



Department of Computer Science and Software Engineering
Faculty of Computing
Sri Lanka Institute of Information Technology

User Experience Engineering - SE3050



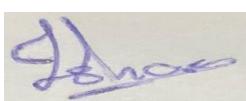
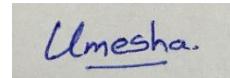
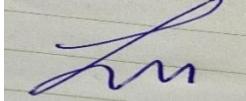
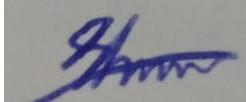
Team EyeZen
EyeZen – The Vision Impairment Tester
WE – UEE – 21

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4	IT21169144	Karunarathne R.Y.D

Declaration

We declare that this is our own work, and this report does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any other university or institute of higher learning, and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgment is made in the text. Also, we hereby grant to Sri Lanka Institute of Information Technology the non-exclusive right to reproduce and distribute our report in whole or part in print, electronic, or another medium. We retain the right to use this content in whole or part in future works (such as articles or books).

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Abstract

The report addresses the pressing issue of the need for comprehensive and accessible early-stage eye care application as there is a high risk of eye diseases with the increase of screen time in the digital era. It recognizes the growing demand for effective eye health management and identifies the lack of suitable solutions in contemporary healthcare connecting with technology.

The primary purpose of this report is to introduce a flexible mobile application designed to bridge the gap between modern technology and ocular health management. It aims to provide a solution that caters to various user demographics and their specific eye care requirements.

The report dives into several key areas, including identifying the user groups, conducting user research, designing a user-friendly platform, and the process of development of the innovative mobile application by customization the questions to address age-specific eye concerns, the incorporation of indigenous treatments such as Ayurveda, and the evaluation of a curated repository of natural remedies.

The report presents the mobile application as a novel and comprehensive strategy for managing ocular health. By seamlessly integrating technology, tradition, and modern methodologies, it offers users a tailored approach to early identification, all-encompassing care, and informed decision-making regarding their eye health.

The conclusion upheld in this report is that the innovative mobile application represents a groundbreaking solution in the field of eye care. Its unique combination of customization and innovation offers a fresh path, redefining eye health management by catering to a diverse range of users and emphasizing early identification, holistic care, and informed decision-making.

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List of Abbreviations

HIPPA - Health Insurance Portability and Accountability Act

1. Introduction

This study proposes a flexible mobile application that smoothly connects contemporary technology and ocular health management in response to the urgent demand for thorough and accessible early-stage eye care. This innovative application, created for mobiles, includes many features that are specifically suited to meet the varied user demographics and unique eye care requirements.

The customized questions collected through the specialists in the ocular health care field, skillfully address the eye concerns of users varying in age limit from infants to adults, are the application's distinguishing feature.

The novel incorporation of indigenous treatments - a field frequently disregarded in contemporary healthcare solutions - is what really makes this application stand out. The program sets the door for a comprehensive strategy for managing ocular health by seamlessly fusing conventional wisdom, like Ayurveda, with modern eye care techniques. Users gain access to a curated repository of natural remedies, expertly evaluated to ensure effectiveness and safety.

Furthermore, the application provides a great opportunity to detect vision problems at an early stage, through the questionnaire which has been customized to direct parents to measure the vision of their infants who are below the age of one year. In the field of eye care, this nexus of custom and innovation offers a fresh paradigm. For a variety of users, the app redefines eye health management by fusing technology, tradition, and modern methods, with an emphasis on early identification, all-encompassing care, and educated decisions.

At the same time, this application ensures accuracy by only utilizing the details taken from ocular health specialists. In this digital era where people suffer from eye diseases because of increased use of screen time, this mobile application will definitely stand out in the marketplace ensuring the existence of the application for a long time by addressing an essential need in the field of health care.

2. Background

2.1 Problem Identification

The domain of eye care plays a pivotal role in safeguarding individuals' visual health and overall well-being. And also deficiency in ensuring eye health will affect the productivity of a person. The timely identification and intervention of vision-related concerns hold the potential to mitigate the impact of ocular disorders. However, with the busy lifestyles of the individuals they are struggling to find a time to go to a checkup to check their vision. But the statistics as illustrated in [Fig. 1] clearly shows that there is a high percentage of preventable or treatable blindness. Therefore, the core research topic of this research was to close the technological gap between the urgent demand for affordable and comprehensive eye care solutions and current technological capabilities and to make an evolutionary step in promoting and raising the awareness of medical treatments for ocular health.

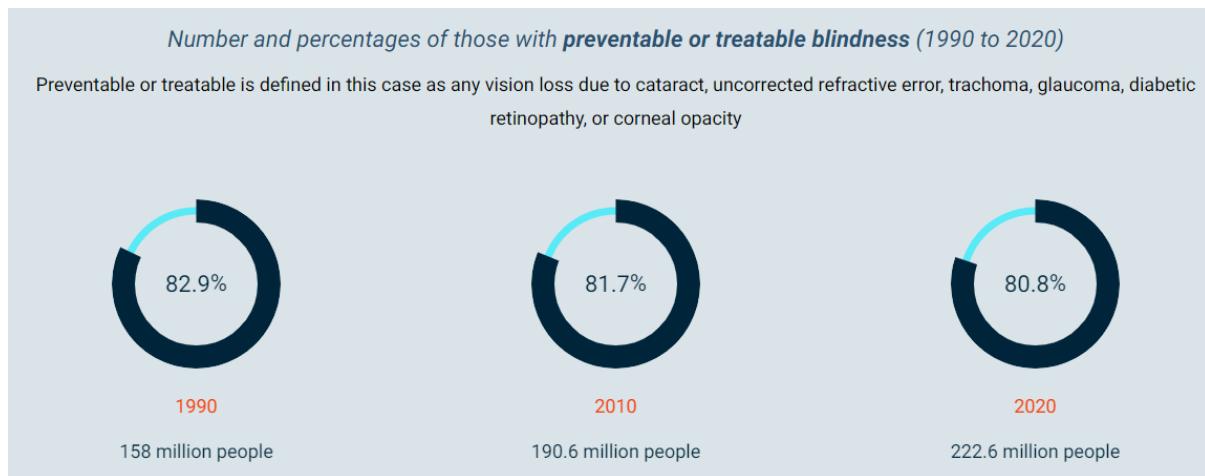


Fig. 1- Number and percentages of those with preventable or treatable blindness. Adapted from [1]

2.2 Competitive Product(s) and Identified Gaps

There are limited numbers of mobile applications available for personal use in the field of eye care such as ICARE VISION TEST and VISION TEST. Among most of the available applications they only provides a very few useful features, and the results are also not guaranteed to be accurate. These few available applications also detect only a limited range of vision problems and sometimes do not even addresses most common eye diseases related issues. Therefore, in the app market there is still a high need for a rich featured application which guarantees accuracy and ensures the security of app users.

2.3 Solution

Developing an application that smoothly combines specialized questionnaires for early detection of eye diseases ensuring the prevention of eye diseases in an early stage, providing traditional cures for holistic care which addresses the requirements of individuals who tend to receive indigenous treatments for eye diseases, and contemporary diagnostic technologies for precise evaluations are the specific goals of this innovative product. This integrated strategy aims to result in early detection, informed decision-making, and improved ocular health outcomes which will make a revolutionary step in the field of health combining with technology.

2.4 System Overview Diagram

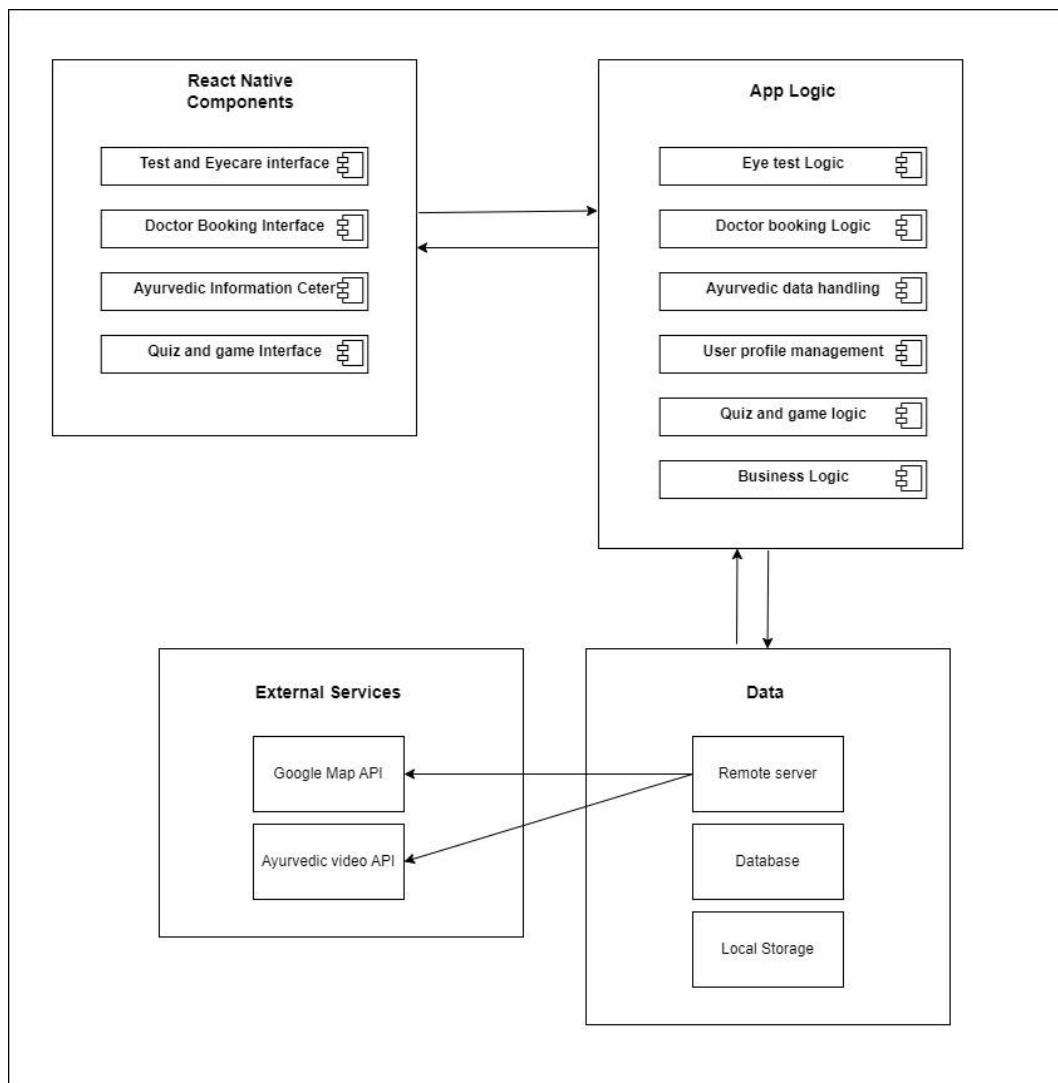


Figure 2- System Overview Diagram

2.5 Design Purpose

EyeZen, all in one eye care application focuses on providing a great opportunity to all who are concerned about their vision. In order to provide a better user experience this application design has been focused on different aspects of mobile application designing. Primarily when designing the application main focus was to select the accurate color combination, and as the app focuses on addressing a health care need blue and white was selected as the main colors as it creates a emotional impact on users [2]. As the application targets a group of individuals who are from below the age of one year to senior citizens the application design has been updated through different phases with the user feedback. This process have ensured the user friendliness by providing effective guides through the design to navigate through the application and to perform eye tests using the mobile application. With this simple but attractive design the usability of the application has been increased. And as the

application focuses on the parents who have little infants, in need of testing their infants vision, the design related to the infant eye care functionality have been made by increasing the attractiveness. Overall, the color combinations and mobile application components have met the requirements of users ensuring user friendliness, usability, efficiency, and attractiveness.

2.6 Team Members

Table 1- Team Member Roles

Student No.	Name	Role
IT21189944	Madusanka G.K.I	Researching, designing, and implementing aspects of adult eye care.
IT21318320	Silva T.U.D	Researching, designing, and implementing aspects of infant eye care.
IT21169380	Thuduvage I.M.H.G	Researching, designing, and implementing aspects of indigenous eye care treatments and medicines.
IT21169144	Karunarathne R.Y.D.	Researching, designing, and implementing aspects of near sightedness.

2.7 Contribution Table

Table 2- Team Members Contributions

Section	Contribution		
Introduction	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Create the application introduction
Background	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Competitive products and gap analysis • System Overview Diagram
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Problem Identification • Creating contribution table
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Design Purpose
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> • Solution
Design Process	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Finding user preferences
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Creating content
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Finding user preferences
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> • Finding user preferences

Milestone 1	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> Identify user groups related to adult eye care
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> Identify user groups related to infant eye care
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> Identify user groups related to indigenous medical treatments
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> Identify user groups related to western medical treatments
Milestone 2	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> Conduct user research for adults
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> Conduct user research for parents with infants
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> Conduct user research for indigenous eye care doctors
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> Conduct user research for western eye care doctors
Milestone 3	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> Verifying key user flows of adult patients
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> Verifying key user flows of parents with little infants
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> Verifying key user flows of indigenous doctors
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> Verifying key user flows of western doctors
Competitor Analysis	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> Finding details
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> Creating the content
Milestone 4	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> Sketching and wireframes for adult eye care
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> Sketching and wireframes for infant eye care
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> Sketching and wireframes for indigenous eye care treatments
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> Sketching and wireframes for near sightedness eye care

Milestone 5	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Figma prototype for adult eye care
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Figma prototype for infant eye care
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Figma prototype for indigenous eye care treatments
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> • Figma prototype for near sightedness eye care
Milestone 6	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • User feedback for Figma prototype for adult eye care
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • User feedback for Figma prototype for infant eye care
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • User feedback for Figma prototype for indigenous eye care treatments
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> • User feedback for Figma prototype for near sightedness eye care
Milestone 7	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Implementation of adult eye care
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Implementation of infant eye care
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Implementation of indigenous eye care treatments
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> • Implementation of near sightedness eye care
Requirement Specification	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Creating the contents
Design Principles	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Creating the contents
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> • Creating the contents
Project Management	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Creating the contents
Conclusion	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Creating the contents

3. Design Process

EyeZen applications' design was guided by empathy, seeking to understand the unique needs of users across age groups, from infants to adults. This deep understanding allowed in defining the core problem: the scarcity of accessible early-stage eye care solutions. Through creative ideation, the application was envisioned with innovative features to cater to diverse eye care requirements. Prototyping brought the ideas to life, enabling in refining the concepts effectively. Finally, rigorous testing with real users ensured that the application meets the specific demands of target audience, resulting in a user-centric solution that redefines eye health management.

3.1 User Involvement

In user centered design process users from user groups including adult patients, parents with little infants, indigenous doctors and western doctors were interviewed in order to get their basic requirements. Then the gathered requirements were analyzed, and the major concern were identified. Then in the phase of ideate, the requirements were matched with functionalities to be implemented in order to achieve the products ultimate goal. After that, a basic prototype were created and gathered the user feedback on those prototype. And with those requirements the design was fine tuned to address the user requirements, which resulted in an increase in user satisfaction with use of design thinking model[Fig. 2].

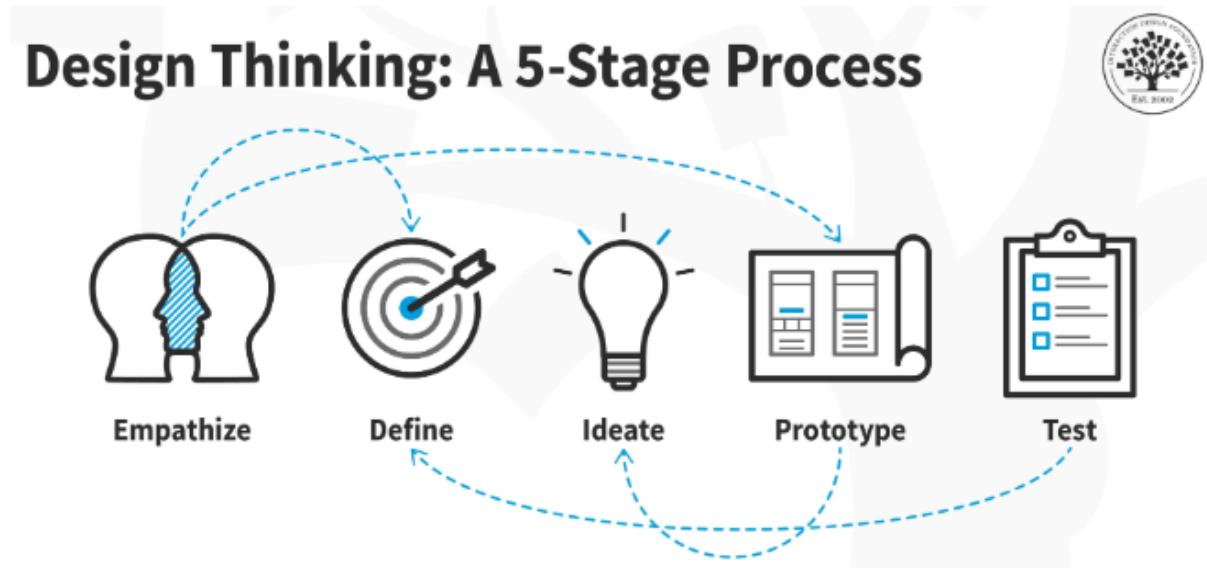


Fig. 3- Stages of Design Thinking Model. Adapted from [3]

4. Milestone 1 : Identify user groups

4.1 Personas



Fig. 4- Persona of an Adult Patient

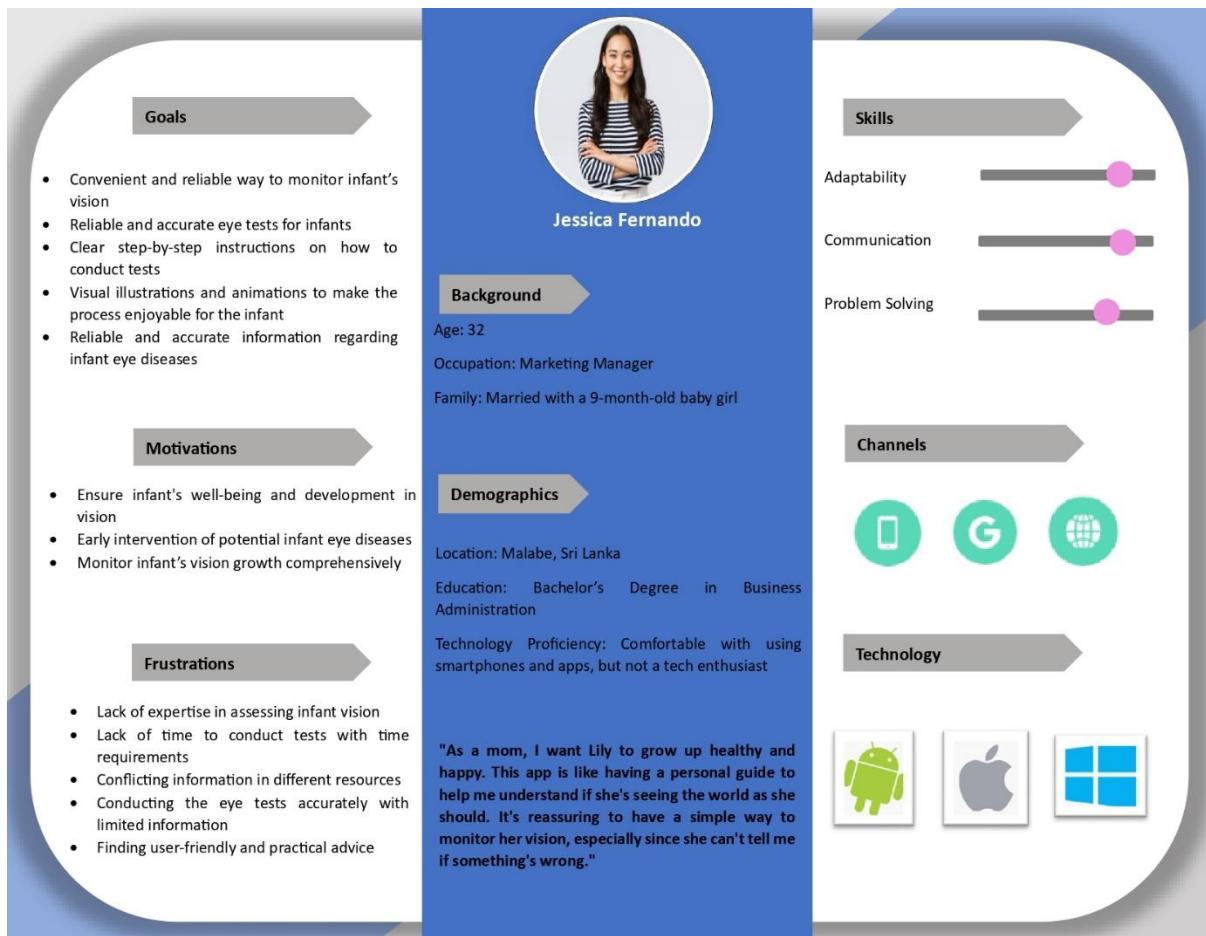
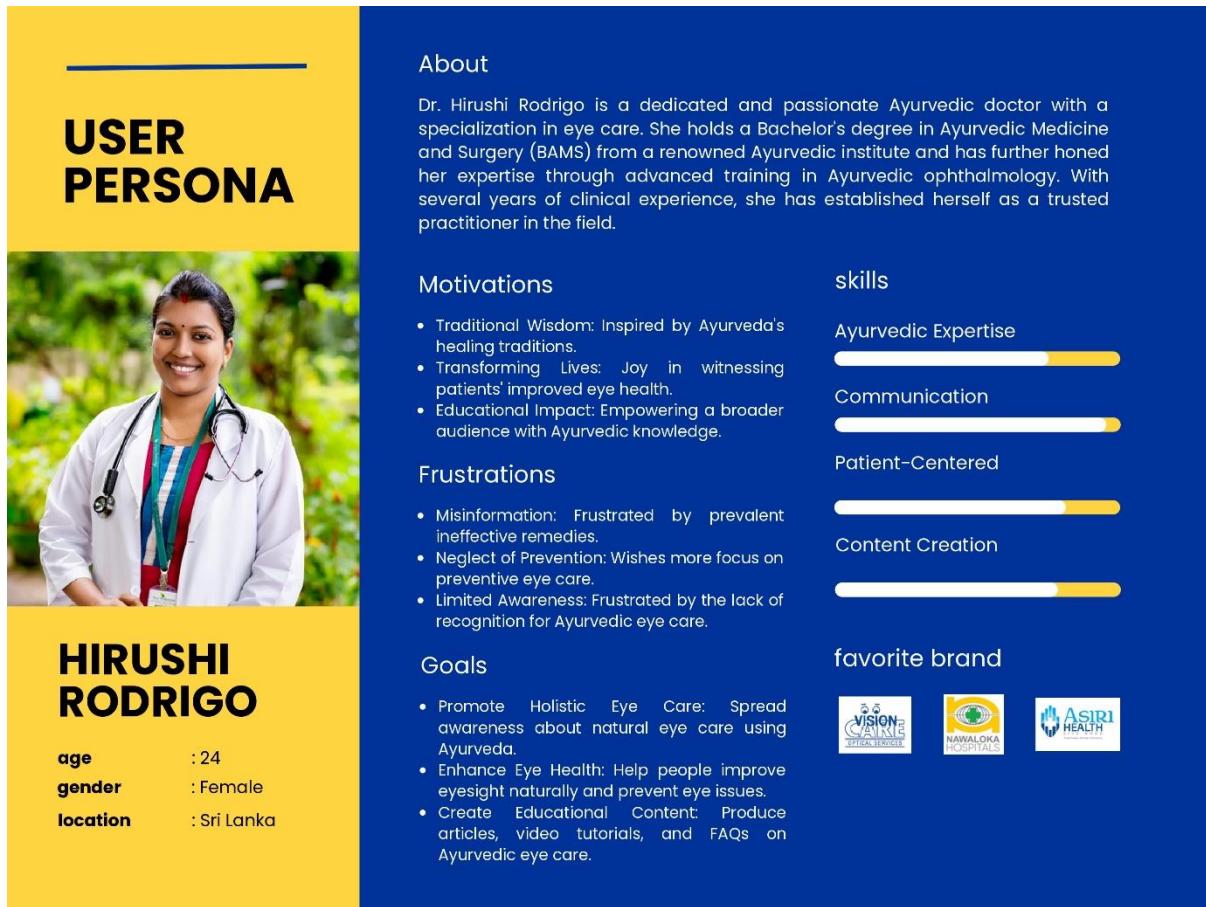


Fig. 5- Persona of a Parent with an Infant





ABOUT

Dr. Olivia Parker: Experienced, compassionate ophthalmologist. 5+ years in the field, trained at top medical school and prestigious eye institute. Specializes in diverse eye conditions, from simple to complex. Passionate about improving vision health.

MOTIVATION

- Dr. Parker is motivated to extend her expertise beyond the confines of her clinic. By contributing articles, videos, and resources to the website, she can provide valuable insights, tips, and guidance to individuals seeking reliable information on eye care.
- Dr. Parker's passion for community involvement aligns with your website's potential to engage with local communities. She envisions participating in virtual workshops, Q&A sessions, and blog posts that address common eye health concerns and foster a sense of connection.

SKILLS



FRUSTRATIONS

- She might feel frustrated that many websites fail to provide comprehensive educational content on eye health, preventing individuals from understanding the importance of regular eye care and potential issues.
- If other websites lack interactive elements like vision testing, Dr Parker might be frustrated by the missed opportunity to engage users in a more dynamic way.

GOALS

- One of her primary goals is to promote early detection of eye problems. Through self-assessment tools and resources, Dr. Parker wants to empower individuals to recognize potential issues and seek professional help in a timely manner.
- She intends to ensure the website is accessible to individuals with different abilities. Dr. Parker's goal is to provide content that is usable by people with visual impairments and other disabilities, promoting inclusivity.

FAVORITE BRANDS



Fig. 7- Persona of a Western Doctor

4.2 Empathy Maps



Fig. 8- Empathy map of an Adult Patient

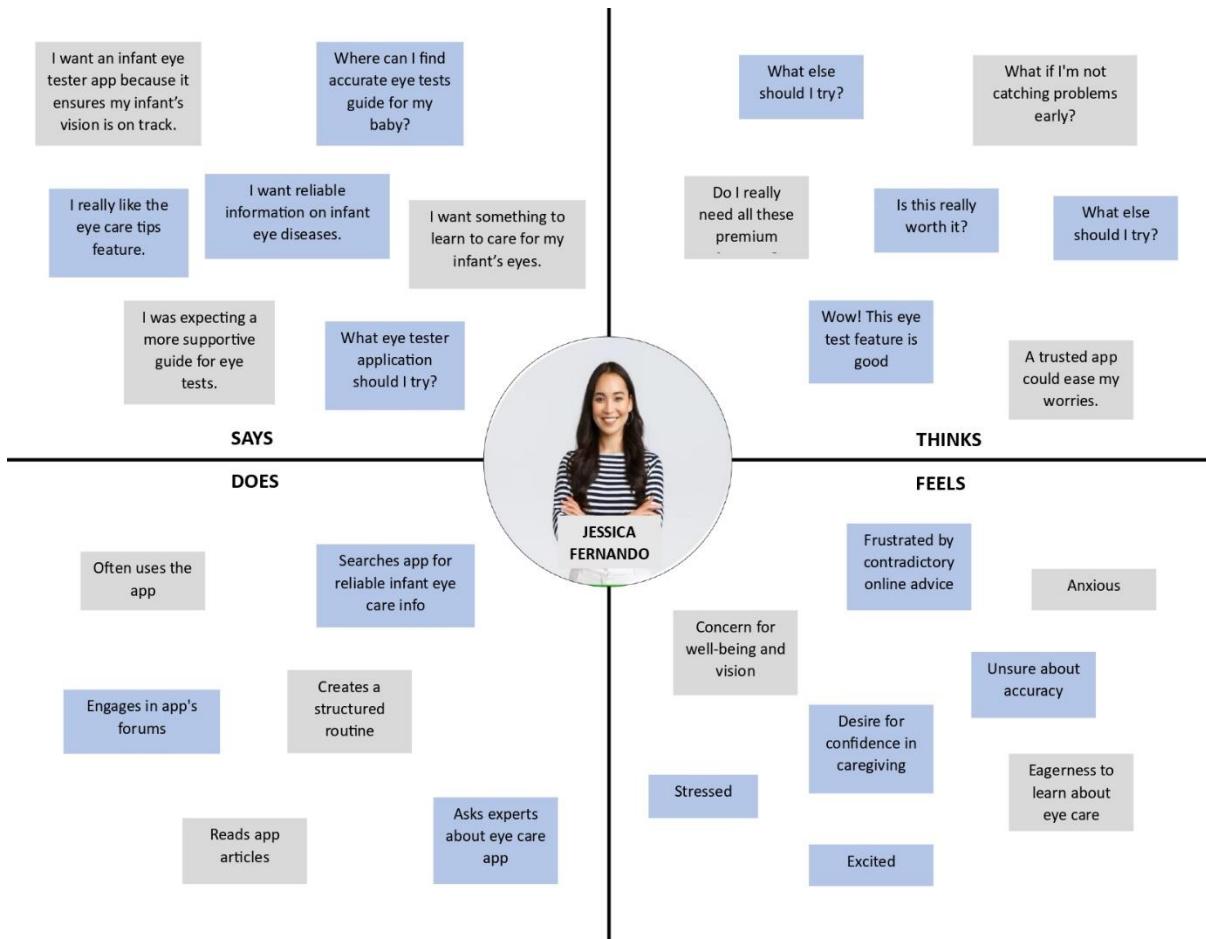


Fig. 9- Empathy Map of a Parent with an Infant

Empathy Map

Says

- "Ayurveda has a profound wisdom that can transform eye health naturally."
- "I've seen patients regain their vision and vitality through Ayurvedic practices."
- "Educating people about holistic eye care is my mission."



Does

- Creates articles, videos, and FAQs to share Ayurvedic insights.
- Personalizes treatment plans based on patients' unique needs.
- Advocates for the integration of Ayurveda into mainstream eye care.

Thinks

- "Misinformation about eye care is widespread, causing frustration and confusion."
- "Preventive measures can make a significant difference in eye health."
- "Ayurvedic practices can bridge the gap between traditional and modern eye care."

Feels

- Empowered by Ayurveda's time-tested principles and its potential to heal.
- Joy when patients' lives improve due to better eye health.
- Frustration towards the lack of awareness and recognition for Ayurvedic approaches.

Fig. 10- Empathy map of an Indigenous Doctor



Fig. 11 - Empathy map of a Western Doctor

4.3 User Stories

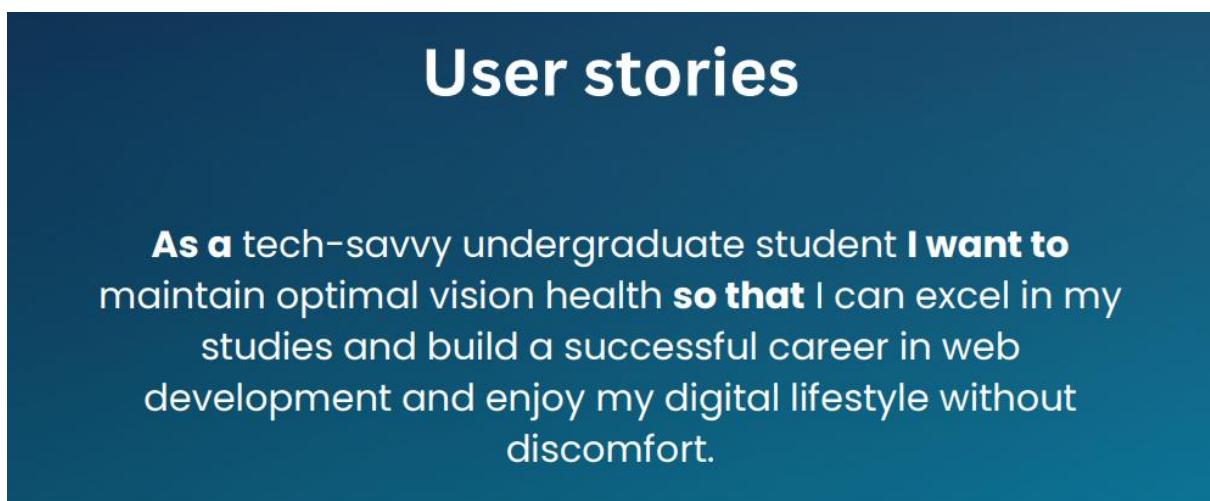


Fig. 12- User story of an Adult Patient

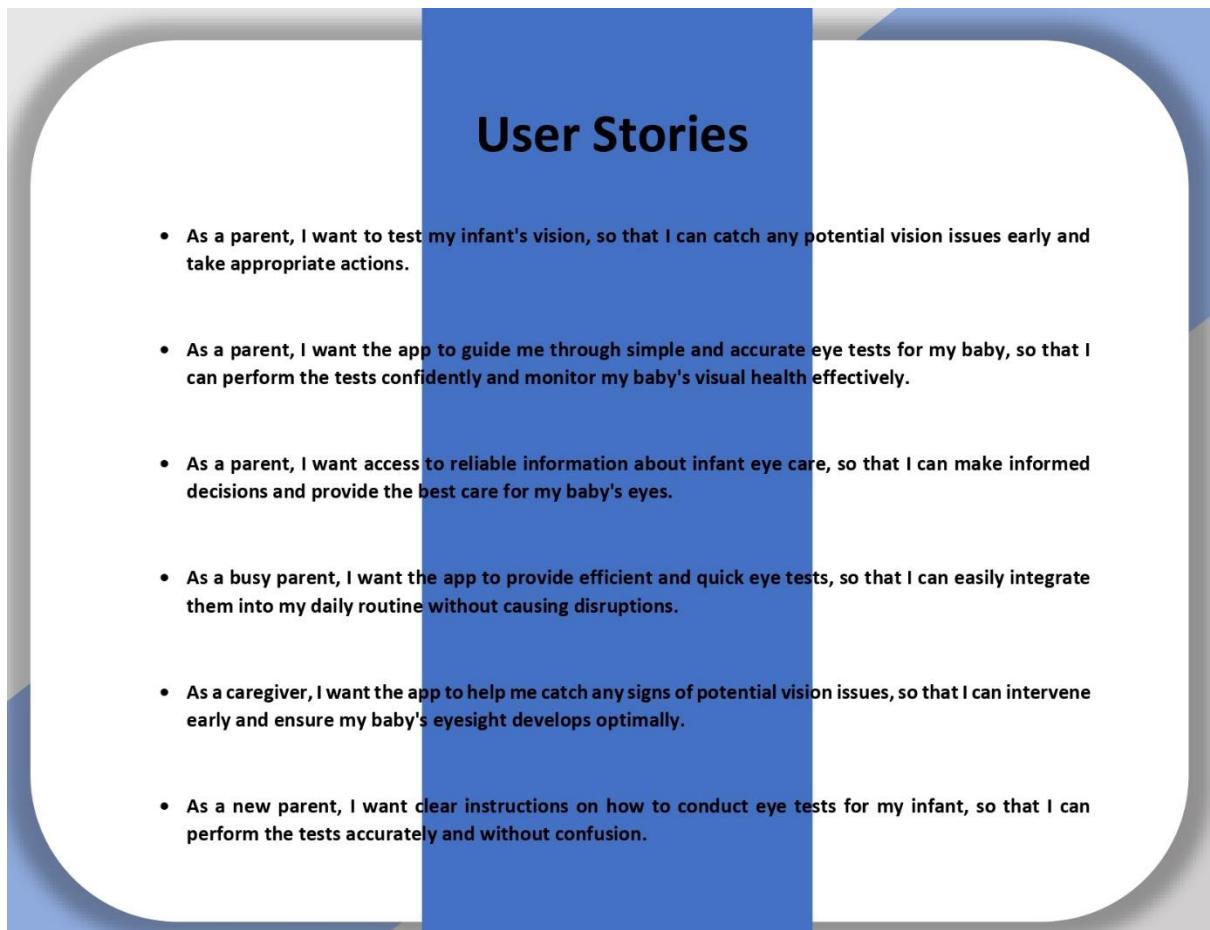


Fig. 13- User story of a Parent with an Infant

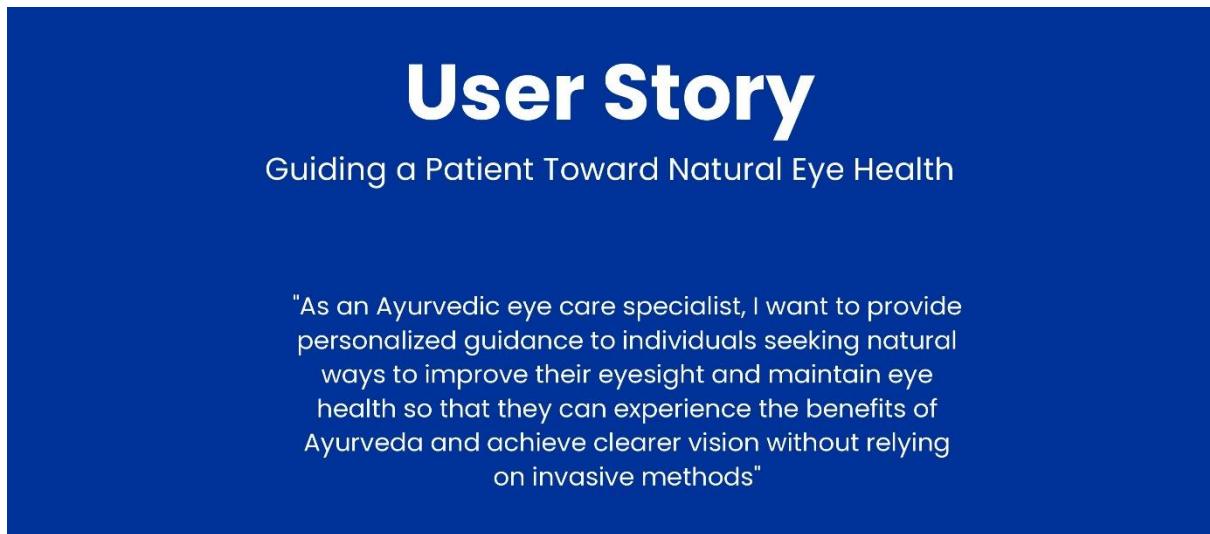


Fig. 14- User story of an Indigenous Doctor

User Story

As an Individual Concerned About Eye Health, I Want Comprehensive Online Resources so that I Can Learn, Prevent, Check and Improve My Eye Health.

Fig. 15 - User story of a Western Doctor

4.4 User Flows

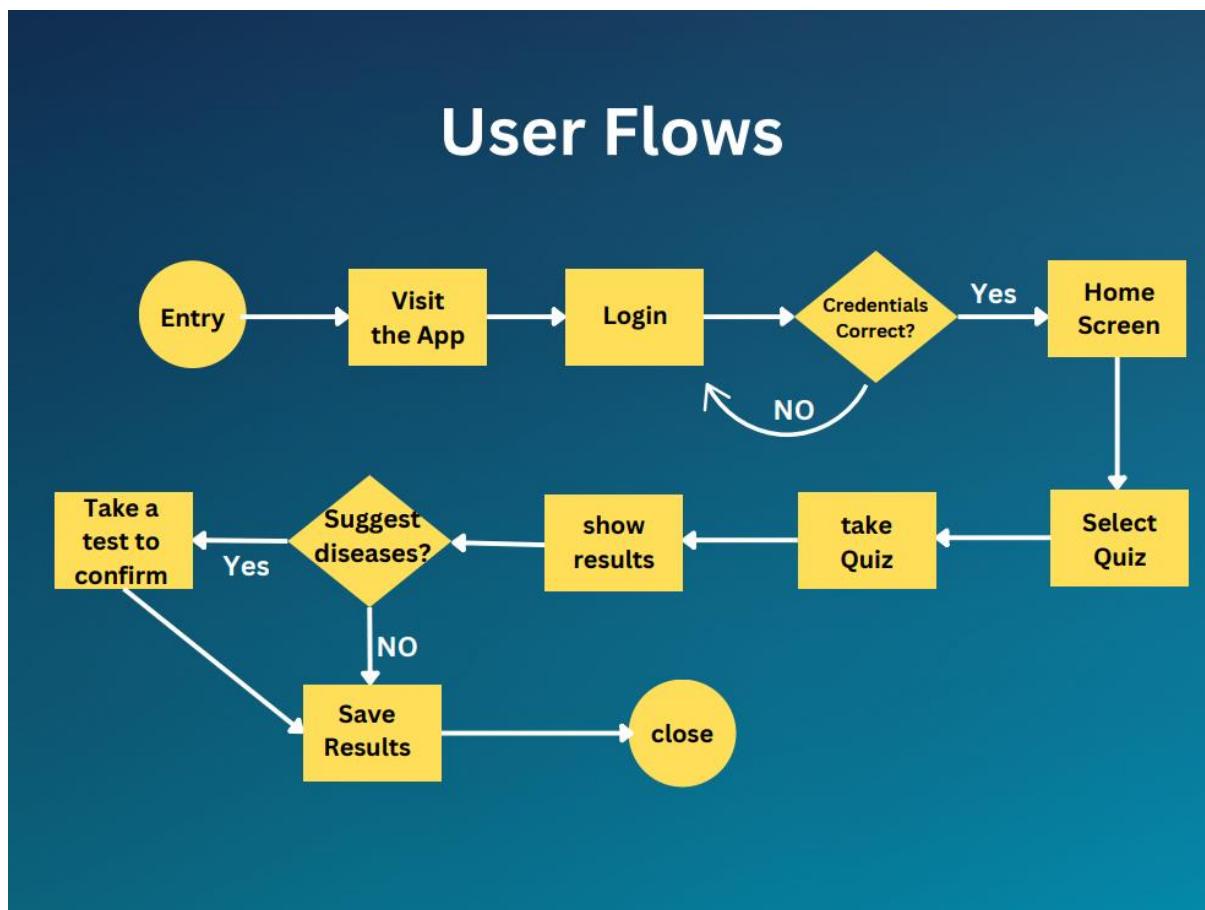


Fig. 16 - User flow of an Adult Patient

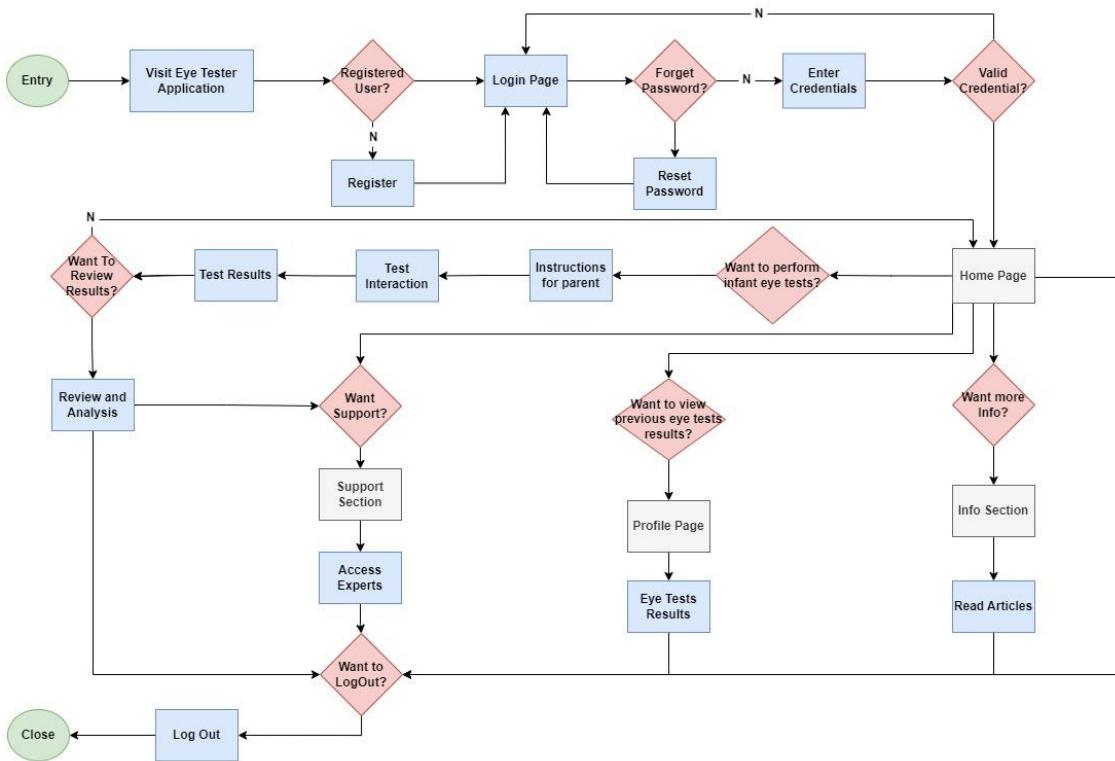


Fig. 17 - User flow of a Parent with an Infant

User flow

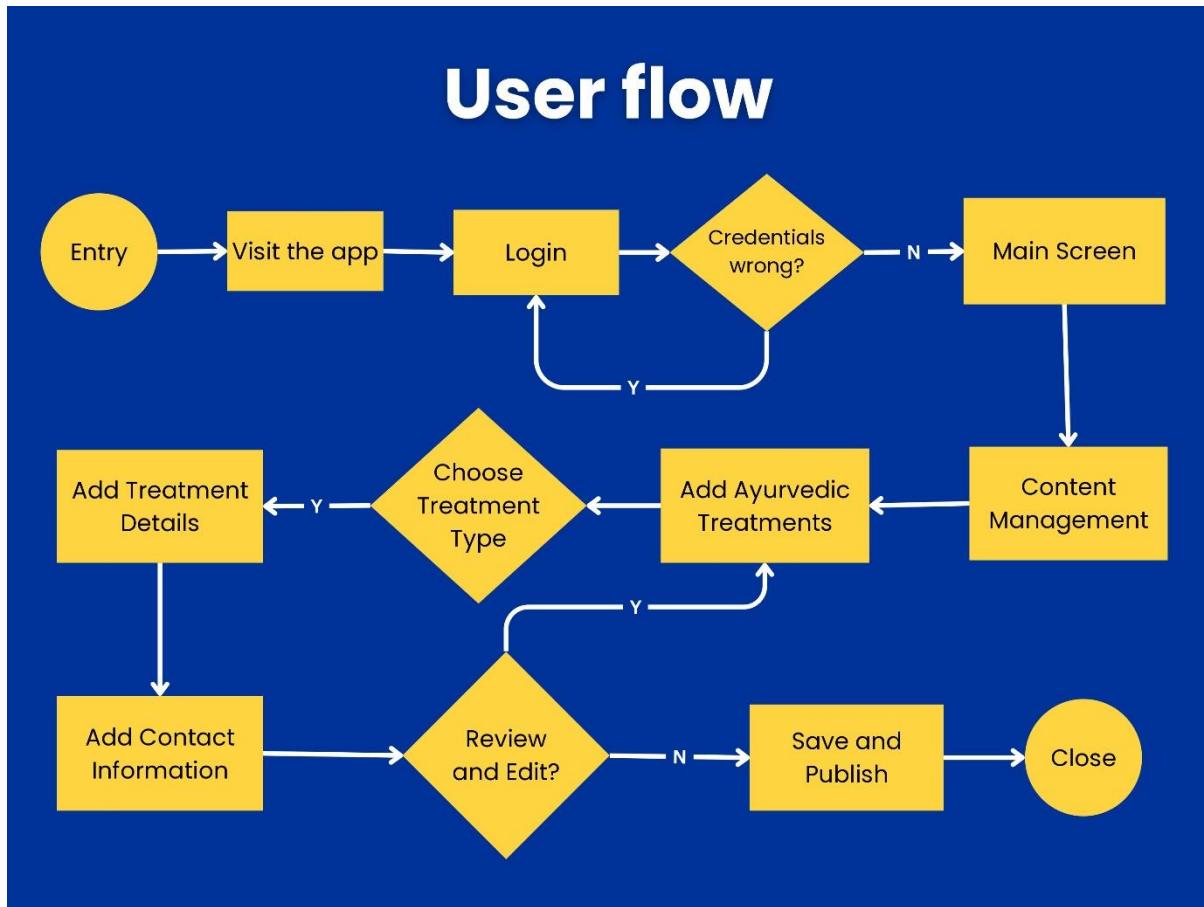


Fig. 18- User flow of an Indigenous Doctor

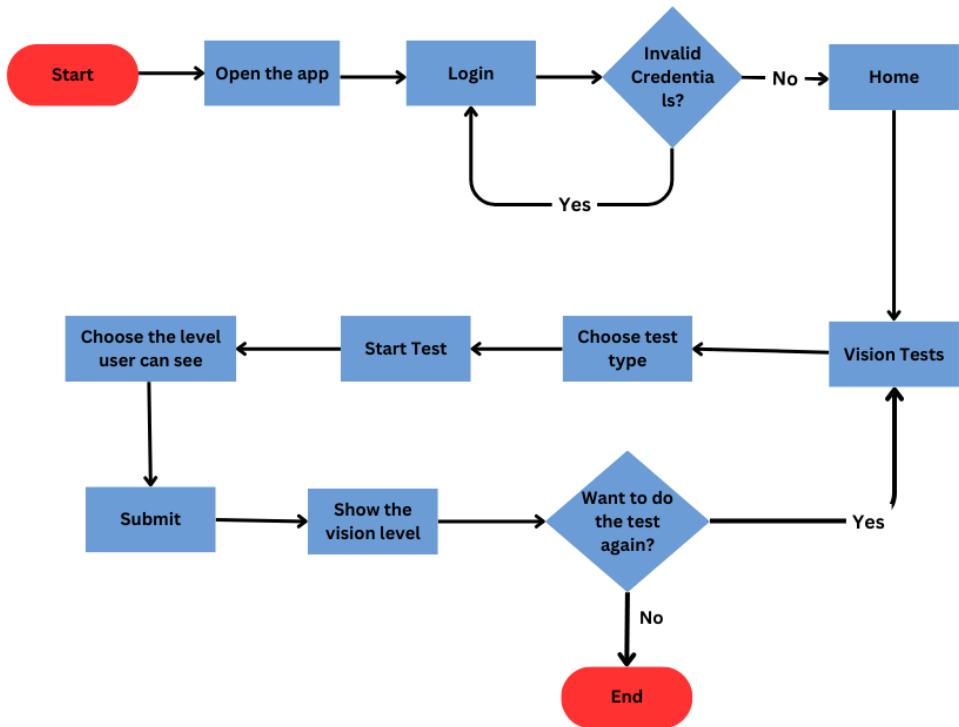


Fig. 19 - User flow of a Western Doctor

4.5 Service Blueprint

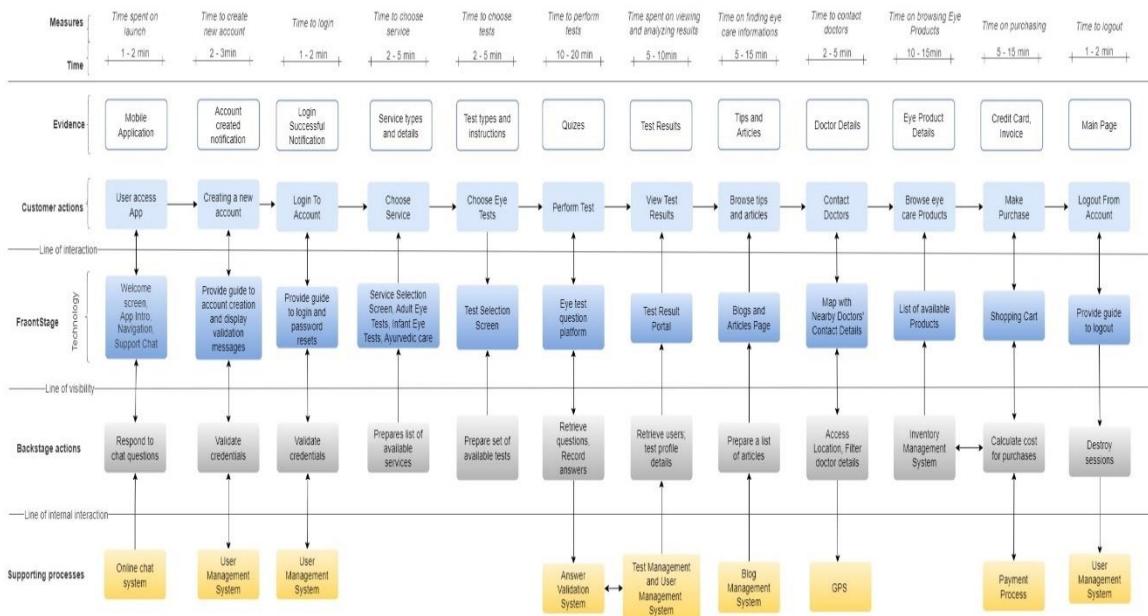


Fig. 20 - Service Blueprint

4.6 Identify basic functionality of the proposed system

1. Disease Detection and Diagnosis: EyeZen offers quizzes and vision tests to evaluate users' vision health and identify common vision problems, including:
 - Color blindness
 - Depth perception issues
 - Macular degeneration
 - Contrast sensitivity
 - Hyperopia (farsightedness)
 - Myopia (nearsightedness)
2. Child-Friendly Features for Infants: EyeZen offers a special infant vision testing feature, enabling parents to assess their infants' visual health and promote early intervention.
3. Child-Friendly Features for Kids: EyeZen includes engaging features tailored for children's eye health: Fun games designed to entertain kids while helping parents spot potential vision problems early.
4. Ayurvedic Eye Care: Within EyeZen, users can access a dedicated section on Ayurvedic eye care, providing valuable resources and advice for natural eye health, such as:
 - Ayurvedic treatments for eye conditions.
 - Informative articles on Ayurvedic eye health.
 - Eye care tips based on Ayurvedic principles.
 - Guidance on natural ways to improve eyesight.
 - Ayurvedic eye care video tutorials for holistic well-being.
5. Finding Eye Specialists: EyeZen simplifies the process of locating qualified eye care professionals:
 - User-friendly doctor locator with geolocation functionality to find nearby eye care specialists.
 - Options to search for both Western and Ayurvedic eye care practitioners.
 - Access detailed profiles of doctors, including qualifications and contact information.

6. Educational Articles: EyeZen offers a wealth of informative articles on various eye conditions and health, serving as a valuable resource for users to expand their knowledge and make informed decisions about their ocular health.

5. Milestone 2 : Plan and conduct user research

5.1.1 User research conducted for an Adult Patient – IT21189944 – Madusanka G.K.I

Introduction

In our society, where screens have become our primary sources of information and entertainment the well-being of our eyes has become a top priority. With the use of devices and changes in lifestyle we face new challenges when it comes to maintaining healthy vision. Eye strain, dryness and other discomforts have become concerns that raise worries about the long-term effects on eye health. To address this issue, we introduce "EyeZen," a solution aimed at protecting and improving your precious sense of sight. The EyeZen application goes beyond promoting eye health – it empowers users by providing them with tools to understand their wellbeing identify potential issues early on and take proactive measures for maintaining healthy eyesight. In this section we will explore the aspects of EyeZen that contribute to this cause. From quizzes that educate users about their eye conditions to interactive games designed to make learning about eye diseases engaging and enjoyable EyeZen caters, to individuals of all ages and backgrounds. Whether you're a concerned parent wanting to ensure your child's development or a student managing both academics and screen time EyeZen offers resources for everyone.

In this discussion we will explore the intricacies of our eye care quizzes. We'll also talk about how users can identify issues and dive into the realm of games that promote awareness of eye diseases. Furthermore, we'll look at the designed diagnostic tests for assessing eye health all within the capabilities of this versatile application.

Test Objectives

- Confirm that the app is usable.
- Evaluate if the application performs as intended and meets the established requirements and expectations.
- Assess how effective the eye care quizzes are in educating users about eye conditions.
- Measure user engagement and retention of knowledge after completing the quizzes.
- Strive to minimize errors throughout the development process.
- Prior to commencing development ensure there are no ambiguities or conflicting requirements.
- Collect feedback from parents or guardians about their children's experiences, with these features.

Methodology

EyeZen, an eye care system was developed using an object-oriented approach. This methodology was chosen for its flexibility, improvement process and ability to adapt to evolving user needs. As stated in the introduction, the research was carried out using three main methods. These include interviews, usability testing, and questionnaires. For the persona User has chosen to do usability testing and interview (video recording) Microsoft Forms was used to create the questionnaire. Zoom was used to conduct the interview.

Interviewing

Questions : One interview was conducted via zoom.

Questions 1: tell me about yourself?

Questions 2: How important is maintaining good eye health to you, considering your career aspirations in web development and your heavy screen time?

Questions 3: In your pursuit of excellence in your studies and career, have you ever faced any eye-related issues like strain or discomfort due to prolonged screen use?

Questions 4: As someone who's tech-savvy, what kind of digital tools or apps do you believe could assist you in maintaining better eye health while balancing academics and work?

Questions 5: Can you tell us about your experiences with eye strain or discomfort during your work or study sessions? How do you currently manage these issues?

Questions 6: Given your occasional eye strain and difficulties related to long hours in front of screens, do you think an eye health-focused app like EyeZen would be beneficial for you?

Video Recording

<https://drive.google.com/file/d/1U09HX015Ng78ou2pajWJJ4KFc7tEGpC5/view?usp=sharing>

Questionnaire

Eye Health and Vision Care Survey

We are 3rd year 1st semester students of faculty of computing at SLIIT. We are gathering these data to develop a mobile application to detect and treat eye disease. So here we analyzing data about users who willing to join this platform.

Thank you for participating in our survey. Your responses will help us improve our eye health and vision care features. This survey will only take a few minutes to complete.

[Sign in to Google to save your progress. Learn more](#)

* Indicates required question

Which age gap do you belong to? *

8 - 18
 18 - 25
 25 - 30
 above 30

How often do you have your eyes checked by a healthcare professional? *

Anually
 Every 2 years
 Only when I have problems
 I have never had an eye checkup

Have you ever used an eye care app for self-assessment? *

Yes, regularly
 Yes , occasionally
 No, never

Have you ever experienced any of the following eye-related symptoms? (Select all that apply) *

Blurred vision
 Eye fatigue
 Dry eyes
 Eye strain
 Redness or irritation

Which of the following eye conditions concern you the most? (Select all that apply) *

Myopia (Nearsightedness)
 Hyperopia (Farsightedness)
 Color Blindness
 Macular Degeneration
 Cataracts
 Glaucoma
 None of the above

Are you aware of the importance of regular eye exercises for maintaining good eye health? *

- Yes, I practice them regularly
- Yes, but I don't practice them often
- No, I wasn't aware of this
- I'm not sure

How satisfied are you with the eye health information available on the internet? *

1 2 3 4 5

Very satisfied Very dissatisfied

Have you ever played educational games related to eye health? *

- Yes, regularly
- Yes, occasionally
- No, never

How important is it for you that eye care apps are user-friendly and easy to navigate? *

1 2 3 4 5

Very Important Not Important at all

Would you be interested in using a mobile app that offers eye health quizzes and tests? *

1 2 3 4 5

Definitely Definitely not

Do you have any other comments or suggestions for improving eye health and vision care apps?

Your answer

Submit

[Clear form](#)

Never submit passwords through Google Forms.

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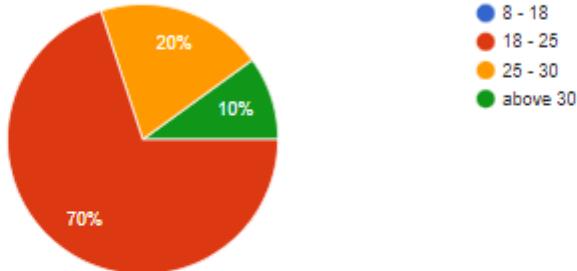
Google Forms

Collected Responses for questionnaires

Which age gap do you belong to?

 Copy

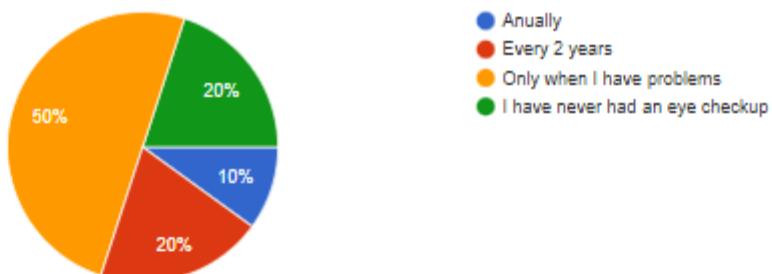
10 responses



How often do you have your eyes checked by a healthcare professional?

 Copy

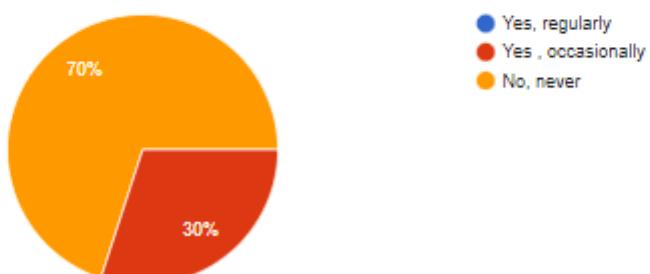
10 responses



Have you ever used an eye care app for self-assessment?

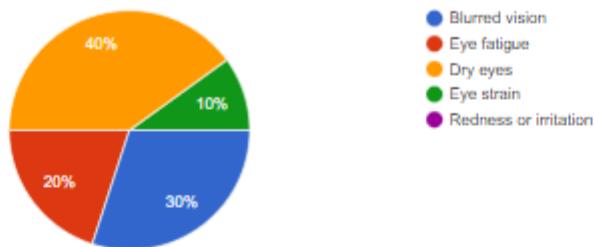
 Copy

10 responses



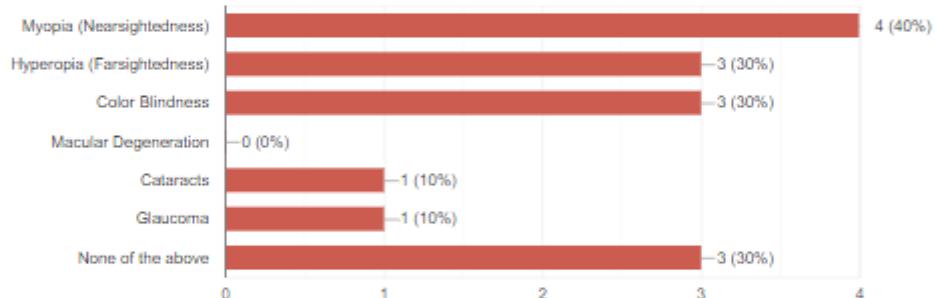
Have you ever experienced any of the following eye-related symptoms? (Select all that apply) [Copy](#)

10 responses



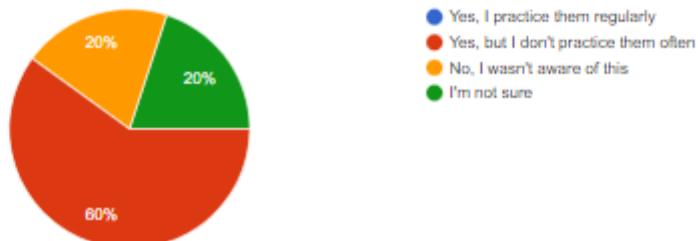
Which of the following eye conditions concern you the most? (Select all that apply) [Copy](#)

10 responses



Are you aware of the importance of regular eye exercises for maintaining good eye health? [Copy](#)

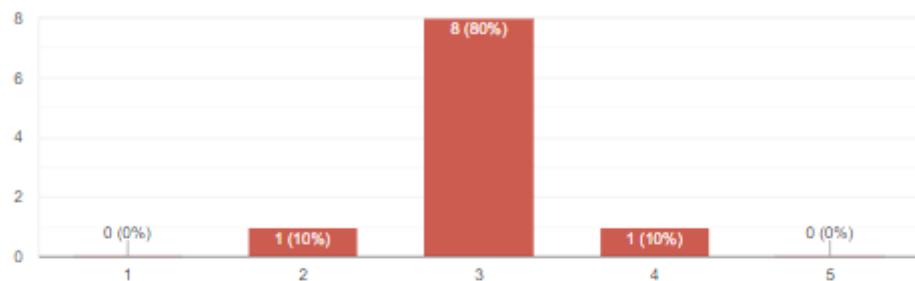
10 responses



How satisfied are you with the eye health information available on the internet?

 Copy

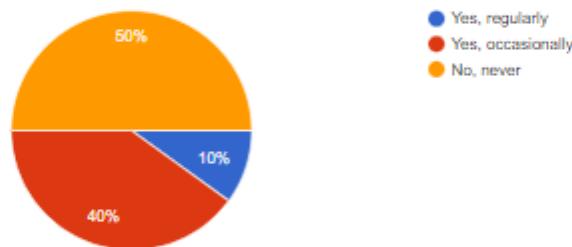
10 responses



Have you ever played educational games related to eye health?

 Copy

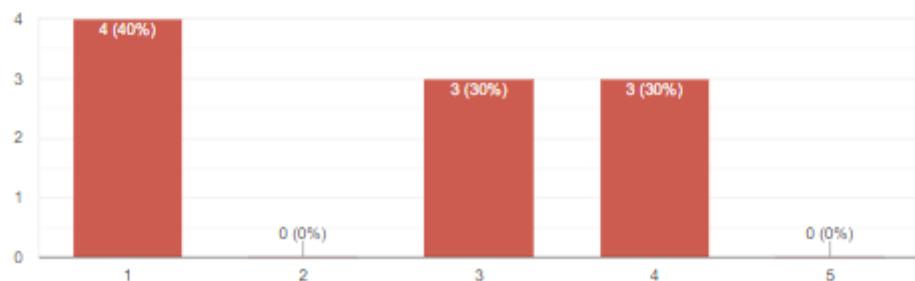
10 responses



How important is it for you that eye care apps are user-friendly and easy to navigate?

 Copy

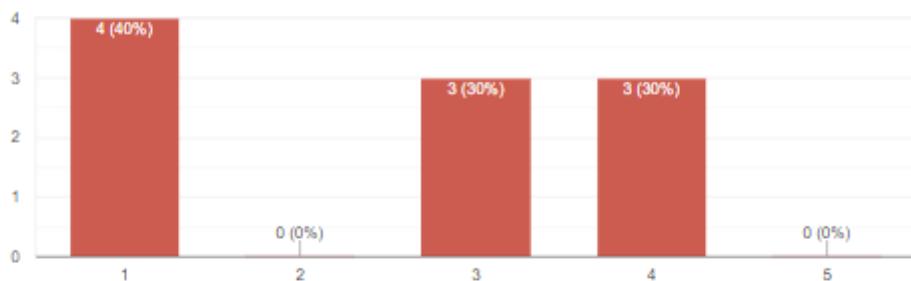
10 responses



How important is it for you that eye care apps are user-friendly and easy to navigate?

Copy

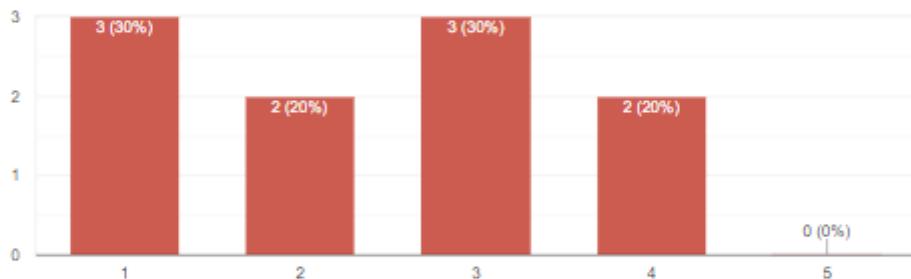
10 responses



Would you be interested in using a mobile app that offers eye health quizzes and tests?

Copy

10 responses



Do you have any other comments or suggestions for improving eye health and vision care apps?

6 responses

No

No

no

-

nothing

Participant Profile

Name	Demography	Location, Date and Time
Umesh Dewasinghe	Age: 25 Work: Freelancer University: Sri Lanka Institute of Information Technology Marital Status: Engaged Location: Gampaha, Sri Lanka	Location: Zoom Date: 4th September 2023 Time: 10.30 PM

5.1.2 User research conducted for a Parent with an Infant – IT21318320 – Silva T.U.D

Introduction

The well-being of a child depends greatly on their vision. EyeZen, a tool for testing vision impairment, offers a promising future for the care of infants' eyesight. It is important to guide the detection of eye problems in infants with precision, while also considering factors such as accuracy, time constraints, and accessibility. Recognition of the user requirements under the user research phase will secure the implementation of a very user friendly and market seizing product. The goal of conducting a user research at the beginning of the product is to get a precise requirement from actual users, what the users accept from the product, how they are visualizing the expected application in the form of designing, what is the expectation of the product features. And these results will help in the designing, implementing, and accomplishing the enhancement of the product.

Test Objectives

The ultimate objective of this test is to identify user requirements from the perspective of a parent with a little infant, as this infant eye care part focuses on early detection of vision impairments. Similarly, the research focuses on understanding the design requirements for uncomplicated use of application. Furthermore, the detailed results obtained through the research would help to simplify the processes by avoiding unnecessary complexity of the implementations. Overall, the process will help to improve the quality of the application and ensure a great user experience.

Methodology

User research will be conducted by interviewing the parent of an infant and conducting a questionnaire to collect data. When conducting the interview, the privacy of the respondent was ensured by not collecting personal details throughout the interview. In order to have a precise understanding of the user's proficiency in technology, experiences and some background details were collected. And also

details related to the functional and design requirements were collected. Questionnaires were formed concerning all the fields in the application planning to launch the product in order to ensure all the relevant data was collected in an initial stage.

Interviewing

Script of Interviewer (Umesh) :

Hello, I'm Umeha. Thank you for participating in this interview. We are working on a project related to infant eye care, and your insights will be valuable. Your responses will help us improve our efforts to promote healthy vision development in infants. So shall we start.

1. Can you please share your name and a little about your background or experience related to infants or childcare?
2. What do you believe are some important factors in ensuring the eye health and development of infants?
3. Are you familiar with any common eye conditions or problems that can affect infants?
4. Can you please tell us if you've ever used a phone app for taking care of your baby or learning about their health?
5. Have you ever used an app specifically for taking care of your baby's eyes, or do you think it would be a good idea to have one?
6. What do you think should be in the app to make it easy to use and helpful for parents like you?
7. How do you imagine using this app in your daily routine as a parent?
8. If you had any problems with the app, what kind of help would you expect from the people who made it?
9. From your experience with parenting apps, do you worry about your personal information being safe when using an app like this for your baby's eyes?
10. What other features or design ideas would you like to see in this app to make it even more user-friendly and helpful for parents like you?
11. Is there anything else you'd like to tell us about designing an app for baby eye care that would make it better for parents like you?

Thank you for your valuable input today. Your perspective will help us in our mission to support infant eye health.

Video Recording

<https://drive.google.com/file/d/1xxfxgZqwWwVjow8AE7dERxU3coQD23/view?usp=sharing>

Questionnaire

- Participant Information
 - Name
 - Age
 - Occupation
 - Email

➤ Mobile App Usage

1. How often do you use mobile apps for infant care or health-related tasks?

- Often
- Rarely
- Never

2. Please list any mobile apps you currently use for infant care or health (if applicable).

➤ Infant Eye Care App Features

1. Have you ever used a mobile app specifically for infant eye care?

- Yes
- No

2. If yes, please list the name(s) of the app(s) you've used.

3. What features or information do you believe are crucial in a mobile app focused on infant eye care?

4. How often would you use an app for infant eye care in your daily routine?

- Often
- Rarely
- Never

➤ Usability and User Experience

1. On a scale of 1 to 5 (1 being very difficult, 5 being very easy), how would you rate the ease of use of the mobile app for infant eye care?

2. Were there any specific features or aspects of the app's user interface that you found challenging to use or understand?

3. What improvements would you suggest to make the app more user-friendly?

➤ Data Security and Privacy

1. How concerned are you about the security and privacy of your personal information while using a mobile app for infant eye care?

- Concerned
- Neutral
- Not Concerned at All

➤ Additional Comments

1. Is there anything else you'd like to share or discuss regarding the mobile app for infant eye care?

Collected Responses for questionnaires

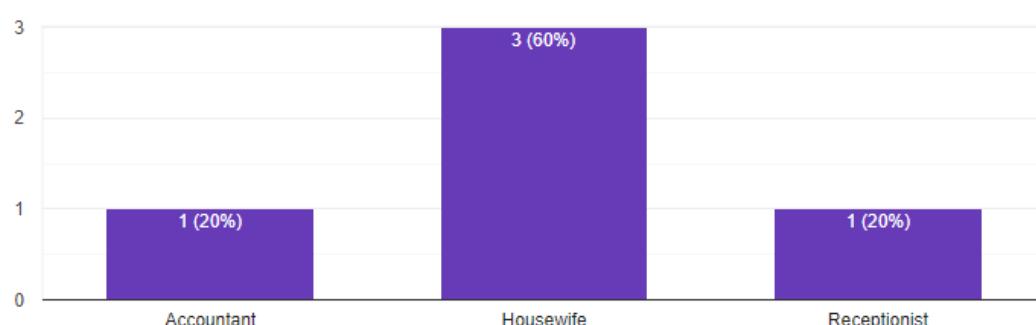
Participant Information	
Name	
5 responses	
Maneesha Perera	
Gayan	
Ann Shamara	
Chamali	
Nipuni	

Age	
5 responses	
30	
32	
24	
28	
25	

Occupation

 Copy

5 responses

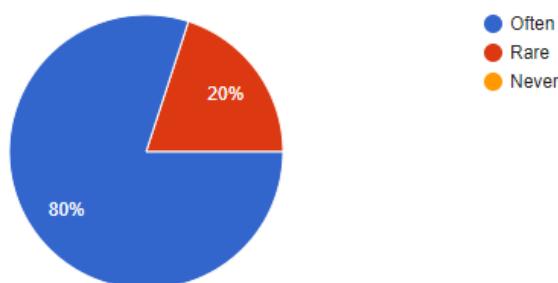


Mobile App Usage

 Copy

How often do you use mobile apps for infant care or health-related tasks?

5 responses



Please list any mobile apps you currently use for infant care or health (if applicable)

4 responses

BabySee

Baby Tracker

BabySparks

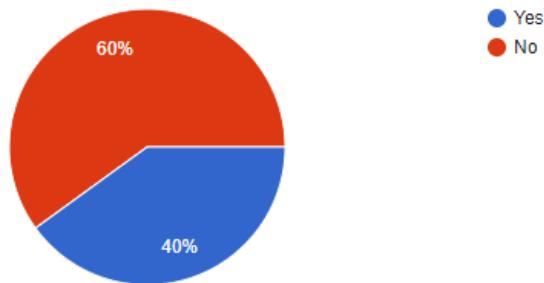
BabyTime

Infant Eye Care App Features

 Copy

Have you ever used a mobile app specifically for infant eye care?

5 responses



If yes, please list the name(s) of the app(s) you've used.

2 responses

BabySee

What features or information do you believe are crucial in a mobile app focused on infant eye care?

5 responses

Accuracy

Easy to use

Correctness

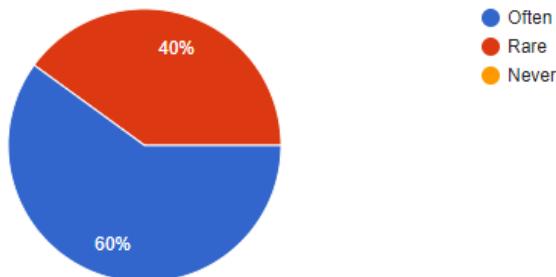
Less time need

Informative

How often would you use an app for infant eye care in your daily routine?

 Copy

5 responses

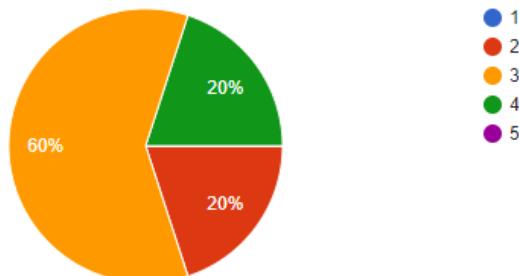


Usability and User Experience

 Copy

On a scale of 1 to 5 (1 being very difficult, 5 being very easy), how would you rate the ease of use of the mobile app for infant eye care?

5 responses



Were there any specific features or aspects of the app's user interface that you found challenging to use or understand?

4 responses

Finding content

How to use

Finding pages

Page directs

What improvements would you suggest to make the app more user-friendly?

5 responses

Easiness

Easy to use

Easy

Easy use

Simple to use

Data Security and Privacy

How concerned are you about the security and privacy of your personal information while using a mobile app for infant eye care?

 Copy

5 responses



- Concerned
- Neutral
- Not Concerned at All

Additional Comments

Is there anything else you'd like to share or discuss regarding the mobile app for infant eye care?

4 responses

Good app will be beneficial

Eye care app will useful, I haven't yet find an app like that

Good app will worth

Hard to find a good app

Participant Profile

Name	Demography	Location	Date	Time
Anonymous	<ul style="list-style-type: none">• Female• Married• Mother of a nine-month-old baby girl• Hard working, Judging, Fast adapting	Kotte, Sri Lanka	25 th of August, 2023	6.00pm

User Research – Tasks/ Scenarios

After the interview just gave the following simple task to the participant to perform.

① Please use the space below to draw the flow that represents your understanding of how you would participate in the infant eye care quiz within the mobile application based on the understanding taken from the provided information about the application's flow.

Login → Quizzes section → perform quiz →
→ view Results

② Please use the space below to draw the flow that represents your understanding of how you would find a information about a specific infants eye care problem within the mobile application based on the understanding taken from the provided information about the application's flow.

Login → Vision care section → Read Articles →
Ask for help

5.1.3 User research conducted for an Indigenous Doctor – IT21169380 – Thuduvage I.M.H.G

Introduction

EyeZen is a revolutionary eye care application designed to empower users with comprehensive information and resources for preserving and enhancing their eye health. This user research aims to evaluate the user experience (UX) of two key sections within the EyeZen app: Ayurvedic Eye Care and Doctor Contact. By conducting this research, we endeavor to uncover areas for improvement and enhancements within these sections, guided by valuable user insights.

Test Objectives

- Usability Verification: To assess the usability of the Ayurvedic Eye Care and Doctor Contact sections, ensuring seamless navigation and utilization.
- Functionality and Requirements: To confirm that both sections meet user requirements and operate as intended.
- Cross-Device Compatibility: To evaluate the app's compatibility across various mobile devices, ensuring a consistent user experience.
- Security Assessment: To examine the app's security measures to protect user data and privacy consistently.
- Error Prevention: To proactively identify and address potential development errors before they impact the user experience.
- Requirement Clarity: To eliminate any ambiguities or contradictory requirements related to the Ayurvedic Eye Care and Doctor Contact sections before the development phase begins.

Methodology

- Research Methods:

As stated in the introduction, this research utilized three primary research methods: interviews, usability testing, and questionnaires.

- Participant Selection:

One participant representing the target user group, an Ayurvedic Eye Care Doctor, was chosen for interviews and usability testing (video recording).

- Interview Medium:

Google meets served as the platform for conducting the interviews, providing a reliable and remote data collection solution.

- Questionnaire Creation:

A structured questionnaire was meticulously crafted using Google Forms to gather comprehensive user feedback effectively.

Interviewing

A single participant, representing the target user group, was selected for interviews. This participant is an Ayurvedic Eye Care Doctor with specialized knowledge in Ayurvedic eye care practices.

Question 01: Do you have any prior experience with Ayurvedic eye care or similar health-related applications?

Question 02: If yes, how long have you been using such applications, and what has been your experience?

Question 03: Can you share any challenges or difficulties you've encountered while using Ayurvedic eye care applications?

Question 04: What improvements would you suggest enhancing the Ayurvedic Eye Care section of the EyeZen app?

Question 05: How can we improve the reliability and usefulness of the Ayurvedic eye care information provided in the app?

Question 06: Are there any additional features or content you would like to see in the Ayurvedic Eye Care section?

Video Recording

https://drive.google.com/drive/folders/1-H1VbrbJZvD5qWvB4xFXak1dLtpjCEf4?usp=drive_link

Questionnaire

- Questionnaire Creation:

A questionnaire was meticulously crafted using Google Forms, incorporating a mix of closed and open-ended questions to facilitate comprehensive user feedback.

- Distribution:

The questionnaire was disseminated among research participants via a publicly accessible link.

- Analysis:

Google Forms' robust analytical tools were harnessed to interpret and derive insights from the collected response data.

Google Form link: <https://forms.gle/yaAQP9HEphEwA3NHA>



User Research Questionnaire

We are 3rd year 1st semester students of faculty of computing in SLIIT. We are gathering these data to develop a mobile application for eye care. So we are analyzing data about users who willing to join this platform. This form is for Ayurvedic eye care section and the Doctor contact sections of the application.

Please provide your honest feedback and insights to help us improve the Ayurvedic Eye Care and Doctor Contact sections of the EyeZen app

sirimathahinsaka@gmail.com [Switch account](#) 

* Indicates required question

Email *

Record sirimathahinsaka@gmail.com as the email to be included with my response

Ayurvedic Eye Care Section

Have you explored the Ayurvedic Eye Care section of the EyeZen app? *

yes
 no

If yes, please share your experience. What did you find most valuable or enjoyable about this section?

Your answer

Were there any aspects of the Ayurvedic Eye Care section that you found challenging or confusing? Please describe.

Your answer

How would you rate the overall usability of the Ayurvedic Eye Care section on a scale of 1 (poor) to 5 (excellent)?

1	2	3	4	5
<input type="radio"/>				

What improvements or enhancements would you suggest to make the Ayurvedic Eye Care section more user-friendly or informative?

Your answer

Is there any specific content or features you would like to see added to the Ayurvedic Eye Care section?

Your answer

Doctor Contact Section

Have you used the Doctor Contact section of the EyeZen app to find eye care professionals? *

Yes
 No

If yes, please share your experience. Were you able to find the information you needed? Were there any challenges?

Your answer

How would you rate the overall usefulness of the Doctor Contact section on a scale of 1 (not useful) to 5 (very useful)?

1 2 3 4 5

Were there any features or details you felt were missing from the Doctor Contact section? Please elaborate.

Your answer

Do you have any suggestions for improving the Doctor Contact section to better serve your needs?

Your answer

Overall Feedback

What do you believe are the strengths of the EyeZen app in promoting eye health * and care?

Your answer

Are there any areas of the EyeZen app, beyond the Ayurvedic Eye Care and Doctor Contact sections, that you believe require improvement or attention?

Your answer

Do you have any additional comments or suggestions for enhancing the EyeZen app's user experience?

Your answer

Thank you for participating in this user research. Your feedback is highly valuable to us in making the EyeZen app even better for our users.

Submit **Clear form**

Never submit passwords through Google Forms.

This content is neither created nor endorsed by Google. [Report Abuse](#) - [Terms of Service](#) - [Privacy Policy](#)

Google Forms

Collected Responses for questionnaires

6 responses

Accepting responses

[Link to Sheets](#) [⋮](#)

[Summary](#) [Question](#) [Individual](#)

Who has responded?

Email

- isurusankax98@gmail.com
- sasidilshan@gmail.com
- ranjiththuduwage@gmail.com
- yasirudilshan449@gmail.com
- ravindupahasara2@gmail.com
- janeshalansakara@gmail.com

Ayurvedic Eye Care Section

Have you explored the Ayurvedic Eye Care section of the EyeZen app? [Copy](#)

6 responses

The chart is a donut chart with a single blue segment representing 100% of the responses. To the right of the chart, there is a legend with two items: a blue circle labeled 'yes' and a red circle labeled 'no'.

Response	Percentage
yes	100%
no	0%

If yes, please share your experience. What did you find most valuable or enjoyable about this section?

6 responses

I found the Ayurvedic Eye Care section to be a treasure trove of knowledge on natural eye care practices. The articles on Ayurvedic remedies were highly informative.

The Ayurvedic Eye Care section provided comprehensive information on natural remedies for eye care, which I found valuable.

I found the Ayurvedic Eye Care section to be a valuable resource for holistic eye care tips and remedies. The articles on Ayurvedic practices were informative.

The Ayurvedic Eye Care section was a valuable resource for holistic eye care practices. I particularly enjoyed the articles on natural remedies.

I explored the Ayurvedic Eye Care section extensively and found it to be a wealth of knowledge on traditional eye care practices. I particularly enjoyed reading about the benefits of herbal remedies.

I found the Ayurvedic Eye Care section to be incredibly informative. The articles on Ayurvedic remedies were well-written and beneficial.

Were there any aspects of the Ayurvedic Eye Care section that you found challenging or confusing? Please describe.

6 responses

The terminology used was sometimes hard to understand, especially for someone new to Ayurveda.

Some of the Ayurvedic terminology used in the section was unfamiliar to me and required further explanation.

Navigation within the section could be improved. It took some time to find specific topics.

Some of the Ayurvedic terminology used was unfamiliar to me. It would be helpful to have explanations for these terms.

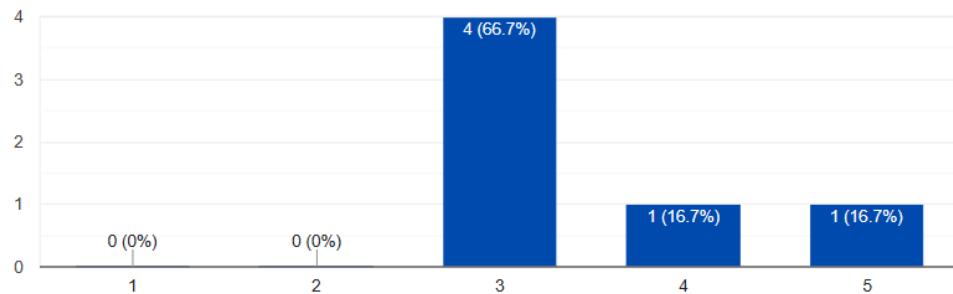
Some of the Ayurvedic terms were a bit challenging to understand, especially for those new to Ayurveda. Adding explanations for these terms would be helpful.

Some Ayurvedic terms were unfamiliar to me, and I had to research them separately to fully understand.

How would you rate the overall usability of the Ayurvedic Eye Care section on a scale of 1 (poor) to 5 (excellent)?

[Copy](#)

6 responses



What improvements or enhancements would you suggest to make the Ayurvedic Eye Care section more user-friendly or informative?

6 responses

Adding explanations for Ayurvedic terms and more visuals, like videos, would enhance user-friendliness. Regular updates with fresh content would also be great.

Providing explanations for Ayurvedic terms and incorporating videos or infographics for visual learners would enhance user-friendliness.

Adding a search feature to quickly find specific topics and more visual content, such as videos or infographics, would enhance the user experience.

Adding explanations for Ayurvedic terms, interactive quizzes or self-assessment tools, and a discussion forum for users to share experiences and tips would enhance the section.

To enhance user-friendliness, consider adding a search function for easy topic access and interactive features like quizzes to test one's knowledge.

Including explanations for Ayurvedic terms and possibly creating a guided user journey for beginners would enhance user-friendliness.

Is there any specific content or features you would like to see added to the Ayurvedic Eye Care section?

6 responses

It would be beneficial to include a section on Ayurvedic eye exercises with practical instructions.

Including a section on Ayurvedic eye exercises and tips for maintaining eye health through diet would be beneficial.

I would like to see more content on Ayurvedic dietary recommendations for eye health.

Including detailed guides on Ayurvedic eye exercises and yoga poses for eye health would be beneficial.

Including video demonstrations of Ayurvedic eye exercises and real-life success stories from users who benefited from these practices would be motivating.

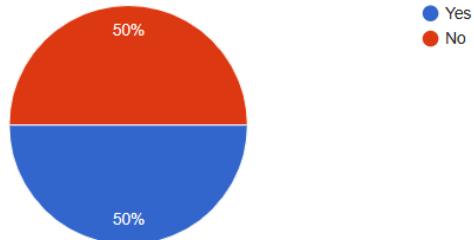
Adding a section on Ayurvedic lifestyle practices for eye health, including dietary recommendations, would be valuable.

Doctor Contact Section

Have you used the Doctor Contact section of the EyeZen app to find eye care professionals?

 Copy

6 responses



If yes, please share your experience. Were you able to find the information you needed? Were there any challenges?

6 responses

I haven't used this section yet as I haven't needed eye care professionals recently.

Yes, I used the Doctor Contact section to find an eye care professional, and it was a smooth experience. I quickly found the information I needed.

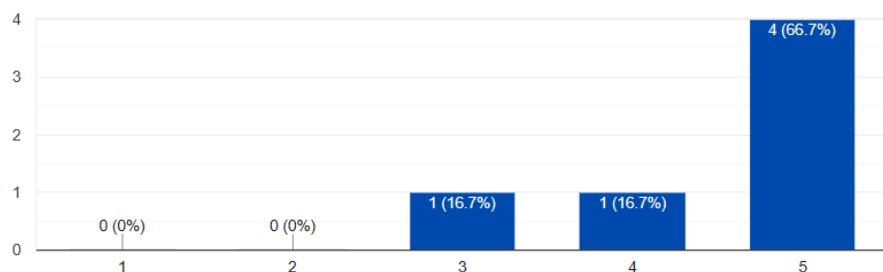
Yes, I used the Doctor Contact section to find an eye care professional, and it was straightforward. I found the necessary information without any issues.

Yes, I used the Doctor Contact section to find an eye care professional, and it was efficient. The information was comprehensive, and I didn't face any challenges.

I haven't used this section as I haven't required eye care professionals' services recently.

How would you rate the overall usefulness of the Doctor Contact section on a scale of 1 (not useful) to 5 (very useful)? [Copy](#)

6 responses



Were there any features or details you felt were missing from the Doctor Contact section? Please elaborate.

6 responses

I didn't explore this section, so I can't provide feedback on missing features.

The Doctor Contact section was quite comprehensive, and I didn't notice any missing features.

The Doctor Contact section was comprehensive, and I didn't notice any missing features.

The Doctor Contact section seemed complete, and I couldn't identify any missing features.

Do you have any suggestions for improving the Doctor Contact section to better serve your needs?

6 responses

Although I didn't use it, having a user review and rating system for eye care professionals could be beneficial.

It would be helpful to add a feature that allows users to book appointments directly through the app.

It would be helpful to include user reviews and ratings for eye care professionals, allowing users to make informed choices.

Integrating a feature for booking appointments directly through the app would be convenient for users.

While I haven't used it, having user reviews and ratings for eye care professionals could be beneficial.

Overall Feedback

What do you believe are the strengths of the EyeZen app in promoting eye health and care?

6 responses

The app's strength lies in its extensive Ayurvedic eye care content, making it a valuable resource for holistic eye health.

The app excels in providing a holistic approach to eye health, combining Ayurvedic practices and modern eye care.

The app provides a comprehensive resource for Ayurvedic eye care, which is a unique and valuable offering.

The app's strength lies in its comprehensive approach to eye care, combining Ayurvedic practices and access to eye care professionals.

The app excels in providing a holistic approach to eye care, combining traditional Ayurvedic practices with modern medical resources.

The app's strength lies in its comprehensive approach to eye health, incorporating Ayurvedic practices and providing access to eye care professionals.

Are there any areas of the EyeZen app, beyond the Ayurvedic Eye Care and Doctor Contact sections, that you believe require improvement or attention?

6 responses

I didn't explore other sections of the app, so I can't provide feedback on this.

I haven't explored other sections, so I can't comment on that.

I didn't explore other sections, so I can't comment on that.

I focused primarily on these sections and didn't explore other areas of the app.

I primarily focused on these two sections, and I didn't explore other areas of the app.

My focus has been primarily on these sections, and I haven't explored other areas of the app.

Do you have any additional comments or suggestions for enhancing the EyeZen app's user experience?

6 responses

Regular updates with the latest developments in Ayurvedic eye care would be highly appreciated.

It's important to continue updating the content to ensure it remains relevant and up-to-date with the latest advancements in eye care.

Consistent updates with the latest information and research in Ayurvedic eye care would keep users engaged and informed.

Regular updates with the latest research and developments in Ayurvedic eye care would keep users engaged and informed.

Regular updates with the latest research findings in Ayurvedic eye care would be appreciated.

Consistently updating the Ayurvedic content with the latest research and practices would be beneficial for users.

Participant Profile

Name	Demography	Location, Date & Time
Hirushi Rodrigo	Age: 24 Work: Ayurvedic Doctor Marital Status: Single Location: Colombo, Sri Lanka	Location: Google Meet Date: 23 rd September 2023 Time: 10.30 PM

Protocols

During the interview and feedback sessions, participant Hirushi Rodrigo was presented with:

- User Flow Diagrams:

Visual representations outlining the user journey within the Ayurvedic Eye Care and Doctor Contact sections.

- High-Fidelity UI Mockups:

Detailed screens and user interfaces for both sections, offering a realistic preview of the app's features.

Participant Hirushi Rodrigo provided candid feedback and valuable suggestions. This feedback will serve as the foundation for improvements and enhancements to the Ayurvedic Eye Care and Doctor Contact sections of the EyeZen app, ensuring a superior user experience.

5.1.4 User research conducted for a Western Doctor – IT21169144 – Karunarathne R.Y.D

Introduction

The domain of eye care plays a pivotal role in safeguarding individuals' visual health and overall well-being. The timely identification and intervention of vision-related concerns hold the potential to mitigate the impact of ocular disorders. The core research topic of this research is to close the technological gap between the urgent demand for affordable and comprehensive eye care solutions and current technological capabilities and to make an evolutionary step in promoting and raising the awareness of indigenous medical treatments for ocular health. The risk of ocular health problems rises when people are subjected to more screen time and online interactions. The issue is succinctly stated: How can the management of eye health be revolutionized by a novel application that successfully combines cutting-edge diagnostic technologies, traditional treatments, and personalized care?

Test Objectives

- Assess the user friendliness and ease of use of the app taking note of any usability challenges or issues.
- Verify that the app effectively performs all its intended functions meeting both specified requirements and user expectations in terms of functionality.
- Ensure optimal performance, across devices ensuring that the app works seamlessly regardless of screen sizes or platforms.
- Enhance security measures to address any vulnerabilities within the app ensuring a level of protection across all devices.
- Strive to minimize development errors by implementing testing and quality assurance processes during the app development phase.
- to commencing development carefully. Clarify all project requirements to eliminate any ambiguities or contradictions, in the project specifications.

Methodology

As mentioned earlier the study utilized three approaches; conducting interviews performing usability testing and distributing questionnaires. We selected individuals, from the user group to participate in the interviews and usability testing sessions. These sessions were recorded using OBS Studio. During the interviews we utilized Google meet as our communication platform while Google Forms was used to create the questionnaires.

Interviewing

The Script as follows:

Question 1: How frequently do you utilize the app, for testing your eyes?

Question 2: Did you find the speech to text functionality useful when inputting your responses?

Question 3: Could you please share any difficulties or obstacles you encountered while using the application?

Question 4: On a scale of 1 to 10 how satisfied are you, with the performance of the app?

Question 5: Would you recommend this application to individuals who have impairments?

Video Recording

https://drive.google.com/drive/folders/1hT_a69Emmq2L8djwhhSpb7zGIASHEIqX?usp=sharing

Questionnaire

We opted for Google Forms to generate our survey incorporating questions that encompassed both choice and open-ended responses. We then distributed the survey link to our research participants urging them to complete it. In order to analyze the collected responses we made use of the tools provided by Google Forms. The primary objective behind our survey was to identify any challenges users might have encountered while utilizing the EyeZen app as soliciting their valuable feedback, on potential areas of improvement.

Google Form Link: <https://forms.gle/dE6D3nSeLCgsUiGe8>



**OPEN YOUR EYES TO
CLEARER VISION**

EyeZen Eye Care Vision Test User Research

"We are third-year, second-semester students at SLIJT, currently engaged in collecting user feedback for eye care mobile applications to enhance our system. Our objective is to gain valuable insights from users, enabling us to make meaningful improvements to the app. Your feedback plays a crucial role in our ongoing efforts to create a more effective and user-friendly eye care solution. We sincerely appreciate your participation in this endeavor, which will contribute significantly to the enhancement of our system."

rpvasiru@gmail.com Switch account 

Not shared

* Indicates required question

Age *

- Under 12
- 12-17
- 18-24
- 25-34
- 35-44
- 45-59
- 60 or older

Occupation *

Your answer

Have you used the near-sighted and far-sighted eye testing mobile app before? *

- Yes
- No

If you have used the app, please share how often you use it? (e.g., daily, weekly, monthly). *

Your answer

Were you able to easily navigate and use the app to test your eyesight? Please explain your experience. *

Your answer

Did you find the speech-to-text feature helpful in entering your responses during the eye test? *

- Yes
- No
- Maybe

Do you have any feedback or suggestions for us as we work on developing our eye care mobile app? Please share your thoughts, ideas, or any improvements you'd like to see. Your input is highly valuable to us

Your answer

Submit **Clear form**

Never submit passwords through Google Forms.

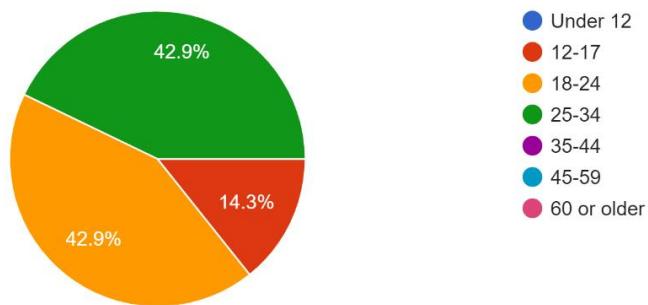
This content is neither created nor endorsed by Google. [Report Abuse](#) · [Terms of Service](#) · [Privacy Policy](#)

Google Forms

Collected Responses for questionnaires

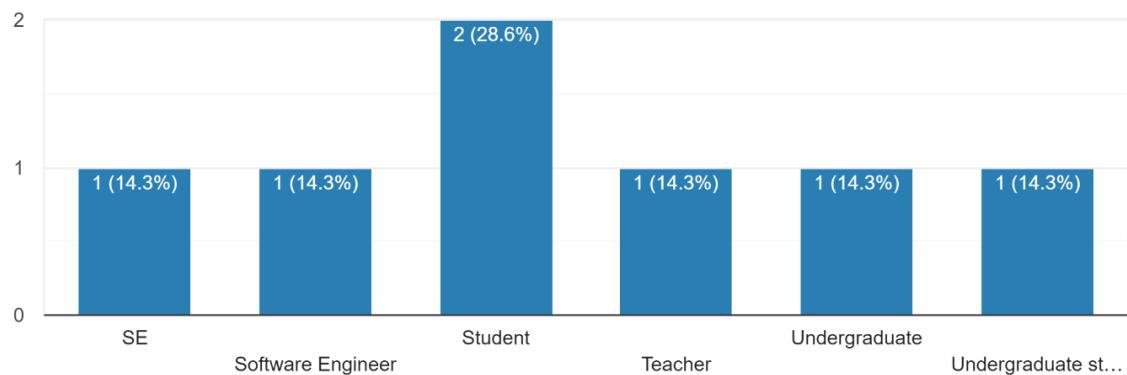
Age

7 responses



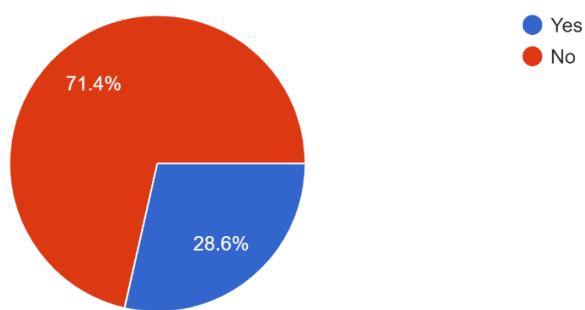
Occupation

7 responses



Have you used the near-sighted and far-sighted eye testing app/web before?

7 responses



If you have used the app/web, please share how often you use it? (e.g., daily, weekly, monthly).

7 responses

Monthly

Daily

None

I haven't used app for eye testing

3 months

monthly

Were you able to easily navigate and use the app/web to test your eyesight? Please explain your experience.

7 responses

Lots of apps contains unnecessary redirects

Sh

None

May be

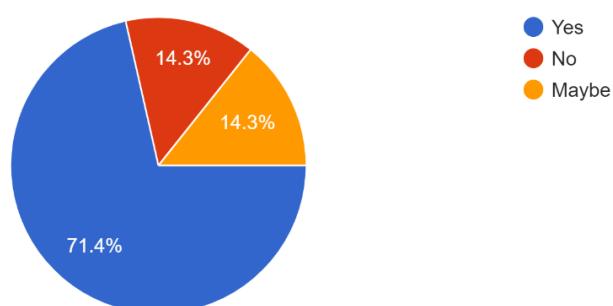
Yes, but seems not successful

yes I use the app easily

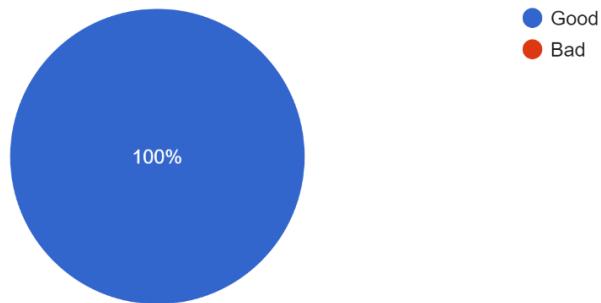
No. Because my keyboard layout is too small . I cannot clearly visible the key when I'm answering the test

Did you find the speech-to-text feature helpful in entering your responses during the eye test?

7 responses



Do you think developing a mobile app for eye tests is a good idea or a bad idea?
2 responses



Do you have any feedback or suggestions for us as we work on developing our eye care mobile app? Please share your thoughts, ideas, or any improvements you'd like to see. Your input is highly valuable to us

6 responses

Informative guides will be useful to understand the flow

Add the voice command

No

UI texts are little smaller and quite uneasy to read. I suggest to concern more on UI

I'm a color blind person , So don't use any red and green color variations together for the App UI

Please dont make the app too complicated.

Participant Profile

Name	Demography	Location, Date Time
Pahasara Wickramasinghe	Age: 24	Location: MS Teams Date : 22 nd September 2023 Time : 8.00 p.m.

Protocol

During the interview we presented the participants, with user flow diagrams and detailed designs of the user interface that we had developed for the "application". We then asked them to share their thoughts provide feedback and offer suggestions based on their observations.

6. Milestone 3 : Verify the key user flow

6.1 Verify the identified functionality (Milestone 1) of the proposed system

6.1.1 User research conducted of an Adult Patient – IT21189944 – Madusanka G.K.I

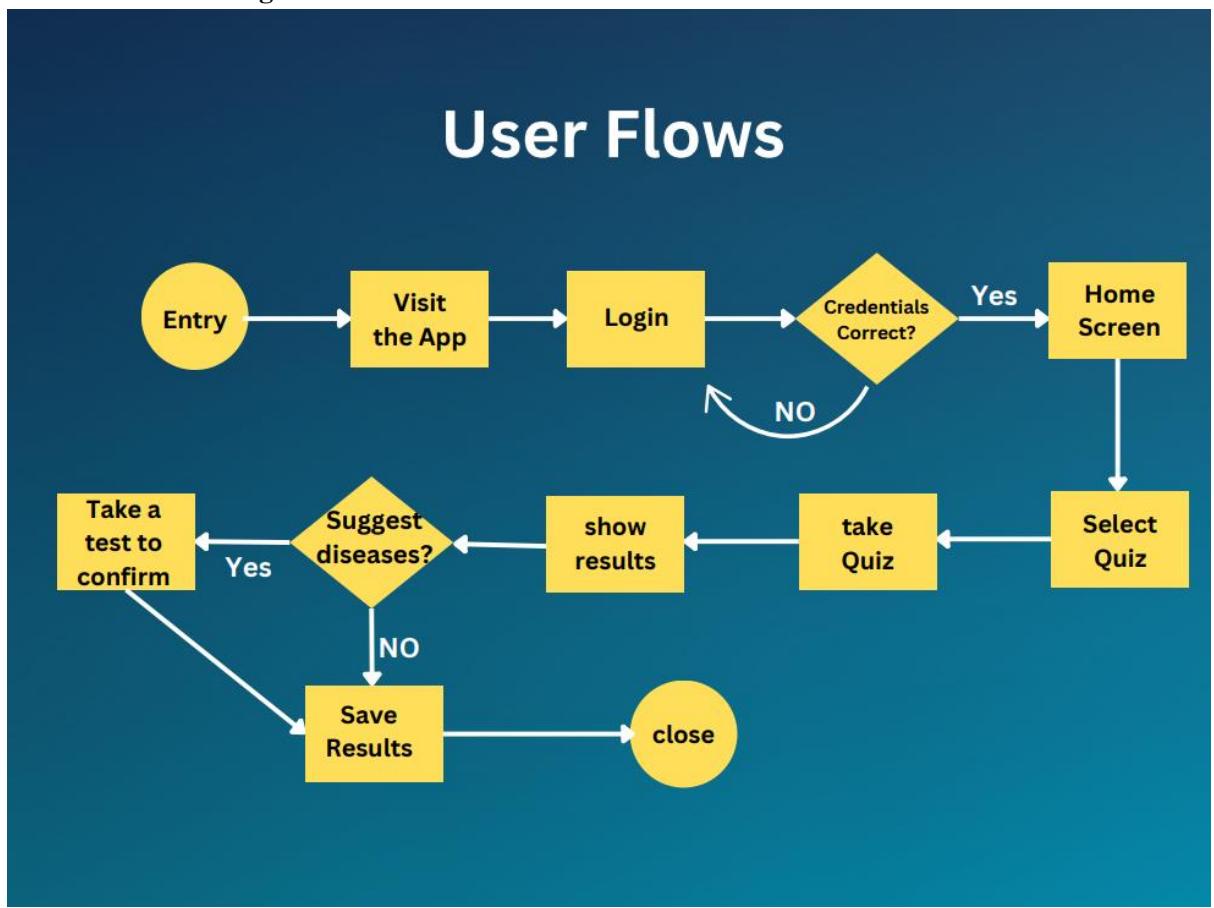
Analysis of User Research Data

After comparing the findings of Milestone 2 and Milestone 1 the core issues of Milestone 1 user flow were discovered after the interview process of Milestone 2.

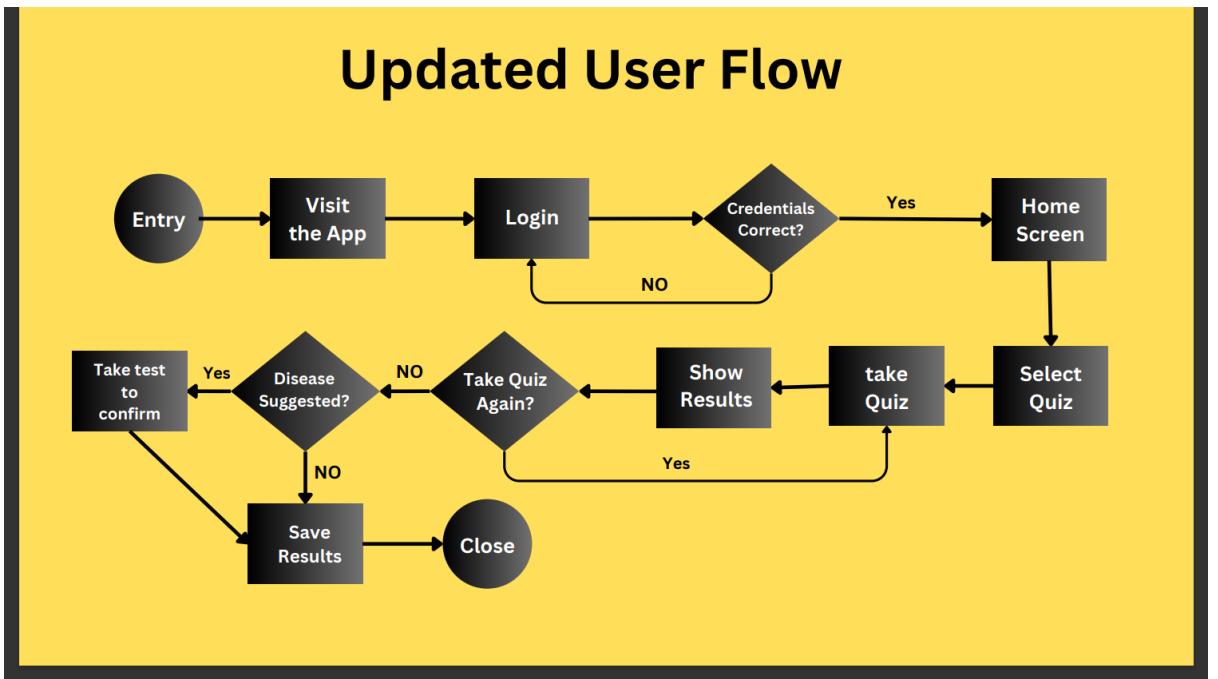
- If the user wants, user can be able to take the test again after the quiz has ended.
- Add Games for kids.

Revisit of User-flow diagram

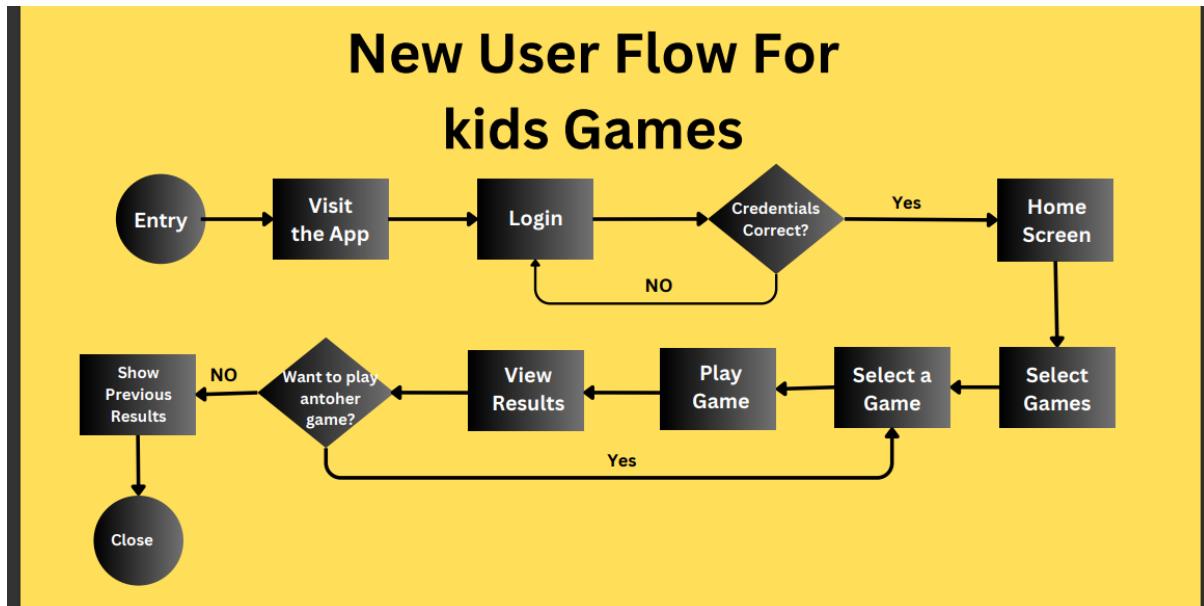
➤ Initial User-flow diagram



➤ Changed User-flow diagram after verifications



- New user for flow kids games



6.1.2 User research conducted of a Parent with an Infant – IT21318320 – Silva T.U.D

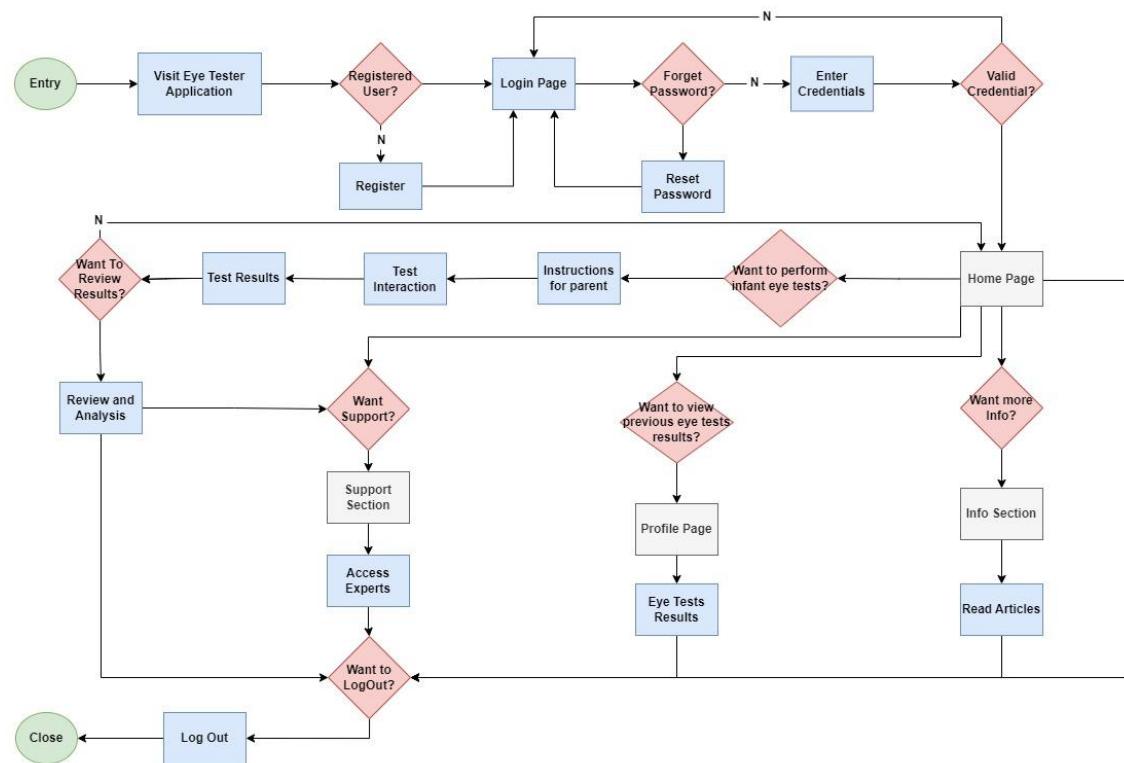
Analysis of User Research Data

According to the data collected through the user research the following requirements and enhancements were identified.

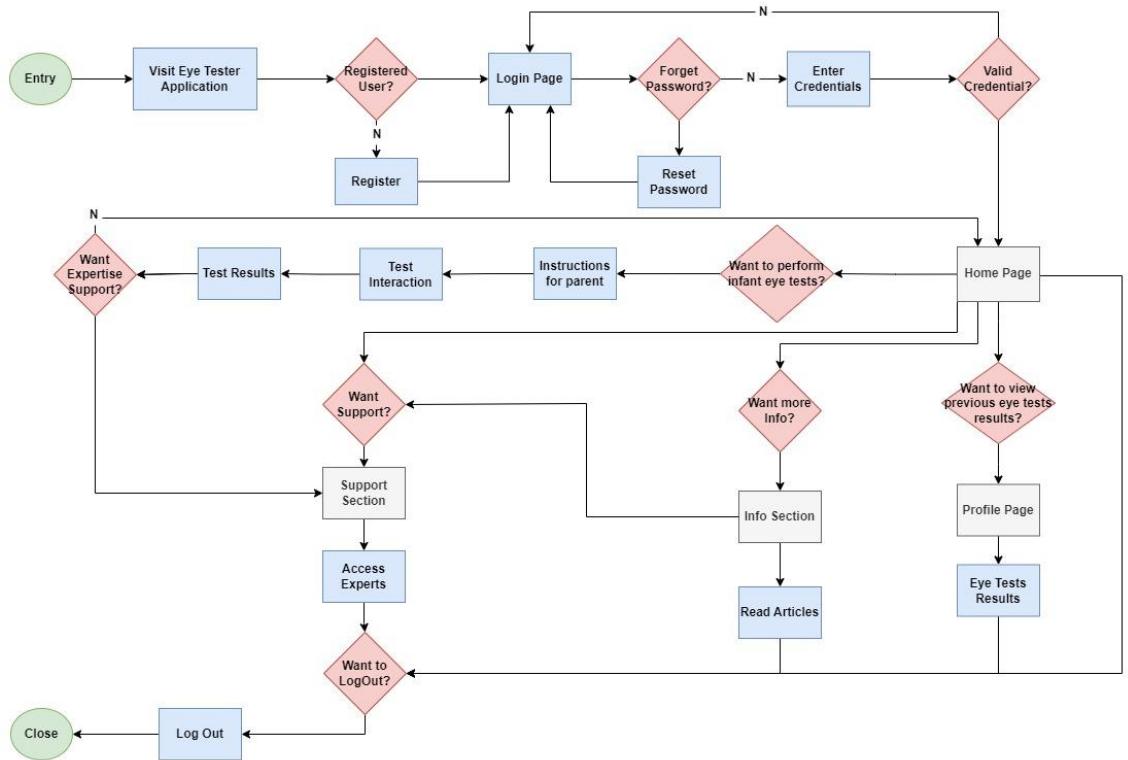
- Infant eye care feature is new to users so that they expect simple design and functionality.
- Parents of little infants hardly find free time, so that they need an application with less time requirement to operate.
- Parents find it easy to use an application if the application do have lesser navigations.
- Parents prefer to get fast and accurate guidance to take care of their infant's vision in arise of a need.

Revisit of User-flow diagram

➤ Initial User-flow diagram



➤ **Changed User-flow diagram after verifications**



- To reduce the navigations between interfaces analysis of results were merged with test results.
- In order to take support after receiving the test results connection was made to ensure the reach of proper guidance through the support section.
- A new connection was created in order to take support for getting a verification in need after going through information regarding infant vision.

6.1.3 User research conducted of an Indigenous Doctor – IT21169380 – Thuduvage I.M.H.G

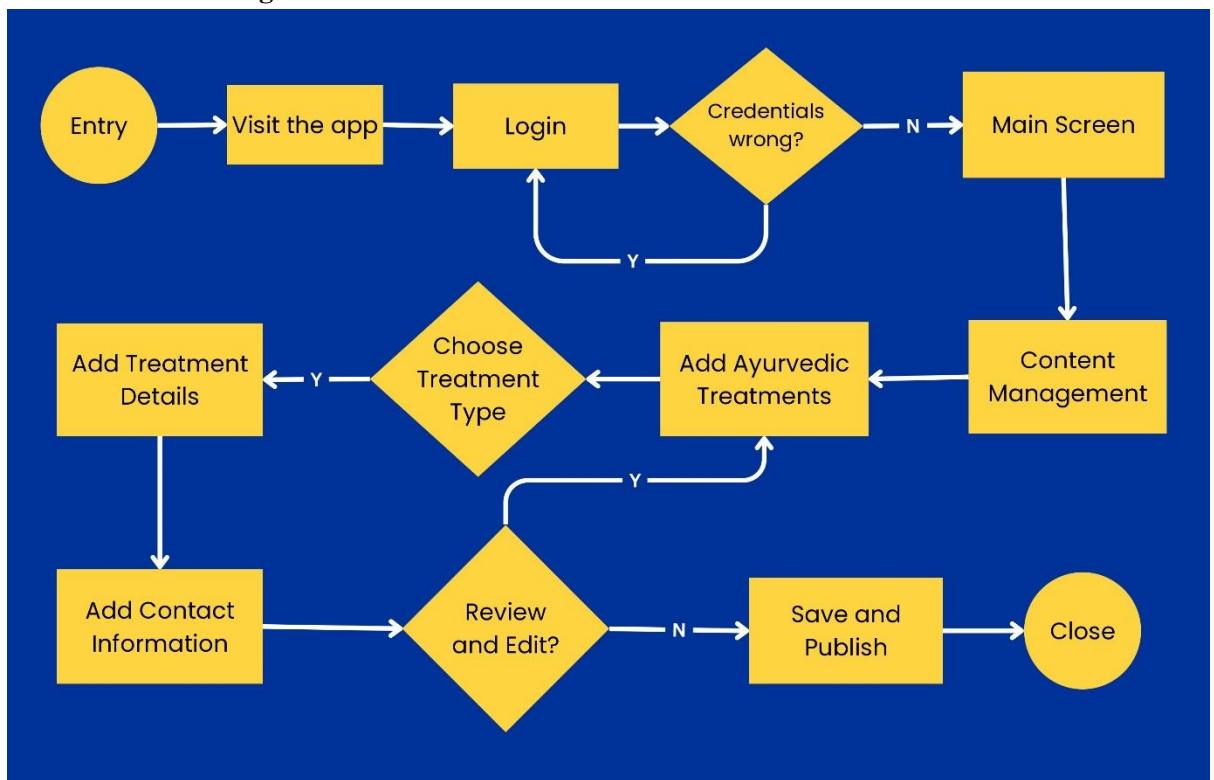
Analysis of User Research Data

After comparing the findings of Milestone 2 and Milestone 1, core issues from the Milestone 1 user flow were identified during the Milestone 2 interview process.

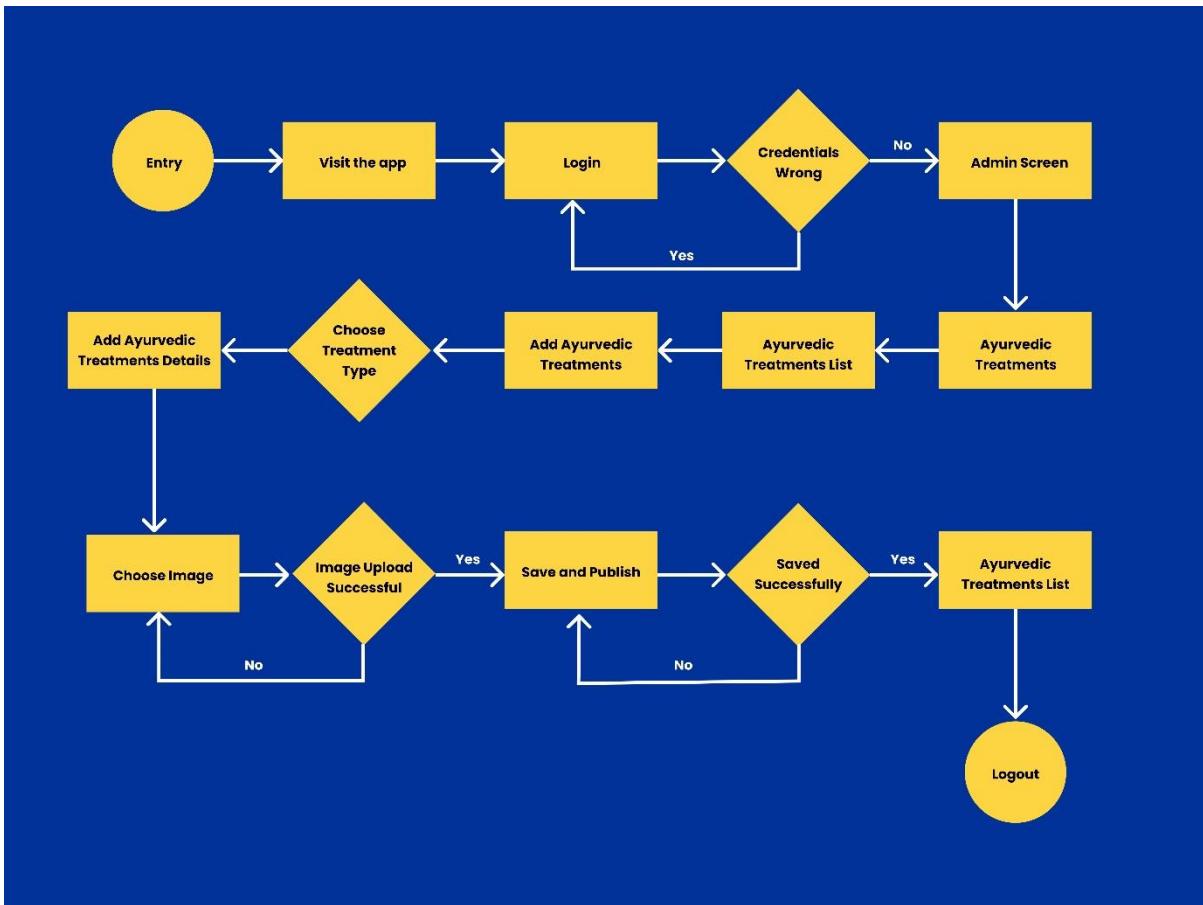
- The admin expressed the need to create an admin panel for adding treatments.
- The admin desires the ability to display a full list of treatments for updating, deleting treatments, and adding new ones.
- When uploading an image, if the upload fails, the user should have the option to either choose a different image or retry the upload. If the upload is successful, it can be saved and published.
- When attempting to save and publish, if the process fails, the user should have the option to retry. If the operation is successful, it should redirect to the Ayurvedic treatment list.

Revisit of User-flow diagram

➤ Initial User-flow diagram



➤ Changed User-flow diagram after verifications



6.1.4 User research conducted of a Western Doctor – IT21169144 – Karunarathne R.Y.D

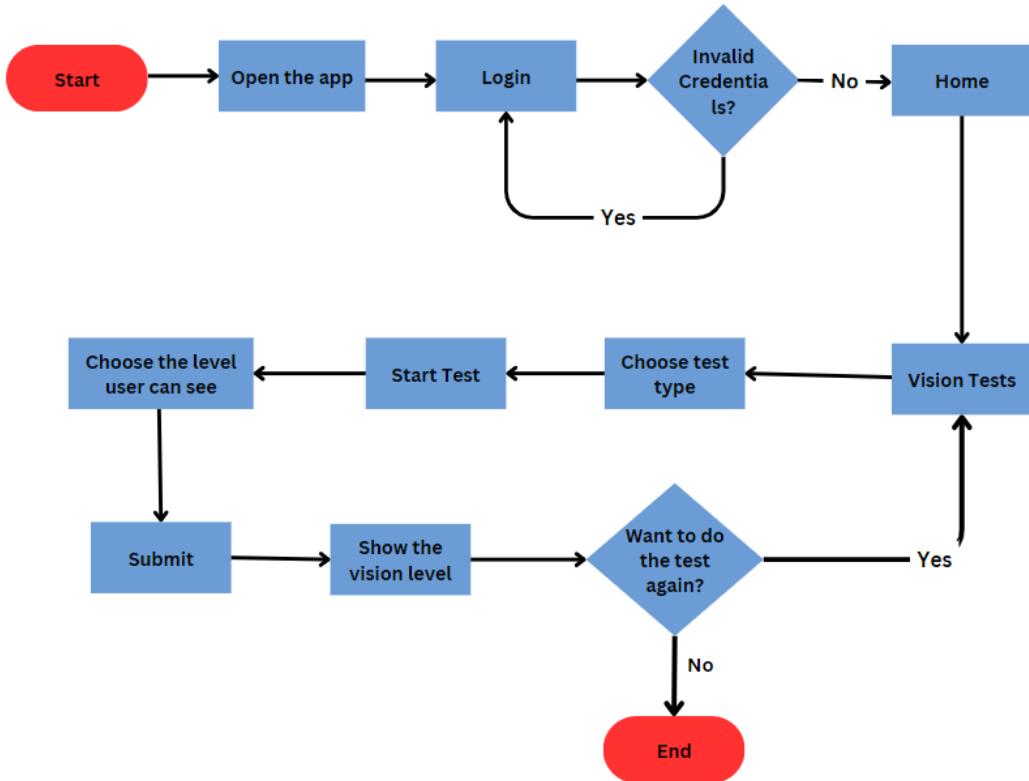
Analysis of User Research Data

After reviewing Milestone 2 in comparison to Milestone 1 and conducting interviews during Milestone 2, we identified some fundamental issues with the user flow from Milestone 1.

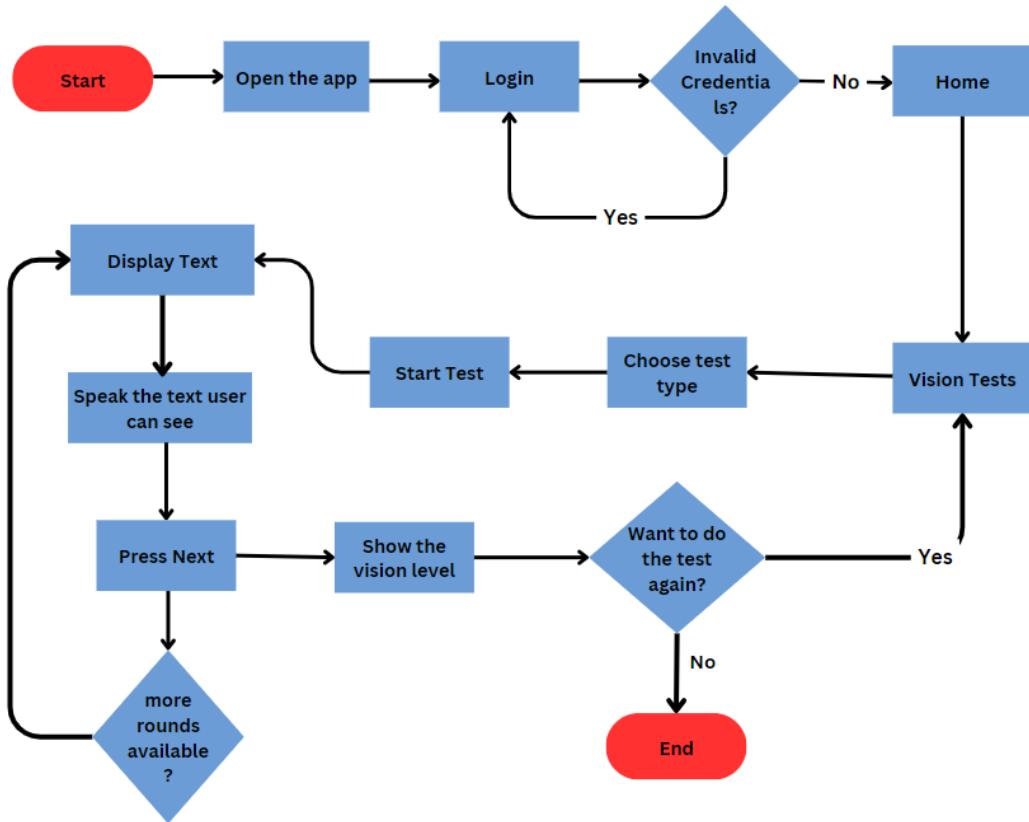
- The admin desires the ability to conduct multiple rounds of eye-testing.
- The admin intends to utilize a speech-to-text library for eye-test.

Revisit of User-flow diagram

➤ Initial User-flow diagram



➤ Changed User-flow diagram after verifications



7. Competitor Analysis

7.1 Competitor 1 - EyeQue VisionCheck

7.1.1 Advantages

- At-Home Vision Testing: EyeQue VisionCheck allows users to perform vision tests at home using a smartphone attachment.
- Accessibility: It offers convenience for users who want to monitor their vision regularly.
- User-Friendly: The app is designed for easy self-testing.

7.1.2 Disadvantages

- Limited to adults
- Doesn't have feature to Book appointments.
- Doesn't have a traditional treatment or Doctor finder.
- Doesn't have eye test games

7.2 Competitor 2 – Eye Handbook

7.2.1 Advantages

- Reference Material: Eye Handbook serves as a valuable reference for eye care professionals, providing detailed information about various eye conditions.
- Educational Resource: It offers educational content for those interested in eye health and conditions.

7.2.2 Disadvantages

- Not a Comprehensive Vision Testing App: Eye Handbook is more of a reference tool and educational resource than a comprehensive vision testing app like Eye Zen.
- Targeted at Eye Care Professionals: It may have limited utility for the public.
- Limited to adults
- Doesn't have feature to Book appointments.
- Doesn't have a traditional treatment or Doctor finder.
- Doesn't have eye test games.
- Doesn't have eye tests with probability quiz.

7.3 Competitor 3 – Color Vision Test

7.3.1 Advantages

- Provides attractive games for kids to detect eye diseases.
- Interactive User-friendly interface

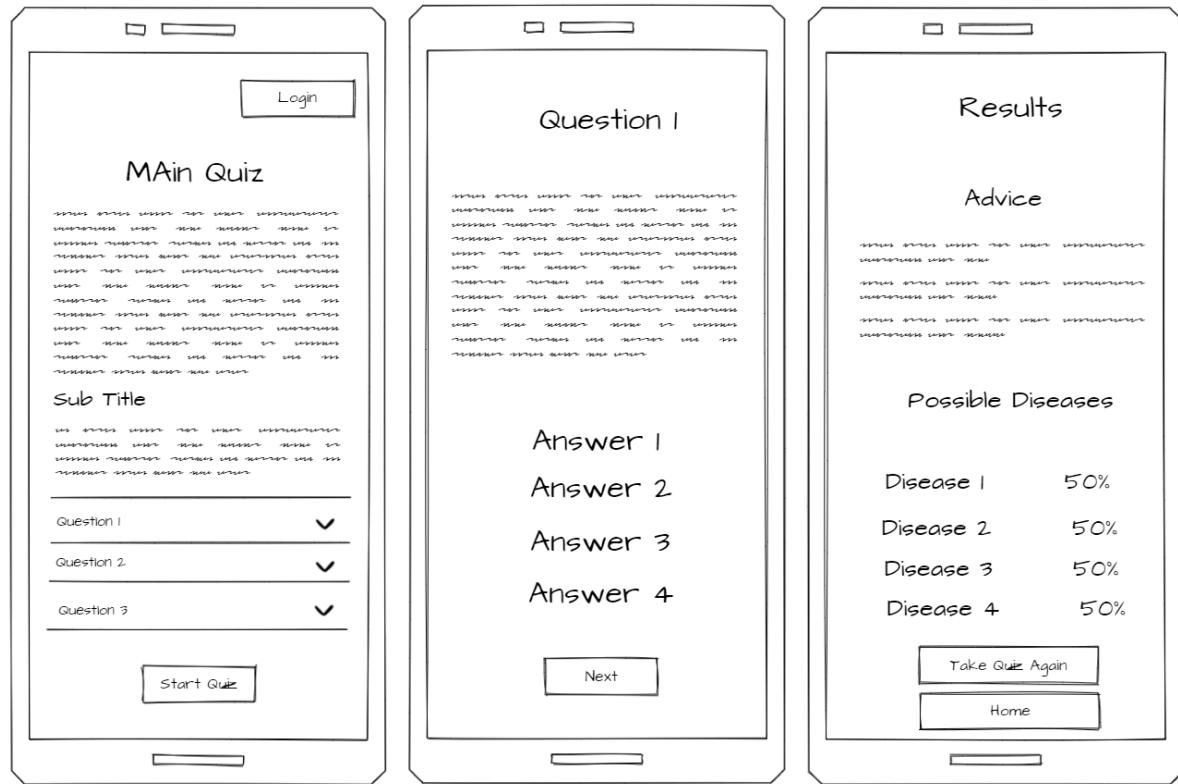
7.3.2 Disadvantages

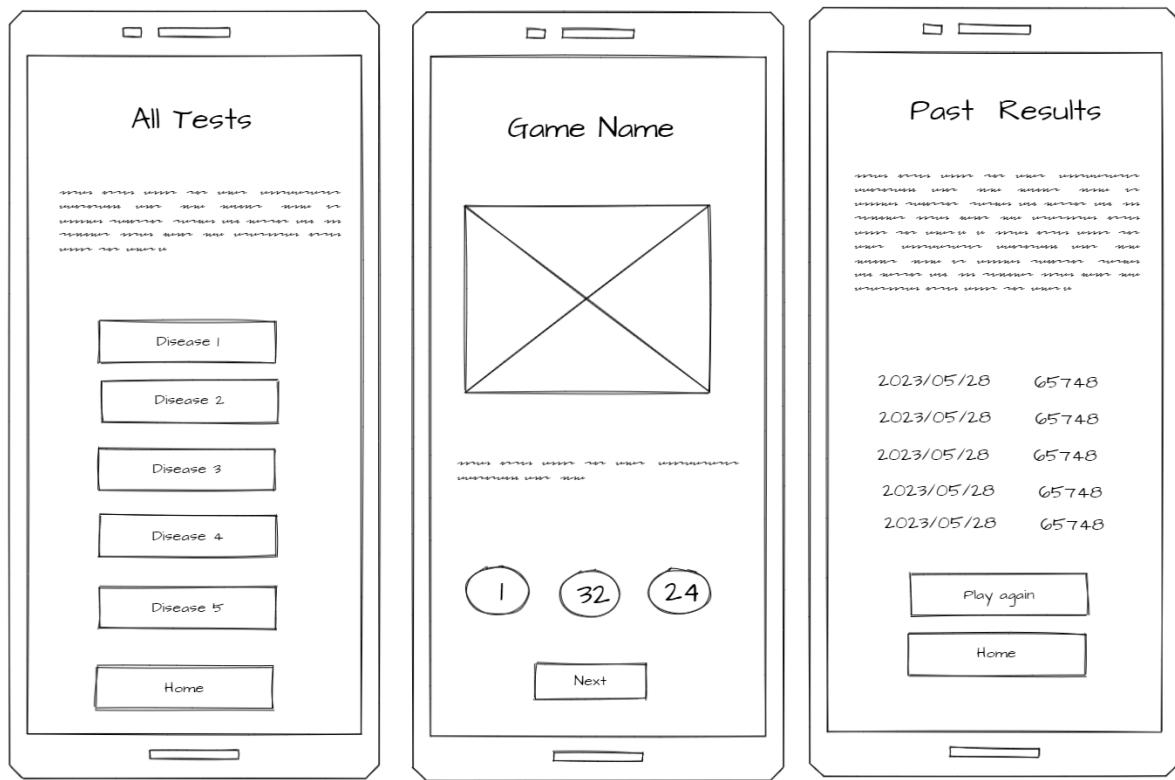
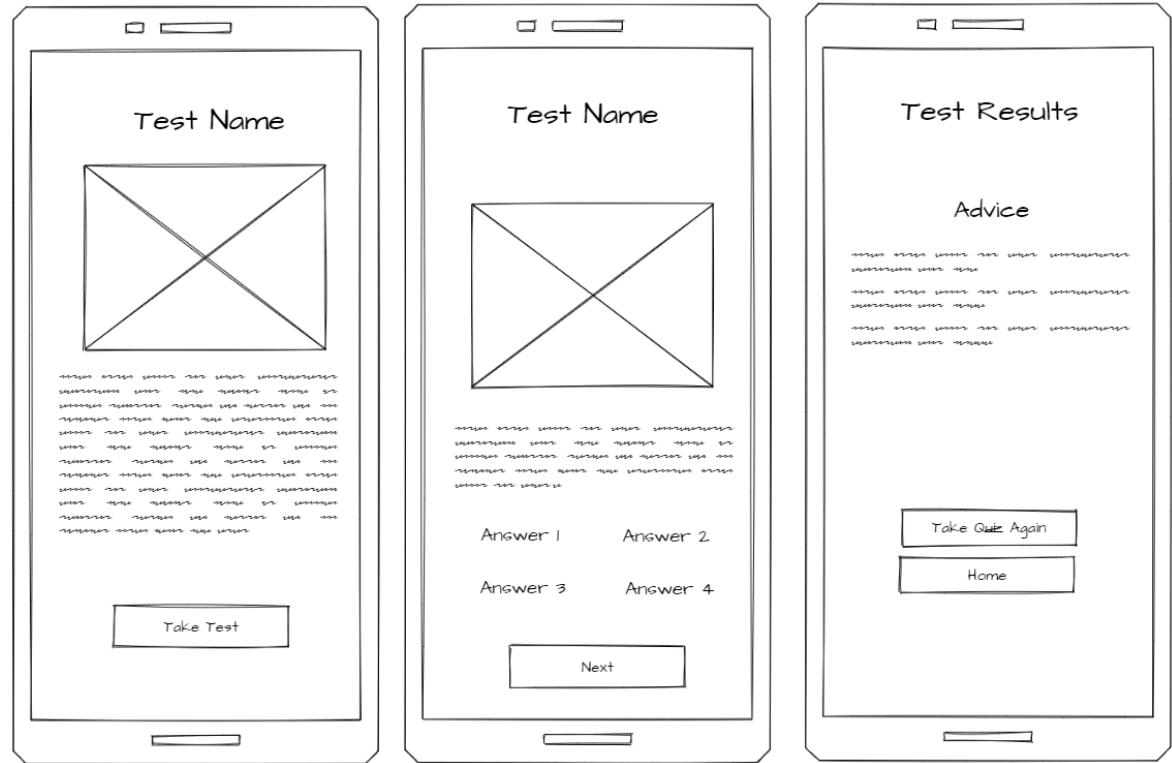
- Limited to children
- Only provides 2 games to children.
- Doesn't have doctor contact 'facility'.
- Doesn't have infant eye care.
- Doesn't have eye tests with probability quiz.
- Doesn't have vision care test.

8. Milestone 4 : Sketching and Wireframes

8.1.1 IT21189944 – Madusanka G.K.I

Sketches





Wireframes

Quiz Home

Title

Sub Title

“Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta beatae vitae dicta sunt pism voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quis consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt.

Question 1

Question 2

Question 3

Question 4

Start Quiz

Quiz

Question 01

“Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard dummy text ever. Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard dummy text ever. Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard dummy text ever. Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard dummy text ever...”

Answer 1

Answer 2

Answer 3

Answer 4

NEXT

Quiz Results

Results

Advice

“Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard dummy text ever. Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard dummy text ever. Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard dummy text ever. Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard dummy text ever...”

Possible Diseases	Percentage
Disease 1	50%
Disease 2	50%
Disease 3	50%
Disease 4	50%
Disease 5	50%

Home

Take Quiz Again

Test Home

Test Name

“Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod temp”

Take Test

myopia

Test Name

“Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod temp”

Next

single test result

Test Results

“Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod temp”

Home

Take Test Again

All Tests

All Test

Lore ipsum is simply dummy text of the printing and typesetting industry. Lore ipsum has been the industry's standard dummy text ever...Lore ipsum is simply dummy text of the printing and typesetting industry. Lore ipsum has been the industry's standard dummy text ever...

Disease 1

Disease 2

Disease 3

Disease 4

Disease 5

Disease 6

Home

Single quiz

Game Name



ectetur adipiscing elit, sed do eiusmod temp?

1

Next

myopia download

Past Results

Lore ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna Lore ipsum dolor sit amet, consectetur

Lore 6578

Lore 6578

Lore 6578

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Lore 6578

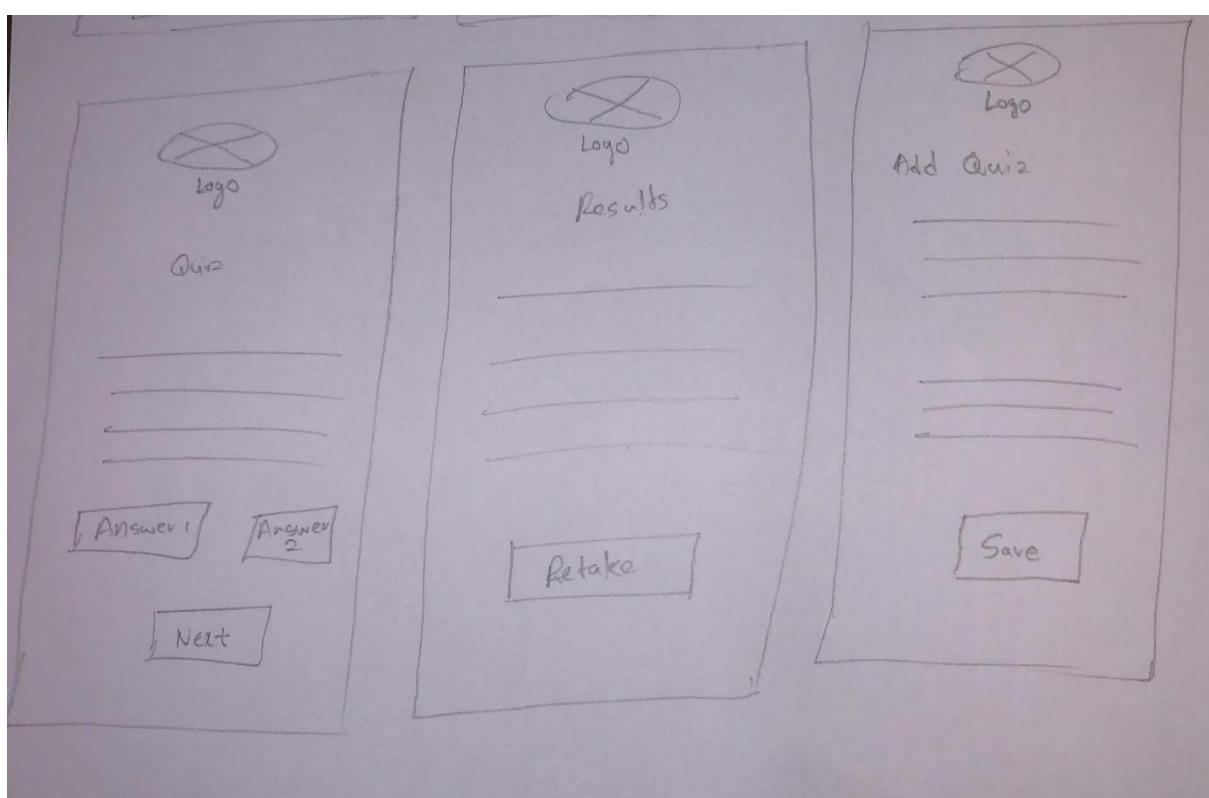
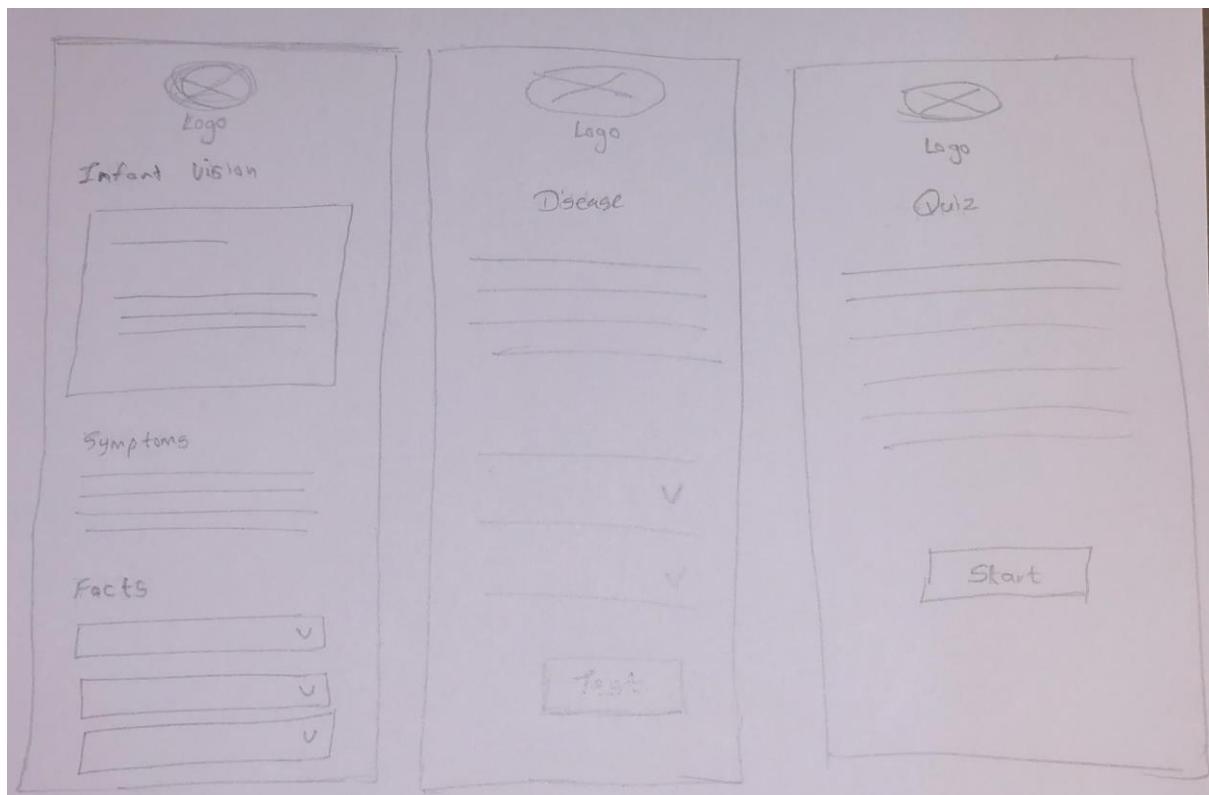
Lore 6578

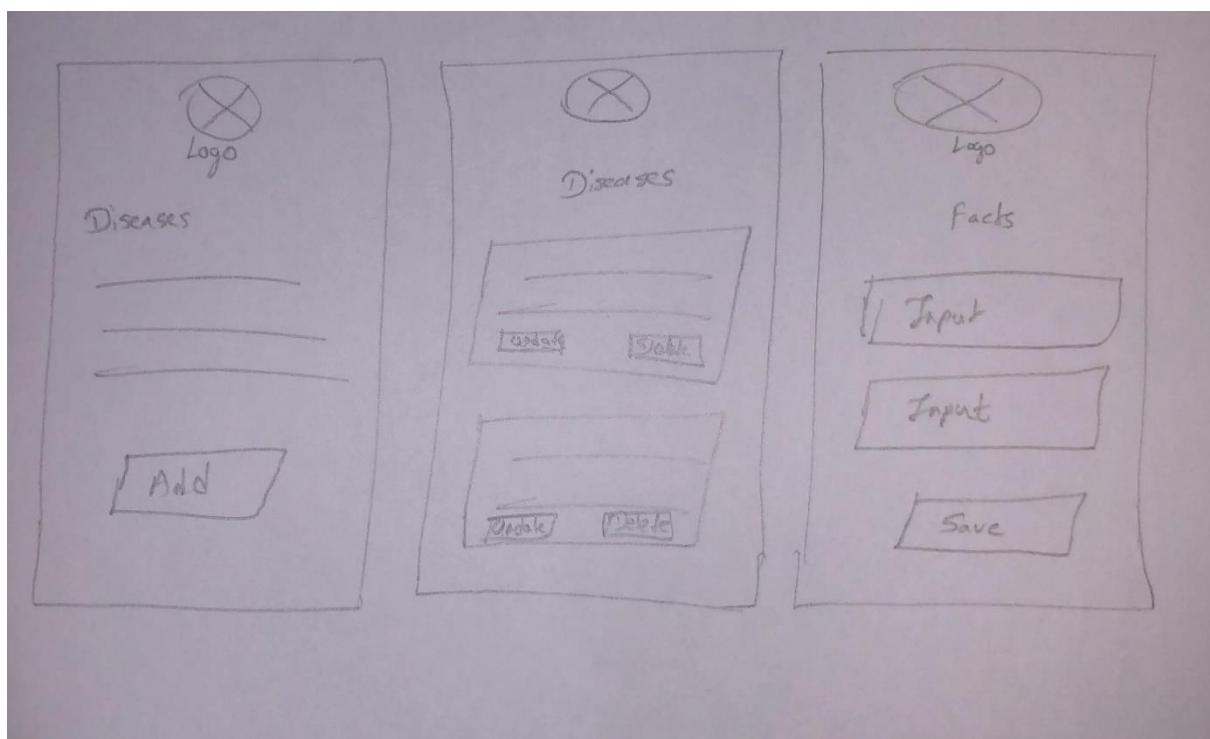
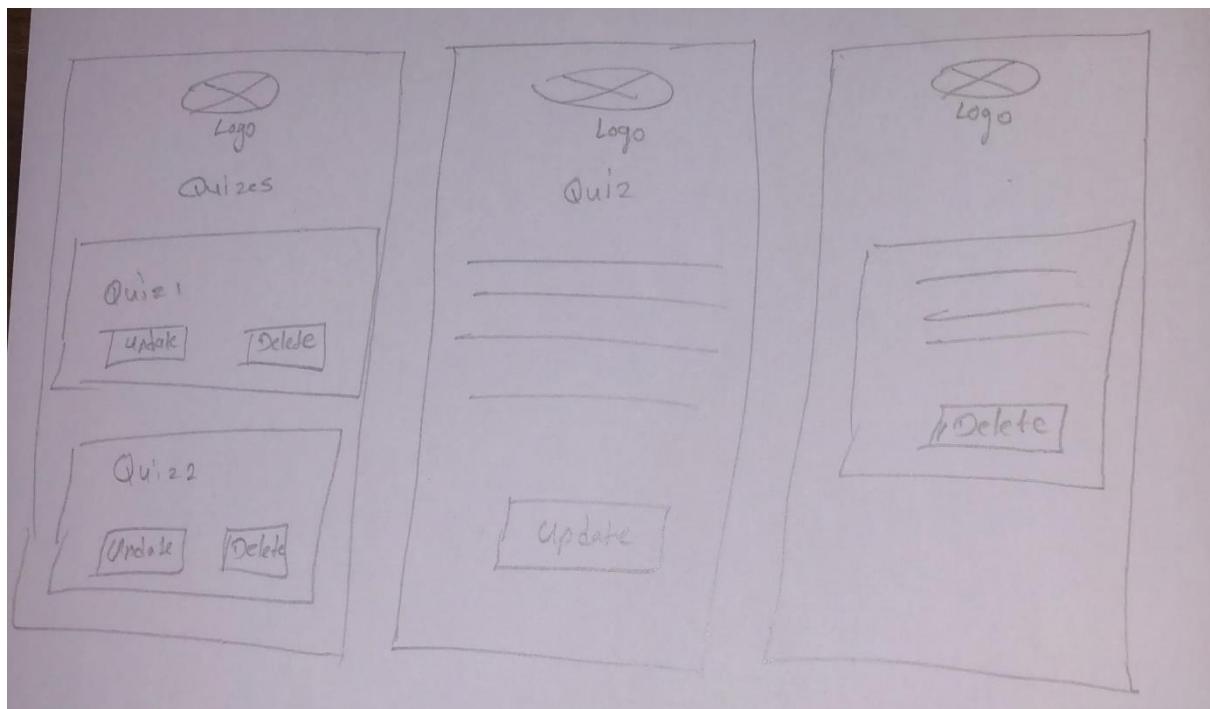
Play Game again

Main

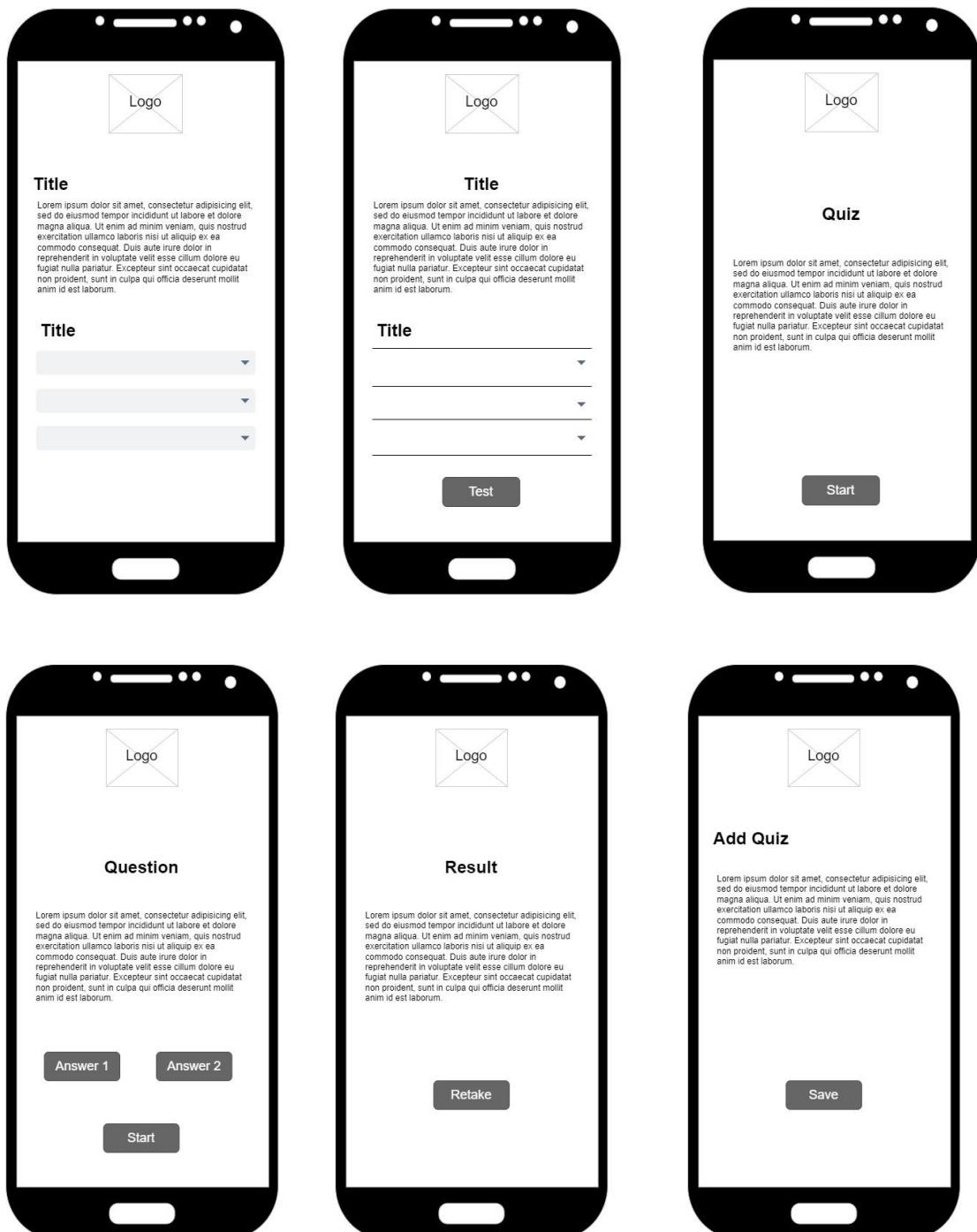
8.1.2 IT21318320 – Silva T.U.D

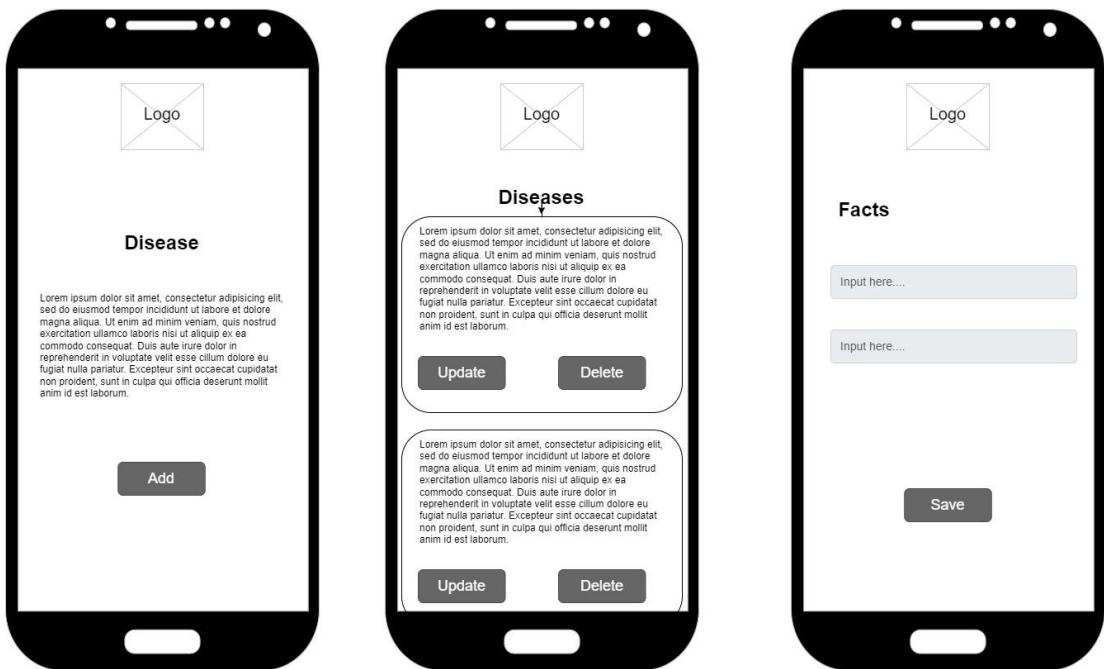
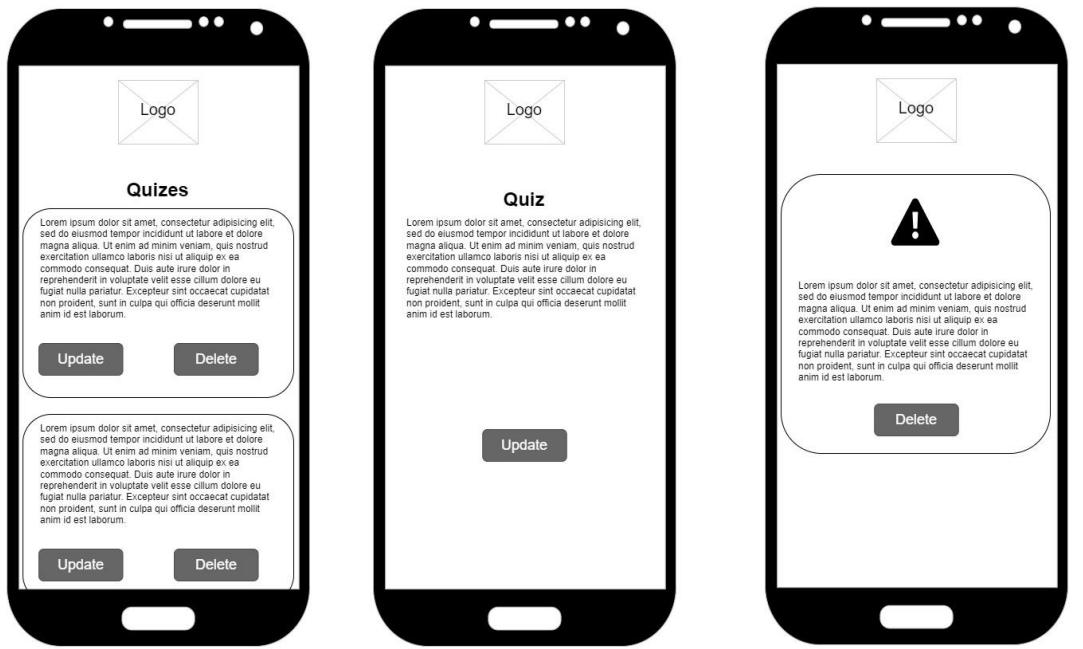
Sketches





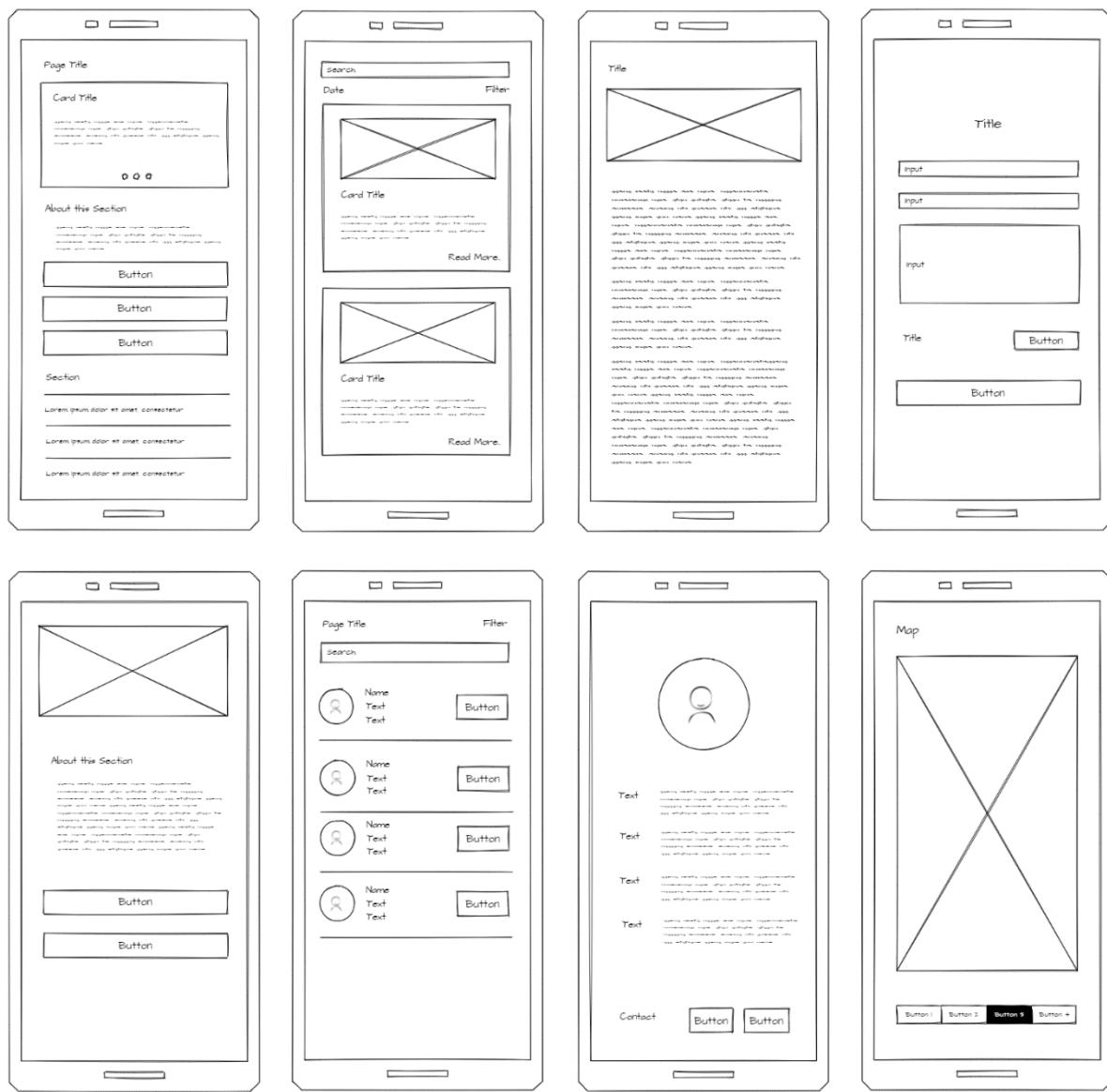
Wireframes



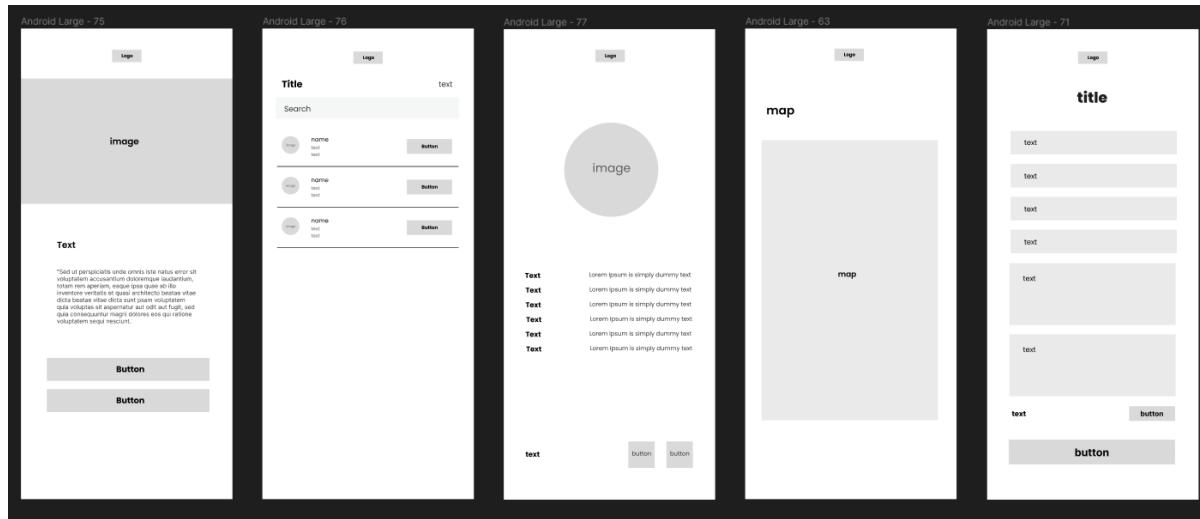
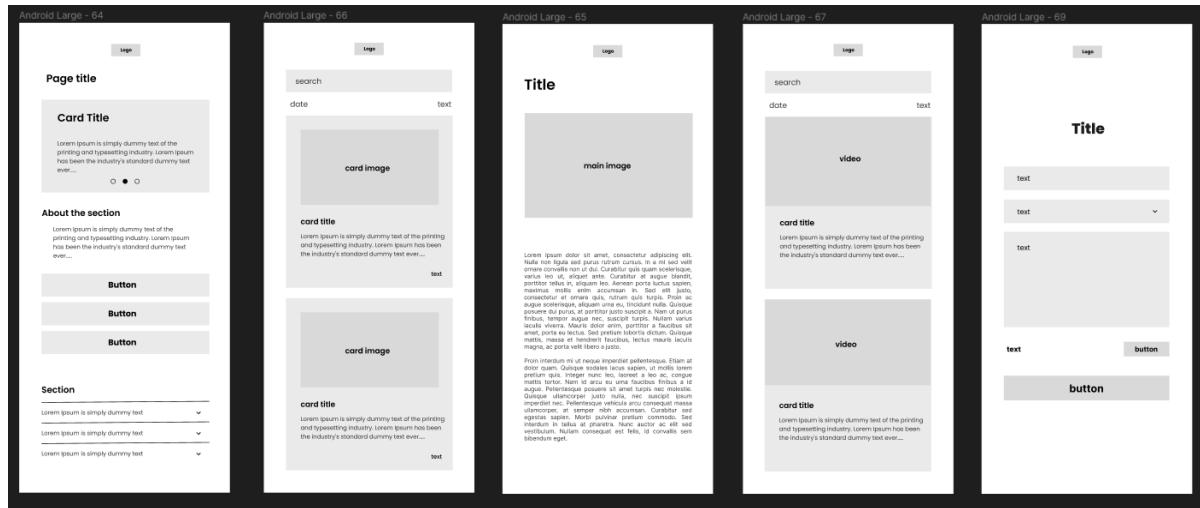


8.1.3 IT21169380 – Thuduvage I.M.H.G

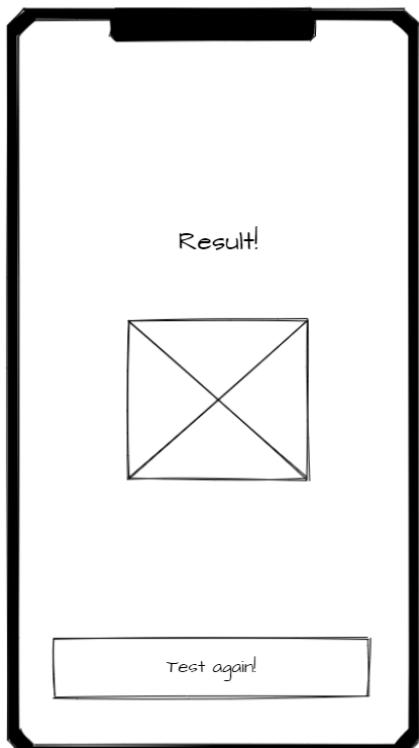
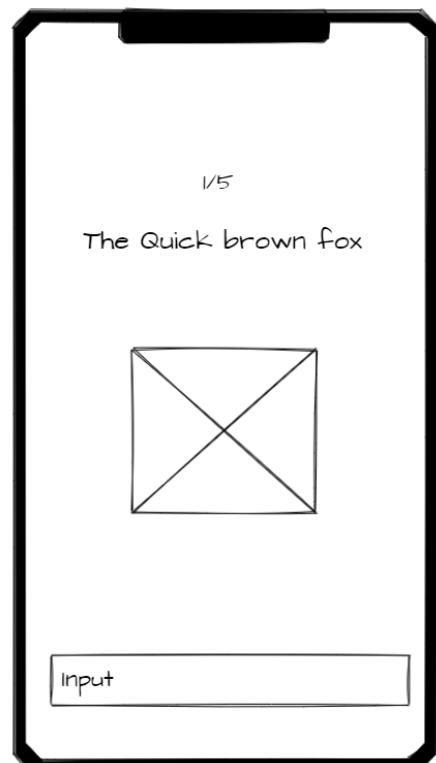
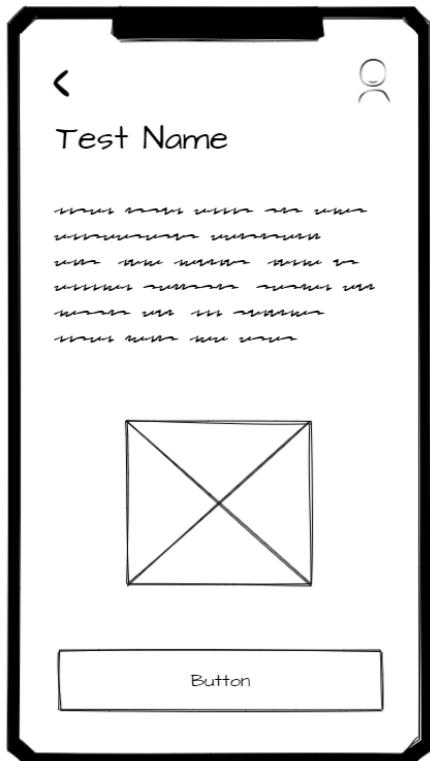
Sketches



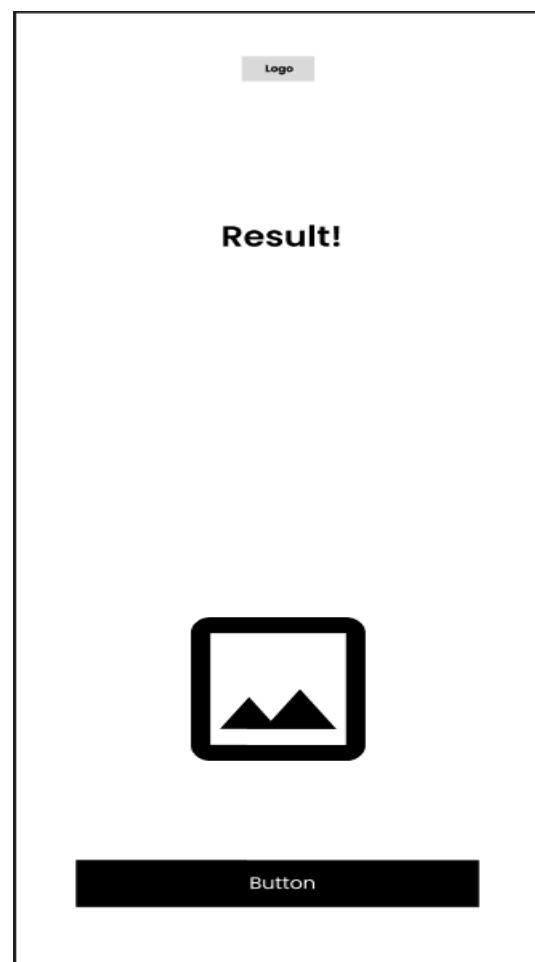
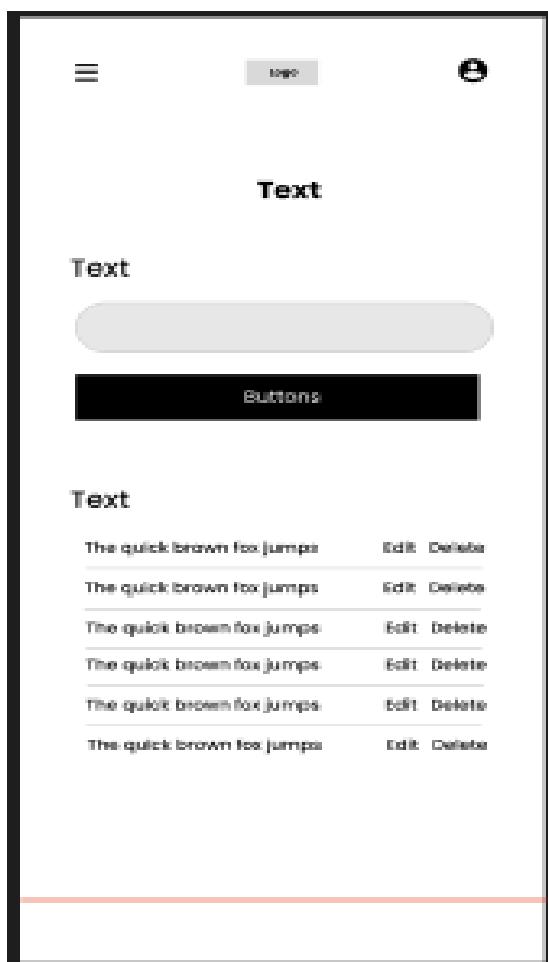
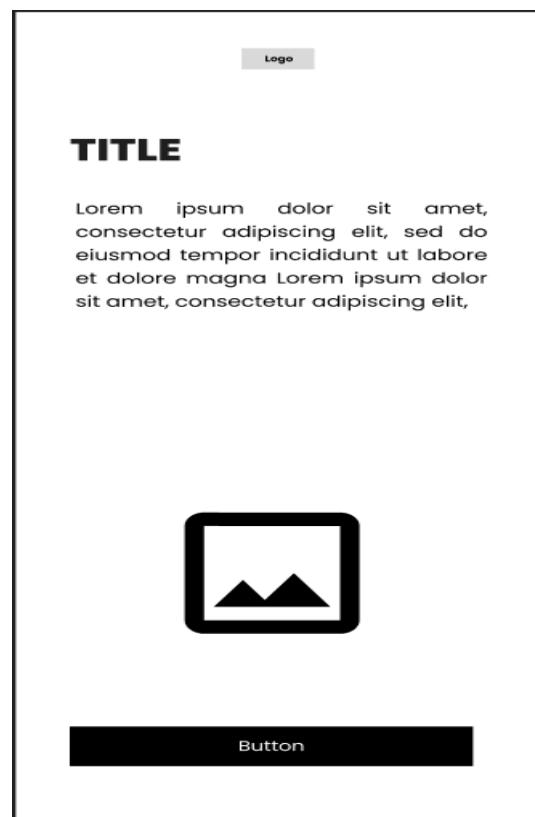
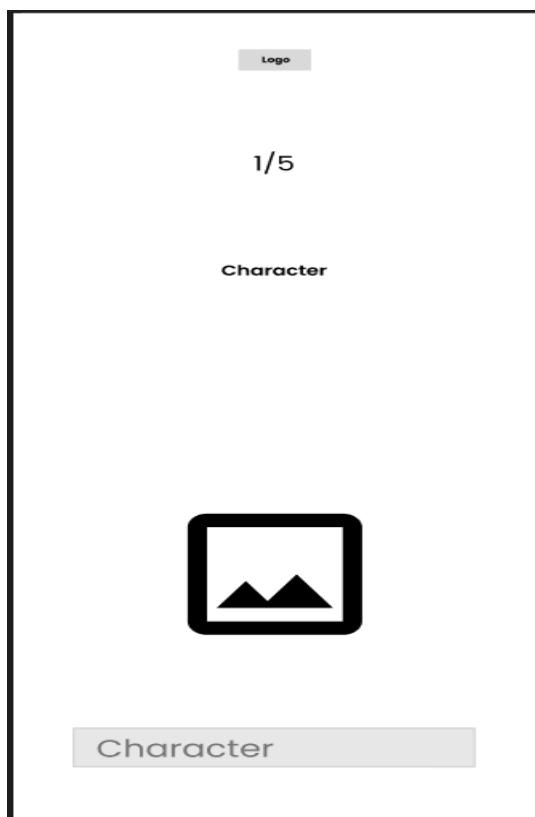
Wireframes



Sketches



Wireframes



9. Milestone 5 : Figma Prototype

9.1 Design 1

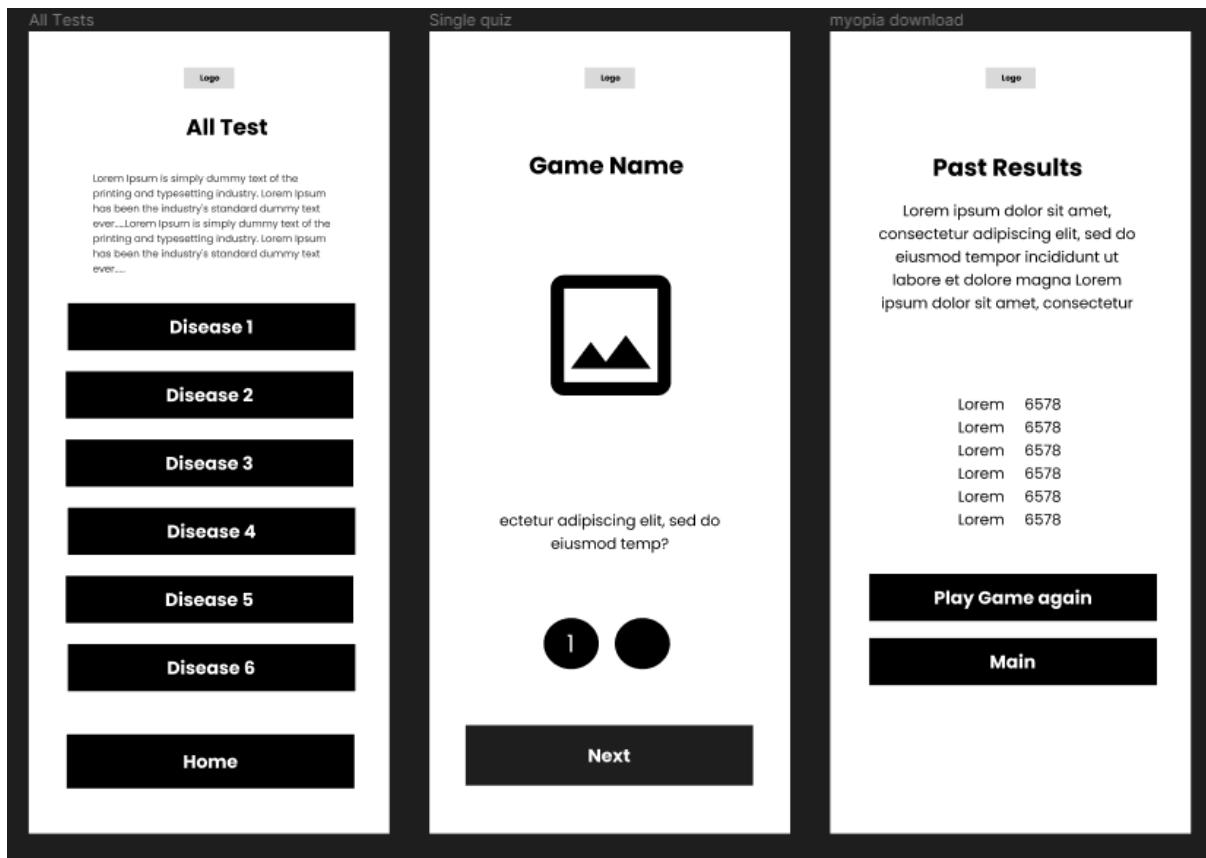
9.1.1 IT21189944 – Madusanka G.K.I

The image displays three mobile screen prototypes for a quiz application, arranged horizontally. Each screen has a dark header bar with a 'Logo' placeholder.

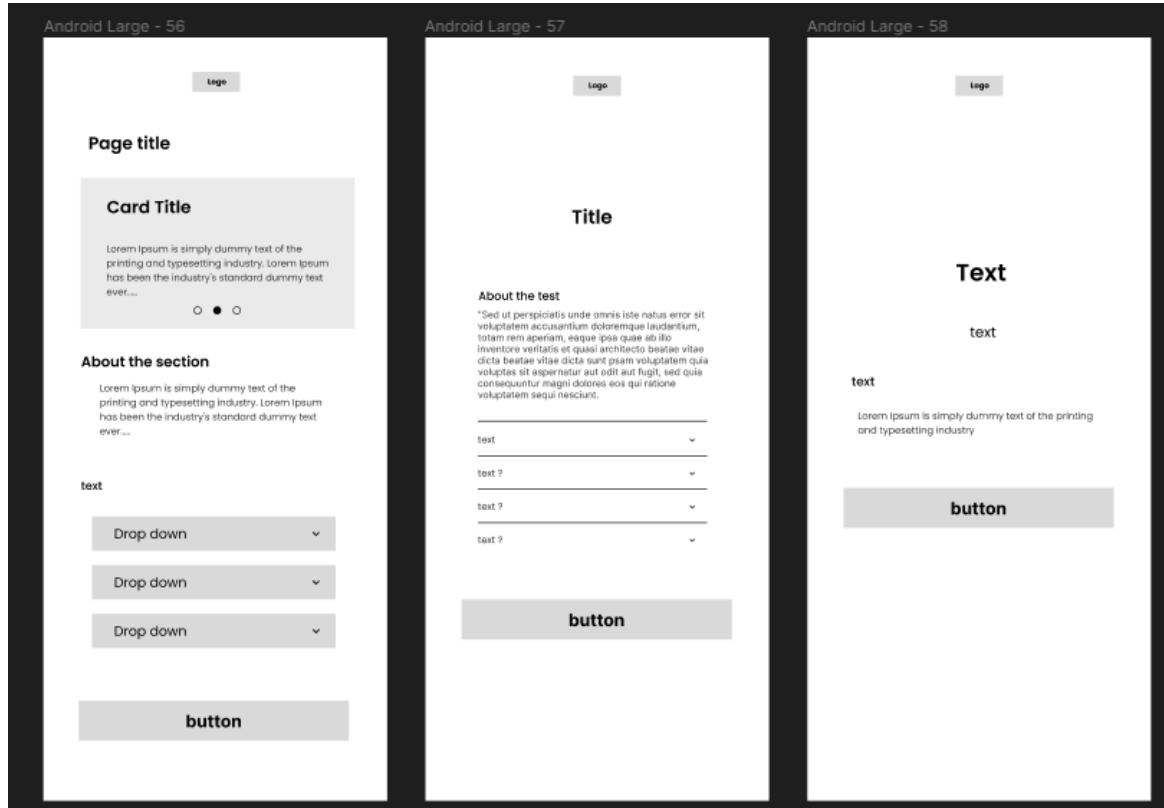
- Quiz Home:** Features a title area with placeholder text about the printing industry. Below it is a 'Sub Title' section with placeholder Latin text. A list of four questions (Question 1 to Question 4) is shown with dropdown menus. At the bottom is a large 'Start Quiz' button.
- Quiz:** Shows a question titled "Question 01". The question text is a placeholder about the printing industry. Below the question are four answer options labeled "Answer 1" through "Answer 4", each preceded by a radio button. A large "NEXT" button is at the bottom.
- Quiz Results:** Displays a "Results" section with a "Advice" paragraph. It lists five diseases with their respective percentages: Disease 1 (50%), Disease 2 (50%), Disease 3 (50%), Disease 4 (50%), and Disease 5 (50%). At the bottom are "Home" and "Take Quiz Again" buttons.

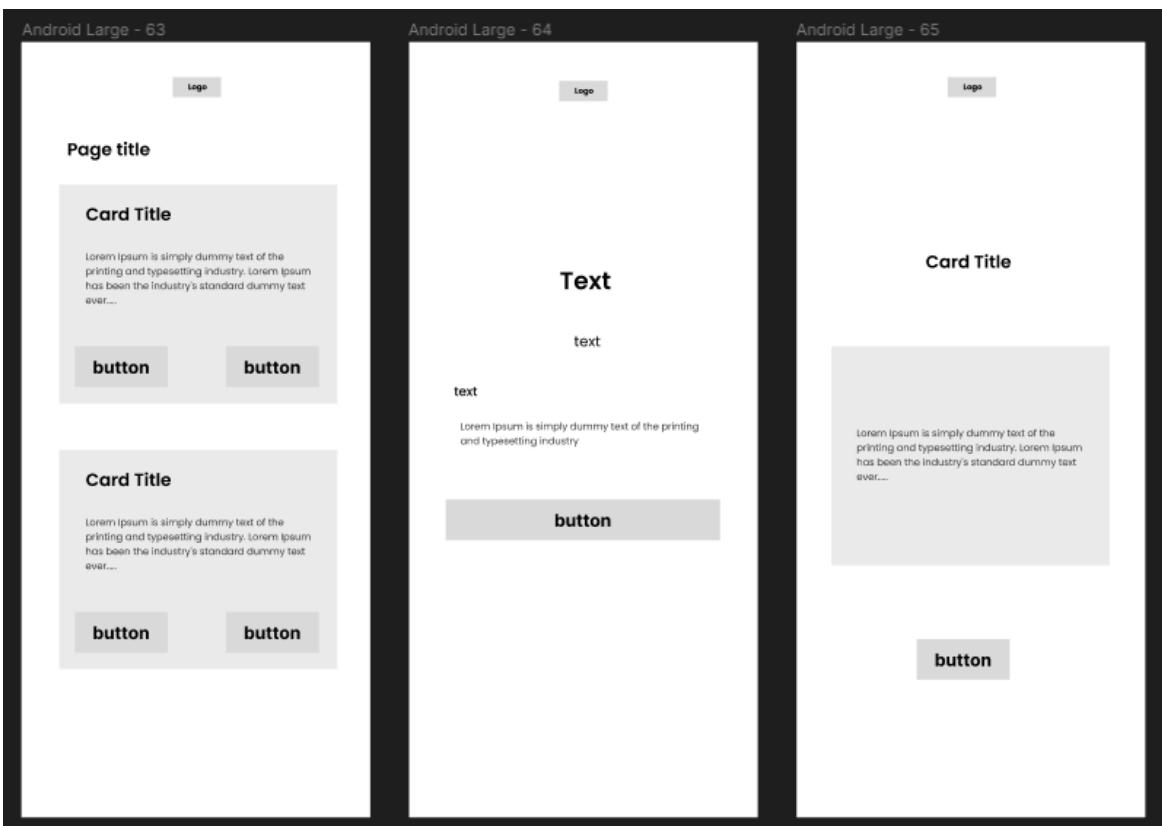
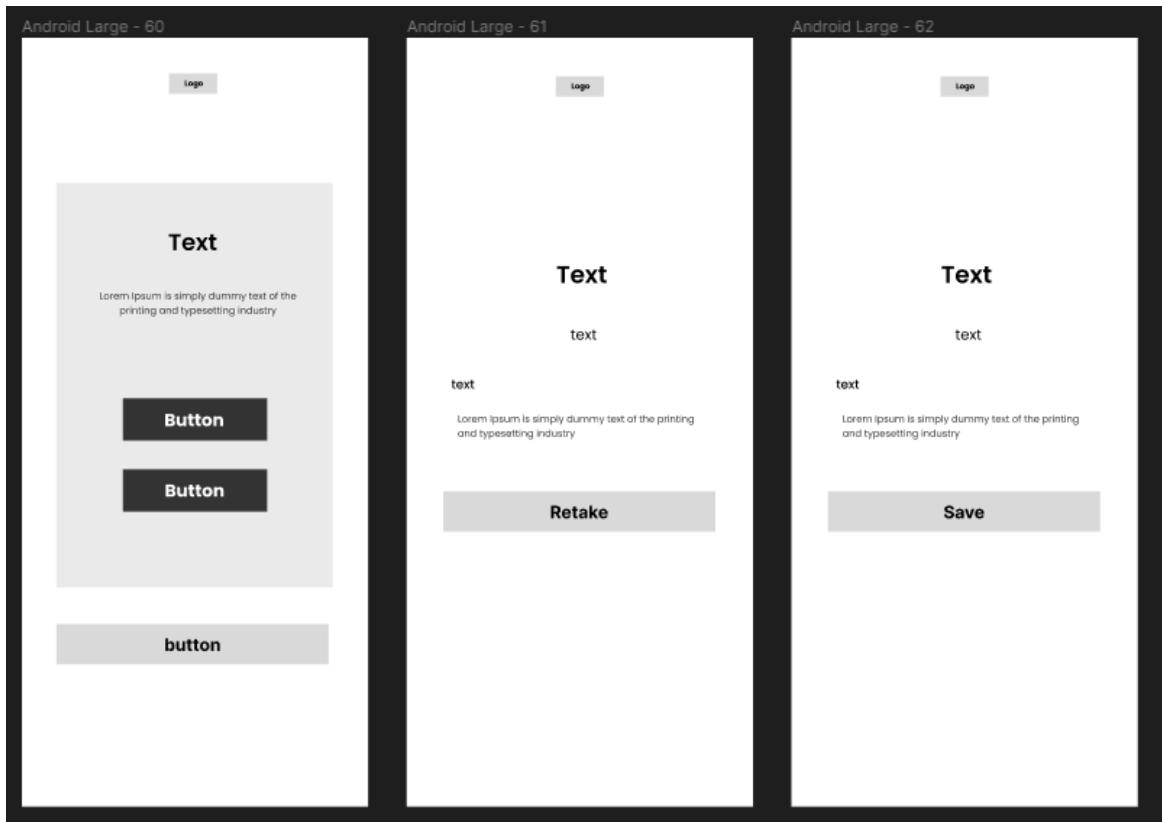
The image displays three mobile screen prototypes for a test application, arranged horizontally. Each screen has a dark header bar with a 'Logo' placeholder.

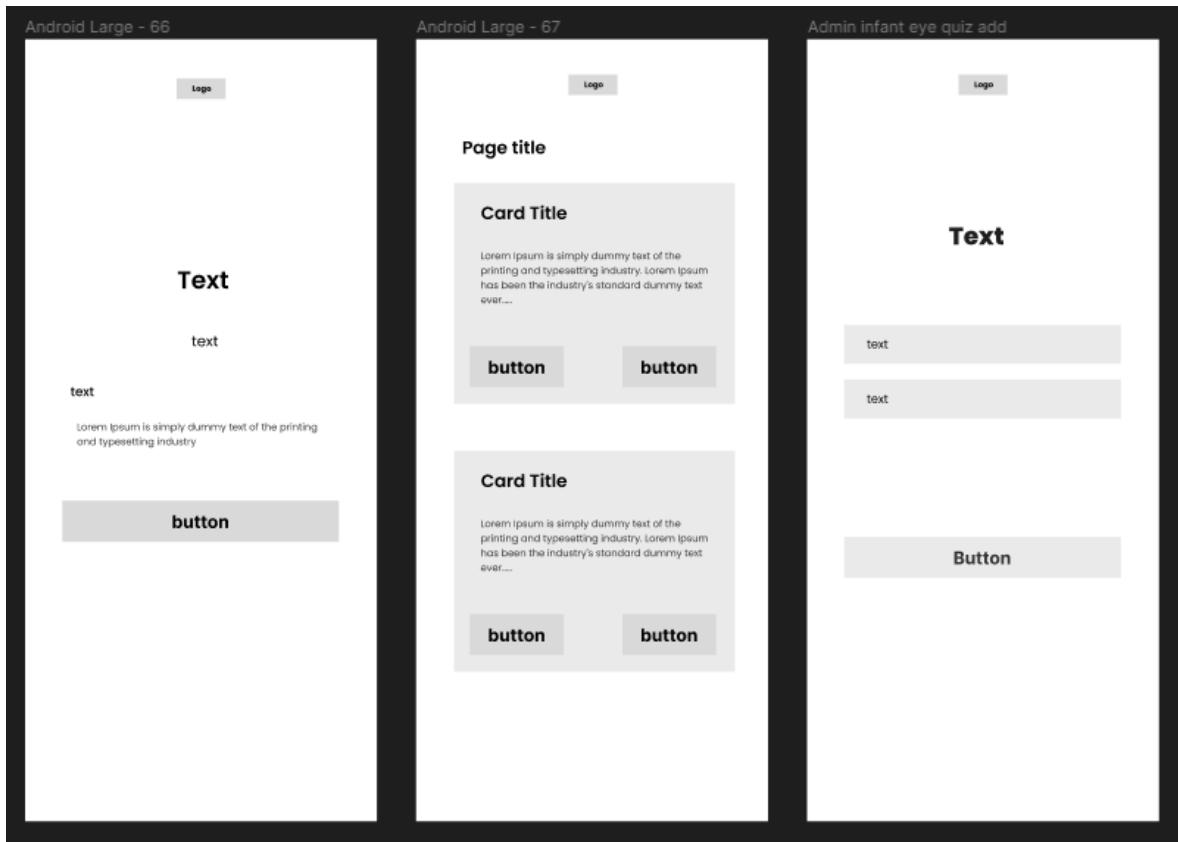
- Test Home:** Features a "Test Name" section with a placeholder icon of two mountains. Below it is a large block of placeholder Latin text. At the bottom is a large "Take Test" button.
- Test:** Shows a "Test Name" section with a placeholder icon of two mountains. Below it is a large block of placeholder Latin text. At the bottom is a large "Next" button.
- single test result:** Displays a "Test Results" section with a large block of placeholder Latin text. At the bottom are "Home" and "Take Test Again" buttons.



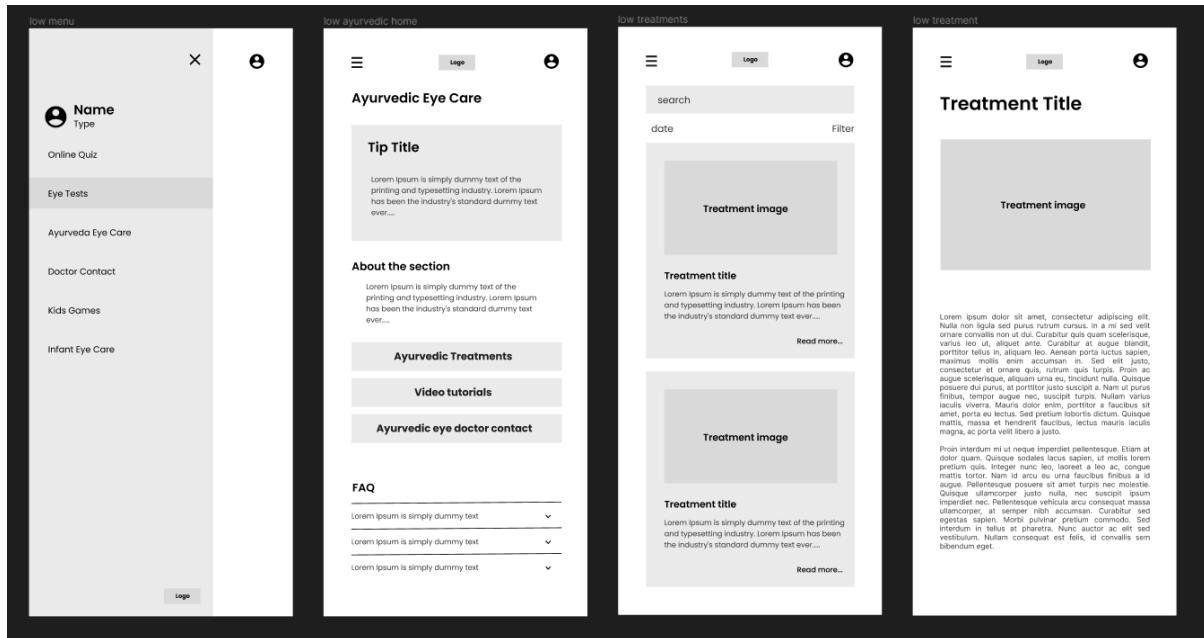
9.1.2 IT21318320 – Silva T.U.D

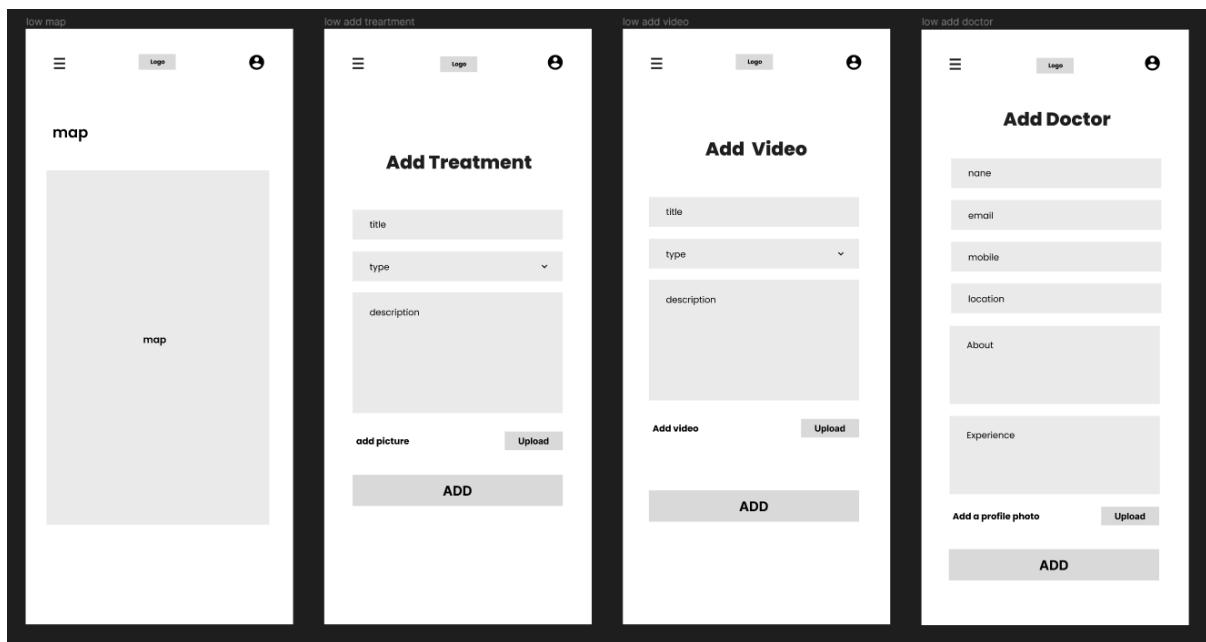
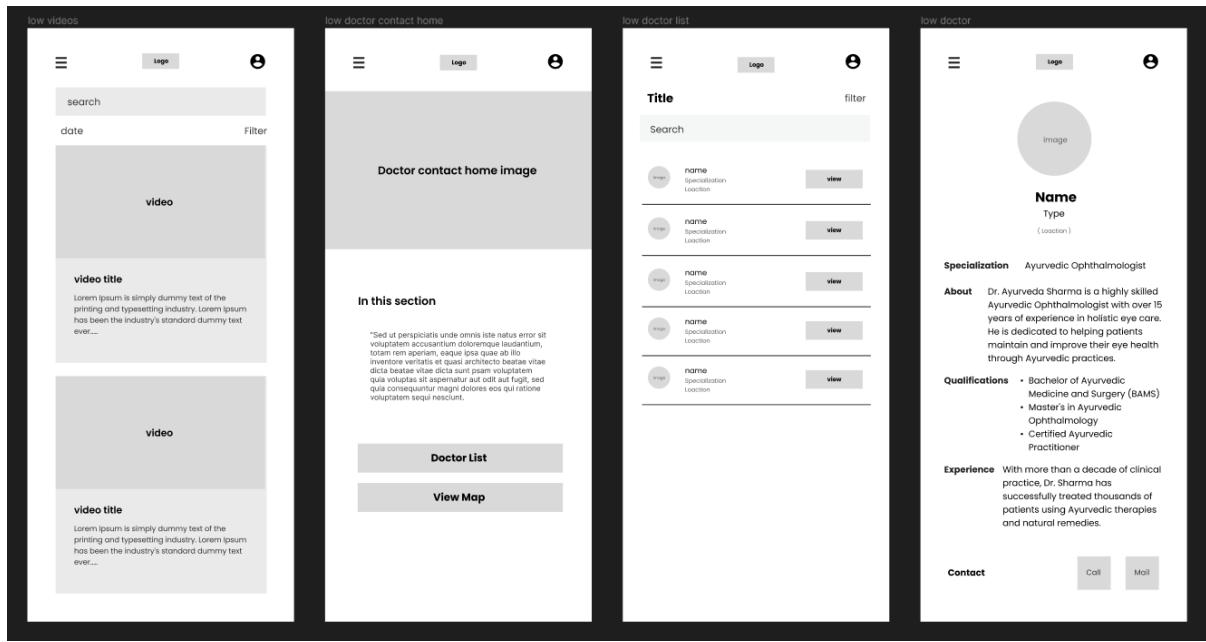






9.1.3 IT21169380 – Thuduvage I.M.H.G







TITLE

Lorem ipsum dolor sit amet,
consectetur adipiscing elit, sed do
eiusmod tempor incididunt ut labore
et dolore magna. Lorem ipsum dolor
sit amet, consectetur adipiscing elit,

Result!



Button

Button



1/5

Character



Character

9.2 Design 2 – Accepted

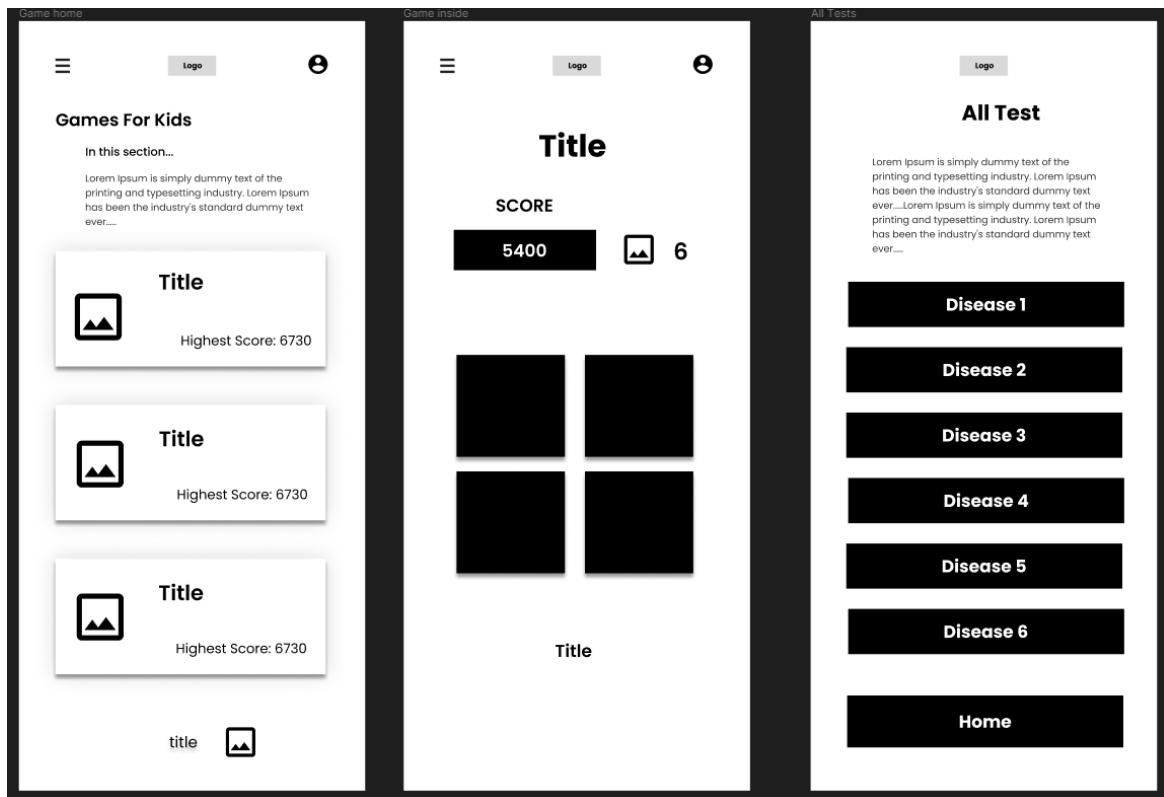
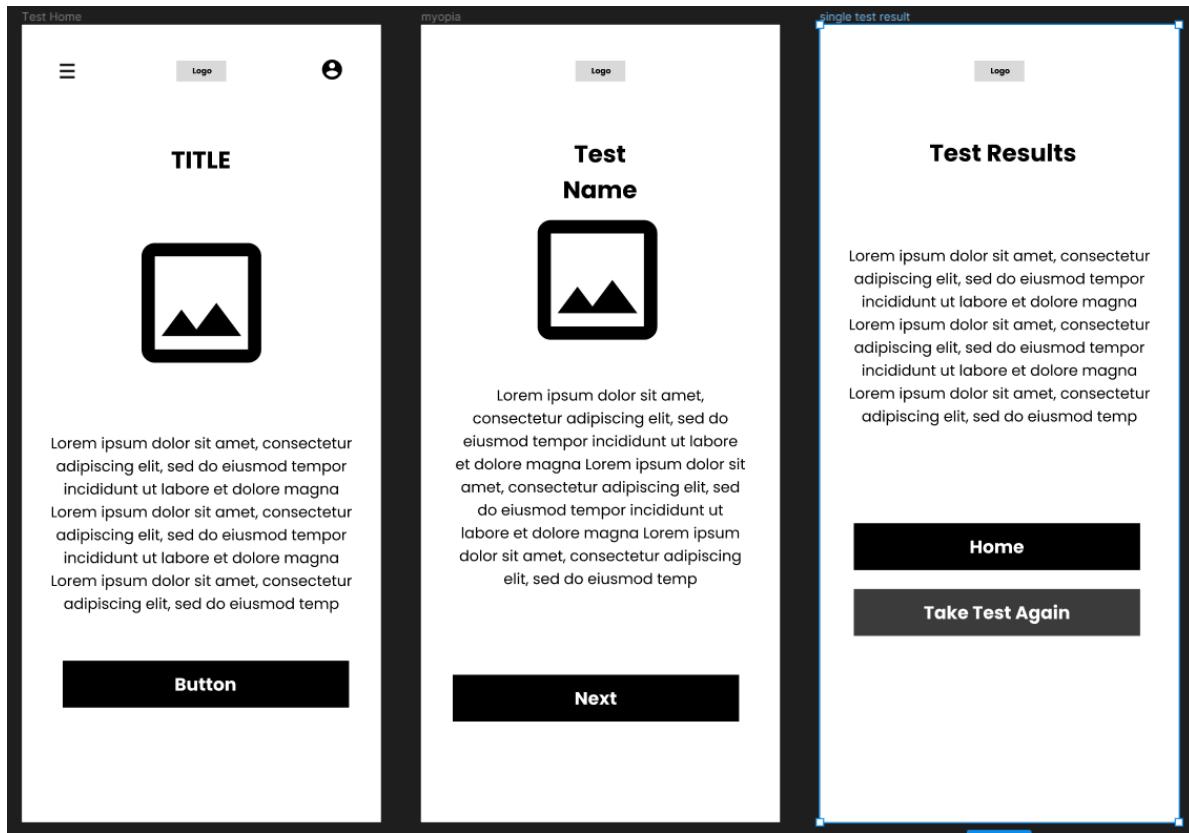
9.2.1 IT21189944 – Madusanka G.K.I

The image displays three screenshots of a quiz application interface, showing the flow from home to quiz and then to results.

Quiz Home: This screen shows a navigation bar with a menu icon, logo, and user icon. It features a title section with "Title" and a detailed description of Lorem Ipsum text. Below this is a "Sub Title" section with a large amount of Latin placeholder text. A list of four questions (Question 1 to Question 4) is shown with dropdown menus. At the bottom is a prominent "Start Quiz" button.

Quiz: This screen shows a navigation bar with a logo. It displays a question titled "Question 01" followed by a detailed description of Lorem Ipsum text. Below the question are four answer options labeled "Answer 1" through "Answer 4", each preceded by a radio button. At the bottom is a "NEXT" button.

Quiz Results: This screen shows a navigation bar with a logo. It features a "Results" section with a heading "Advice" and a detailed description of Lorem Ipsum text. Below this is a section titled "POossible Diseases" showing five diseases with their respective percentages: Disease 1 (50%), Disease 2 (50%), Disease 3 (50%), Disease 4 (50%), and Disease 5 (50%). At the bottom are two buttons: "Home" and "Take Quiz Again".



Single quiz

Logo

Game Name



ectetur adipiscing elit, sed do eiusmod temp?

1

Next

myopia download

Logo

Past Results

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna Lorem ipsum dolor sit amet, consectetur

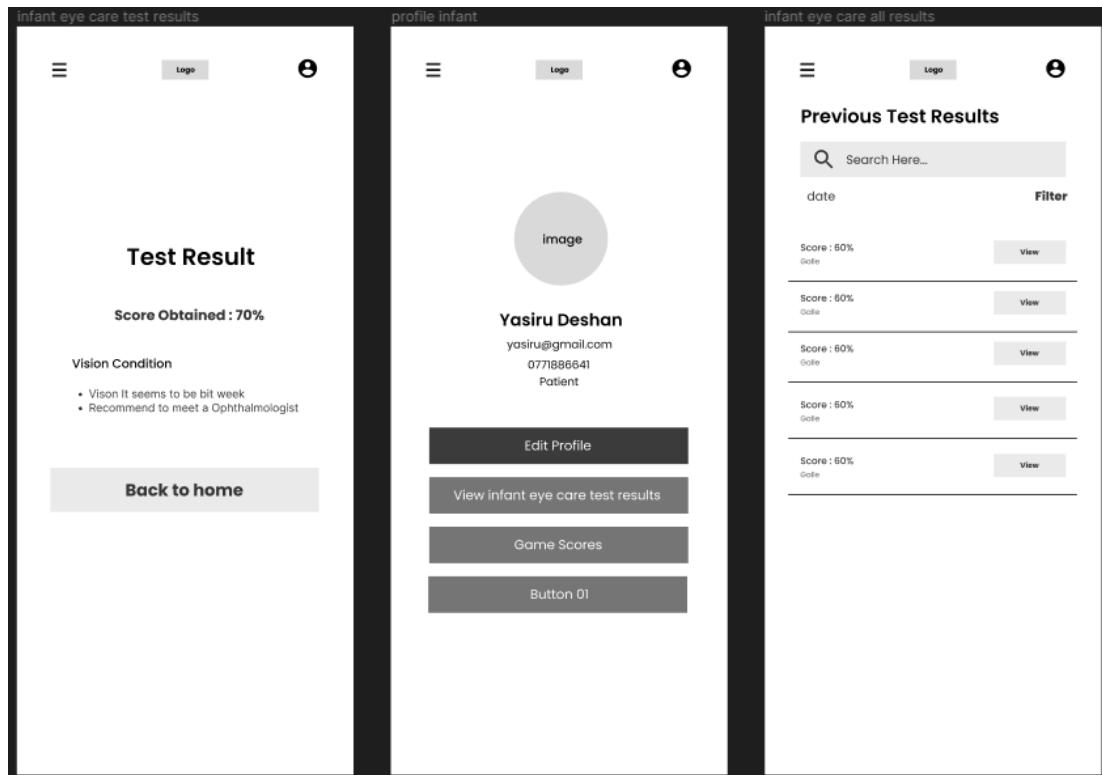
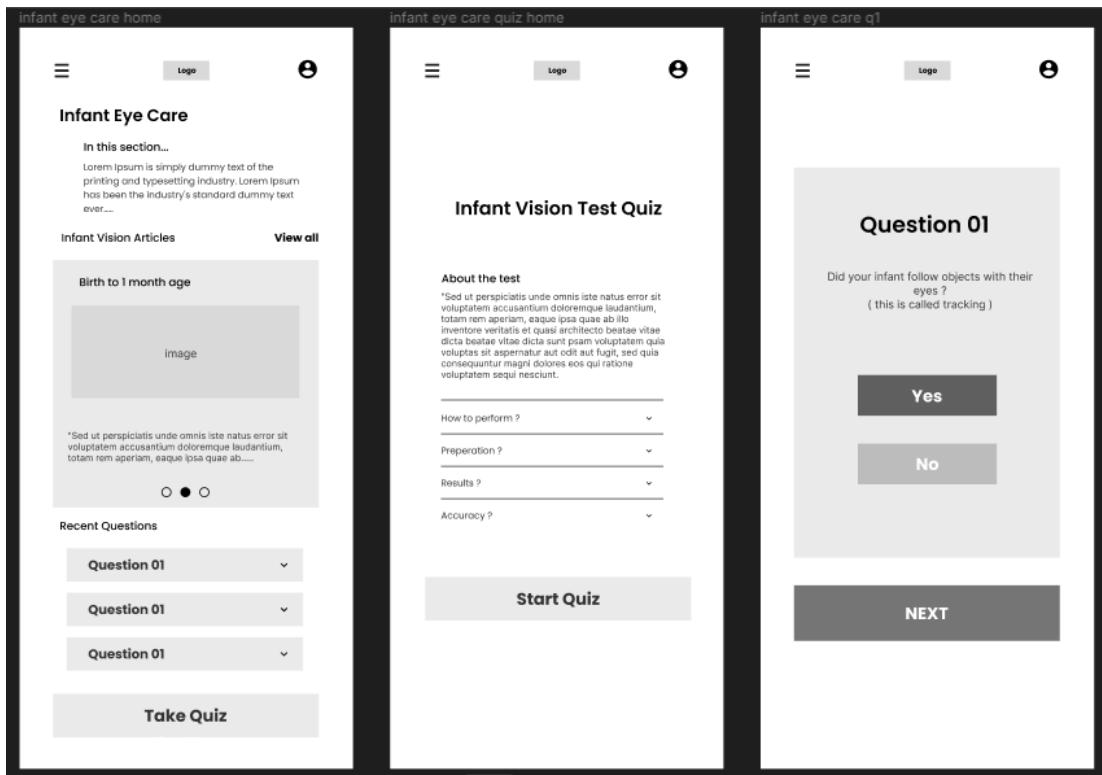
6578
6578
6578
6578
6578
6578

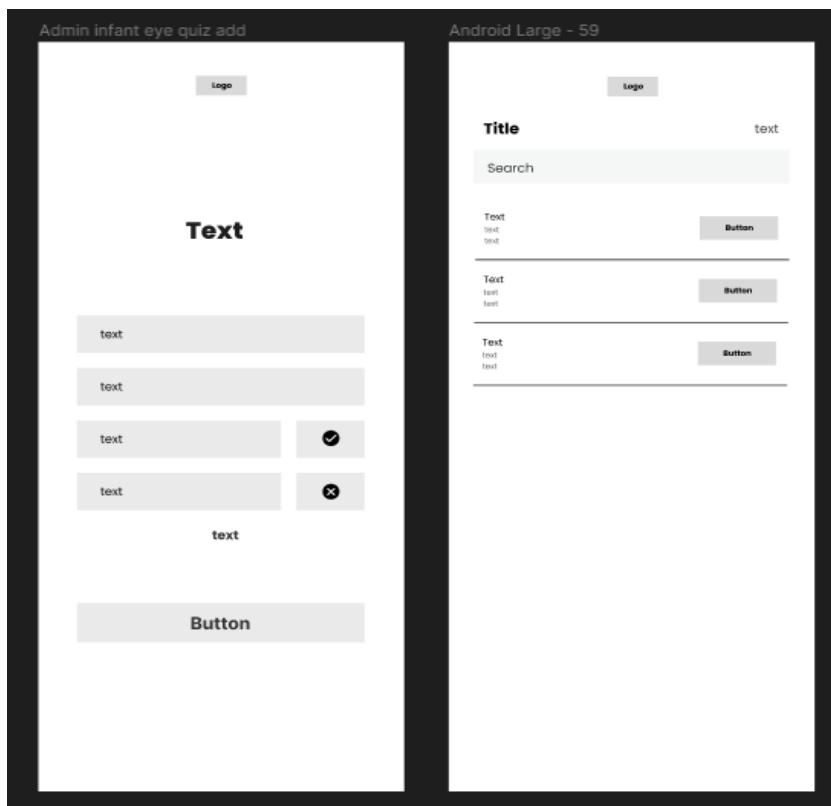
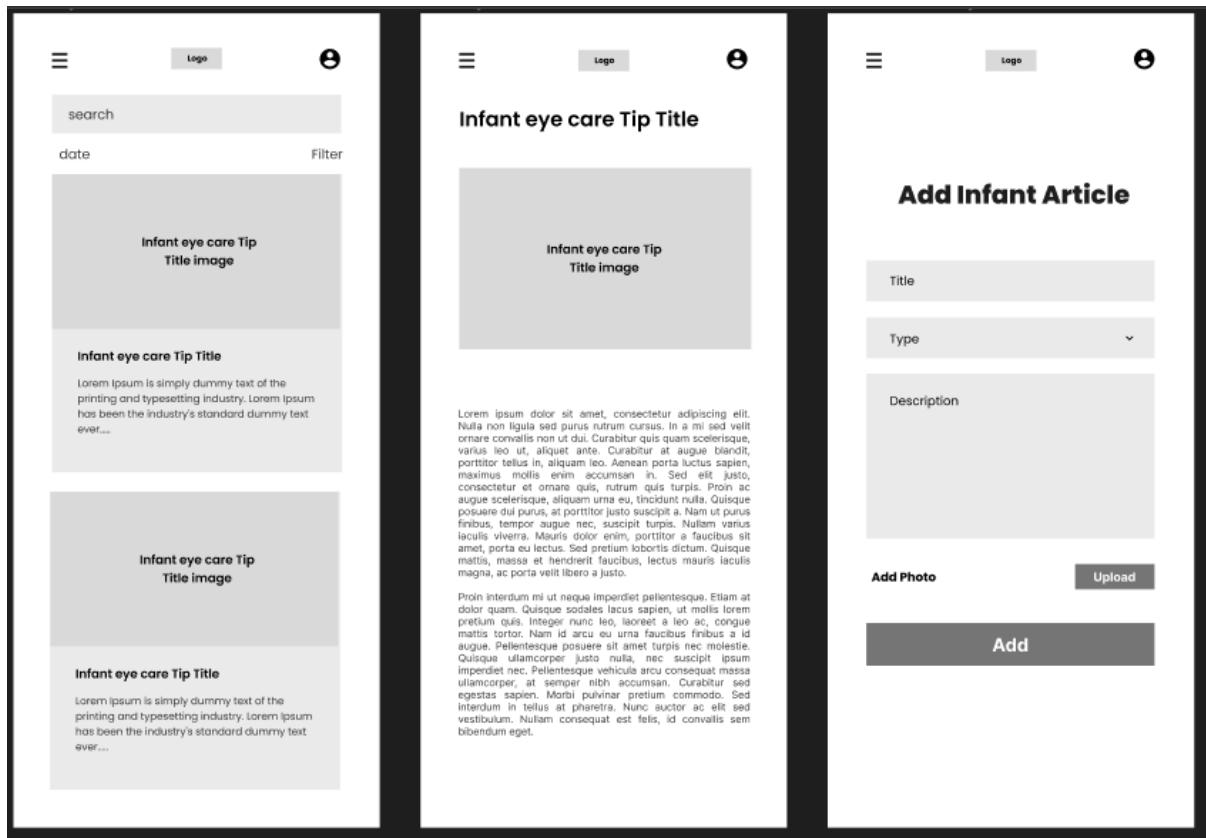
Play Game again

Main

9.2.2 IT21318320 – Silva T.U.D

Updated the designs added user's previous tests result page.





9.2.3 IT21169380 – Thuduvage I.M.H.G

Row 1:

- low map
- low add treatment
- low add video
- low add doctor

Row 2:

- low videos
- low doctor contact home
- low doctor list
- low doctor

Row 3:

- low menu
- low ayurvedic home
- low treatments
- low treatment

9.2.4 IT21169144 – Karunarathne R.Y.D



Logo



Logo



TITLE

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna. Lorem ipsum dolor sit amet, consectetur adipiscing elit,

Result!



Button

Button



Logo



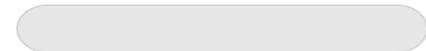
Logo



Text

Result!
Short Paragraph

Text



Buttons

Text

The quick brown fox jumps	Edit	Delete
The quick brown fox jumps	Edit	Delete
The quick brown fox jumps	Edit	Delete
The quick brown fox jumps	Edit	Delete
The quick brown fox jumps	Edit	Delete
The quick brown fox jumps	Edit	Delete



Buttons



Logo



TITLE

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna. Lorem ipsum dolor sit amet, consectetur adipiscing elit,



Logo



1/5

Character



Button

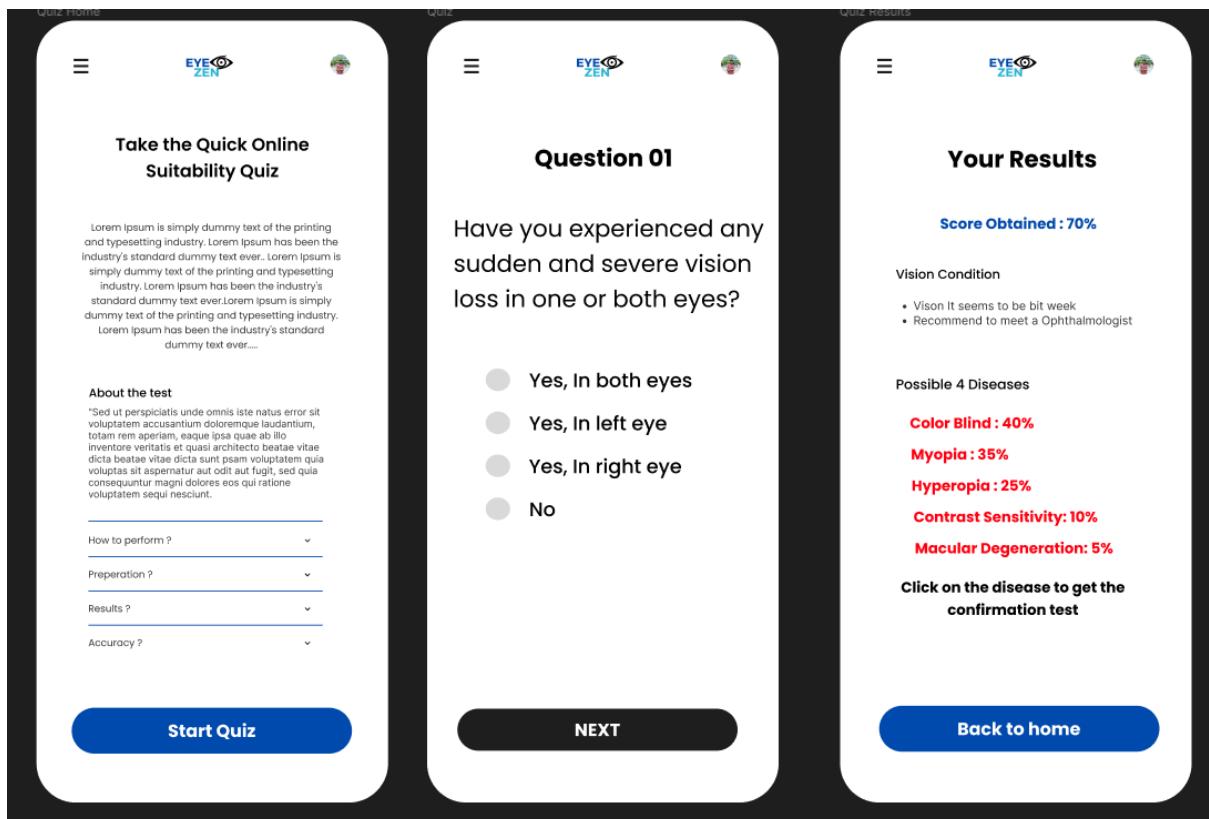
Character

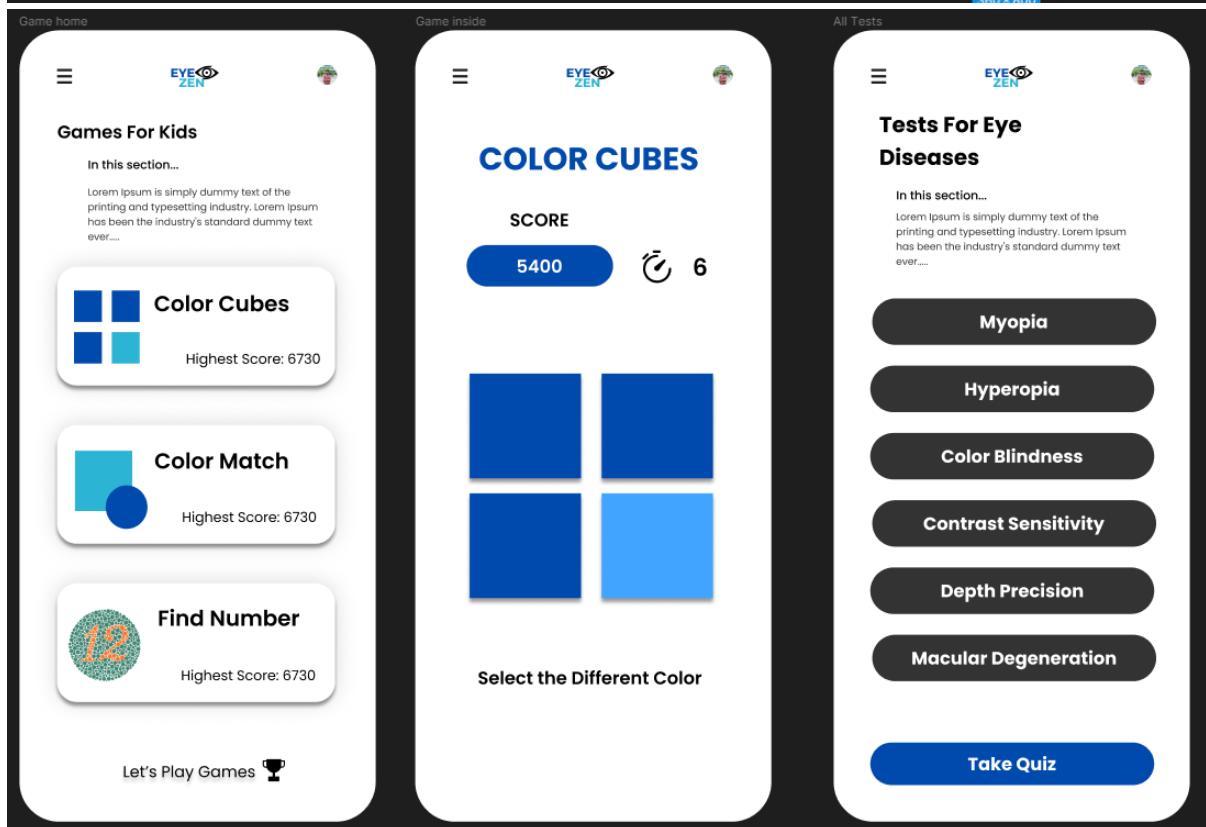
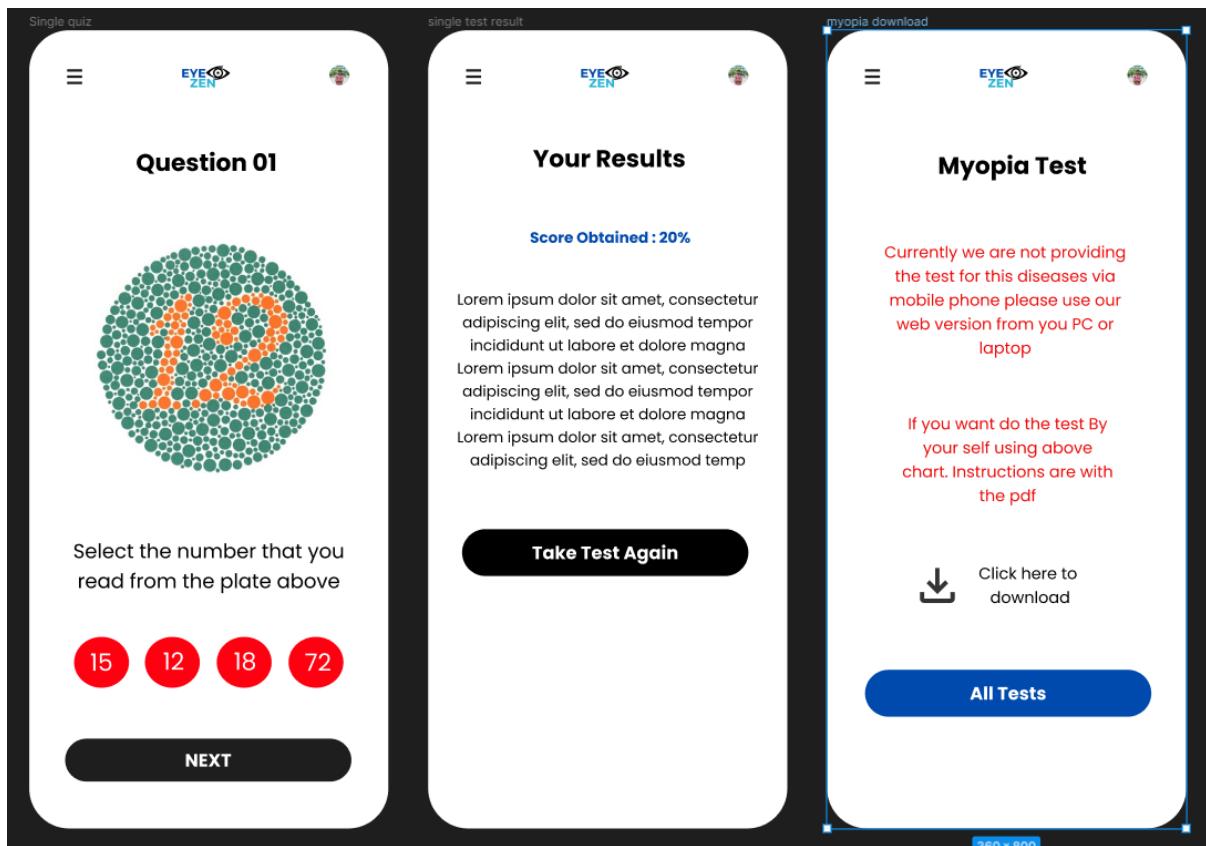
9.3 High Fidelity Prototype

<https://www.figma.com/file/MLkuHpr9BfCyEIHPLSiFOx/High-Fidelity-Prototypes?type=design&node-id=0%3A1&mode=design&t=fzMIJSnEUirWPuJd-1>

9.4 Design 1

9.4.1 IT21189944 – Madusanka G.K.I





9.4.2 IT21318320 – Silva T.U.D

The image displays six mobile application screens for 'EyeZen' arranged in two rows of three. All screens feature a top navigation bar with a menu icon, user profile icon, and a central logo.

- infant eye care home:** Shows a section titled 'Infant Eye Care' with a placeholder text about dummy text. It includes a 'View all' button, a card for 'Birth to 1 month age' with a photo of a baby, and a recent questions section with three items labeled 'Question 01' each. A large blue 'Take Quiz' button is at the bottom.
- infant eye care quiz home:** Shows a section titled 'Infant Vision Test Quiz'. It includes a detailed 'About the test' section with Latin placeholder text, four dropdown menus for 'How to perform?', 'Preparation?', 'Results?', and 'Accuracy?'. A large blue 'Start Quiz' button is at the bottom.
- infant eye care q1:** Shows a question card for 'Question 01'. The question is 'Did your infant follow objects with their eyes ? (this is called tracking)'. It has 'Yes' and 'No' buttons. A large black 'NEXT' button is at the bottom.
- infant eye care test results:** Shows a 'Test Result' screen with a score of 'Score Obtained : 70%'. It includes a 'Vision Condition' section with a bulleted list: '• Vision It seems to be bit week' and '• Recommend to meet a Ophthalmologist'. A large blue 'Back to home' button is at the bottom.
- profile infant:** Shows a profile screen for 'Yasiru Deshan' with an image, email (yasarlu@gmail.com), phone number (0771886641), and title (Patient). It includes buttons for 'Edit Profile', 'View infant eye care test results', 'Game Scores', and 'Button 01'.
- infant eye care all results:** Shows a 'Previous Test Results' screen with a search bar, date filter (2023 / 08 / 31), and a 'Filter' button. It lists five test results, each with a 'Score : 60%' and a 'Date' (all listed as 'Date'). Each result has a 'View' button.

infant eye care list

Infant eye care Tip Title

Read More...

Infant eye care Treatment Title

Read More...

infant eye care article

Infant eye care Tip Title

"Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eum velut qui proposito delecto, et quasi architecto beatae vitae dicta beatae vitae dicta sunt psam voluntatem quia voluptas sit aspernatur aut occit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt.

Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consecetur, adipisci velt, sed quis non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem.

- vel illum qui dolorem eum fugiat quo voluptas nulla pariatur?
- beatae vitae dicta sunt
- udantium, totam rem aperiam, esqu
- m doloremque

Admin Home 2

Welcome Admin

Add treatments

Add video

Add Doctors

Add infant Article

Infant Section

Admin add infant eye care 1

Add Infant Article

Title

Type

Description

Add Photo Upload

Add

9.4.3 IT21169380 – Thuduvage I.M.H.G

The image displays a 4x3 grid of mobile application screens for 'EYE ZEN'. The screens are arranged as follows:

- Row 1:**
 - Ayurvedic home 01:** Shows the 'Ayurvedic Eye Care' section with a 'Tip of the day...', 'In this section...', and three blue buttons: 'Ayurvedic Treatments', 'Video tutorials', and 'Ayurvedic eye doctor contact'.
 - treatments 01:** Shows a search bar, date (2023 / 08 / 31), and filter icon. It lists two treatments with small images: 'Treatment' (a person with a yellow mask) and 'Treatment' (a woman applying eye drops).
 - treatment 01:** Shows a large image of a woman applying eye drops. Below it is a detailed text block and a long paragraph of placeholder text.
 - video home 01:** Shows a search bar, date (2023 / 08 / 31), and filter icon. It lists two video tutorials with small images: 'Video Title' (hands holding a bowl) and 'Video Title' (two people working).
- Row 2:**
 - Admin Home 01:** Shows a welcome message 'Welcome Admin' with a photo of a doctor, and five blue buttons: 'Add treatments', 'Add video', 'Add Doctors', 'Quizzes', and 'Infant Section'.
 - add Treatment 01:** Shows fields for 'Treatment Title', 'Type', 'Description', 'Add Photo' (with an 'Upload' button), and a large blue 'Upload' button.
 - add video 01:** Shows fields for 'Video Title', 'Type', 'Description', 'Add Video' (with an 'Upload' button), 'Add Thumbnail' (with an 'Upload' button), and a large blue 'Upload' button.
 - add doctor 01:** Shows fields for 'Name', 'Email', 'Mobile', 'Location', 'About', 'Qualifications', 'Profile picture' (with an 'Upload' button), and a large blue 'ADD' button.
- Row 3:**
 - doctor contact home 01:** Shows a doctor's photo and a 'Doctor List' button.
 - doctor list 01:** Shows a search bar, filter icon, and a list of doctors (all named Hirashi Chamodi, BAMS, Galle) with 'View' buttons.
 - doctor 01:** Shows a doctor profile for 'Hirashi Chamodi' (BAMS, Galle). It includes specialization ('Ayurvedic Ophthalmologist'), location ('Galle'), about ('Dr. Ayurveda Sharma is a highly skilled Ayurvedic Ophthalmologist with over 15 years of experience in holistic eye care.'), qualifications ('Bachelor of Ayurvedic Medicine and Surgery (BAMS)', 'Masters in Ayurvedic Ophthalmology', 'Certified Ayurvedic Practitioner'), and experience ('With more than a decade of clinical practice, Dr. Sharma has successfully treated thousands of patients using Ayurvedic therapies and natural remedies.'). It also has a 'Contact' button and icons for phone and email.
 - map:** Shows a map of San Francisco with various landmarks and a red route line.

9.4.4 IT21169144 – Karunaratne R.Y.D



NEARSIGHTED?

Currently we are not providing the test for this diseases via mobile phone please use our web version from your PC or laptop.

If you want do the test by yourself using below chart. Instructions are with the PDF.



[Download Here](#)



Your Near Vision is Good!



[Test Again](#)



Your Near vision is not Good!

Please contact a doctor or seek medical advice!



[Test Again](#)

1/5

E



E

FARSIGHTED?

Test your near vision here. To perform the test, remove your glasses and move back 12" to 16" from the screen.

Cover left eye with your left hand and try to read the text to the end and repeat with the right eye.

Take a Test

9.5 Design 2 – Accepted

9.5.1 IT21189944 – Madusanka G.K.I

Take the Quick Online Suitability Quiz

Have you experienced any sudden and severe vision loss in one or both eyes?

- Yes, In both eyes
- Yes, In left eye
- Yes, In right eye
- No

Your Results

Score Obtained : 70%

Vision Condition

- Vision It seems to be bit week
- Recommend to meet a Ophthalmologist

Possible 4 Diseases

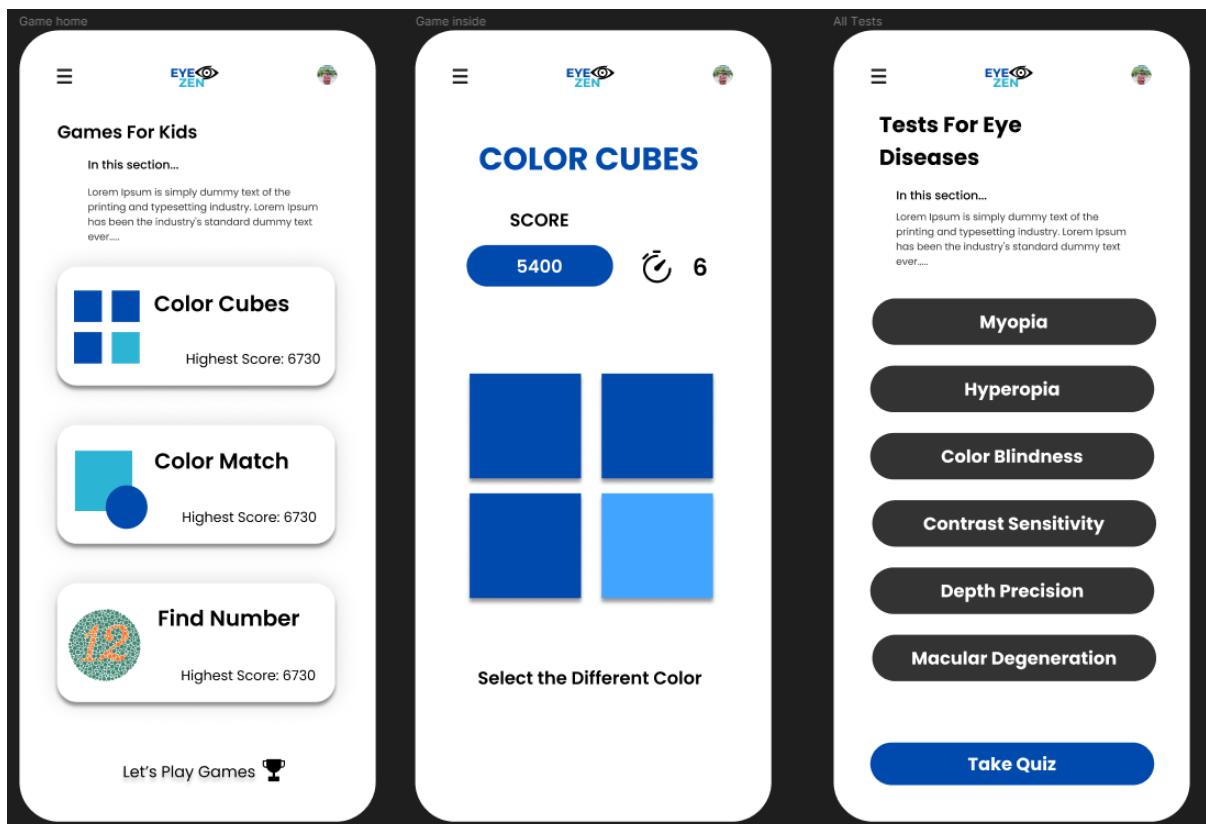
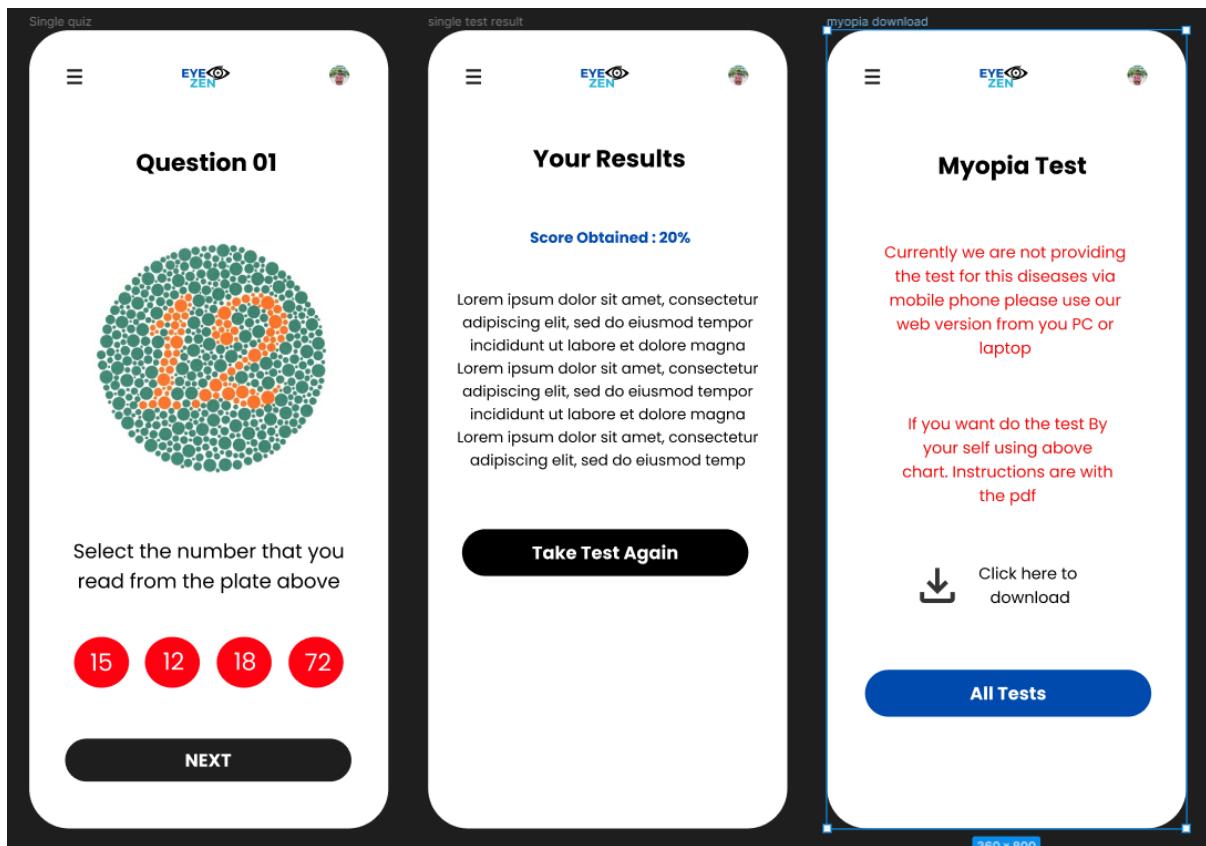
- Color Blind : 40%**
- Myopia : 35%**
- Hyperopia : 25%**
- Contrast Sensitivity: 10%**
- Macular Degeneration: 5%**

Click on the disease to get the confirmation test

Start Quiz

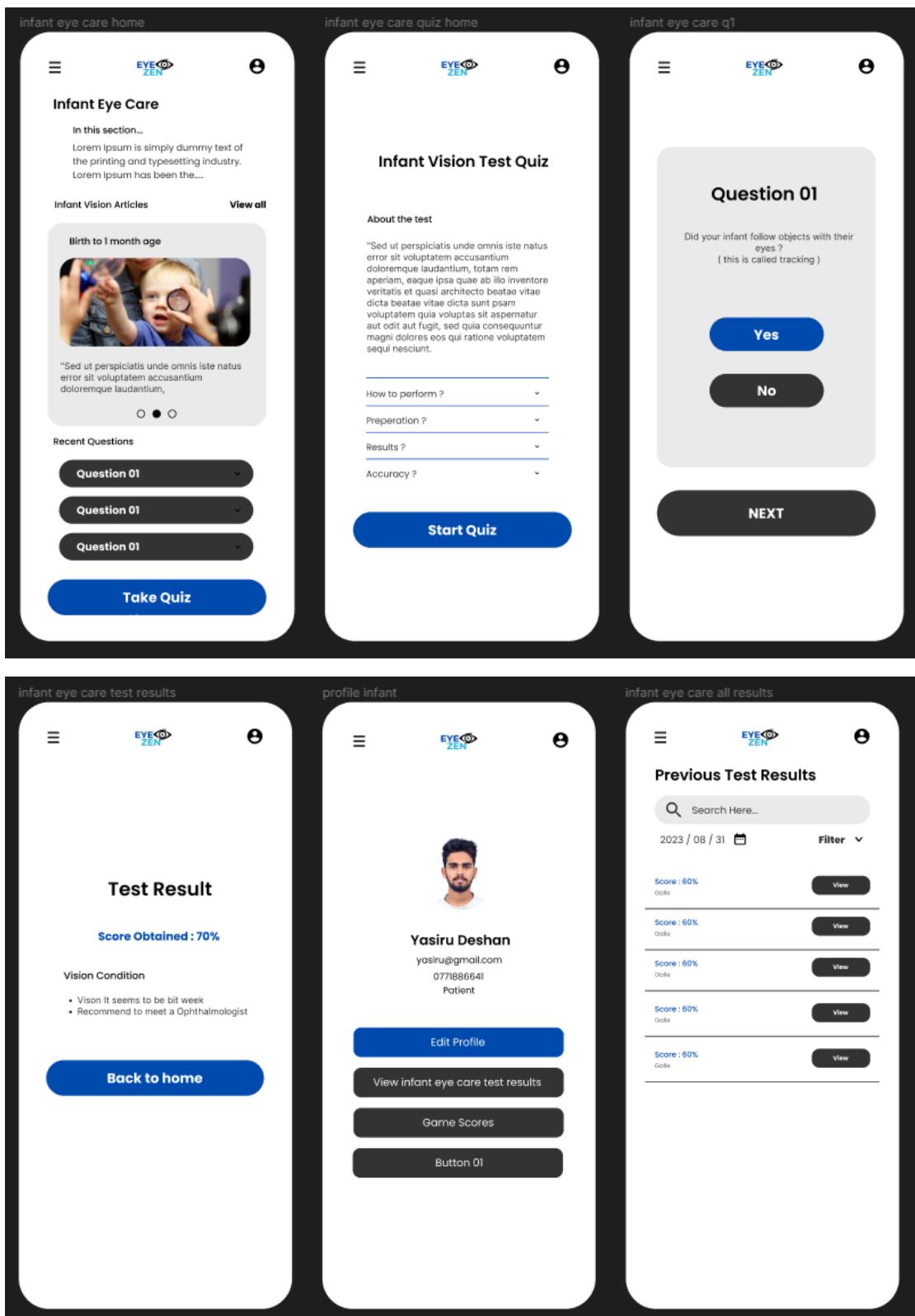
NEXT

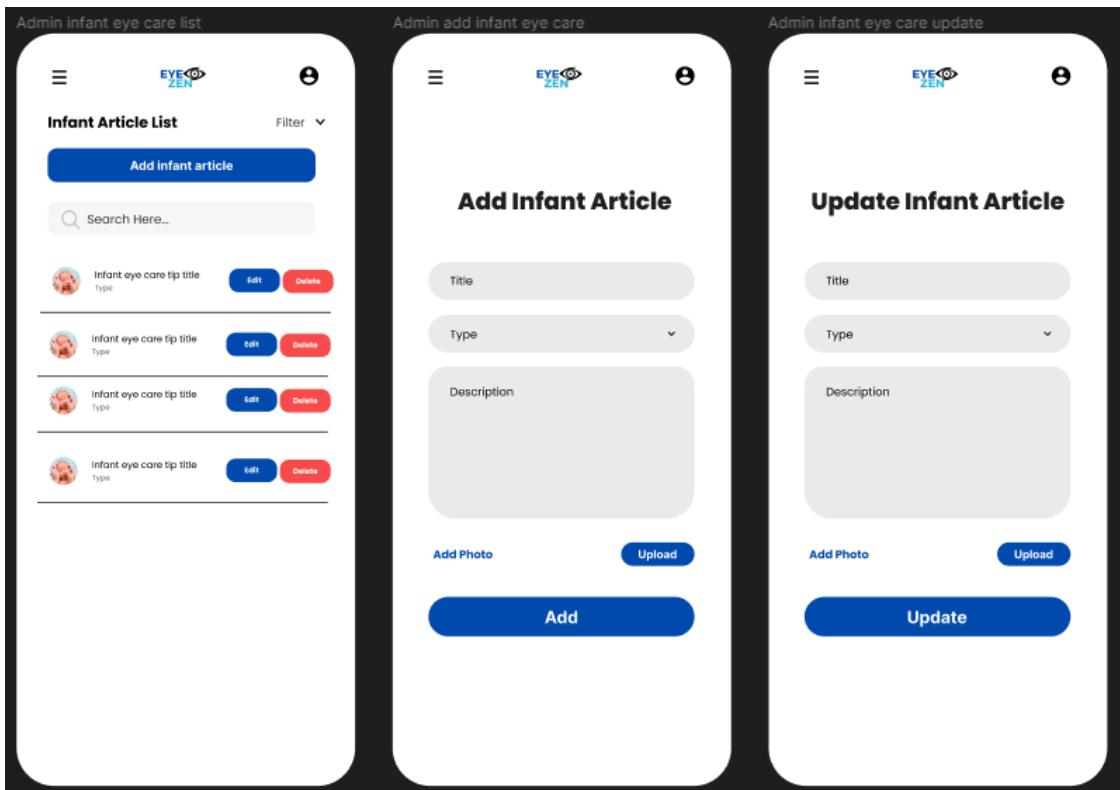
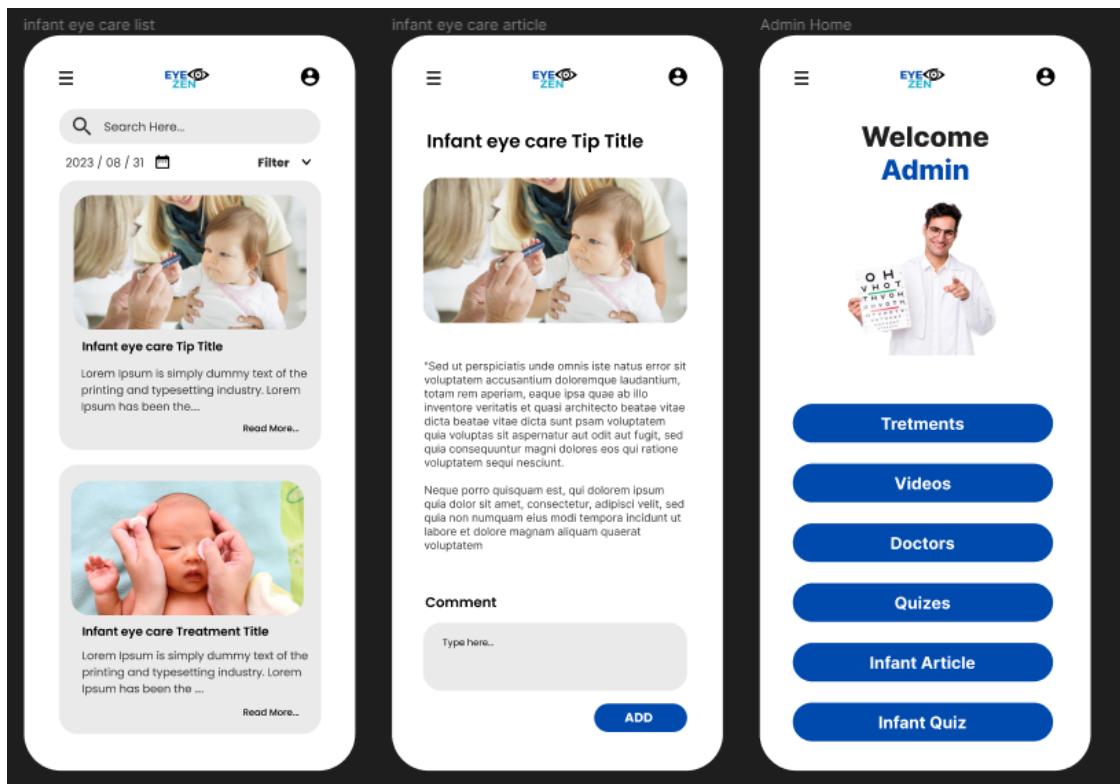
Back to home

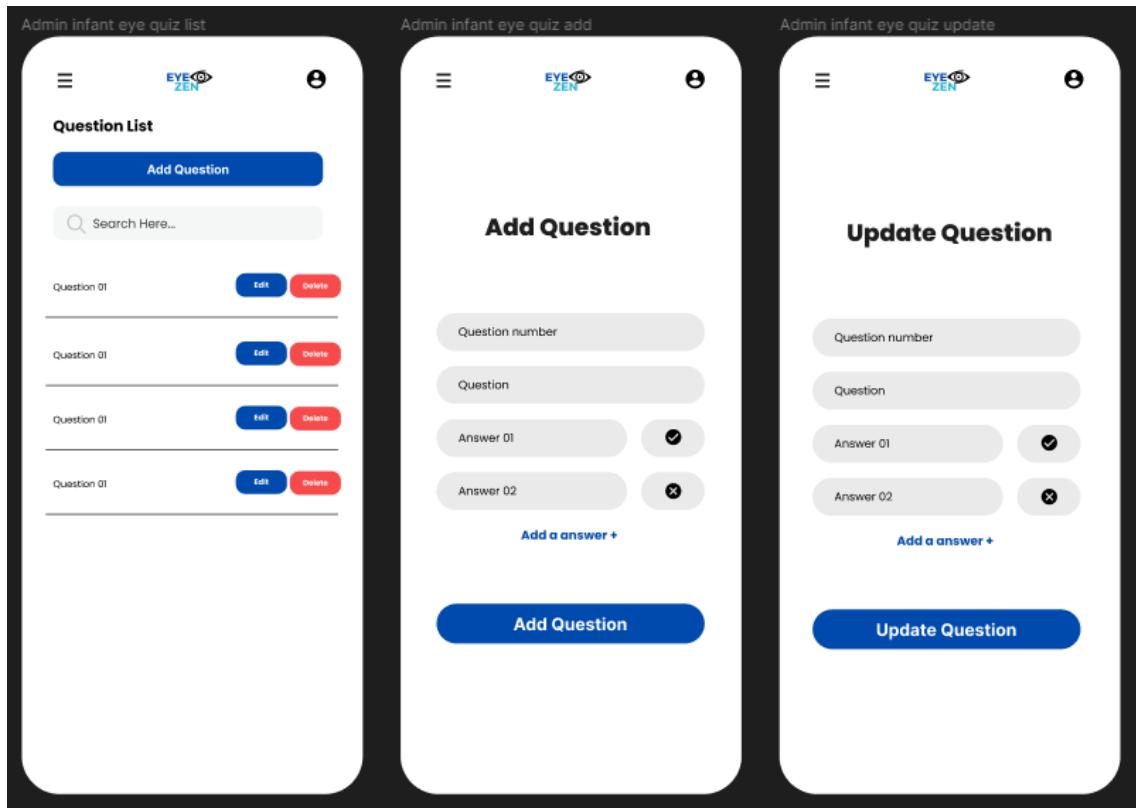


9.5.2 IT21318320 – Silva T.U.D

Updated final design based on user feedback.



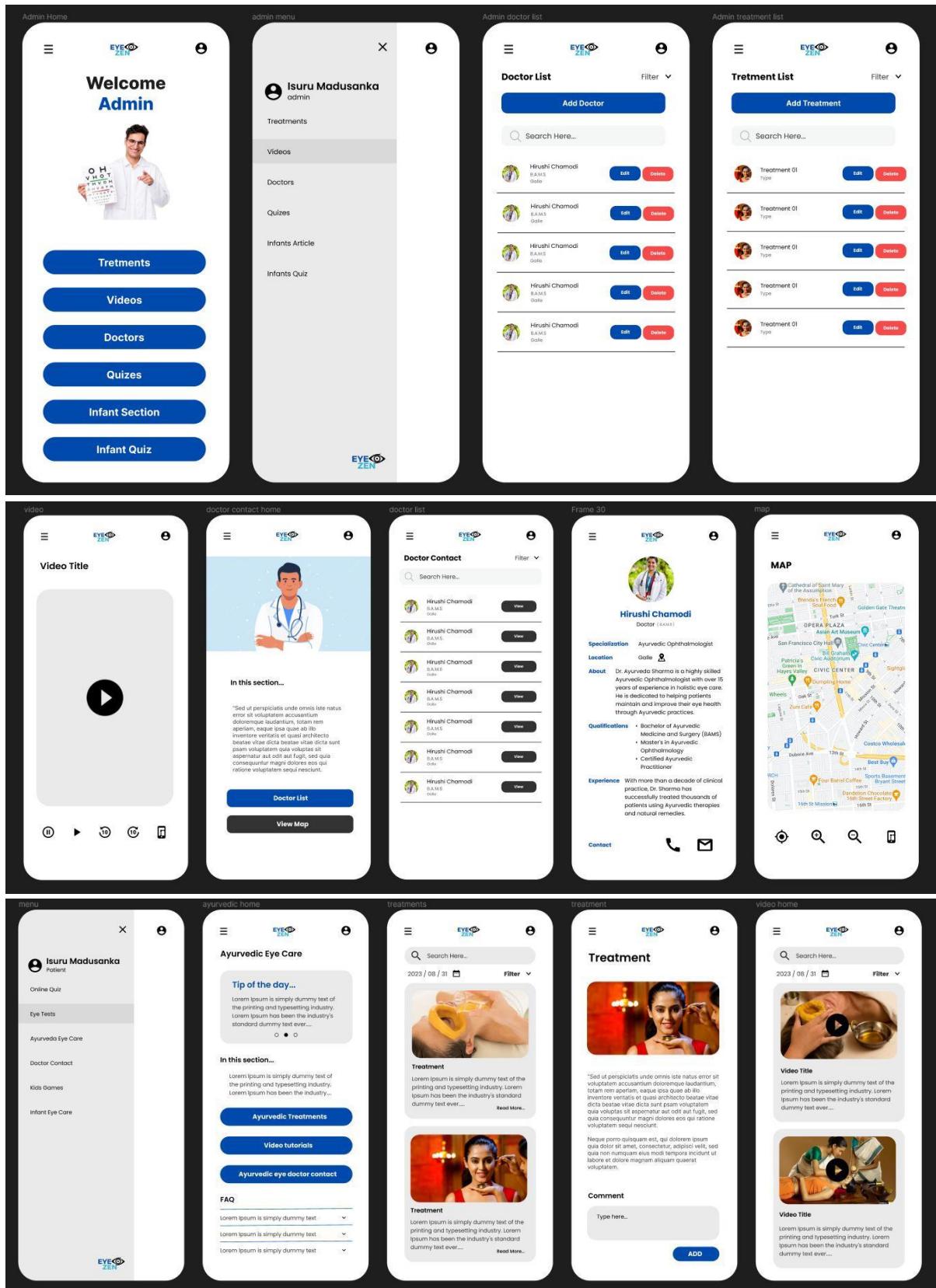




9.5.3 IT21169380 – Thuduvage I.M.H.G

The image displays a grid of eight mobile application screens, likely from a Flutter application, arranged in two rows of four. Each screen features a dark header bar with the 'EYE ZEN' logo.

- Top Row:**
 - Update treatments:** A form for updating treatment details. It includes fields for Treatment Title, Type (dropdown), and Description, along with 'Add Photo' and 'Upload' buttons, and a large blue 'Update' button at the bottom.
 - update video:** A form for updating video details. It includes fields for Video Title, Type (dropdown), and Description, along with 'Add Video' and 'Upload' buttons, and a large blue 'Update' button at the bottom.
 - update doctor:** A form for updating doctor details. It includes fields for Name, Email, Mobile, Location, About, Qualifications, and Profile picture, each with its own 'Upload' button, and a large blue 'Update' button at the bottom.
- Bottom Row:**
 - Admin video list:** A list view showing multiple video entries, each with a thumbnail, title ('Video 01'), type ('Type'), and edit/delete buttons.
 - add Treatment:** A form for adding new treatments. It includes fields for Treatment Title, Type (dropdown), and Description, along with 'Add Photo' and 'Upload' buttons, and a large blue 'Upload' button at the bottom.
 - add doctor:** A form for adding new doctors. It includes fields for Name, Email, Mobile, Location, About, Qualifications, and Profile picture, each with its own 'Upload' button, and a large blue 'ADD' button at the bottom.
 - add video:** A form for adding new videos. It includes fields for Video Title, Type (dropdown), and Description, along with 'Add Video' and 'Upload' buttons, and a large blue 'Upload' button at the bottom.



9.5.4 IT21169144 – Karunarathne R.Y.D



NEARSIGHTED?

Currently we are not providing the test for this diseases via mobile phone please use our web version from your PC or laptop.

If you want do the test by yourself using below chart. Instructions are with the PDF.



[Download Here](#)



Your Near Vision is
Good!



[Test Again](#)



Your Near vision is not
Good!

Please contact a doctor or seek
medical advice!



[Test Again](#)



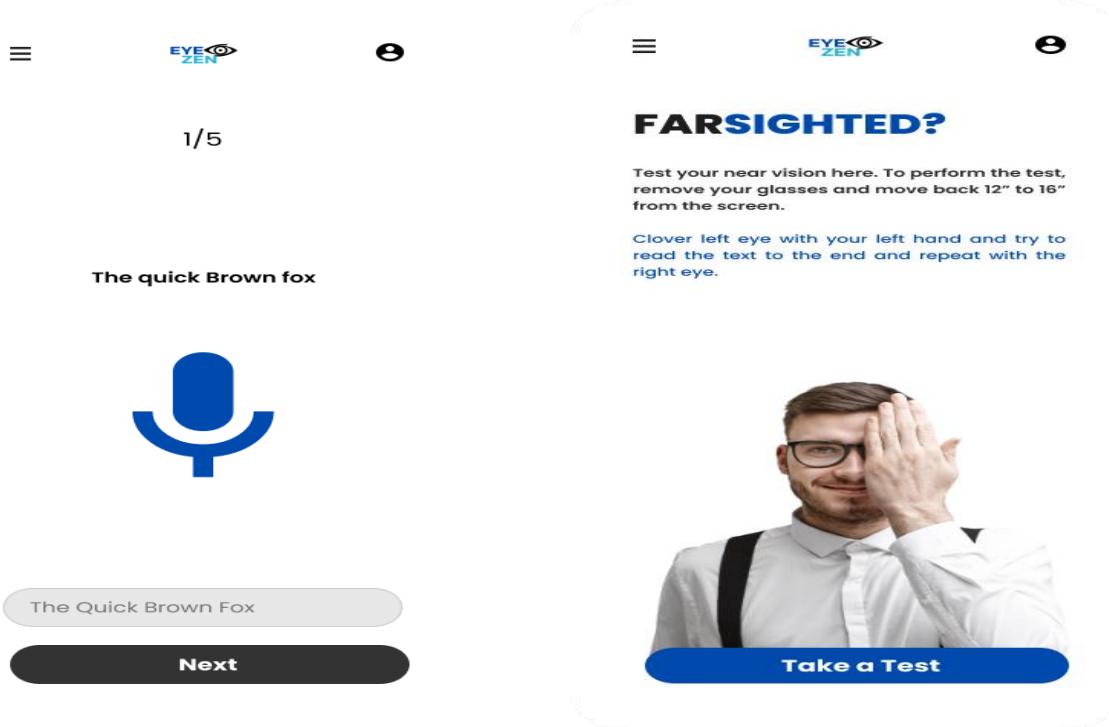
Texts for Test

Add Text

[Add Text](#)

Text List

The quick brown fox jumps	Edit	Delete
The quick brown fox jumps	Edit	Delete
The quick brown fox jumps	Edit	Delete
The quick brown fox jumps	Edit	Delete
The quick brown fox jumps	Edit	Delete
The quick brown fox jumps	Edit	Delete



10. Milestone 6 : User Feedback for your Prototype

10.1.1 IT21189944 – Madusanka G.K.I

Video Script

1. Imagine you're interested in learning more about the importance of early eye care in a person. Please find where you can access the quiz.
2. Now, let's say you find that you have a probability of having a eye disease according to the test result. How do you take a relevant?
3. Now, let's say you suspect you might be experiencing an eye-related issue. Try to find a feature or section within the app that allows you to take a direct eye test.
4. Now try to play a game and get results.
5. Were there any elements of the prototype that confused you while trying to access educational articles on early eye care?
6. How was your experience navigating to and participating in the infant eye care quiz?
7. Overall, do you think any design aspects need to be updated or improved based on your experience with these tasks? Thank you so much for your valuable feedback today. It will help us enhance the app for adults like you. We appreciate your time and insights.

Video Link

<https://drive.google.com/drive/folders/13OUBVmh-fJUJE6YnTSa1uPxP58p5aH6H?usp=sharing>

Prototype – Updated

Quiz Home

Take the Quick Online Suitability Quiz

Lorum ipsum is simply dummy text of the printing and typesetting industry. Lorum ipsum has been the industry's standard dummy text ever since the 1500s when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorum ipsum.

About the test

"Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperient, eaque ipsa quae ab illo inventore vertenti et quasi architecto beatis vitas dicta sunt peccatum voluntatem quam excepta est aspernatur aut odit aut fugit, sed quia consequuntur mundissima eos qui latente voluptatem seculi resolute."

How to perform ?

Preparation ?

Results ?

Accuracy ?

Start Quiz

Quiz

Question 01

Have you experienced any sudden and severe vision loss in one or both eyes?

Yes, In both eyes
 Yes, In left eye
 Yes, In right eye
 No

NEXT

Quiz Results

Your Results

Score Obtained : 70%

Vision Condition

- Vision It seems to be bit week
- Recommend to meet a Ophthalmologist

Possible 4 Diseases

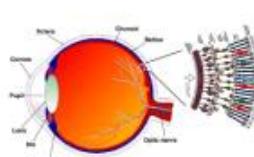
Color Blind : 40%
Myopia : 35%
Hyperopia : 25%
Contrast Sensitivity: 10%
Macular Degeneration: 5%

Click on the disease to get the confirmation test

Back to home

Test Home

Color Blindness

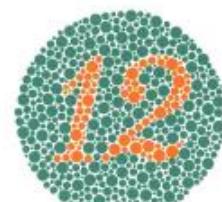


Lorum ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna Lorum ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna Lorum ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod temp.

Take Test

Single quiz

Question 01



Select the number that you read from the plate above

15 12 18 72

NEXT

single test result

Your Results

Score Obtained : 20%

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Take Test Again

Contact Consultant

Game home

Games For Kids

In this section...

Lore ipsum is simply dummy text of the printing and typesetting industry. Lore ipsum has been the industry's standard dummy text ever....

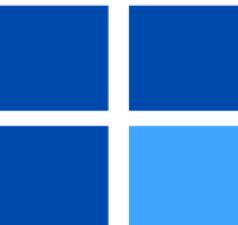
- Color Cubes**
Highest Score: 6730
- Color Match**
Highest Score: 6730
- Find Number**
Highest Score: 6730

Let's Play Games 

Game inside

COLOR CUBES

SCORE 5400



Select the Different Color

All Tests

Tests For Eye Diseases

In this section...

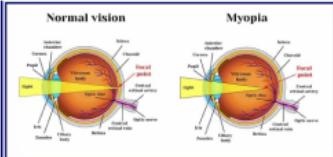
Lore ipsum is simply dummy text of the printing and typesetting industry. Lore ipsum has been the industry's standard dummy text ever....

- Myopia**
- Hyperopia**
- Color Blindness**
- Contrast Sensitivity**
- Depth Precision**
- Macular Degeneration**

Take Quiz

myopia

Myopia



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Take Test

myopia download

Myopia Test

Currently we are not providing the test for this diseases via mobile phone please use our web version from you PC or laptop

If you want do the test By your self using above chart. Instructions are with the pdf

 Click here to download

All Tests

Video Script

Hello and welcome! First of all thank you for participating with us today to engage with the testing for the infant eye care application prototype. Your insights are valuable to us. We've developed a prototype of our infant eye care app. It's a work in progress, and we're eager to hear your thoughts. We'll ask you to perform specific tasks, and please feel free to share your thoughts with us. Shall we start now?

1. Imagine you're interested in learning more about the importance of early eye care in infants. Please find where you can access educational articles or resources on this topic within the app.
2. Now, let's say you suspect your baby might be experiencing an eye-related issue. Try to find a feature or section within the app that allows you to contact a healthcare professional or seek medical advice.
3. Next, let's navigate through the app as if you want to participate in the infant eye care quiz. Locate the quiz section and initiate the quiz.
4. Were there any elements of the prototype that confused you while trying to access educational articles on early eye care?
5. How was your experience navigating to and participating in the infant eye care quiz?
6. Overall, do you think any design aspects need to be updated or improved based on your experience with these tasks?

Thank you so much for your valuable feedback today. It will help us enhance the app for parents like you. We appreciate your time and insights.

Video Link

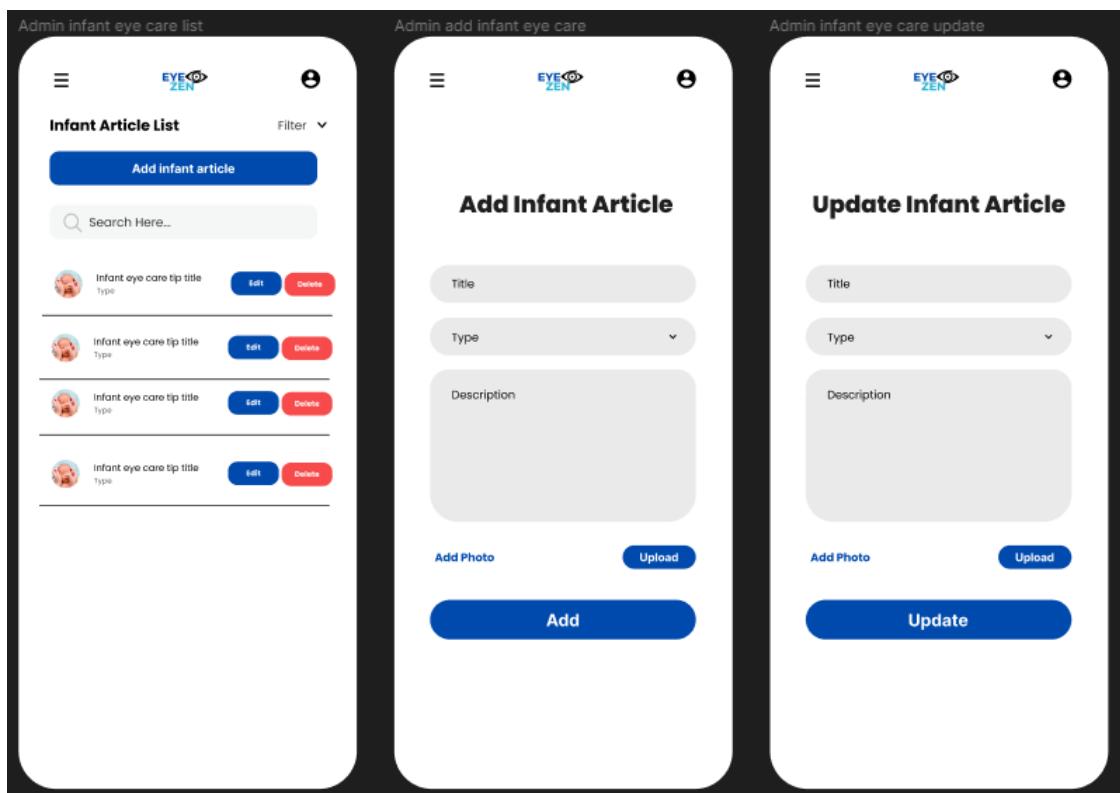
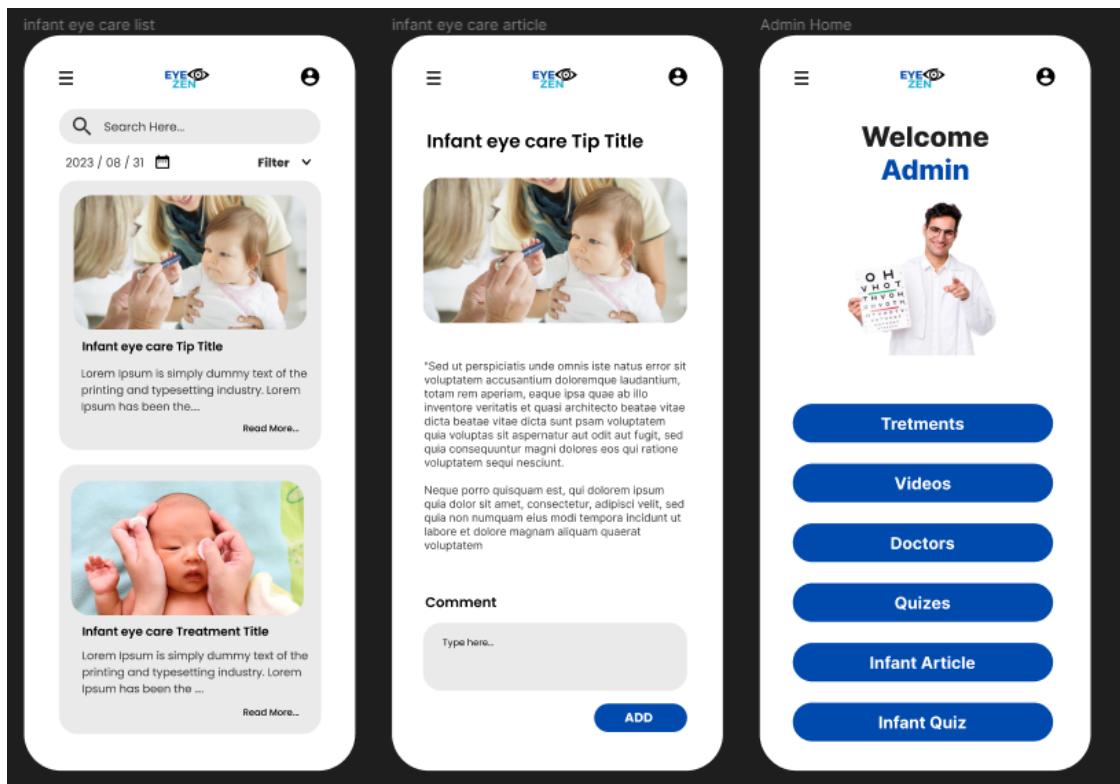
https://drive.google.com/file/d/1HbIYkY_Do_PKr9Squ45biKU81-0Asso-/view?usp=sharing

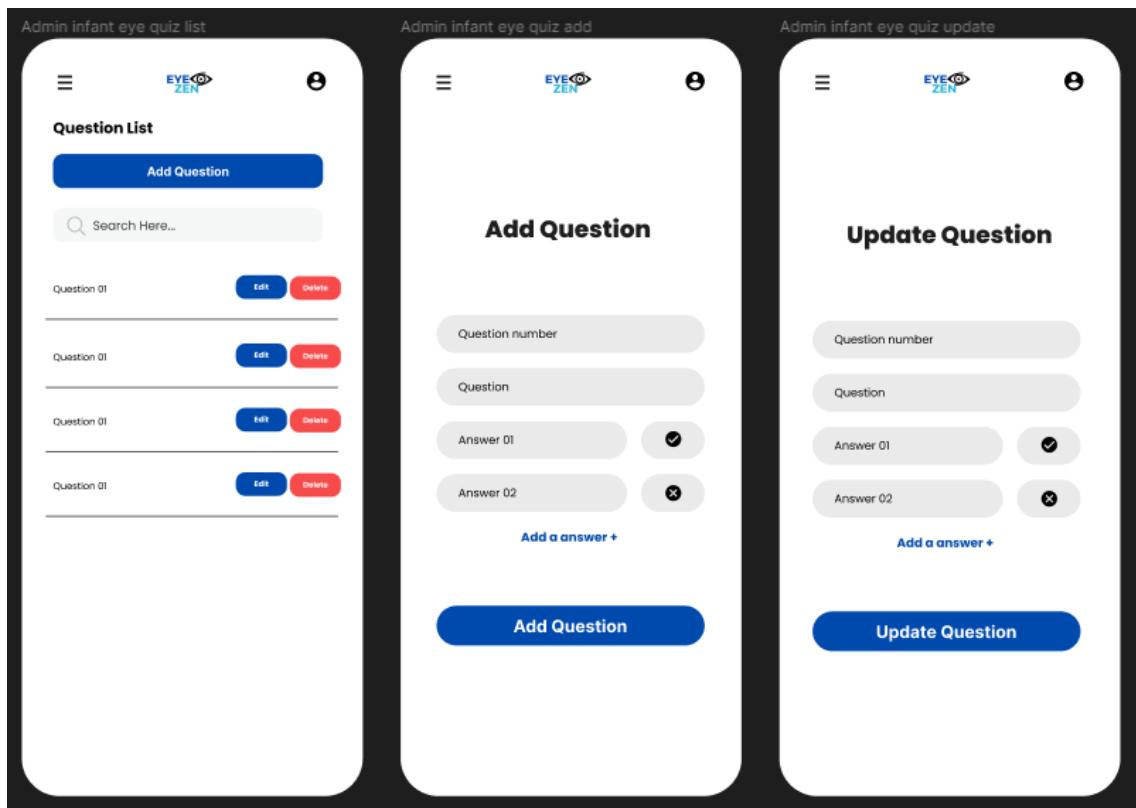
Prototype - Updated

Updated design based on user feedback.

The image displays six mobile phone prototypes for an infant eye care application, arranged in two rows of three. Each prototype is labeled with its screen name at the top:

- infant eye care home**: Shows a section titled "Infant Eye Care" with a placeholder text "In this section...". It includes a "View all" button, a card for "Birth to 1 month age" with a photo of a baby, and a "Recent Questions" list containing three entries: "Question 01" (repeated three times). A large blue "Take Quiz" button is at the bottom.
- infant eye care quiz home**: Shows a section titled "Infant Vision Test Quiz". It includes an "About the test" section with placeholder Latin text, and dropdown menus for "How to perform?", "Preparation?", "Results?", and "Accuracy?". A large blue "Start Quiz" button is at the bottom.
- infant eye care q1**: Shows a question titled "Question 01": "Did your infant follow objects with their eyes ? (this is called tracking)". It has "Yes" and "No" buttons, and a large black "NEXT" button at the bottom.
- infant eye care test results**: Shows a "Test Result" screen with a score of "Score Obtained : 70%". It includes a "Vision Condition" section with a bulleted list: "• Vision It seems to be bit weak" and "• Recommend to meet a Ophthalmologist". A large blue "Back to home" button is at the bottom.
- profile infant**: Shows a profile page for "Yasiru Deshan" with an avatar, email (yasiru@gmail.com), phone number (0771886641), and title (Patient). It includes buttons for "Edit Profile", "View infant eye care test results", "Game Scores", and "Button 01".
- infant eye care all results**: Shows a "Previous Test Results" screen with a search bar, date filter (2023 / 08 / 31), and a "Filter" dropdown. It lists five test results, each with a "Score : 60%" and a "Date" (all listed as "Date"). Each result has a "View" button to its right.





Video Script

Hello and welcome! Thank you for participating in our usability testing for the Ayurvedic Eye Care and Doctor Contact application Prototype 1. Your feedback is incredibly valuable as we work to improve this initial version. We'll guide you through a series of tasks related to Prototype 1. Please feel free to share your thoughts and experiences. Are you ready to begin?

1. Imagine you're interested in exploring Ayurvedic treatments and tips for eye care. Please locate where you can access Ayurvedic eye care treatments, tips, and articles within Prototype 1.
2. Now, let's say you need to contact an Ayurvedic eye care doctor. Find the feature or section within Prototype 1 that allows you to browse a list of Ayurvedic eye care doctors and get detailed information about them, including their location and contact details.
3. Suppose you want to watch Ayurvedic eye care video tutorials. Try to find a section in Prototype 1 that provides access to these video tutorials.
4. How was your experience navigating through Prototype 1 and attempting these tasks? Were there any aspects of Prototype 1 that you found confusing or challenging?
5. In the context of Prototype 1, do you have any general feedback or suggestions for improvement? Please focus on what can be enhanced within this initial version of the Ayurvedic Eye Care and Doctor Contact application.

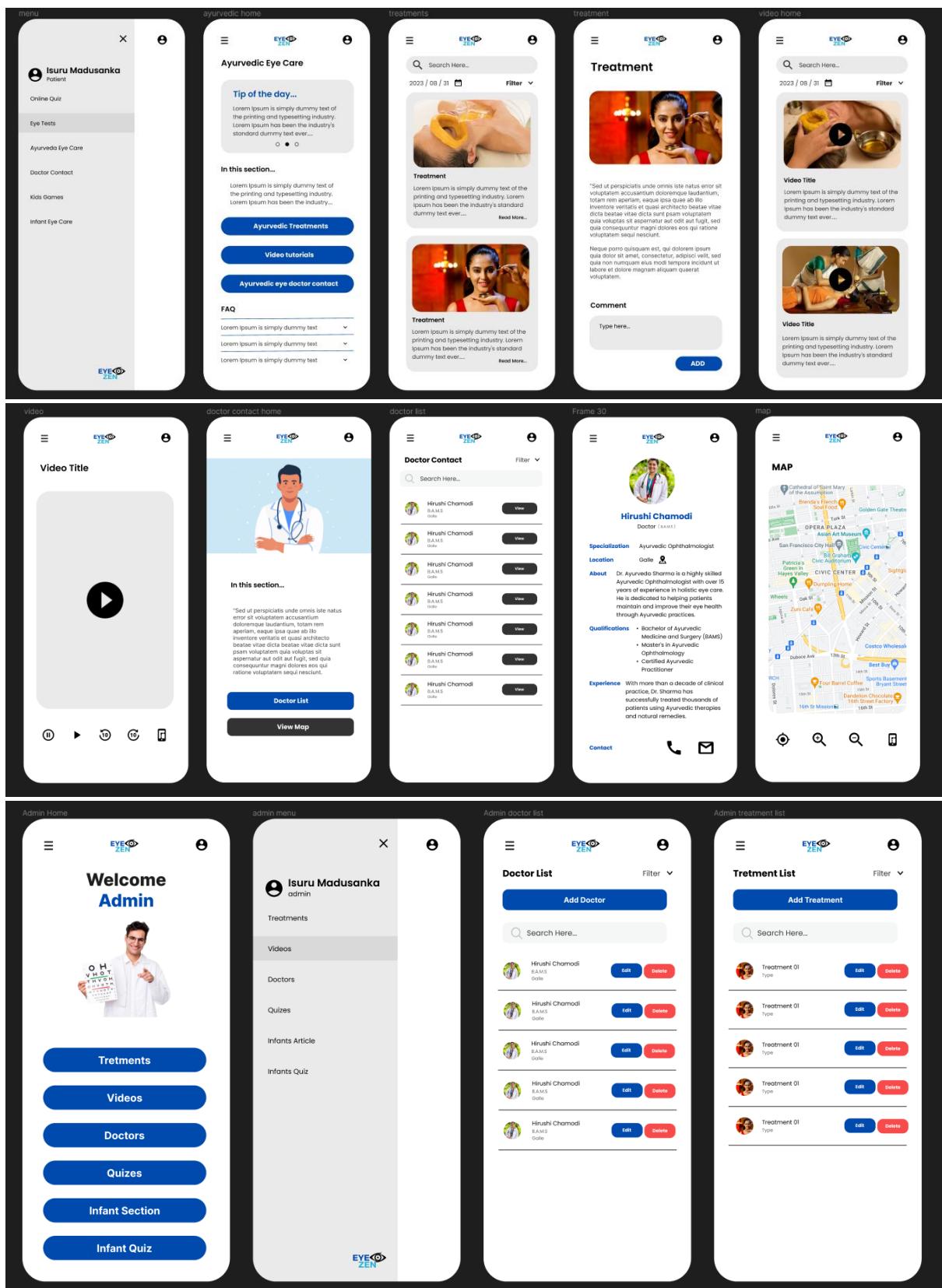
Conclusion:

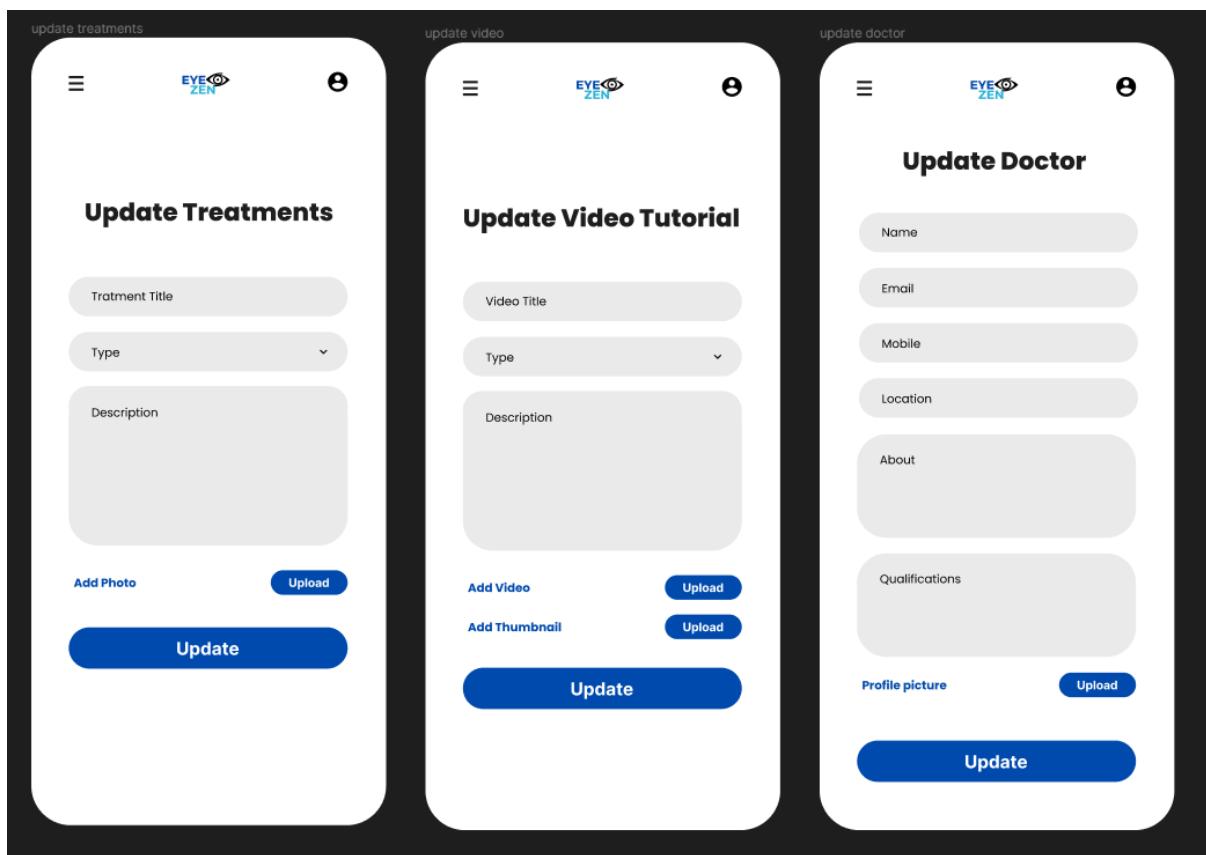
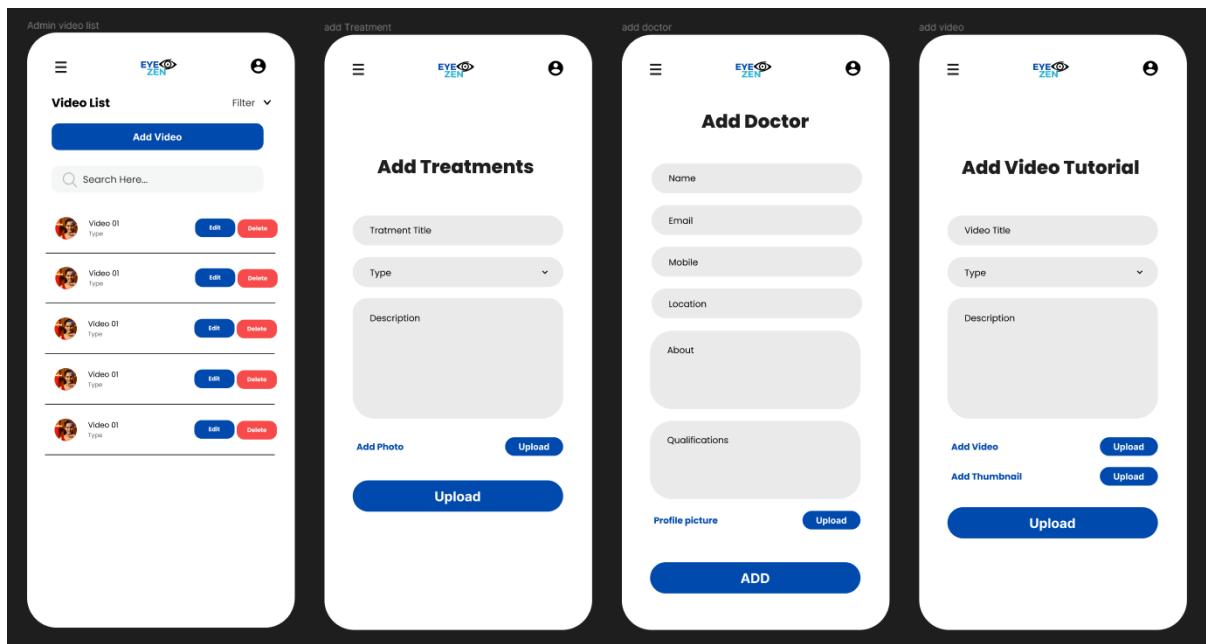
Thank you so much for your feedback on Prototype 1 today. Your input is vital in helping us improve this initial version of the application. We appreciate your time and the insights you've provided. Your feedback will be used to refine Prototype 1 and make it more user-friendly and effective for our users. Thank you once again!

Video Link

https://drive.google.com/drive/folders/1N11QbmdiED_zQ-al-z6Kudhs26cxJDA?usp=sharing

Prototype - Updated





Video Script

Hello and welcome! Thank you for participating in this feedback session for our eye test app prototype. Your insights are incredibly valuable as we work to improve our application. We've developed a prototype of our eye test app, and we'd like to hear your thoughts on specific aspects. We'll ask you about your experience with the app's features, and please feel free to share your thoughts with us. Shall we start now?

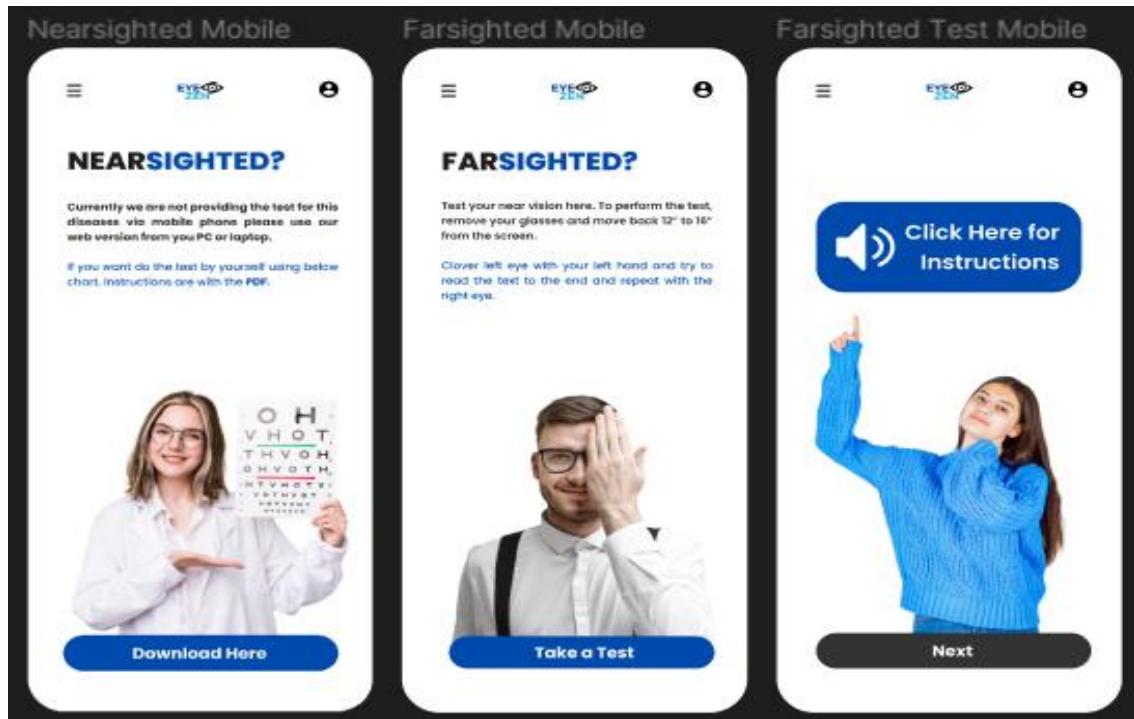
1. As you've interacted with the live prototype, what are your thoughts on the app's current features for initiating an eye test?
2. Can you share any challenges or difficulties you encountered while using the live prototype for the eye test?
3. In your experience, do you believe the live prototype effectively addresses the needs of users with vision challenges, such as far-sightedness?
4. Are there any specific aspects of the live prototype that you found particularly user-friendly or impressive?
5. Overall, based on your real-time experience with the live prototype, do you have any additional feedback or suggestions to improve the app's usability and effectiveness?

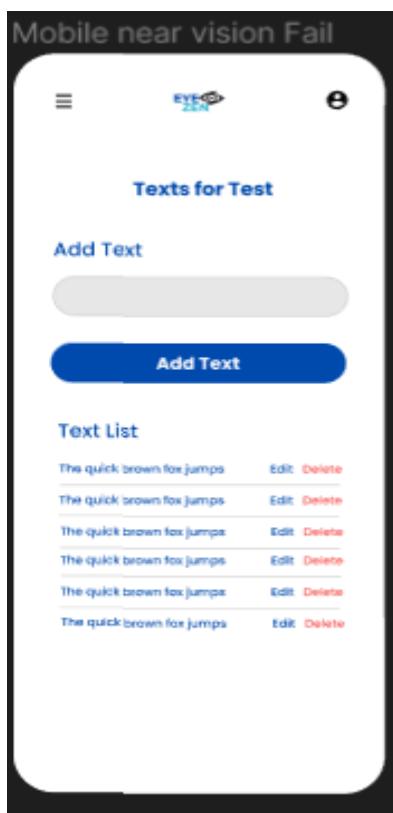
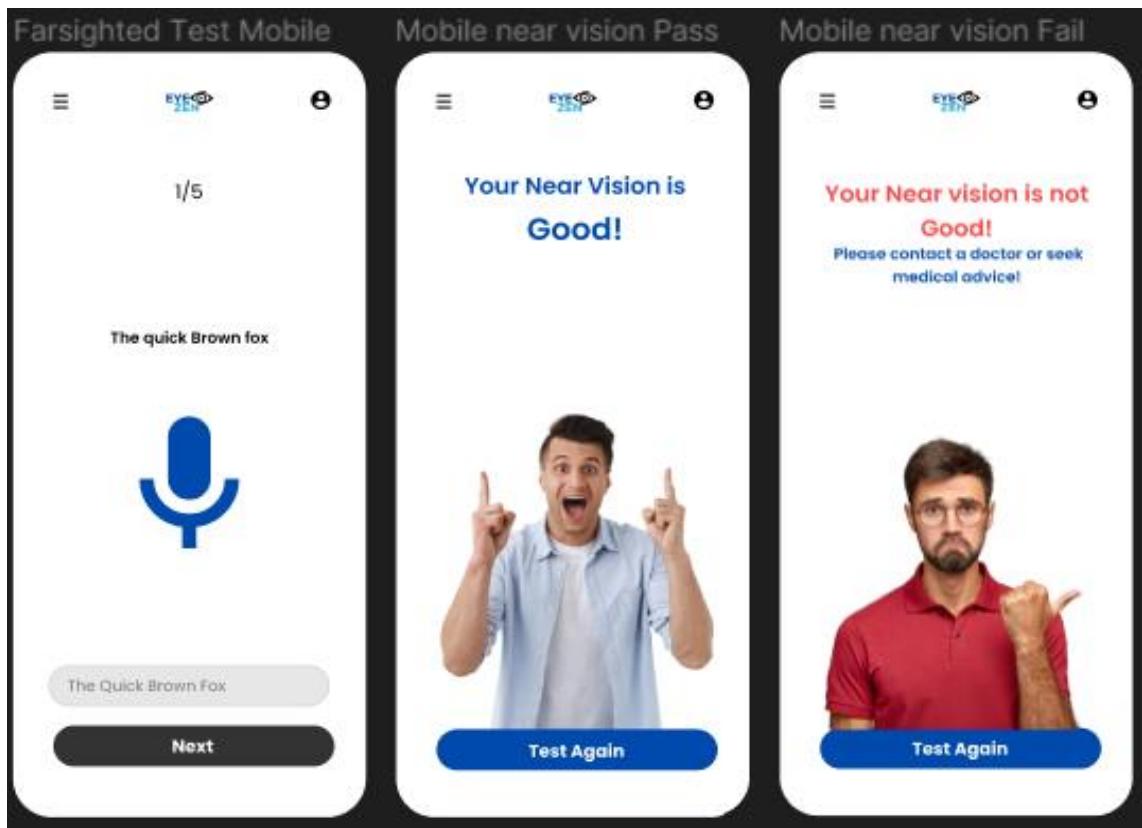
Thank you so much for your feedback today. It will help us consider the potential addition of voice instructions to enhance the app's usability. We appreciate your time and insights.

Video Link

<https://drive.google.com/drive/folders/1TF6Zo2OmKJS7x07iD2cmANSUPt216Cxb?usp=sharing>

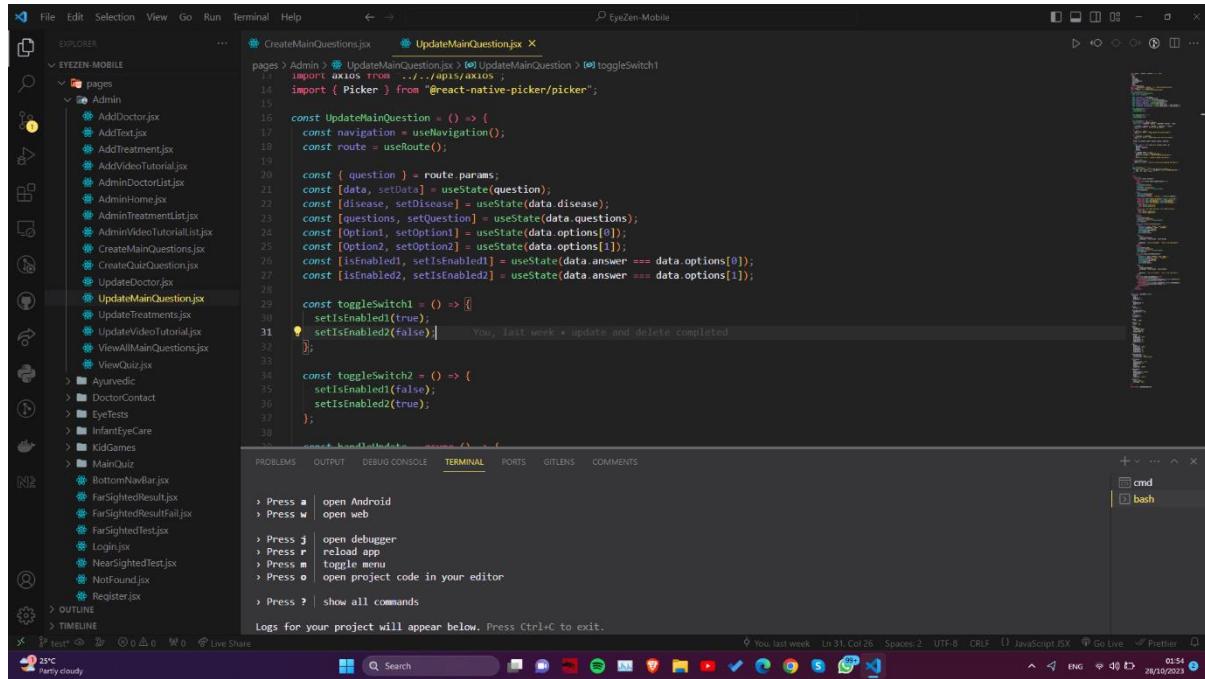
Prototype - Updated





11. Milestone 7 : Implementation

Code :



```
pages > Admin > UpdateMainQuestion > UpdateMainQuestion.jsx
import axios from '.../apis/axios';
import { Picker } from '@react-native-picker/picker';

const UpdateMainQuestion = () => {
  const navigation = useNavigation();
  const route = useRoute();

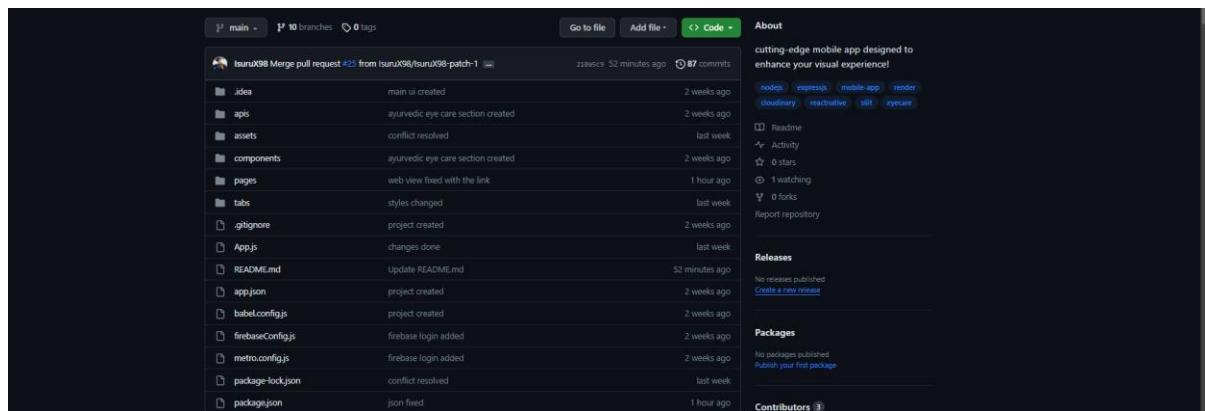
  const { question } = route.params;
  const [data, setData] = useState(question);
  const [disease, setDisease] = useState(data.disease);
  const [questions, setQuestion] = useState(data.questions);
  const [Option1, setOption1] = useState(data.options[0]);
  const [Option2, setOption2] = useState(data.options[1]);
  const [isenabled1, setIsEnabled1] = useState(data.answer === data.options[0]);
  const [isenabled2, setIsEnabled2] = useState(data.answer === data.options[1]);

  const toggleSwitch1 = () => {
    setIsEnabled1(true);
    setIsEnabled2(false);
  };

  const toggleSwitch2 = () => {
    setIsEnabled1(false);
    setIsEnabled2(true);
  };
}

export default UpdateMainQuestion;
```

Github Repository:



IsuruX98 Merge pull request #25 from IsuruX98/IsuruX98-patch-1

zineesha · 52 minutes ago · 87 commits

File	Commit Message	Time Ago
idea	main ui created	2 weeks ago
apis	ayurvedic eye care section created	2 weeks ago
assets	conflict resolved	last week
components	ayurvedic eye care section created	2 weeks ago
pages	web view fixed with the link	1 hour ago
tabs	styles changed	last week
.gitignore	project created	2 weeks ago
App.js	changes done	last week
README.md	Update README.md	52 minutes ago
app.json	project created	2 weeks ago
babelConfig.js	project created	2 weeks ago
firebaseConfig.js	firebase login added	2 weeks ago
metro.config.js	firebase login added	2 weeks ago
package-lock.json	conflict resolved	last week
package.json	json fixed	1 hour ago

About

cutting-edge mobile app designed to enhance your visual experience!

nodejs express mobile-app render

cloudinary reactnative util eyecare

Readme

Activity

0 stars

1 watching

0 forks

Report repository

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

Contributors

<https://github.com/IsuruX98/EyeZen-Mobile.git>

Prototype Version 2

We have already mentioned all the video scripts and screenshots under milestones 6. Here are the overall basic screenshots of EYEZEN app.

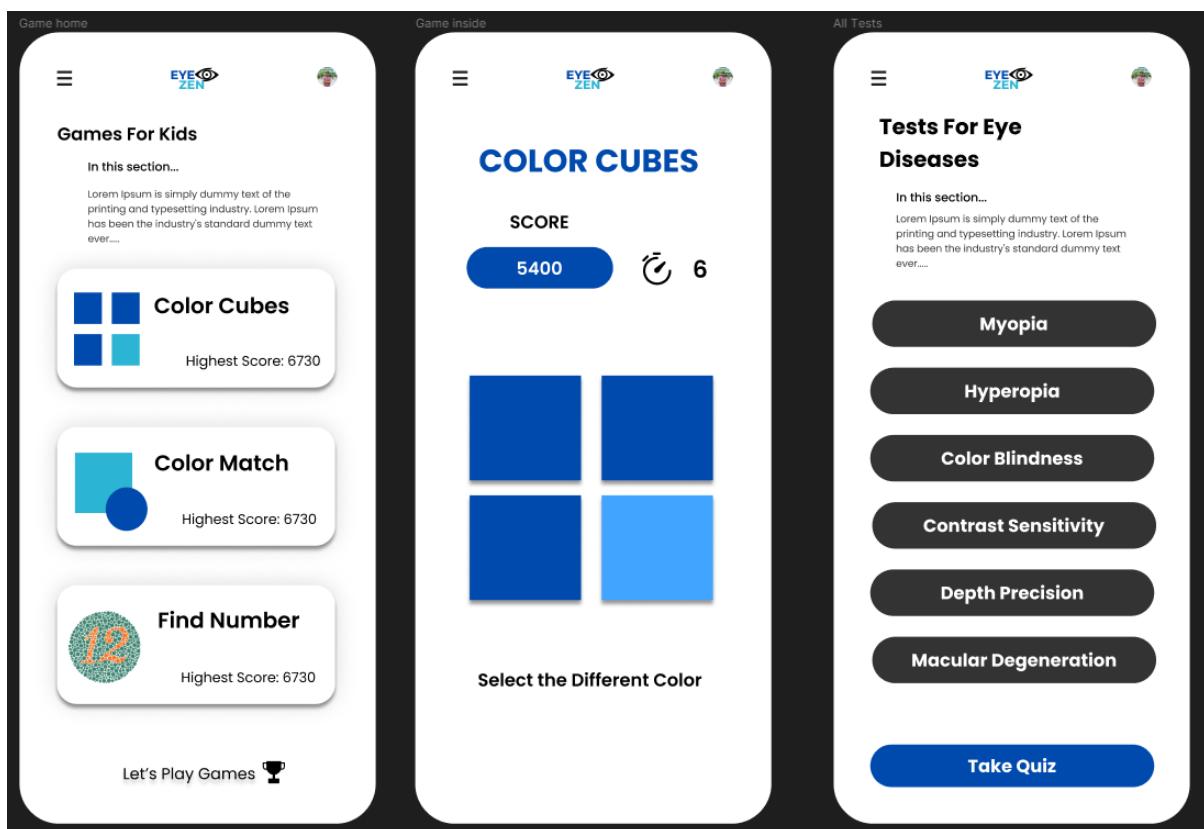
Video Links :

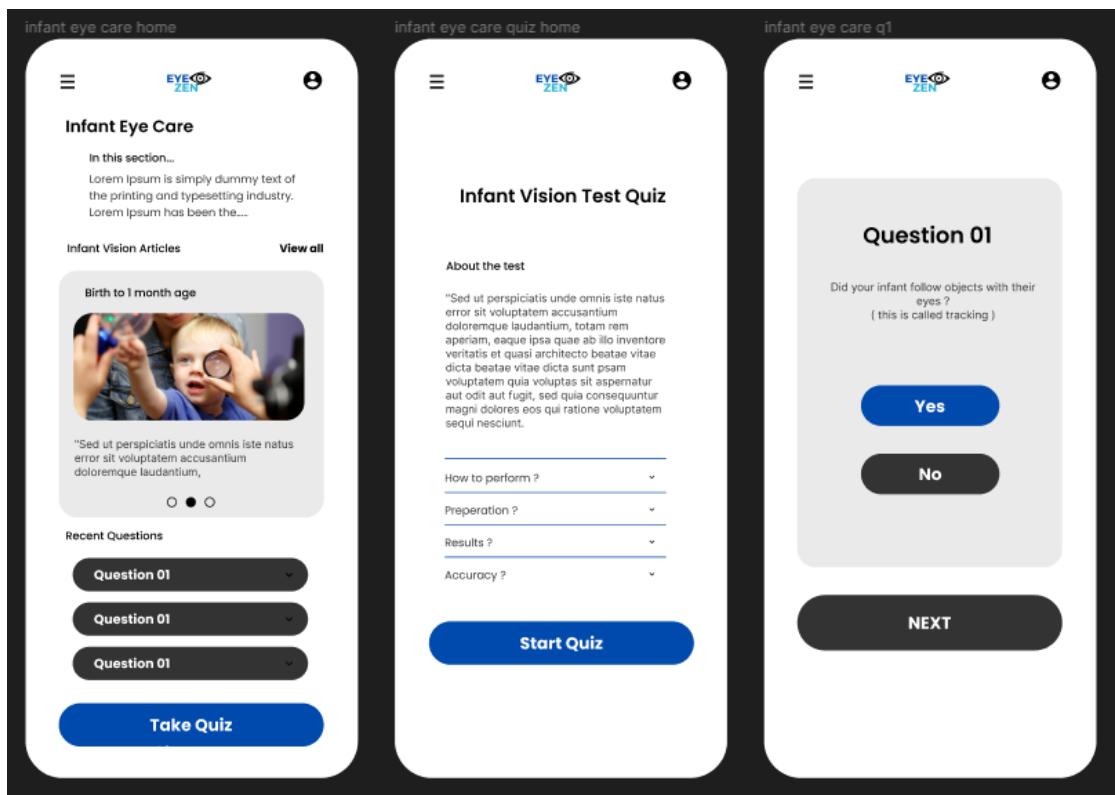
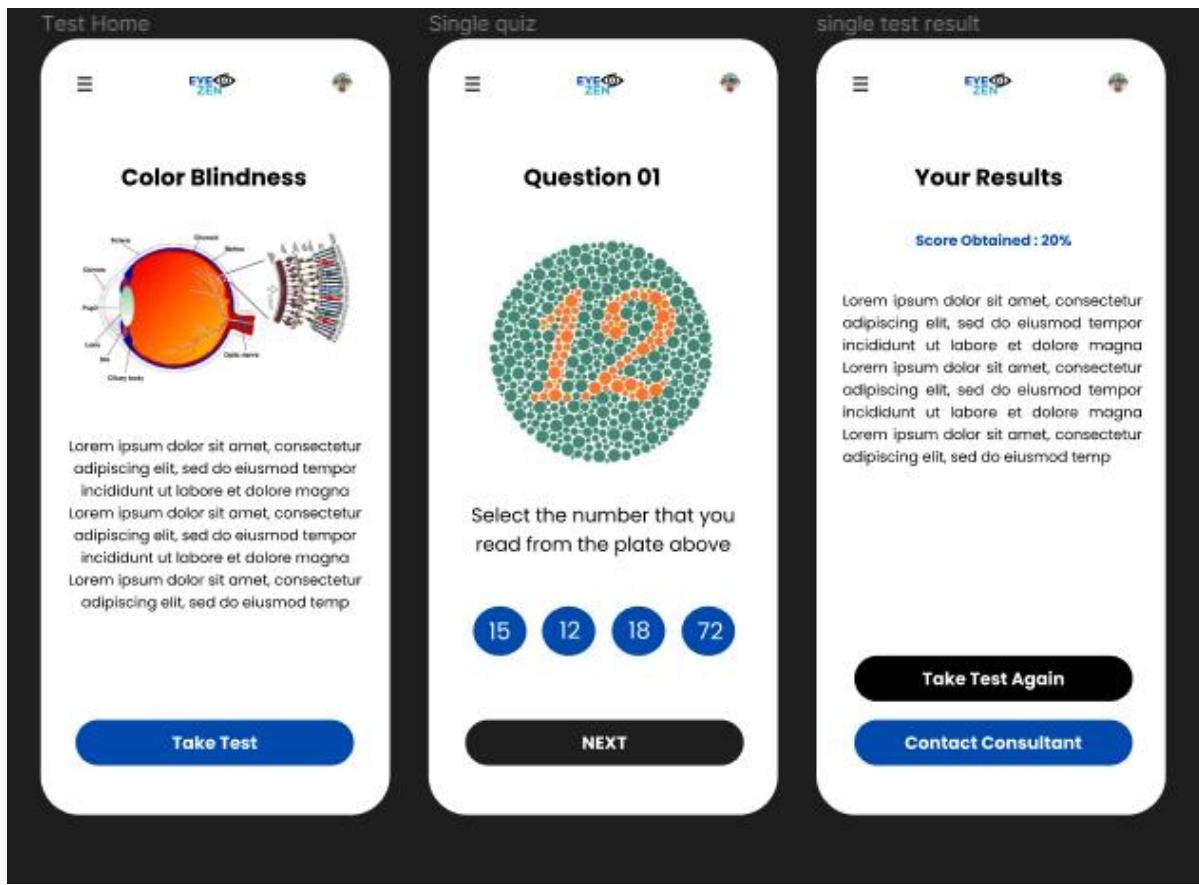
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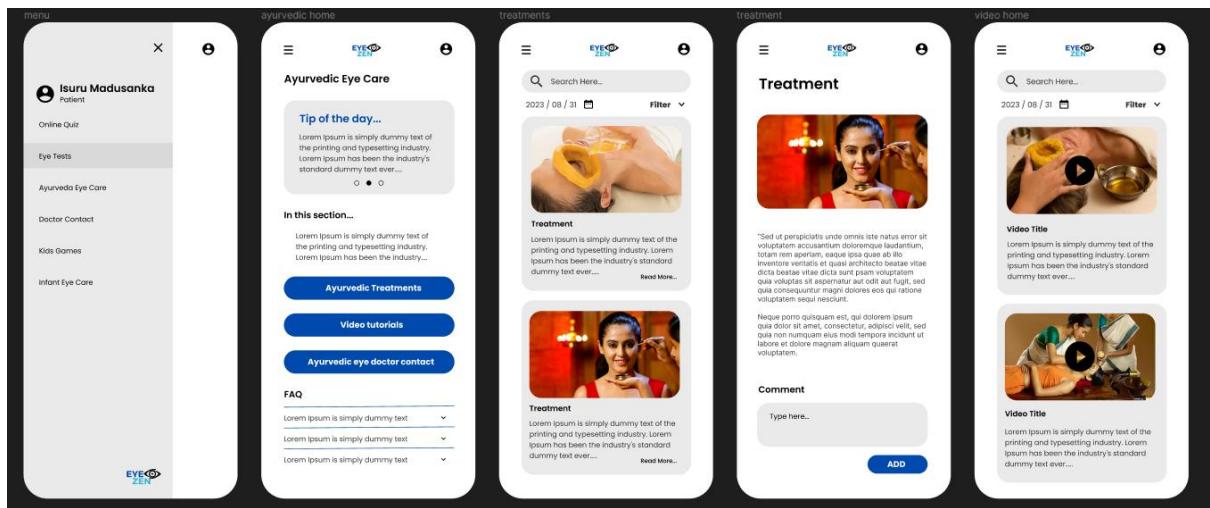
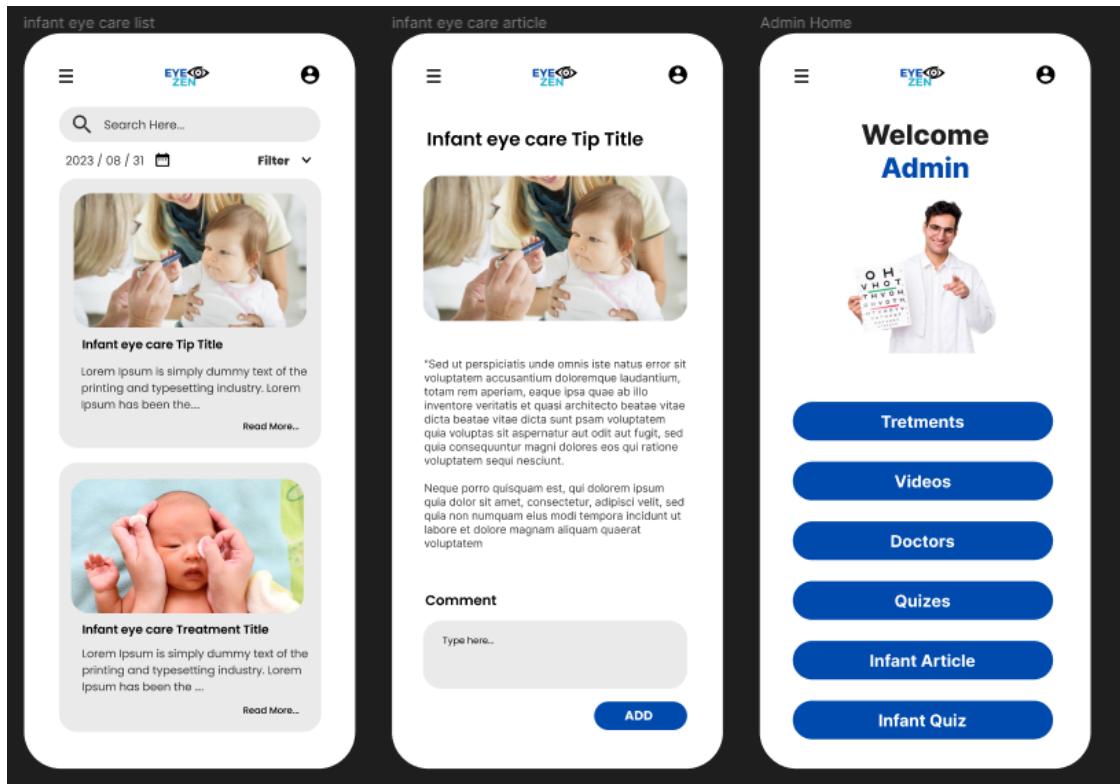
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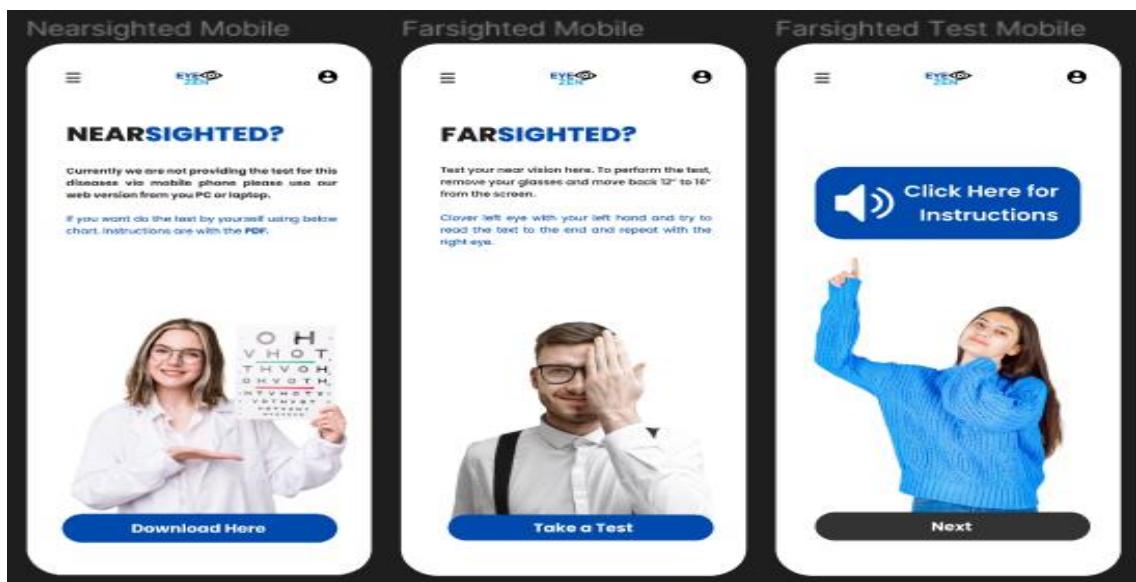
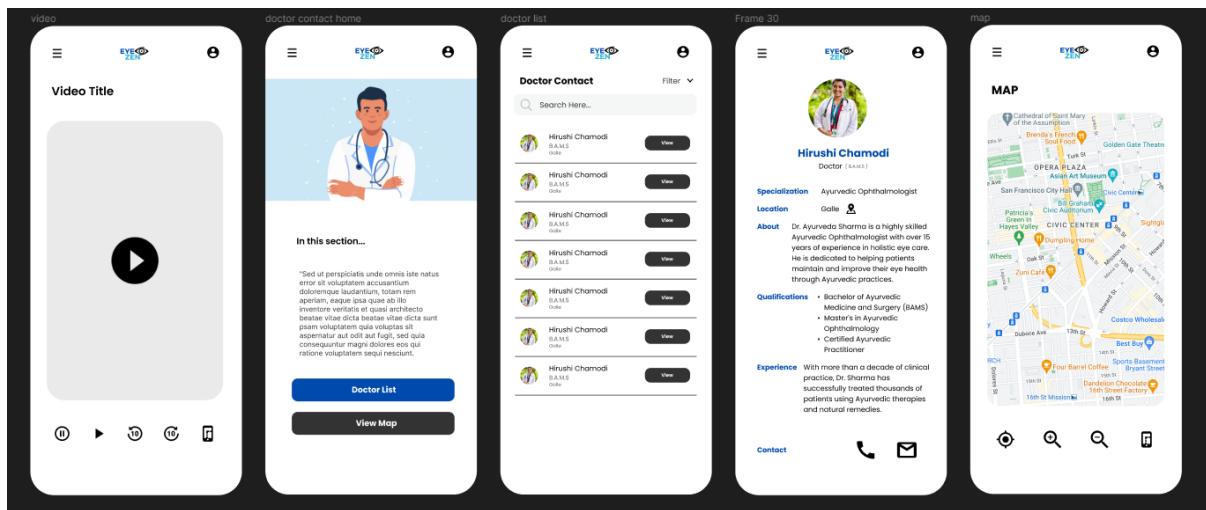
<https://drive.google.com/drive/folders/13OUBVmh-fJUJE6YnTSa1uPxP58p5aH6H?usp=sharing>

https://drive.google.com/file/d/1HbIYkY_Do_PKr9Squ45biKU81-0Asso-/view?usp=sharing









Test Plan

Introduction

- "Welcome to the EyeZen testing session. We're thrilled to have you here today. The purpose of this session is to gather feedback on the EyeZen app to enhance your experience. We value your input, and your feedback will be invaluable. The session will last about [duration]. Are you comfortable with the session being recorded for note-taking purposes? Your privacy is important to us."

Participant Information

- "First, let's gather some basic information. Can you please tell me your name and your age?"

Consent

- "Thank you. To begin, may I confirm your consent to record this session? Please be assured that your data will be kept confidential.".

Warm-up Questions

- "Let's start with some icebreaker questions:
- Do you currently use any eye care or health-related apps?
- Do you have any specific eye health concerns or conditions?"

Take Adult Eye Care Quiz

- "Now, please take the Main Eye Care Quiz on the app. Think aloud as you answer the questions."

Take infant Eye Care Quiz

- "Now, please take the Infant Eye Care Quiz on the app. Think aloud as you answer the questions."

Try a Kid's Game

- "Now, let's explore one of the kid-friendly games designed to identify potential vision problems in young children."

Access Ayurvedic Eye Care Information

- "Navigate to the Ayurvedic Eye Care section and explore the resources available, such as Ayurvedic treatments, articles, tips, or video tutorials."

Locate an Eye Care Specialist

- "Use the app's Doctor Locator feature to find an eye care specialist of your choice."

Think-Aloud

- "As you perform these tasks, please think aloud. Share your thoughts, questions, and observations as you go."

Observations and Follow-up Questions

"After each task, I'll ask a few questions:

- What worked well during this task?

- What challenges did you face, if any?
- What suggestions do you have for improving this feature?

App Overview

- "Now, I'll provide an overview of the app's features, explaining how it aims to provide comprehensive eye care solutions."

Additional Feedback

- "Before we conclude, do you have any general thoughts or feedback on the EyeZen app?"

Closing

- "Thank you for your time and feedback. Do you have any questions or comments about the testing process?"

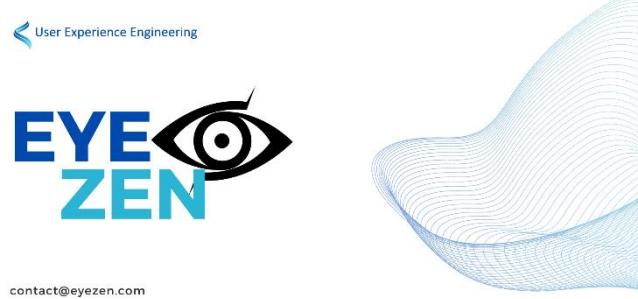
Post-Test Questions

- "After the test, I'll ask some additional questions about your overall experience, any further suggestions, and demographic information."

Conclusion

- "In conclusion, we appreciate your valuable insights. Your feedback will significantly contribute to improving the EyeZen app. Thank you for your participation."

12. Milestone 8 : Business Pitching for Investors



PROBLEM IDENTIFICATION



STATISTICS

"Globally, at least 2.2 billion people have a near or distance vision impairment. In at least 1 billion of these, vision impairment could have been prevented or is yet to be addressed." "Vision impairment poses an enormous global financial burden, with the annual global cost of productivity estimated to be US\$ 411 billion"



OUR MISSION

To revolutionize eye care through innovative technology, making early detection and holistic eye health accessible to all.



SWOT ANALYSIS

Strengths

Cutting-edge mobile app for comprehensive eye care. Integration of traditional and modern treatments. User-friendly interface for all age groups.

Opportunities

Expanding vision tests and eye exercises. Potential in telehealth for eye care.

Weaknesses

Limited testing for myopia due to practical constraints. Initial need for awareness building.

Threats

Competition from established eye care providers.

MARKET GAPS

Existing Competitive Products

- ICARE Vision Test
- Vision Care App
- BabySparks
- Vision
- Color Vision Test
- Color test

Gaps in the Current Market

- Mainly Targets on Adults
- Early Detection of Infants
- Combining Indigenous and western Treatments
- User Friendly Interface

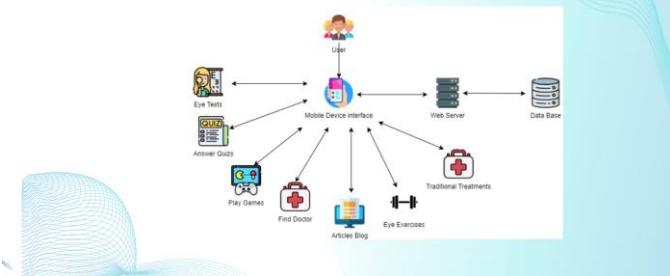
TARGET AUDIENCE

- **Age Group:** Individuals of all age groups, from Infants to seniors
- **Urban and Rural Users**
- **Health-Conscious Individuals:** Individuals with a proactive approach to health and wellness.

STRATEGY

- Combine innovative diagnostics with holistic treatments.
- Expand features based on user feedback.
- Collaborate with eye care specialists for expert input.
- Create a scalable and adaptable platform.

SYSTEM OVERVIEW



TIMELINE



FINANCE

INITIAL INVESTMENT: 220, 000/=

REVENUE PROJECTIONS:

YEAR 1 - 100,000/=
YEAR 2 - 250,000/=
YEAR 3 - 500,000/=

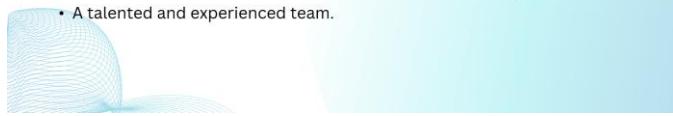
COMMERCIALIZATION

- **FREEMIUM MODEL :** ADD ADDITIONAL PREMIUM FEATURES.
- **DATA INSIGHTS AND ANALYTICS:** ANONYMIZED DATA FROM USERS' QUIZ RESPONSES AND EYE TESTS AND CREATE VALUABLE INSIGHT WHICH HAS ECONOMIC VALUE.
- **AYURVEDIC ITEMS (IF POSSIBLE)**
- **ADVERTISING :** AD REVENUE CAN BE GENERATED BASED ON THE NUMBER OF IMPRESSIONS OR CLICKS ON THESE ADVERTISEMENTS.
- **PARTNERSHIPS WITH EYE CARE SPECIALISTS :** COLLABORATING WITH EYE CARE SPECIALISTS AND CLINICS TO RECOMMEND THEIR SERVICES.

ATTRACTIVE POINTS FOR INVESTORS

Why Choose EyeZen?

- The unique combination of technology and traditional treatments.
- Expanding market in the digital health sector.
- Proven commitment to user feedback and continuous improvement.
- A talented and experienced team.



OUR TEAM



Ishara Madusanka



Umesha Silva



Isuru Madusanka



Yasiru Karunaratne

User Experience Engineering

User Experience Engineering

THANK YOU!



13. Requirement Specification

13.1 Usability Goals

In their report, the team has identified a set of crucial usability goals to ensure the user-friendliness and effectiveness of the product. The primary objective is to establish a high level of ease of use, ensuring that users can perform tasks without encountering confusion or frustration. When designing and implementing the product it has been prioritize efficiency, aiming to enable users to accomplish their goals with speed and minimal effort. Learnability is another important consideration, with an emphasis on an intuitive user experience for new users, requiring minimal training. And also, providing an error-tolerant experience with clear error messages for users. Consistency in the user interface and design is maintained throughout the product, ensuring a familiar and seamless user experience. Accessibility is a key focus, with the goal of making the product usable for individuals with disabilities. Additionally, to achieve high user satisfaction to foster product loyalty and positive recommendations. Task completion, feedback mechanisms, and product performance are all core goals to ensure efficient task execution, feedback collection for improvements, and a responsive product. These usability goals are tailored to the nature and purpose of the product, aligning with the needs and expectations of the target users.

13.2 User Experience Goals

In a user-centric design, the designing and implementation was dedicated to creating a range of user experiences that are intuitive, efficient, and satisfying. The primary aim is to ensure users can effortlessly navigate the product, minimizing the need for extensive guidance. By offering a clean and logical user interface, they intend to establish an intuitive user experience that reduces any barriers to entry. Efficiency is another key consideration, with a focus on streamlining tasks and minimizing steps required for users to accomplish their goals. The production was keen on providing users with an engaging experience, captivating their interest through interactive elements and compelling content. And also, committed to accessibility, ensuring that individuals with disabilities can use the product with features such as screen readers and keyboard navigation. Consistent user experience is paramount, enabling users to navigate various sections of the product with ease. Error tolerance and effective feedback mechanisms have been integrated to provide a seamless experience. Additionally, personalization is a priority, tailoring the experience to individual preferences, and contributing to a more engaging and satisfying interaction. Through ongoing user feedback and testing, aims to fine-tune and optimize these experiences, ultimately creating a product that resonates with and fulfills the diverse needs of their user base.

13.3 Functional Requirements

- Users should be able to log in securely to access their profiles and data.
- The application should offer multiple specialized eye tests for adults.

- Users should be able to select and complete specific eye tests.
- Each test should have a clear set of instructions for users.
- Test results should be generated and displayed after completion.
- The application should provide eye tests for infants, which can be conducted by parents.
- Clear instructions for parents on how to conduct the tests should be provided.
- The application should record and analyze the infant eye test results.
- Users should have access to a library of Ayurvedic eye care tips and treatments.
- The application should categorize Ayurvedic tips by eye condition.
- Users should be able to search for specific Ayurvedic remedies based on their eye issues.
- The application should allow users to find nearby eye care specialists based on their location.

13.4 Non-Functional Requirements

- Responsiveness: The application should respond to user interactions within two seconds or less to provide a seamless user experience.
- Security: User access to different parts of the application should be controlled and should follow the principle of least privilege.
- Availability: The application should be available 24/7, with scheduled maintenance windows announced in advance.
- HIPAA Compliance: If handling health information, the application should comply with Health Insurance Portability and Accountability Act (HIPAA) regulations to protect patient data.

13.5 Hierarchical Task Analysis

13.5.1 Disease Detection and Diagnosis through quizzes

- Sub-task 1: Take Eye Care Quiz
- Sub-task 2: Perform Quiz
- Sub-task 3: Review Quiz Results
- Sub-task 4: Confirm Diagnosis

13.5.2 Testing with kids eye games

- Sub-task 1: Take Kids Eye Games
- Sub-task 2: Perform Games
- Sub-task 3: Review Results
- Sub-task 4: Confirm Diagnosis

13.5.3 Infant Eye Care checks through quizzes

- Sub-task 1: Take Infant Eye Care Quiz
- Sub-task 2: View instructions for parents
- Sub-task 3: Perform Quiz
- Sub-task 4: Review Quiz Results
- Sub-task 5: Confirm Diagnosis

13.5.4 Ayurvedic Eye Care

- Sub-task 1: Access Ayurvedic Treatments
- Sub-task 2: Read Ayurvedic Articles
- Sub-task 3: Get Eye Care Tips
- Sub-task 4: Learn Natural Eyesight Improvement
- Sub-task 5: Discover Preventive Measures
- Sub-task 6: Watch Ayurvedic Tutorials

13.5.5 Finding Eye Care Specialists

- Sub-task 1: Locate Western Eye Care Doctors
- Sub-task 2: Locate Ayurvedic Eye Care Specialists
- Sub-task 3: Book Eyecare specialist

14. Design Principles

EyeZen projects design was based on the Five-stage Design Thinking model proposed by the Hasso-Plattner Institute of Design at Stanford. In this design model five main stages was,

1. Empathize
2. Define
3. Ideate
4. Prototype
5. Test

When starting the project as it engages with the health care field, experts in that field was met and interviewed to get accurate information regarding eye health. Then after concerning all the gathered data deficiencies in existing systems was found and went through ideate phase by planning and designing the idea behind EyeZen. Then the prototyping was done by focusing on usability, user experience and attractiveness. Finally, testing was done basically based on prototype to ensure the user requirements are met as it is.

15. Project Management

15.1 Meetings

The project planning and implementation were planned more by using meeting. The frequency of these meetings varies depending on the specific needs of the part of the project, but typically, had weekly team check-ins to discuss progress, address any challenges, and set priorities for the coming week. Additionally, monthly meetings were conducted to share updates and insights from different team members. All meeting details, including timelines and pre-meeting materials, were communicated through our internal WhatsApp group, and the preferred communication platform for virtual meetings was Google Meets. This structured approach to meetings helps keep everyone informed, engaged, and aligned with project goals.

15.2 Risk Management

One of the most concern risk is safeguard the sensitive data of users. Data breaches and unauthorized access to personal and medical information were identified as high-priority risks, leading to the implementation of stringent data protection measures and compliance with relevant regulations like HIPAA.

Other risk factor is that the app provides a seamless and enjoyable user experience. Poorly designed user interfaces will definitely lead to low user adoption. So EyeZen must be user friendly for individuals of varying technological backgrounds and age groups.

Technical issues also need to be considered. App crashes, slow performance and compatibility issues in different mobile devices and operating systems are some of the major technical issues. These issues can also lead to low user interaction with the system

Integration with healthcare providers such as hospitals and doctors is essential. Communication and relevant data sharing is crucial with the above-mentioned parties. Also need to ensure that app quizzes and tests provide accurate results, minimizing the risk of misdiagnosis. The other factor for integration with healthcare providers is app must be integrates smoothly with western and ayurvedic healthcare providers.

15.3 Milestones

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Selecting a topic	■									
Identifying user groups		■								
Conduct user research			■							
Verifying user flows				■						
Sketching and wireframes					■					
Figma prototyping						■				
Implementation							■			

15.4 Problems Encountered

1. Technical Glitches and performance issues

After the initial launch users had issues such as app crashes and slow performance. To address these issues our team used testing to identify the glitches and fixed them with updates.

2. Limited user engagement with ayurvedic section

The ayurvedic eye care section had low user involvement. Improving the section's visibility through navigation and promoting its content through new letters and notifications fixed this issue by boosting user engagement.

3. Balancing academic and development work

During the development period of EyeZen, the team faced the challenge of balancing academic commitments and process of creating the app. To manage this challenge, team members established a flexible work schedule and prioritized task effectively. This has allowed the team to allocate time for academic responsibilities while involving the app's implementation.

4. Initial privacy concerns

Some users privacy concerns regarding the app's storage and use of their healthcare data. As a solution to this our team responded by providing clear explanations of our privacy policies and allowing users to manage their data preferences.

16. Conclusion

In conclusion, project EyeZen was planned, designed, and implemented by going through different phases during the timeline of approximately one and a half month. Overall, EyeZen is an all-in-one eye care mobile application which has addressed major deficiencies in existing systems and provide users with a user friendly and an efficient way to check their vision at home. EyeZen targets a varied age group so that when designing the application all the aspects including app components, color themes, user guides were taken into consideration. And this application made a revolutionary step in the field of eye care as this application has combined the capabilities of western and ayurvedic medicines into one place. Not only that, but also infant eye care which focuses on infants below one year of age has been made a remarkable step as these are the main unique features in EyeZen. Overall, EyeZen is a well planned and implemented mobile application which help users to detect their eye diseases at home, and which has a high accuracy level as all the questionnaires and treatments are made by specialists in the field of ocular health.

17. References

- [1] "Laser Eye Surgery Hub," 2020. [Online]. Available: <https://www.lasereyesurgeryhub.co.uk/data/visual-impairment-blindness-data-statistics/>.
- [2] A. Serra, "Foonkie Monkey," 26 June 2023. [Online]. Available: <https://www.foonkiemonkey.co.uk/best-practices-for-user-centered-ux-ui-design-in-mobile-healthcare-app-development/>.
- [3] "Interaction Design Foundation," [Online]. Available: <https://www.interaction-design.org/literature/topics/design-thinking>.

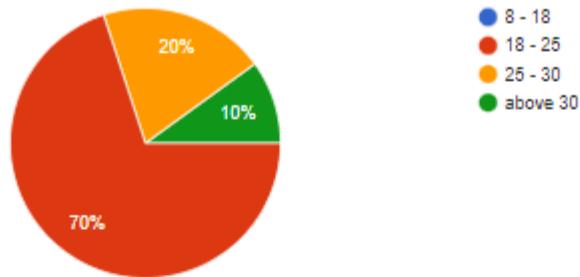
18. Appendix

18.1 Initial User Survey Responses

Which age gap do you belong to?

 Copy

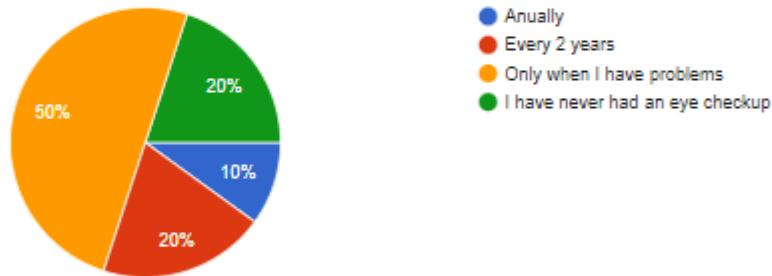
10 responses



How often do you have your eyes checked by a healthcare professional?

 Copy

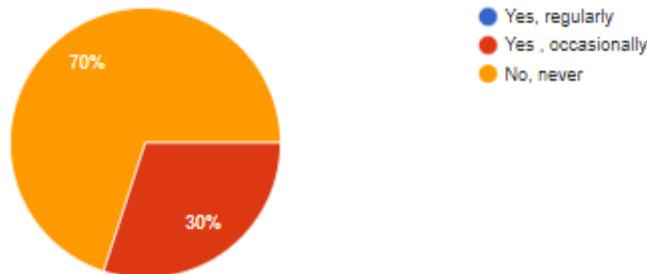
10 responses



Have you ever used an eye care app for self-assessment?

 Copy

10 responses

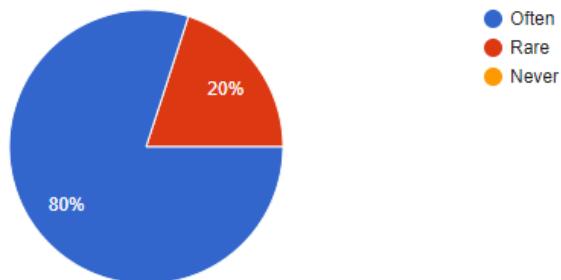


Mobile App Usage

How often do you use mobile apps for infant care or health-related tasks?

Copy

5 responses

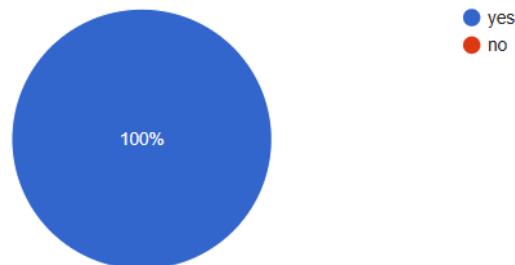


Ayurvedic Eye Care Section

Have you explored the Ayurvedic Eye Care section of the EyeZen app?

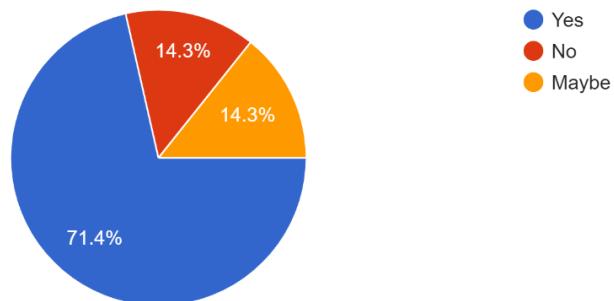
Copy

6 responses



Did you find the speech-to-text feature helpful in entering your responses during the eye test?

7 responses



18.2 Meeting Minutes

Table 3 - Meeting Minutes

Date	Start Time	End Time
September 5	8.00 PM	8.15 PM
September 12	9.20 PM	9.30 PM
September 19	8.30 PM	10.30 PM
September 26	10.00 PM	10.15 PM
October 3	10.00 PM	10.30 PM
October 11	12.30 PM	1.00 PM

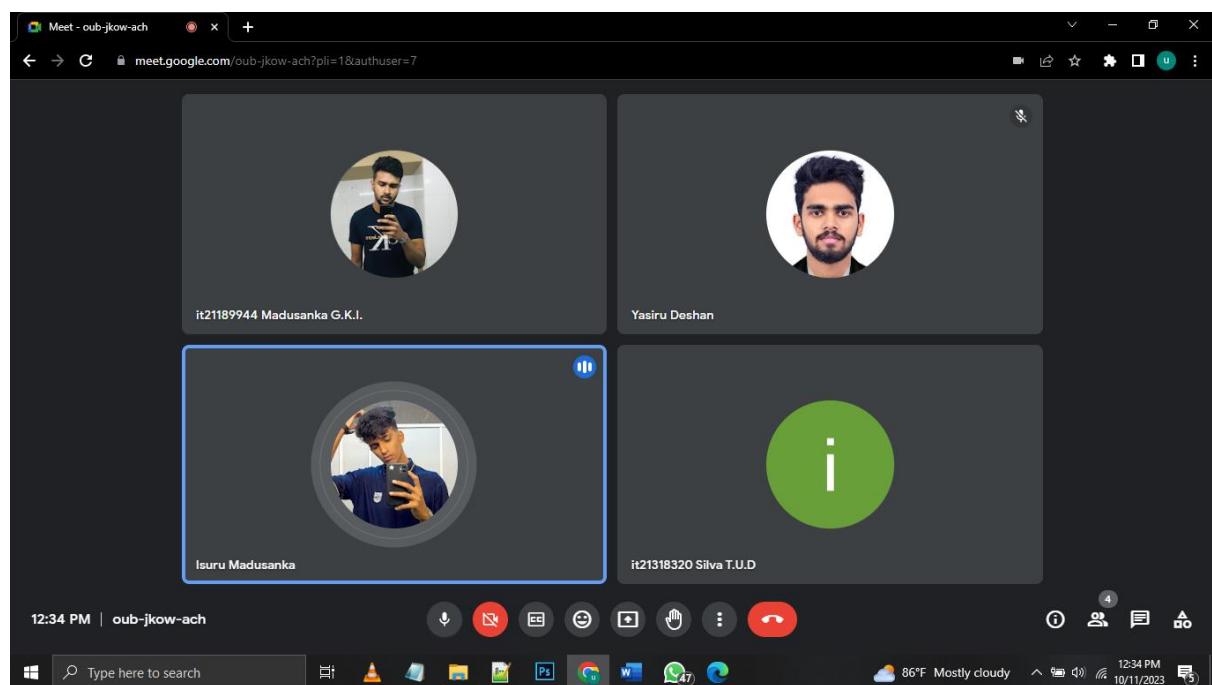


Figure 21 - Project Meetings

18.3 Toggl tracking

The screenshot shows the Toggl Track dashboard for the 'UEE' organization. The left sidebar includes sections for TRACK (Timer), ANALYZE (Reports, Insights), MANAGE (Projects, Clients, Billable rates, Team), PROFILE, and ADMIN. The main area displays a 'Project time tracking forecast' chart comparing 'Total time tracked' (green line) and a 'Trendline' (grey line) over six weeks. Below the chart, a summary shows 'TOTAL HOURS' at 56:36:44. The bottom section shows a summary of billable hours for the year, with a 'Create invoice' button and a donut chart titled 'Time Entries'.

Project time tracking forecast

Total time tracked Trendline

80 h
60 h
40 h
20 h
0 h

Week 37: 9/11 - 9/17 | Week 38: 9/18 - 9/24 | Week 39: 9/25 - 10/1 | Week 40: 10/2 - 10/8 | Week 41: 10/9 - 10/15 | Week 42: 10/16 - 10/22

TOTAL HOURS: 56:36:44

TOTAL HOURS: 56:15:00

BILLABLE HOURS: 16:45:00 | 29.78%

Create invoice

Projects

100%
24% Back to Top
20%
18%
12%
8%
6%
4%
2%
1%
0%
Time Entries

Toggl Track

track.toggl.com/reports/detailed/7679385/period/thisYear/projects/195785510

UEE UEE ORGANIZATION

Timer

ANALYZE

Reports (selected)

Insights

MANAGE

Projects

Clients

Trial: 29 days left [Upgrade today](#)

The basics of tracking time

PROFILE

ADMIN

Organization

Settings

+ Add entries

TIME ENTRY

USER DURATION TIME

Ayurvedic crud done ● UEE Project \$ Isuru Madusanka 13:30:00 12:00 PM - 1:30 AM 09/30/2023

Create Color Blind test Frontend ● UEE Project Ishara 6:30:00 11:31 AM - 6:01 PM 09/24/2023

Create Scoring system for main q ● UEE Project Ishara 4:30:00 11:27 AM - 3:57 PM 09/23/2023

Complete Main Quiz Home ● UEE Project Ishara 4:30:00 10:00 AM - 2:30 PM 09/17/2023

Create Main Quiz ● UEE Project Ishara 3:45:00 6:09 PM - 9:54 PM 09/19/2023

Create ColorBlind Test Backend ● UEE Project Ishara 3:45:00 11:16 AM - 3:01 PM 09/13/2023

Far sighted test added and add re ● UEE Project Yasiru 3:30:00 9:37 PM - 1:07 AM 09/14/2023

Test Words CRUD Done ● UEE Project \$ Yasiru 3:15:00 6:40 PM - 9:55 PM 09/10/2023

Completed UI ● UEE Project It21318320 3:00:00 5:00 PM - 8:00 PM 09/13/2023 [Back to Top ^](#)

Complete Backend Crud For Main ● UEE Project Ishara 3:00:00 10:00 AM - 1:00 PM 09/06/2023

Updated User flows ● UEE Project It21318320 2:00:00 6:00 PM - 8:00 PM 09/10/2023

Toggl Track

track.toggl.com/reports/detailed/7679385/period/thisYear/projects/195785510

UEE UEE ORGANIZATION

Timer

ANALYZE

Reports (selected)

Insights

MANAGE

Projects

Clients

Trial: 29 days left [Upgrade today](#)

The basics of tracking time

PROFILE

ADMIN

Organization

Settings

Create Scoring system for main q ● UEE Project Ishara 4:30:00 11:27 AM - 3:57 PM 09/23/2023

Complete Main Quiz Home ● UEE Project Ishara 4:30:00 10:00 AM - 2:30 PM 09/17/2023

Create Main Quiz ● UEE Project Ishara 3:45:00 6:09 PM - 9:54 PM 09/19/2023

Create ColorBlind Test Backend ● UEE Project Ishara 3:45:00 11:16 AM - 3:01 PM 09/13/2023

Far sighted test added and add re ● UEE Project Yasiru 3:30:00 9:37 PM - 1:07 AM 09/14/2023

Test Words CRUD Done ● UEE Project \$ Yasiru 3:15:00 6:40 PM - 9:55 PM 09/10/2023

Completed UI ● UEE Project It21318320 3:00:00 5:00 PM - 8:00 PM 09/13/2023

Complete Backend Crud For Main ● UEE Project Ishara 3:00:00 10:00 AM - 1:00 PM 09/06/2023

Updated User flows ● UEE Project It21318320 2:00:00 6:00 PM - 8:00 PM 09/10/2023

Completed User Research ● UEE Project It21318320 2:00:00 8:00 PM - 10:00 PM 09/08/2023

Conduct User Initial Interview ● UEE Project It21318320 1:00:00 6:00 PM - 7:00 PM 09/07/2023 [Back to Top ^](#)

Created user flow ● UEE Project It21318320 1:00:00 9:00 PM - 10:00 PM 09/05/2023

Created personas ● UEE Project It21318320 1:00:00 8:30 PM - 9:30 PM 09/04/2023

18.4 Contribution Table

Section	Contribution		
Introduction	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Create the application introduction
Background	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Competitive products and gap analysis • System Overview Diagram
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Problem Identification • Creating contribution table
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Design Purpose
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> • Solution
Design Process	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Finding user preferences
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Creating content
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Finding user preferences
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> • Finding user preferences
Milestone 1	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Identify user groups related to adult eye care
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Identify user groups related to infant eye care
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Identify user groups related to indigenous medical treatments
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> • Identify user groups related to western medical treatments
Milestone 2	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Conduct user research for adults
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Conduct user research for parents with infants
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Conduct user research for indigenous eye care doctors
	IT21169144	Karunarathne R.Y.D.	<ul style="list-style-type: none"> • Conduct user research for western eye care doctors
Milestone 3	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Verifying key user flows of adult patients

	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Verifying key user flows of parents with little infants
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Verifying key user flows of indigenous doctors
	IT21169144	Karunaratne R.Y.D.	<ul style="list-style-type: none"> • Verifying key user flows of western doctors
Competitor Analysis	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Finding details
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Creating the content
Milestone 4	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Sketching and wireframes for adult eye care
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Sketching and wireframes for infant eye care
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Sketching and wireframes for indigenous eye care treatments
	IT21169144	Karunaratne R.Y.D.	<ul style="list-style-type: none"> • Sketching and wireframes for near sightedness eye care
Milestone 5	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Figma prototype for adult eye care
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Figma prototype for infant eye care
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Figma prototype for indigenous eye care treatments
	IT21169144	Karunaratne R.Y.D.	<ul style="list-style-type: none"> • Figma prototype for near sightedness eye care
Milestone 6	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • User feedback for Figma prototype for adult eye care
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • User feedback for Figma prototype for infant eye care
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • User feedback for Figma prototype for indigenous eye care treatments
	IT21169144	Karunaratne R.Y.D.	<ul style="list-style-type: none"> • User feedback for Figma prototype for near sightedness eye care

Milestone 7	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Implementation of adult eye care
	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Implementation of infant eye care
	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Implementation of indigenous eye care treatments
	IT21169144	Karunaratne R.Y.D.	<ul style="list-style-type: none"> • Implementation of near sightedness eye care
Requirement Specification	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Creating the contents
Design Principles	IT21169380	Thuduvage I.M.H.G	<ul style="list-style-type: none"> • Creating the contents
	IT21169144	Karunaratne R.Y.D.	<ul style="list-style-type: none"> • Creating the contents
Project Management	IT21189944	Madusanka G.K.I	<ul style="list-style-type: none"> • Creating the contents
Conclusion	IT21318320	Silva T.U.D	<ul style="list-style-type: none"> • Creating the contents