
12. The account details, mirror settings, and notification settings can be adjusted from the account button in the navigation section.
13. The light icon will show where the user can tap to change the light setting.

Categorization

Categorization allows users to rapidly find and access relevant content, improves navigation, and enhances the overall user experience.

1. We have a specific area that showcases all the owned skincare items. This allows users to keep track of their personal collection and conveniently access product information.
2. Recommended products are displayed in a category. After the mirror analyses the user's skin, it recommends products that might improve their skin and solve their issues.
3. To make it easier for the user to find certain skincare products, I organized them by type, such as cleansers, toners, serums, and eye creams. This allows users to rapidly navigate to the relevant product category and explore a variety of possibilities.
4. Users can stay up to date on the newest skincare trends, professional recommendations, and instructive articles with the easily identifiable app card.
5. I recognize the significance of customization and personalization. The settings menu has been deliberately divided into categories such as Account Settings, Mirror Settings, and Notifications Settings. This user-friendly layout makes it simple to locate and modify individual settings based on the user's preferences.

6. Each area of concern in the user's skin is separated into a card so the user can see and analyze each individually.
7. The navigation tab was created with the user in mind. Each app's functionality and feature is classified, allowing them to easily navigate through different sections such as home, analysis report, scan products, music, and settings. This user-friendly design ensures that users can quickly access the features they need to make the most of their skincare journey.

Labeling systems

1. Each text placeholder has a label description of what should be filled in.
2. The navigation section clearly labels every icon with its description.
3. The categories of skin care products have a label with the type of underneath.
4. The news and tips section has a clear title label, description, and a button to let the user see more details.
5. The recommended for you section shows the product, its name, rating, and its price.
6. In the report, the areas of concern for the skin are labeled with a description and the evaluation is shown below this label.
7. In the report, the donut chart sections have a legend and are clearly labeled.
8. Every button clearly describes what it is meant to do.
9. The song is labeled with its name, artist, number of plays and duration.
10. The settings categories are labeled.

Ease of use

Setting up the mirror is a seamless process. Users only need to scan the QR code supplied, which will bring them to the app's download page. To make things even easier, individuals can sign up with their Google account, which eliminates the requirement for manual registration.

We ensure that consumers are not overburdened with skincare recommendations and news by offering them only one piece of knowledge every day. This method allows users to concentrate on and fully comprehend the material offered, avoiding information overload and fostering a more effective learning experience.

For users who wish to try out new skincare products, our system provides a seamless experience. They can quickly choose the category of interest and browse a large range of available products. Users can also search for a specific product, ensuring that they find exactly what they are looking for. The recommended items function considers the mirror's analysis of their skin, delivering individualized recommendations that aid customers in decision-making and reduce doubts generated by contradicting viewpoints found on the internet. Users can keep inside their budget by filtering things by price.

Users may rapidly monitor the temperature and UV light levels by opening the application. This feature assists customers in determining if they need wear sunscreen or what clothes to wear.

Adding products to their skincare routine is hassle-free. Users can just scan the product's barcode or QR code, and it will be added to their routine automatically. This reduces the need for manual data entry and speeds up the process.

The system's settings are intended to be simple, non-restrictive, and well-organized. Users may easily change settings without wasting time looking for the appropriate option. The user-friendly design allows users to adjust fast and easily.

By selecting the reports area in the navigation section, users can view the past results from the mirror analysis. This allows individuals to monitor their progress and compare the condition of their skin over time. It is a very simple interface with only the essential metrics which doesn't confuse the user.

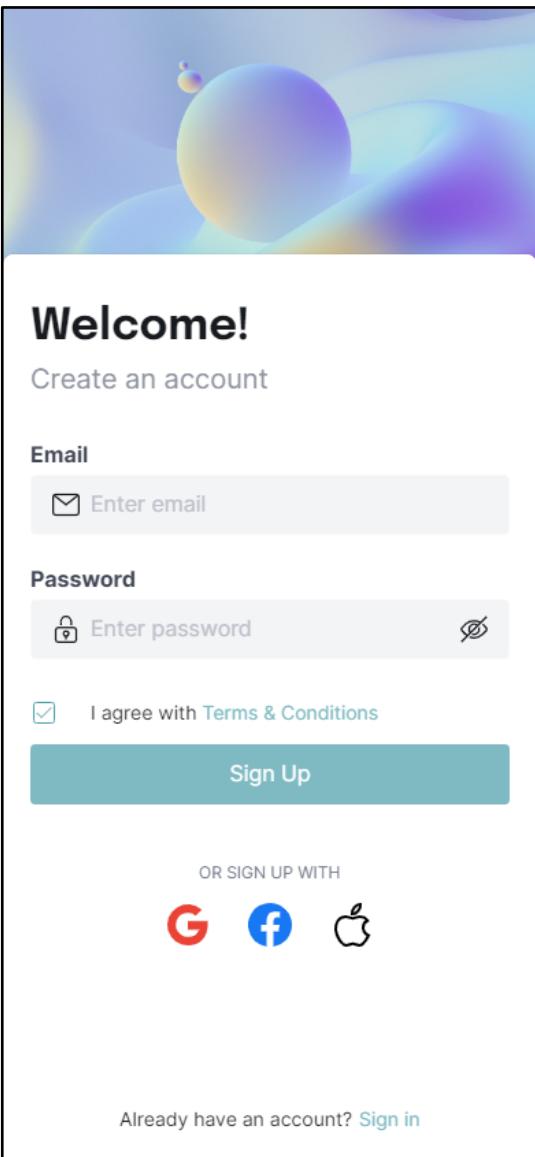
Users can listen to their favorite music while doing their skincare routine. They can use the navigation section to access the music feature, search for their desired songs, pick them, and play them seamlessly within the application.

The mirror itself offers user-friendly functionalities. Users can begin their skincare routine by saying "start my routine" and then using voice commands like "next" or "done" to advance through the steps. They can analyze their face by saying "analyze face" to the mirror. When evaluating the face, a glow will appear around the face to show that it is being analyzed. If the user wants to adjust the mirror's light, they simply touch the sun icon on the top of the mirror and drag left or right to decrease or increase brightness.

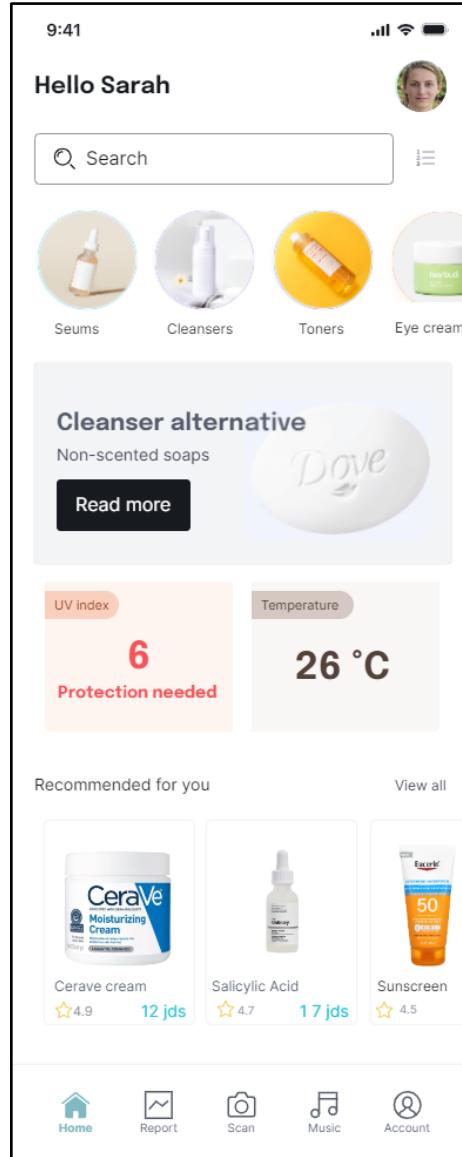
Prototyping

I obtained user feedback on the wireframe and incorporated this feedback in the prototypes.

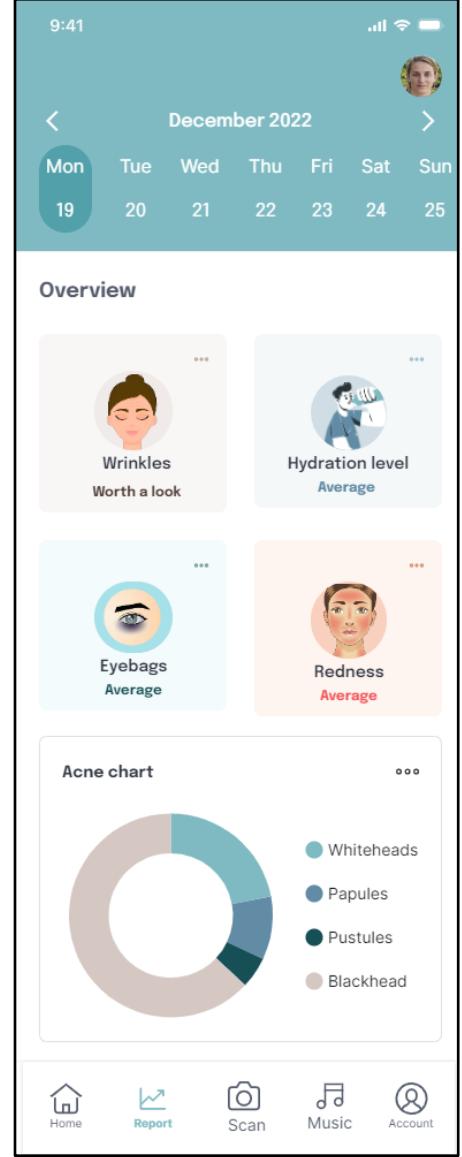
The prototype



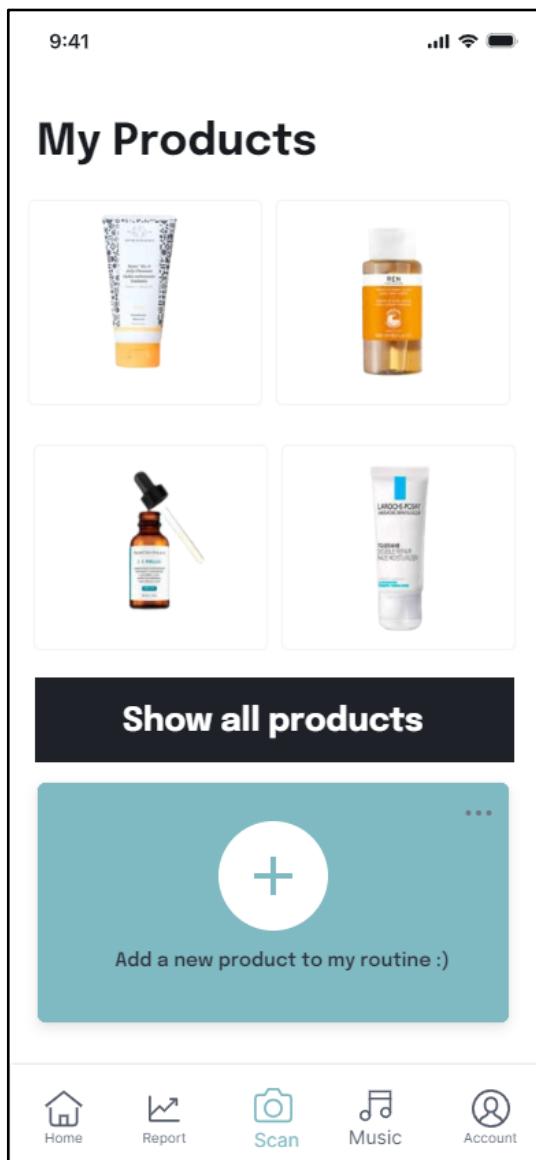
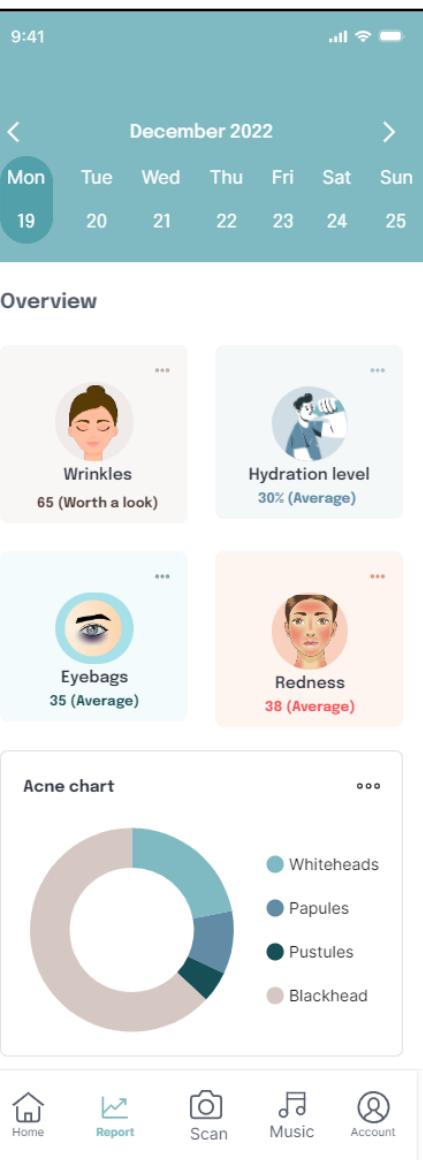
Sign up



home page



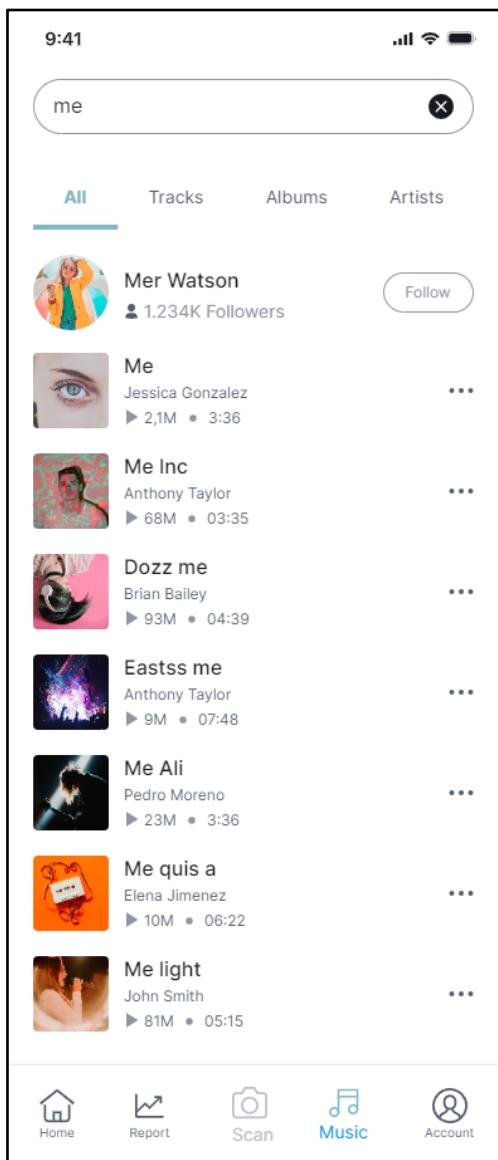
Skin care analysis report



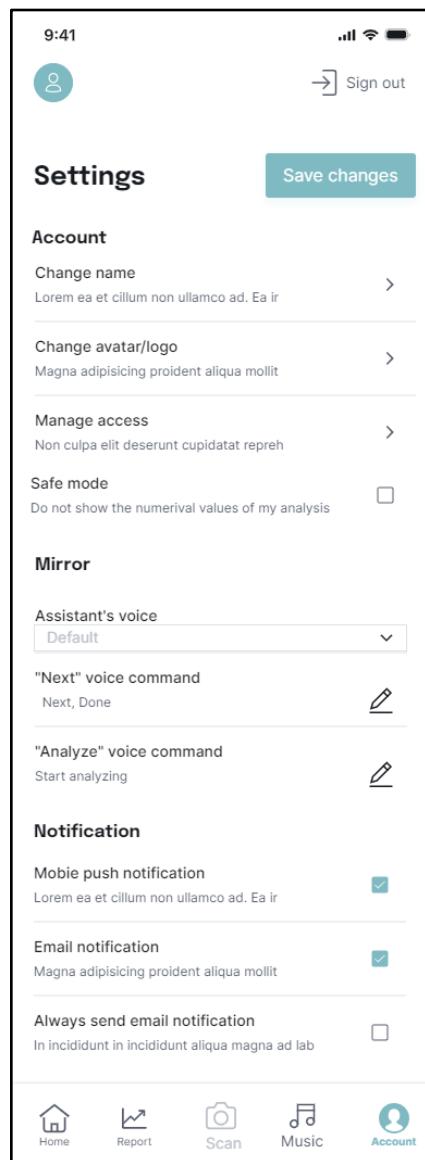
Safe mode

View my products

Scan a new product.



Music



Account settings



This is after the sign up that lets the user chose their goals.

Tools

There is a huge variety of prototyping tools. The most well-known tools are Figma and Justinmind.

Figma: Because of its collaborative nature and user-friendly interface it has grown in popularity. It enables numerous team members to collaborate on a design project at the same time, enabling real-time collaboration and seamless workflow. Designers can use Figma to develop stunning UI designs, interactive prototypes, and even user testing. Its adaptability and accessibility make it an ideal solution for teams working remotely and develop user interfaces. What I loved about figma was the wide collection of built-in plugins which improve the functionality and expands the capabilities of Figma.

Justinmind: Justinmind, stands out as a full prototyping platform with robust capabilities for prototyping. It allows development of extremely interactive and dynamic prototypes with complex interactions, animations, and logic. To speed up the design process, the tool includes a variety of pre-built UI elements, interactive widgets, and templates.

I used Visily which is a prototyping website that allows the creation of wireframes and prototype and has a huge variety of editable templates that I found extremely helpful to use. I used Visily to optimize my prototyping workflow and rapidly translate my ideas into actual prototypes. Its broad template library and editing capabilities helped me focus on creativity and user experience. Moreover, I found it easy to edit all the interfaces as they were all on the same page. In justinmind I must open a separate tab for each screen which makes it hard to navigate between them.

I also got a mirror like what I want the product to look like to create a prototype for testing.

Fitts's law

Fitts's Law is a fundamental principle that connects the time required to get to a target to its size and distance from the starting point. Fitts's Law was employed in my project to improve the usability and efficiency of the user interface.

This law was used to ensure that the interactive features in my system, such as buttons, and navigation elements, are adequately large and easily reached. This allows users to interact with these aspects more accurately and rapidly. In terms of size, I made sure to make the targets large enough to be easily found and selectable, reducing the risk of errors. This is especially important in my case since it is a mobile application (small screen size). Regarding distance, I made sure that the layout and placement of the buttons are put in a way to decrease travel distance for users to reach their intended targets. Elements that are frequently used or important are put in easy-to-find areas, reducing time-consumption.

For example, the save changes in the setting menu was placed at the top so the user doesn't have to scroll all the way down to save their changes, its size was appropriate, and its color was distinguishable. Elements that are frequently accessed or important are positioned in easily accessible areas, reducing the need for complicated and time-consuming finger movements.

The scan a new product button is obvious (big and distinguishable color) that makes it easy for the use to find what they want. Also, the button to show all the products is in a distinct black color and a big color.

Evaluation of user experience of my system's functionalities

To ensure the user experience of my system, I used the User-Centered Design principle by doing user research to understand the pains and goals of my target users. This provided me with important insights into their preferences and needs, which influenced my design selections. In this section, I will outline the user experience principles and heuristics and demonstrate how I used every concept to evaluate the user experience of my system.

Don Norman principles:

Discoverability:

1. The slider that appears when the user turns on the light signifies that the intensity decreases when the finger is dragged to the left and increases when the finger is dragged to the right. This design is intuitive and known to people nowadays so it will be easily discoverable.
2. The product itself is a mirror which urges the users to investigate it. This makes following the routine steps and the analysis process easy and natural to do.
3. When following the instructions of how to apply the products the mirror augments the direction lines on the users face which makes the process of applying the products easier.

Visibility:

1. The selected goals in the “choose your goal(s)” screen will be darker signifying to the user that they chose that goal.
2. The date selected in the report screen is darker in color to show users which day is currently being shown.
3. In the settings screen when the checkbox is ticked, it will change color to blue.
4. When a product is scanned successfully it will be added to “My product” section.
5. When the user is on a screen, the icon will turn blue showing where the user is currently.
6. When the analysis process is taking place, a glowing aura will breathe around the user.
7. Incorrect sign-up credentials should show an error and be colored red.
8. Augmented lines shows where the product should be applied.

Affordance:

1. The icons used in the navigation bar signify what each screen does. For example, a home logo is used to show the home screen, a chart is used to show the reports section, a camera is used to show the scan screen, a melody is used to show the music screen and a person is used to show the account screen.
2. The button on the mirror shows that it should be pressed.
3. The mirror's flexibility encourages the user to adjust its height and angle.
4. The scrolling bar encourages the dragging motion to change brightness.
5. The QR code that will be in the product's box encourages people to scan it (out of curiosity).
6. The lines on the user's face in the mirror prompts the user to touch those areas in real life.

Mapping:

1. Left and right arrows next to the data maps the day before and after the current day.
2. The border around the QR code scanner maps out where the QR should be placed.
3. When the light is turned on a slider appears on top. Metaphorically the right maps higher brightness and left maps a lower brightness.
4. The augmented guidelines are mapped correctly onto the user's face.

Simplicity:

1. The pictures used were very minimal, with no backgrounds to make sure the user isn't distracted by too many visuals.
2. The user can easily find everything they want as all the screens don't have too many elements and only cover one functionality.
3. The analysis isn't overly scientific and complicated, and the user is only shown what is needed.
4. Only one kind of news is shown a day to not overwhelm the user.
5. Initially only a selection of the products is shown to simplify.
6. Settings aren't overly complicated and aren't nested.
7. The color palette used is kept minimal.
8. Augmented lines are kept minimal..

Feedback:

1. The glow around the face in the mirror gives feedback that analysis is in progress.

Neilsen's Heuristics:

Visibility of System Status:

1. When analysis is being carried out, a glow shows the process.
2. When the product is analyzed correctly, the user is redirected to the previous page.

Not included: progress should be included.

Match Between System and Real World:

1. When following the instructions of how to apply the products the mirror augments the direction lines on the users face which makes the process easier.
2. The analysis will be done in real life through the mirror and the results will be shown in the application.

User Control and Freedom:

1. User can add and delete products from “my products.”
2. Users who don’t want to see numerical evaluation of their skin can simply hide them by enabling safe mode from the settings, and those who do want to see numerical values and find it effective can choose to disable the mode from the settings.
3. Users can change the light mode and intensity.
4. The user is not only restricted by the recommended products and can view other products.
5. The user can change the keyword used to move through the routine steps from settings.
6. The user can change the keyword used to start analysis of the face from settings.
7. The user can select the voice they prefer.
8. Users can sign up using google, apple or Facebook account. They can also log out.
9. View all in home page shows all the recommended products.
10. Can go back at any point.

Not included: user should be able to change their goal.

Consistency and Standard:

1. The navigation pane is the same on every screen.
2. The color palette is consistent.

Error Prevention:

1. Signing up using google/Facebook/apple which simplifies passwords, enables single sign-on, and improves account recovery and security procedures.
2. Prevents errors when adding a new product to the routine by scanning it instead.
3. If a user says next and done a lot in general and doesn’t mean to move to the next step of the routine, they can change the keyword to a less commonly used word.

Not included: if the user proceeds without selecting a goal in the initial setup they won’t be able to adjust it. For improvement the user should be presented with a “are you sure message” and they should be able to adjust their goal from settings

Recognition Rather than Recall:

1. Avoid memory load in saving the password by allowing sign in with other accounts.
2. The active page is blue.
3. I used icons to recognize what the analysis card is talking about.
4. I used visualizations to help people analyze their results efficiently.
5. Images for the products instead of just their names. Also, the price of the product is shown.
6. The image of the song is shown so users can recognize it and select it.
7. The mirror shows where the product will be applied instead of the user remembering where.

Flexibility and Efficiency:

1. Signing up can be done in multiple ways.
2. Users can press their image at the top right of the page to see the personal account screen or the account part of the navigation bar.

Not included: user can add the product manually as well.

Aesthetic Design:

1. The colors are kept minimal and cohesive throughout the application.
2. The mirror can have a modern for those who prefer or an antique look for those who want a retro look.
3. The overall look of the application gives a feel of simplicity cleanliness and sleekness.
4. Headings were used to show the main parts of the screen.
5. The application doesn't rely on too much text and instead uses images.
6. The augmented lines are simple and not overwhelming or confusing to the user.

Help, Diagnosis:

1. Visual augmented lines help user know where and how to apply each product, so the user won't feel incompetent.
2. Voice outputs from the mirror help user know how much and what motion to apply the product so user won't feel confused.
3. The QR code helps guide the user through the application download.
4. In case incorrect credentials were entered, an error message appears showing why.

Not included: diagnosis in case the analysis failed. (Why? What to do?). A feature should be found to allow live chatting with customer support to help and diagnose in case an error occurs).

Documentation:

Documentation should be fully developed in the future.

Overall, the system's user experience design adheres to well-established concepts and heuristics, resulting in a suitable and intuitive user experience. Intuitive designs, clear visual cues, affordances, mapping, simplicity, and feedback all contribute to a system that is simple to learn, efficient to operate, and improves overall user experience. There are a few places that might be addressed to improve the user experience. To begin, a progress indicator should be provided throughout lengthy operations such as analysis to offer consumers a sense of completion. Second, allowing users to adjust their goal after the first setup would provide flexibility and user control. It would also be beneficial to incorporate a tool for live chat assistance to assist users in the event of faults or complications. Finally, documentation should include details to enable users fully grasp and successfully use the system's functions.

Tools I used to create my user interface and experience.

1. To design the basic structure and layout of my application, I used Visily, a wireframing and prototyping tool. Its pre-designed templates aided in the prototyping phase, allowing me to visualize the user flow and interactions more easily.
2. I used remove.bg to ensure a consistent appearance and feel throughout the application. This ensured a uniform visual style and removed any distractions that can interfere with the user experience.
3. enhance.io: This application enabled me to enhance the visual appearance of each image, ensuring that they were professional and visually appealing reflecting the application's high standards.
4. I used colorhunt.co to find a suitable color palette that matched the objective of my application. This tool provided professional-looking color schemes that would evoke the desired feelings of my application while also improving the overall visual aesthetic.
5. I used designspiration.com to ensure that the photos in my application were consistent with the color palette I chose. This site helped me construct a visually cohesive collection of graphics that supported the entire design and fit the house style.
6. I used a physical mirror to test and develop the usability and interaction design of my application. This enabled me to prototype and mimic the experience of interacting with my product, verifying that users could properly navigate and interact with it.

Why user personas?

"Designing for everyone results in an unfocused goal that will dehumanize the profile of future users."

People are no longer passive consumers of a product or service; instead, they are actively interacting with it; they are engaged in a 'conversation' in which both sides, user, and product, are actively inquiring and answering. Personas defined during the design phase assist designers imagine that conversation.

User personas are an invaluable tool in UX design. To begin, they humanize users by developing fictional representations with names, backgrounds, and goals, so encouraging empathy and understanding. It dives beyond age, demographic, etc. and lets us dig into the psychology of the users. To add, personas direct design decisions by prioritizing features and functions that are relevant to user demands. They also encourage team collaboration and alignment by acting as a shared language for shared communication which ensures coherence. Moreover, by anchoring the process in real user insights, personas enable a user-centered design approach, preventing assumptions and prejudices. They aid in the scoping and prioritization of design work, as well as the effective communication of study findings. Finally, personas promote iterative improvement, which results in more impactful and user-centric solutions. In general, user personas improve the design process, resulting in better user experiences. Better user experience means higher customer retention and acquisition and an increased profit.

Categories, classifications, and behaviors of my target users.

End user segmentation

Segmentation types	Segmentation Chosen .	Segmentation criteria
Demographic Segmentation	Profession	Any profession
	Age	Varying ages but I expect teenagers to be the most dominant users because According to a poll performed in the United States in February 2021, skin care was the top purchased beauty category across all age groups. Skin care is the product category on which most Gen Z shoppers (aged 18 to 24 years) spend the most money.
	Gender	mostly women as they tend to take care of their skin more than men.
Geographic Segmentation	Country	Any country
Lifestyle Segmentation	Interests and activities	Any interests and activities but they tend to have no time.
Behavioral Segmentation	Browsing habits	Browsing habits: doesn't have much time
Business Customer Segmentation	Business size	Business size: individual use

User categorization will be based on:

1. Skin Types:
 - a. Oily Skin: Users who produce excessive oil and have acne.
 - b. Dry Skin: Individuals with low sebum production can have issues such as dry patches or fine wrinkles.
 - c. Combination Skin: People who have a mix of oily and dry skin on different sections of their face.
 - d. Normal Skin: Users with normal sebum production and few skin issues.
2. Skin Issues (their goal):
 - a. Acne: Users who have regular breakouts or acne-related issues.
 - b. age/Wrinkles: Users who are concerned about aging.
 - c. Users with uneven skin tone or dark areas experience hyperpigmentation.
 - d. Sensitivity: Users with sensitive or quickly irritated skin.
 - e. Dryness: Users who have dry or dehydrated skin.
3. Skincare Knowledge and Habits:
 - a. Skincare Enthusiast: Users who understand skincare ingredients, regimens, and products.
 - b. Minimalist: Users who prefer a streamlined skincare routine with few products and steps.
 - c. Inconsistent: Users who have difficulty sticking to a consistent skincare program.
4. Technology Aptitude:
 - a. Tech-Savvy: Users who know how to use technology.
 - b. Technologically Challenged: Users who require more assistance with technology.

These categories and classifications will help define distinct user personas, each with their own goals, motivations, and pain points. A different skin care routine will be given to each user category.

User behavior

From the user research conducted and the segmentation and categorization, I concluded that the user behavior is as outlined below.

1. Users tend to have busy lifestyles and may not have much time to fully understand their skin type, create a skincare routine and update it as their skin changes.
2. Users don't prioritize a lot of time for themselves.
3. Users don't know how to deal with their skin type.
4. Users get so overwhelmed when trying to choose the product that they put it off for so long and their skin gets worse as a result.

Understanding these habits will allow you to design the UI and UX of the user-centered skincare experience that caters to the needs and preferences of each user segment.

Testing

Test scenarios and tasks.

Documentation provided:

User Manual

GLO Smart Mirror

- Analyses your skin
- Recommends a personalized routine
- Recommends you products
- Tracks your skin's health



Voice enabled

This product is voice activated !



Application supported

Download the supporting application by scanning the attached barcode

Voice commands guide



Say "Analyze now" to start analyzing your skin



Say "Start routine" to start your skin routine.



Say "next" to move through your skin routine.

For additional questions don't hesitate to contact us on glo@gmail.com



With love, GLO team.

Scenario 1: Setting up mirror.

Tasks:

1. Unbox the product.
2. turn mirror on
3. turn light on
4. Adjust brightness.
5. Download application.

Expected series of step:

1. Open box
2. Get a mirror.
3. See documentation and card with QR code.
4. Turn on the mirror.
5. Tap on star on top.
6. Drag left and right to adjust brightness.
7. Scan QR code, download.

Scenario 2: analyze their face.

Tasks:

1. Analyze your skin through the mirror.

Expected series of step:

1. Turn on the mirror.
2. Say analyze now.

Scenario 3: go through a skin care routine.

Tasks:

1. follow the mirror in a routine.

Expected series of step:

1. Get notification for reminder of the routine.
2. Turn on the mirror.
3. Say “next” after each step.

Scenario 4: look through the application. (Describe how you will do each task)

Tasks:

1. Sign-up
2. Describe what you can do through this home page?
3. What series of steps would you take to find out your skin hydration in 24th of April.
4. Add a new product to your routine.
5. What other functionalities do you see? How do you expect it to work?
6. Change the voice of the mirror.

Expected series of step:

1. In sign-up describe the process.
2. Browse products, see my recommended products, see UV and temperature for the day and read articles.
3. Go to report, swipe left/right to get to that date and see top right card.
4. Go to scan, add a new product to routine, position QR in the middle of the screen, hold.
5. Music, play music through app.
6. Account, mirror, Assistant's voice drop down.

User's end to end experience:

First use: Purchase the mirror, open it, find the QR code and documentation. Scan QR code, download application and sign up using google.

Analyze face: turn on mirror, adjust light mood as the user wants, adjust brightness, say analyze now, wait till done, open application, go to reports see page.

Follow a routine: get notification on app, turn on mirror, adjust light and brightness, say start routine, follow steps, say next, turn off mirror.

Buy new products: open app, home, see recommended products, filter by price, purchase it from stores.

Customer journey map:

Journey Steps	Discovery Why do they even start the journey?	Purchase Why would they trust us?	Onboarding and First Use How can they feel successful?	Sharing Why would they invite others?
Actions What does the customer do? What information do they look for? What is their context?	Look for a skin care solution.	Analysis done by a well-established machine learning algorithm Product database is from a well-established, tested application	Unbox mirror Scan QR code Download application + sign up Analyse skin	Post a review on their accounts Tell people that express their skin care issues to them
Needs and Pains What does the customer want to achieve or avoid? <i>Tip: Reduce ambiguity, e.g. by using the first person narrator.</i>	Reduce confusion from the huge amount of products Improve skin health	Need for a more structured way to do their skincare. Don't want to go to a dermatologist regularly	Sign up and setup process should be streamlined Analysis of face should be quick System not too complicated	Help others Feel proud of their accomplishments
Touchpoint What part of the service do they interact with?	Online advertisement	word of mouth reviews about us	mirror Application Documentation QR code	
Customer Feeling What is the customer feeling? <i>Tip: Use the emoji app to express more emotions</i>	!	:(:)	:-)



Testing methodology:

The users will be given the mirror, the application prototype, the QR code, and the documentation. They will be given a series of steps to complete, and I will observe them (observation testing methodology). I will also ask them for their opinion (have a conversation) at the end of the testing process.

Description of the testing process:

I captured a video for one user and recorded the voice of another, but it turned out that people felt uncomfortable being recorded, even though they initially agreed to it. As a result, their behavior changed, prompting me to switch to taking observation notes for the remaining users.

Two of the users had difficulty understanding their tasks, despite receiving the same resources as the other participants. Therefore, I provided more guidance to help them navigate through the process.

Most users encountered challenges when evaluating and testing the application on their laptops. The prototype lacked interactive features, and the text was too small to read. Consequently, they struggled to comprehend that the prototype was not fully functional, leading to some confusion and unusual interactions.

During my observations, I identified several common usability issues. Firstly, users struggled to grasp the initial steps required to analyze their skin, often resorting to simply looking into the mirror. Some even skipped this task, mistakenly believing that the task was incomplete and by mistake.

Most users expressed confusion when encountered with the music screen. They mistakenly interpreted it as a list of skincare experts, failing to understand its true purpose. Even after talking to them, they said it was unnecessary and that it might affect the voice command. They said that they would rather hear calm music and mute it at any time.

Furthermore, I noticed that many users had trouble navigating the home page, finding it overwhelming and hard to comprehend. Additionally, some users did not understand what the "dove thing" is and chose to skip over it without grasping its purpose.

Notably, individuals with limited skincare knowledge, particularly men, faced significant confusion when using the application. The analysis results did not translate meaningfully to them, despite acknowledging the potential benefits. Understanding the specific meanings behind each value proved challenging for them.

In contrast, I also observed positive aspects of the user experience. Firstly, all users found the initial setup process of the mirror and application to be highly intuitive and efficient, resulting in a smooth start to their interaction with the system.

When it came to scanning the product, users generally found it easy to perform. However, they expressed a desire for larger text on the button, as the current size proved somewhat difficult to read. Additionally, users encountered confusion regarding the "my products" feature, suggesting that providing informative details could help alleviate this issue, especially for newer users who are unfamiliar with the functionality.

Regarding the settings, all users found them easy to comprehend and adjust according to their preferences. However, there was some ambiguity in the wording related to changing the next step and initiating the analysis. Users felt that the phrasing used for these actions could be clearer and more explicit, leading to a better understanding of the system's behavior.

Benefits and drawbacks of the end-user testing process

Benefits of the end-user testing process:

The testing process allowed me to interact with the target customers. Since I had a normal conversation with the users after the testing it allowed me to understand them so well and they provided valuable feedback on their experience with the mirror and application prototype. This feedback provides insights into usability issues, confusion, and suggestions for improvements.

My testing process replicated real-world scenarios by providing users with the mirror, prototype, QR code, and documentation. This allowed users to engage with the system in a more authentic manner, providing a realistic understanding of how they would interact with it in their daily lives without my involvement (it was hard not telling them what to do).

The observation testing methodology allowed me to closely observe users' behaviors and reactions. This method revealed insights that users did not explicitly mention during conversations as they didn't pay that much attention. This helped me uncover usability issues and areas for improvement. For example, when users didn't understand what the music screen was, they didn't look at the navigation bar icon. They didn't read the recommended products (too small).

The testing process highlighted several common usability issues, such as difficulties in understanding the initial steps, confusion about certain features (e.g., the music screen and new section). Identifying these issues is crucial for addressing them and improving the overall user experience.

Drawbacks of the end-user testing process:

Initially recording videos and voice recordings of users seemed like a useful approach. However, it became apparent that users felt uncomfortable being recorded, which affected their behavior and may have influenced the overall testing process. This discomfort might have compromised the authenticity of their interactions with the mirror and application.

Due to time constraints, I only did test for 7 people. A larger sample size would provide a more comprehensive understanding of user perspectives and experiences.

The prototype used for testing lacked interactive features and had small text, causing confusion and hindering users' ability to fully comprehend its functionality. These limitations may have impacted users' understanding and perception of the system, potentially leading to skewed feedback.

The user documentation was not printed so users didn't interact and benefit with it as much as I expected. In general users didn't completely understand what even a user manual is.

Change based on feedback gathered:

A user recommended addition of a guest account. While I think this idea is worth looking more into and can provide valuable advantages, this can be added to the application later after more thorough researching.

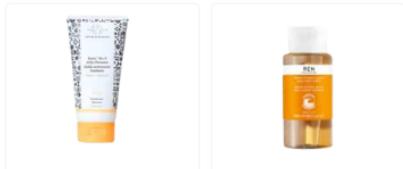
The screenshot shows the mobile application's home screen with several UI elements and their descriptions:

- Top Bar:** Displays the time (9:41), signal strength, and battery level.
- User Profile:** Shows "Hello Sarah" next to a circular profile picture.
- Section Header:** "Recommended for you" with a "View all" link.
- Product Cards:** Three cards showing product images, names, ratings, and reviews:
 - Cerave cream: 4.9 stars, 12 jds
 - Salicylic Acid: 4.7 stars, 17 jds
 - Sunscreen: 4.5 stars, 4 jds
- Section Header:** "Your daily dose of news"
- News Card:** "Cleanser alternative Non-scented soaps" with a "Read more" button and a Dove soap image.
- Weather/UV Index:** A card showing "UV index 6 Protection needed" and "Temperature 26 °C".
- Bottom Navigation Bar:** Includes icons for Home, Report, Scan, Progress, and Account.

Annotations:

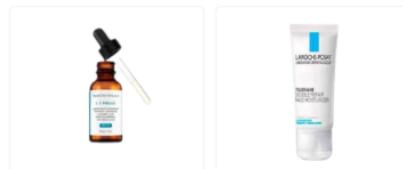
- Top Right:** A callout box states: "The recommended for you section was moved to the top of the screen as users thought it was more important and should be paid more attention to."
- Middle Right:** A callout box states: "The news section was labeled to clearly define what the block is."
- Bottom Right:** A callout box states: "The random products were removed as all users expressed how they wouldn't use it and it contributed to the overwhelming selection of products. If the user wants to see a wider selection, they will resort to the traditional ways."
- Bottom Left:** A callout box states: "The UV and temperature were put under the news as requested by all users."

My Products ⓘ



The button was made clearer per user requests.

An information will show what “my products” means. (the products that are currently in use in the routine.)



Users expressed another way to add the product without scanning. (More user freedom and control which will be applied later on).

Show all products



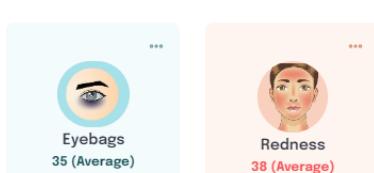
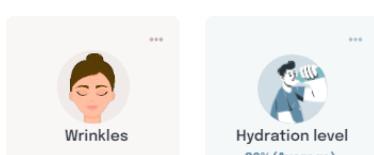
Add a new product to my routine

...

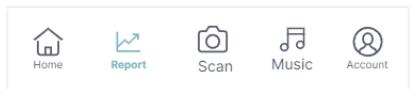
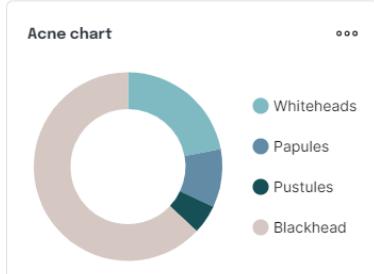




Overview



See your goal
Track your progress >

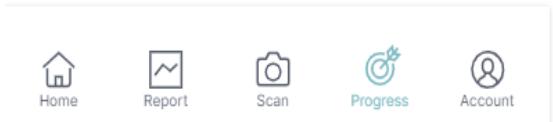
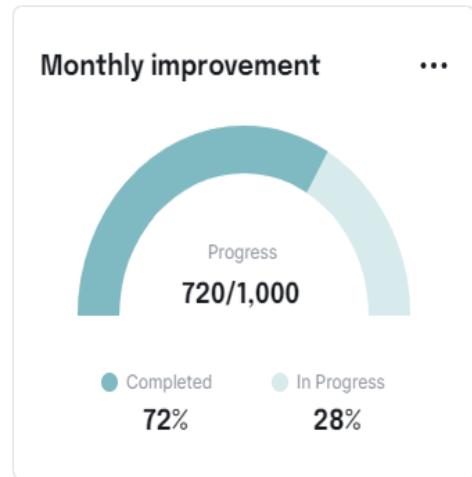
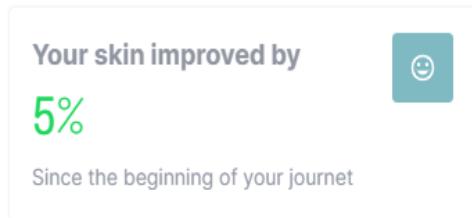


Users said that they wanted to see how far they came so I added a button to the analysis screen to direct them to the goals screen.

The music feature was removed.

My Progress ⓘ

A track your goal screen was added to show the users how far they have come.





Settings

Save changes

Account

Change name
Lorem ea et cillum non ullamco ad. Ea ir >

Change avatar/logo
Magna adipisicing proident aliqua mollit >

Manage access
Non culpa elit deserunt cupidatat repreh >

Safe mode
Do not show the numerical values of my analysis

Mirror

Assistant's voice Default ▼

Voice command to move to next step.
Next, Done edit

Voice command to move to analyze face.
Start analyzing edit

Notification

Mobile push notification
Lorem ea et cillum non ullamco ad. Ea ir

Email notification
Magna adipisicing proident aliqua mollit

Always send email notification
In incididunt in incididunt aliqua magna ad lab

Home Report Scan Progress Account

Based on user behavior, I have decided to eliminate written documentation and utilize the mirror for the onboarding process. Text prompts will appear on the mirror, guiding users through voice commands. This approach improves user understanding and engagement, simplifies onboarding, and eliminates the need for external instructions. By leveraging the mirror's interface, users can seamlessly interact with the system using intuitive prompts and voice commands.

Moreover, the mirror will play soft music during the routine. The user will be able to mute this music and adjust its volume.

Review of tools and how they can improve project.

1) **Seven-Stages of Action**, developed by Don Norman, helps in understanding and improving the user experience by breaking down the user's interaction into sequential stages.

The stages:

Goal: What result do I want to achieve?

Plan: What options do I have for achieving my goal?

Specify: Which of these options will I choose?

Perform: How do I execute my plan?

Perceive: What happened when I did that?

Interpret: What does that result mean?

Compare: Did I reach my goal

I can find possible pain points and places for improvement by evaluating each stage. In my case I used this tool as follows:

1. I realized that the users had goals that they wanted to achieve through the application that was missing. For example, users expressed that they want to see how far they've come which was missing. In my next iteration I added this feature.
2. From my testing I gathered that there wasn't an alternative option to scanning the product using a QR code and some users preferred doing it that way. Some users said, what if the QR code doesn't work because the product had a defect for example? What would happen then.
3. Choosing where to go to achieve the task and which option to choose was very easy for all users. I didn't observe any users unable to choose between options.
4. Users were stuck trying to execute plans like analyzing the skin, moving through the routine, etc.
5. I couldn't test how users perceived outcomes as the prototype wasn't fully functional but when describing how everything will turn out it seemed that users perceived the outcome the same way expected.
6. Interpretation of the results of analysis of the skin wasn't easy and as impactful for users who didn't have as much skincare knowledge. Therefore, they had to search more on the internet to find more information about each value. The description of each value was provided to help them interpret results better.
7. The feedback from users of what the expectation, pains and needs are during the research was fully addressed in the final prototype.

2) **Ideation** tools and techniques facilitate brainstorming and generating creative ideas. These tools can help improve projects by encouraging innovative thinking and problem-solving. Some techniques include brainstorming, worst idea, sketching general ideas without assessment. In my project, initially, I brainstormed by writing down all the ideas that came to mind on sticky notes. This helped me explore and envision all the

possible ideas. Later I produced a sketch for the idea that I liked best by drawing what I think this solution will look like and do. Sketching was quick, inexpensive, and helped me embody all the ideas that I was thinking onto paper so I can see it more clearly. After creating the sketch, I showed it to my parents and verbally described to them my idea. This step helped me be more creative and take the point of view of other people. A weird way that generated more ideas to my application was writing a story about a fictional character. The story helped me empathize with the target segment and generated more ideas as to how they will interact with the product. In each ideation step, I went into more and more details for my system getting me closer to my vision.

3) **Sketching** allows visualization of ideas and concepts. It enables us to investigate several design options and iterate on the visual elements before delving into thorough execution. Sketching assists in the refinement of the layout, user interface, and interactions by producing a tangible representation that can be shared with stakeholders for feedback and validation. It cuts costs as it decreases the need to redo the project.

4) The way users **perceive** a system using their five senses (sight, hearing, touch, taste, and smell) has a substantial impact on the user experience. I made sure the layout and colors meet the business goals and standards as they have an impact on the system's aesthetic and usability. I also offered the mirror to have a retro aesthetic to evoke feelings of nostalgia and elegance in users. I allowed the user to incorporate their hearing by allowing voice feedback and playing soft music during the routine. This will provide feedback and engage users better, enhancing the experience. People also get sensory input and perceive their surroundings using touch, smell, and taste as well. While these sensory inputs weren't specifically targeted in my system they are still important in making the UX better.

5) **Graphic design softwares** creates visually appealing and professional designs for the project. These tools enable the designing of user interfaces, icons, illustrations, and optimizing visual assets. Visualizing the application will allow users to interact with the application and provide feedback allowing us to stick to user-centered design. I used Visily which let me translate my ideas into something that user can evaluate and see.

6) **Analytics and user behavior tracking technologies** provide useful information about how users engage with the system. We can analyse user behavior trends, discover bottlenecks, and optimize the user experience by measuring data such as page views, click-through rates, or user journeys. Google Analytics, for example, can provide statistics on user demographics, traffic sources, and behavior flow, whereas products such as Hotjar and Mixpanel include heatmaps, session recordings, and user feedback features to acquire a better knowledge of user interactions and pain areas.

Reflection

“The best foundation you can wear is glowing healthy skin.”

Taking care of our skin can be a daunting task in today's fast-paced society. Individuals who value their overall skin health frequently struggle to find the correct direction with an overwhelming amount of skincare routines and an excess of products flooding the market. It's easy to get lost in the internet's sea of information and become unclear about which skincare products are genuinely beneficial and which don't work for you and are only a financial waste.

The mirror augments visual guides onto the user's face and offers clear voice directions regarding the appropriate product quantities to improve the user experience and ease product application. Users can save time and find it intuitive following the recommended routine by decreasing cognitive overload and avoiding the need for extensive research on product application. The Smart Mirror goes beyond just providing guidance. It provides users with peace of mind by ensuring they get the most out of their skincare purchases. The mirror evaluates user progress and determines which goods genuinely give benefits by tracking the performance of the recommended products via its algorithm. This research enables customers to make more educated selections and avoid wasting money on things that may not be as valuable for them. Moreover, to create a more immersive experience, I included background calming music to play during the routine.

The mirror is integrated with a user-friendly application to ensure simplicity and ease of usage. The application presents users with a customized interface that recommends the best skincare products based on their specific skin analysis. This feature simplifies the decision-making process and assists users in making educated decisions by filtering down the overwhelming array of product options. The main screen is purposefully created to provide users with a clear and uncluttered experience. It concentrates on giving important information such as the UV index, temperature, and a single carefully picked news article. Furthermore, the application has a complete dashboard where users can track their daily skin analysis and watch the improvement of their skin over time. In response to user feedback and the aim to increase motivation and trust in our product, I designed a new goals screen. This update provided users with a chart, clearly demonstrating how far they have come and how close they are to attaining their goals. Moreover, to easily include new products in the skincare routine, users can scan the QR code or barcode with the Smart Mirror.

The settings' flexibility is an important addition to the product because it allows customers to personalize the command word for advancing to the next step of the routine and stating the analysis, preventing errors that can occur when specific words are frequently used in the user's vocabulary. Furthermore, I understand the importance of creating a comfortable user experience including senses. That is why I gave users the ability to choose the feedback voice of the mirror.

Another key aspect of my product is the streamlined onboarding process. I employed proactive help; when the user first launches the mirror they are guided through the important instructions and voice commands by getting voice prompts from the mirror and text appearing on the mirror. This was employed as I realized during user testing that no one reads the documentation and prefers a more real time guided process.

The product is most likely going to be expensive restricting the number of users being able to purchase the product. The product needs a touch screen, camera to analyze, the integration of an API to analyze skin and get results (Haut.Ai), mirror structure, voice integration, etc. This also increases the possibility of maintenance and failure. Therefore, customer support in case of failure should be easily accessible and offered in appropriate prices.

To improve the UX/UI in future versions I suggest the following.

I will continuously evaluate and refine the user interface to maintain a fluid and intuitive experience. Simplify navigation, reduce clutter, and prioritize critical information for simple access.

1. Enhance customization capabilities so that users can customize color schemes and text sizes. This enables consumers to create a genuinely personalized experience.
2. Integrate a responsive help system within the mirror to provide real-time assistance to users. That way users can communicate with the mirror streamlining the process better and enhancing the experience by ensuring the user doesn't get stuck and feels as if they are talking to a personal assistant.
3. Include multilingual support to appeal to a wide user base.
4. In the future, integrating skin care specialists within the Mirror would be an excellent addition to consider. This feature would allow users to receive individualized solutions and expert advice based on their specific needs.
5. The user interface can be a holographic interface projecting from the mirror onto the table instead of an application integrating it into the real world better.
6. Add a feature that will test skin sensitivities to specific issues and remove these products from the recommended.

Encompassing everything, I would argue that my product is sustainable. I think the mirror and application integrate so well with each other and into the users' lives. The product also offers an intuitive design motivating users to look forward to their skin care routine. Moreover, there is potential for including more functionalities into the application enhancing the performance of the application.

The overall journey

Necessity is the mother of invention. I have always valued skin health, but I've struggled with understanding my skin type and curating the correct routine and selecting the most effective product which for the longest time affected my confidence. I also used products that made my skin worse causing even more frustration.

To create a solution that resonates with users, I applied the user centered design approach to empathize with users. I started by conducting thorough user research, creating user personas, and imagining user stories. The user stories inspired the idea of creating a personalized connection to the product which in turn translated to adding the personalized settings feature (changing mirror commands and voice.) and was incorporated into the entire interaction. My personal connection to the target audience aided this approach by helping me to quickly empathize with their issues and objectives. Through this study, I learned a lot about how customers imagined the product and how they wanted to interact with it.

I did brainstorm sessions, jotting down ideas on sticky notes, to further encourage creativity. I carefully selected one of these concepts and proceeded to sketch it into a visual representation. To obtain input from users, I shared the sketches with them, allowing me to gather insights and enhance the design. With this feedback in mind, I created a prototype that included the requested changes.

I performed user testing sessions and closely observed how users engaged with the solution to put the prototype to the test. This hands-on approach enabled me to discover any usability concerns and obtain further input from participants through talks. Using these observations and ideas, I iteratively improved the prototype, considering the useful comments received.

I ensured that the final product was the outcome of an iterative process that was matched with users' needs and preferences by combining user research, feedback-driven design iterations, and hands-on observation. This user-centered approach not only assisted me in addressing my personal issues, but also in developing a solution that connected with others who had similar worries.

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