



ALPHA

Life Below Water

Research Blogger

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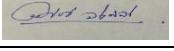
SER026

User Experience Engineering SE3050

Department of Computer Science and Software Engineering, Faculty of Computing, Sri Lanka Institute of Information Technology (SLIIT)

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

Healthy oceans and seas are essential to our existence. They cover 70 percent of our planet, and we rely on them for food, energy, and water. They are the most diverse and important ecosystem, contributing to global and regional elemental cycling, and regulating the climate. Under the sustainable development goals specified by the United Nations, we choose life below water as the sustainable development goal. For that we are going to develop a research publishing app mainly for the people who interacting with the oceans and seas to aware to co-exist with the ocean life and how to use the oceans, seas, and marine resources for sustainable development.

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1 Introduction

This is the report of the user experience engineering module's assignment. The main focus of this project is life below water. It's a sustainable development goal mentioned by the United Nations.

We achieve the goal by creating a research publishing mobile application. In this application users can only publish researches related to oceans and seas.

Our group created a mobile application to publish researches of the ocean. The users can publish their researches in this application. In this there are 3 types of users namely Admin, Researcher and the user. User and the researcher need to create accounts and the admins account is hard coded.

A researcher can conduct the research and can submit the research to the admin via the application after that admin can approve the research after that the research will get published in the application.

Users can view the researches published by the researchers and they can comment their issues and ideas. They can save the posts. They can download the researches if they want.

This application consists of many functions such as user profile management, comment management, research post management, Article and idea management.

2 Background

2.1 SDG selection

What is the goal

To conserve, utilise, and raise awareness of the world's oceans, seas, and marine resources.

Why

The oceans provide life support for our planet and manage the global climate system. They are the world's largest ecosystem, with about a million recognized species and tremendous unexplored scientific potential. Oceans and fisheries continue to provide the economic, social, and environmental needs of the world's population. Despite the crucial need of ocean conservation, decades of unethical exploitation have resulted in worrisome degradation. Current attempts to protect critical marine ecosystems and small-scale fisheries, as well as to invest in ocean science, are insufficient to satisfy the urgent need to protect this immense, yet vulnerable, resource. The significant halt in human activity caused by the COVID-19 disaster, while tragic, provides an opportunity for oceans to recover.

What is the problem

About 80% of all tourism takes place in coastal areas. Unless are fully managed, tourism can pose a major threat to the natural resources on which it depends, and to local culture and industry. Those people don't know location to travel in beach side. About 90% of the Sri Lankan freshers are employed in small scale fisheries. So, they need accelerated support due to the lack of market opportunities.

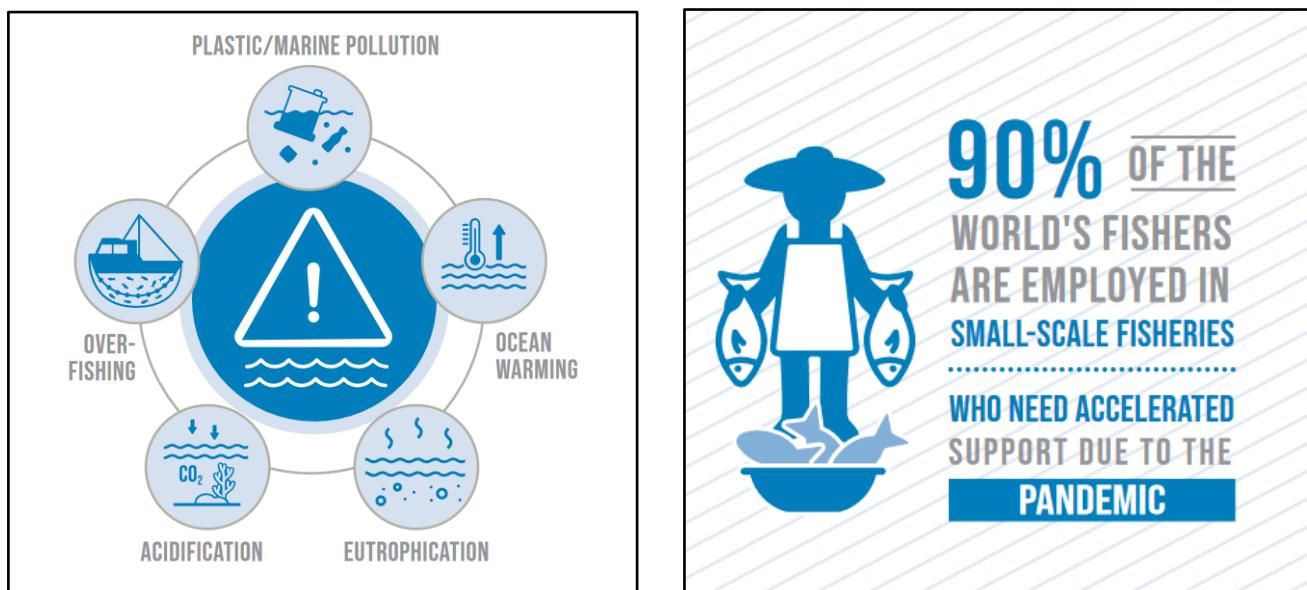


Figure 1 Pollution in ocean

Our Solution

We are going to develop a research publishing app mainly for the people who interacting with the oceans and seas to aware to co-exist with the ocean life and how to use the oceans, seas, and marine resources for sustainable development. So, everyone able to take awareness about these fishery market, diving areas, ocean pollution though the blogs, ideas, research papers which are uploaded to our application.

2.2 Design Purpose

There will be users who has different education level. So mainly we focused on the usability of our application. Thus, we used large button with meaning full names. Meaning full names to our application.

To increase the user-friendliness, we used light colours. Peoples who use this application can upload images also. It helps to increase meaningful and attractive of application.

Anybody who has account in our application can upload their thoughts, experiences with ocean. It increases efficiency of this application.

2.3 Team Members

IT20181564 M. T. Sanju
Team Leader
Sign in/Sign Up, User profile management function developer

IT20039004 H. C. Liyanage
Adding research papers, Blogs function developer

IT20047542 W.M.K.K. B Walisundara
Requesting Research paper, Manage request function developer

IT20206550 K. I. K. R. D. N. Kandakkulama
Adding comments, Manage comment function developer

2.4 Contribution Table

Student Number	Name	Contribution
IT20181564	M. T. Sanju	<p>Created Sponsor persona.</p> <p>Created Sponsor empathy map.</p> <p>Created project manager user story.</p> <p>Created manage profile user flow.</p> <p>Contributed to the service blueprint.</p> <p>Created user research questions according to a sponsor.</p> <p>Interview a sponsor and get their opinion on our application.</p> <p>Created wireframes, UIs, Prototypes according to the manage profile and user profile management.</p> <p>Created a google form and get sponsors reviews about our application flow, designs, UIs.</p> <p>Contributed to the reports.</p> <p>Developed sign in/sign up, user profile management functions.</p>
IT20039004	H. C. Liyanage	<p>Created Researcher persona.</p> <p>Created Researcher empathy map.</p> <p>Created registered user's user story.</p> <p>Created adding blog user flow.</p> <p>Contributed to the service blueprint.</p> <p>Created user research questions according to a Researcher.</p> <p>Interview a Researcher and get their opinion on our application.</p> <p>Created wireframes, UIs, Prototypes according to the adding blogs, research, articles function.</p> <p>Created a google form and get Researcher reviews about our application flow, designs, UIs.</p> <p>Contributed to the reports.</p> <p>Developed blogs/articles/research Management function.</p>
IT20047542	W.M.K.K. B Walisundara	<p>Created Diver persona.</p> <p>Created Diver empathy map.</p> <p>Created registered user's user story.</p> <p>Created manage profile user flow.</p> <p>Contributed to the service blueprint.</p> <p>Created user research questions according to a Diver.</p> <p>Interview a Researcher and get their opinion on our application.</p> <p>Created wireframes, UIs, Prototypes according to the request research function.</p> <p>Created a google form and get Researcher reviews about our application flow, designs, UIs.</p> <p>Contributed to the reports.</p> <p>Developed blogs/articles/research Management function.</p>

IT20206550	K. I. K. R. D. N. Kandakkulama	<p>Created Aquarist persona.</p> <p>Created Aquarist empathy map.</p> <p>Created unregistered user's user story.</p> <p>Created adding comment user flow.</p> <p>Contributed to the service blueprint.</p> <p>Created user research questions according to a Aquarist.</p> <p>Interview an Aquarist and get their opinion on our application.</p> <p>Created wireframes, UIs, Prototypes according to the adding comments management function.</p> <p>Created a google form and get Aquarist reviews about our application flow, designs, UIs.</p> <p>Contributed to the reports.</p> <p>Developed comment Management function.</p>
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Table 1 Contribution Table

3 Design Process

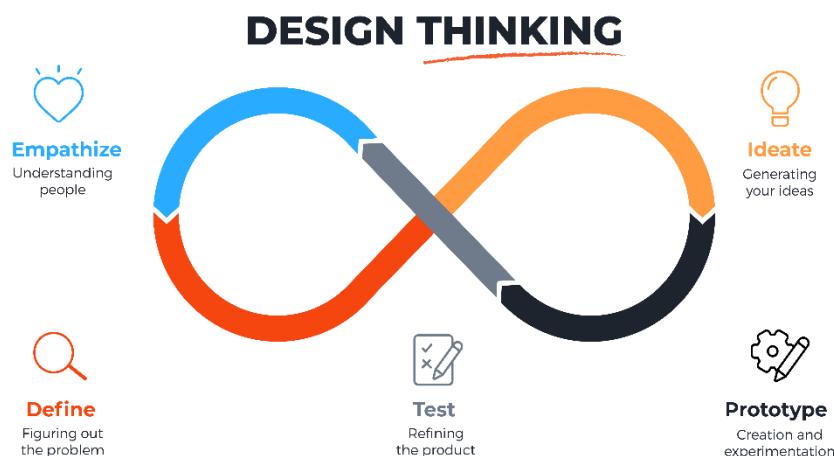


Figure 2 Design Thinking

According to sustainable development goals our task was to find a absolute solution for the life below water. For that task we used design thinking model. Design thinking model consist with five stages, and we used them as follows to full fill user needs.

Empathize – we conducted an anonymous survey to collect people interests about life below water.

Define – we need to educate the people who interacted with life beneath water and the future generations about the watery eco system.

Ideate – to full fill the above requirement we gathered lots of ideas, conducted interviews with stakeholders to come up with a solution to above requirement.

Prototype – during the ideate phase analysing the ideas and interview comments we come up with creating a full functional mobile application for educate people interact with watery eco system.

Test – after the protype phase we decide to test application on the field by providing app with selected audience and testers put on the fact that we still need update some UIs to improve user experience and we developed the requirements of the users.

By using the above phases, we had a huge advantage of understanding the users' expectations and their requirements.

3.1 User Involvement

As for a starting level we researched similar systems such as ferrovial blog and freshwater blog. Then identified their designs and empathized to find pros and cons on their current design and planned to avoid same mistakes and try to improve our system to provide what users seek as their requirement with user friendly manner.

As for second method we used was to explore the social media platforms such as facebook, twitter and communities and browsing on internet as a result we found forums for our targeted user audience and gather data about how they interact, what they want and how to provide a good solution to satisfy their user requirement and user experience.

Additionally, we keep track of a lot of comments posted in public forums in the area of life below water and sustainable development goals.

4 Milestone 1: Identify user groups

4.1 Persona(s) – 04 personas from a group

1) Sponsor

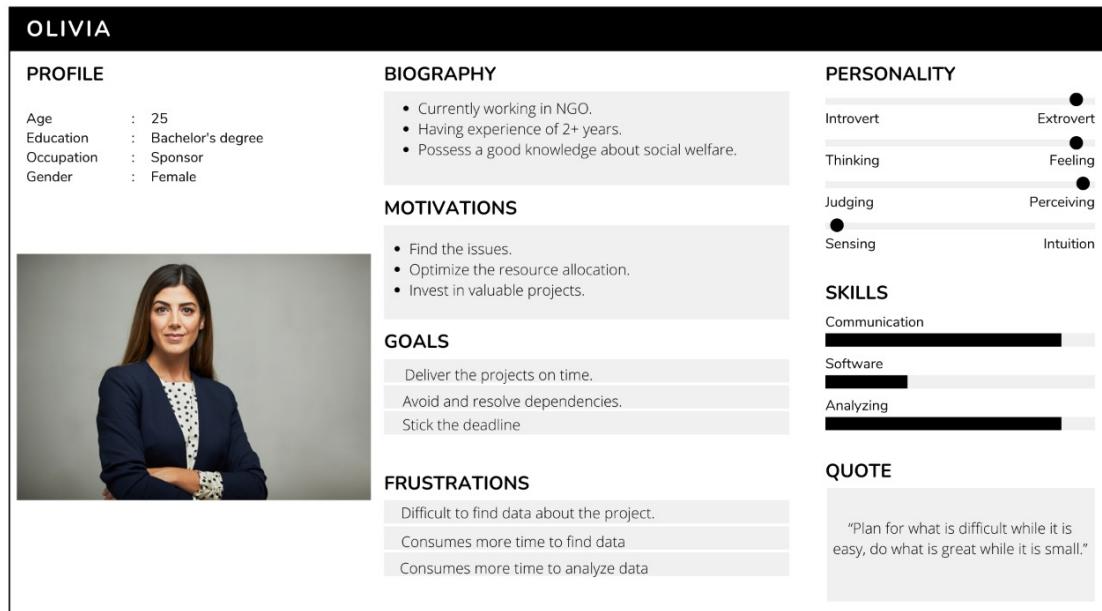


Figure 3 Sponsor persona

2) Researcher

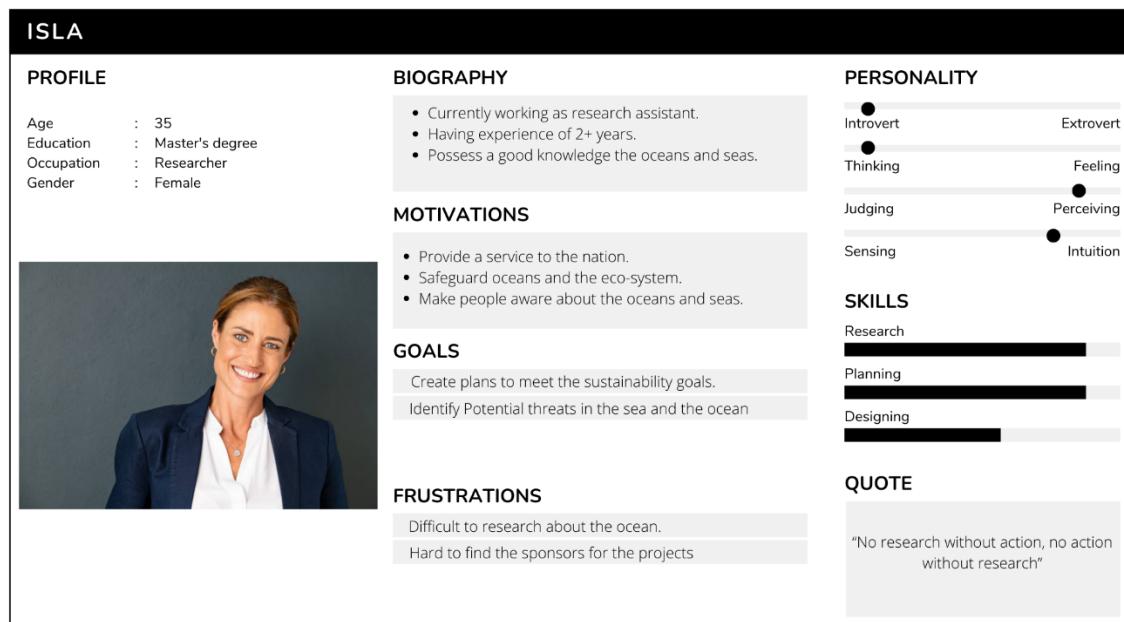


Figure 4 researcher persona

3) Diver

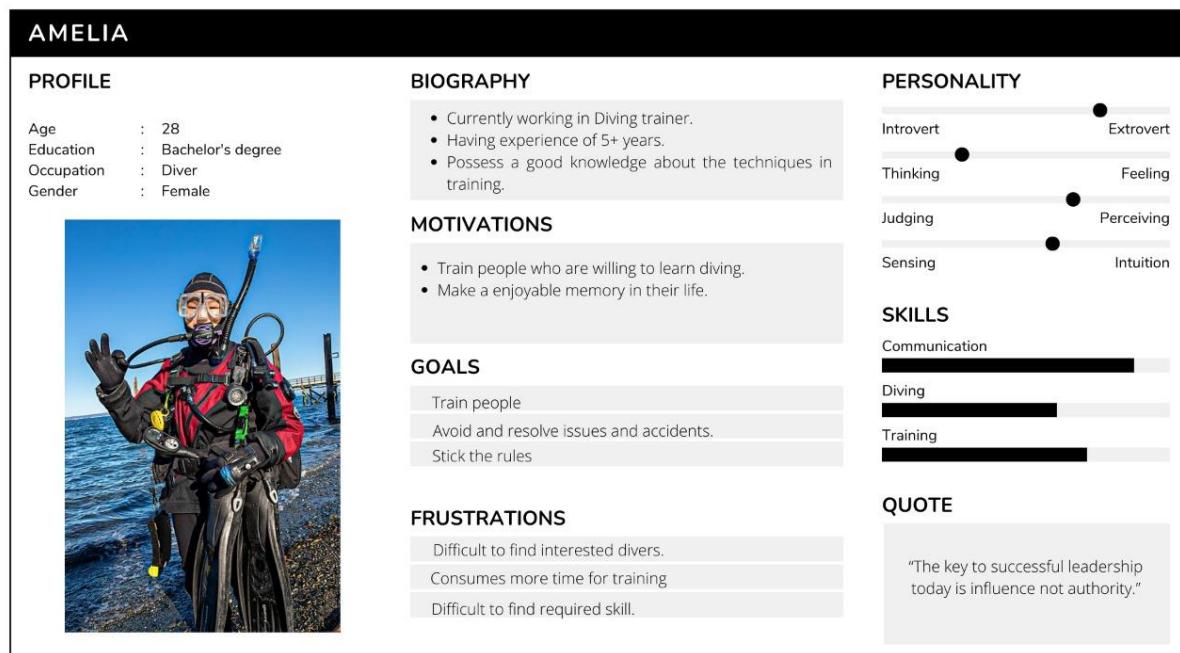


Figure 5 Diver Persona

4) Aquarist

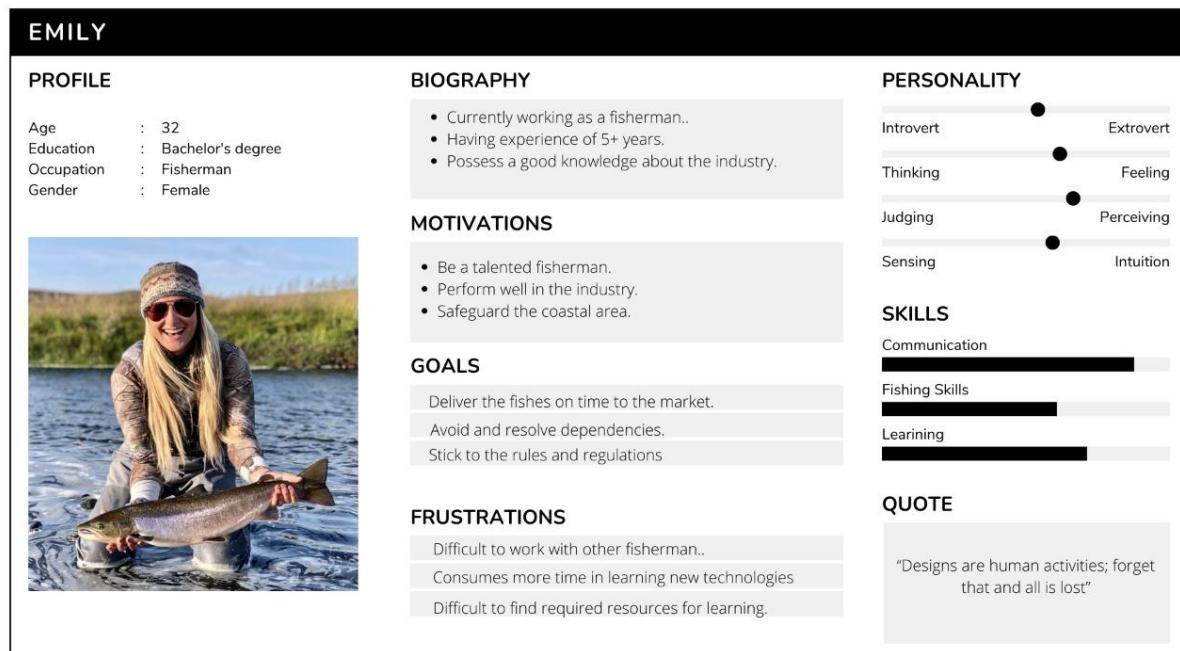


Figure 6 Aquarist persona

4.2 Empathy map(s) – 04 Empathy maps from a group

1) Sponsor

SAYS	I WANT TO KNOW MOST AFFECTING PROBLEM IN COSTAL AREA AND THE NATURE OF THE PROBLEMS I WANT TO KNOW WHAT CAN I DO TO PROTECT SEA CREATURES AND SEA WEEDS	IS ALL THE BLOGS ARE TRUE CAN I PROTECT UNDERWATER LIFES AND PLANTS CAN I CATEGORISE ALL THE PROBLEMS DOES THE DONATION IS ENOUGH	THINK
DOES	READ THE RESEARCH ARTICALSE ON UNDER WATER LIFE READ ALL THE COMMENTS ON BLOG TO VALIDATE THEM CALCULATE BUDGET AND FIND PEOPLE WHO CAN I SUPPORT WITH THAT AMOUNT	SELF-CONFIDENT UNSURE	FEELS LOVE CONFUSED STRESSED

Figure 7 Sponsor empathy map

2) Researcher

SAYS	I WANT TO PUBLISH MY RESEARCHES ABOUT OCEANS AND SEAS I WANT TO KNOW PEOPLE'S PROBLEMS WHO LIVES IN OCEANS AND SEAS	HOW CAN I TRUST PEOPLE'S PROBLEMS WILL PEOPLE BELIEVE MY RESEARCH WILL THERE BE A SOLUTION TO THE PROBLEMS OF THE PEOPLE OF THE OCEANS AND SEAS	THINK
DOES	PLANNING TO GATHER INFORMATIONS ABOUT OCEANS AND SEAS GATHER PEOPLE'S PROBLEMS WHO LIVES IN NEAR OCEANS AND SEAS FIND SOLUTIONS FOR PEOPLE'S PROBLEMS	WORRIED DEPRESSED NOT SATISFIED	FEELS

Figure 8 Researcher empathy map

3) Diver – IT20047542

SAYS	I WANT NEW DIVING EQUIPMENT WITH LOW COST AND GOOD QUALITY I WANT TO ADVERTISE DIVING COURSES DOING BY ME I WANT TO KNOW WHAT ARE THE NEW PLACES FOR DIVING	CAN I GET BEST EQUIPMENT FOR LOW PRICE CAN I SHARE MY EXPERIENCE AND KNOW WHAT ARE THE NEW PLACES FOR DIVING CAN I WRITE ATTRACTIVE BLOG OF ADVERTISING	THINK
DOES	WRITE A BLOG ABOUT EQUIPMENT THAT WE WANT USE IMAGES OF UNDER WATER TO GET BEST PUBLICATION SEARCH FOR THE BLOG AND RESEARCH PAPERS ON DIVING	STRESSED HAPPY DEPRESSED UNSURE	FEELS

Figure 9 Diver empathy map

4) Aquarist - IT20206550

SAYS	I WANT A BEST PRICE FOR MY FISHES I WANT NEW FISHING EQUIPMENT WITH LOW COST AND GOOD QUALITY I WANT MARKET OPPORTUNITIES IN MY AREA	CAN I GET HELP FROM ANYBODY TO MAKE MARKET OPPORTUNITIES CAN I GET BEST EQUIPMENT FOR LOW PRICE CAN I SELL FISHES FOR BEST PRICE	THINK
DOES	PLANING TO MARKET FISHES IN OUR AREA WRITE A BLOG WHAT ARE THE EQUIPMENT THAT I WANT COMMENT ON THE BLOG THAT PUBLISHED ABOUT FISHERY	STRESSED DEPRESSED ANXIOUS FEAR	FEELS

Figure 10 Aquarist empathy map

4.3 User stories – 04 User stories from a group

As a Project Manager

I want to hire skilled developers

So that I can easily manage the project without dependencies

As an unregistered user,

I want to read a blog

So that I can get people's opinion about fishery and their lifestyles to do my research successfully.

As a registered user,

I want to write a Blog

So that I can ask help from the people who are willing to help our fishery

As a registered user,

I want to write a Blog

So that I can give my experience of diving for the people who interested in diving

4.4 User flow(s) - 04 User flows from a group

1. First User Flow - Manage Profile – IT20281564

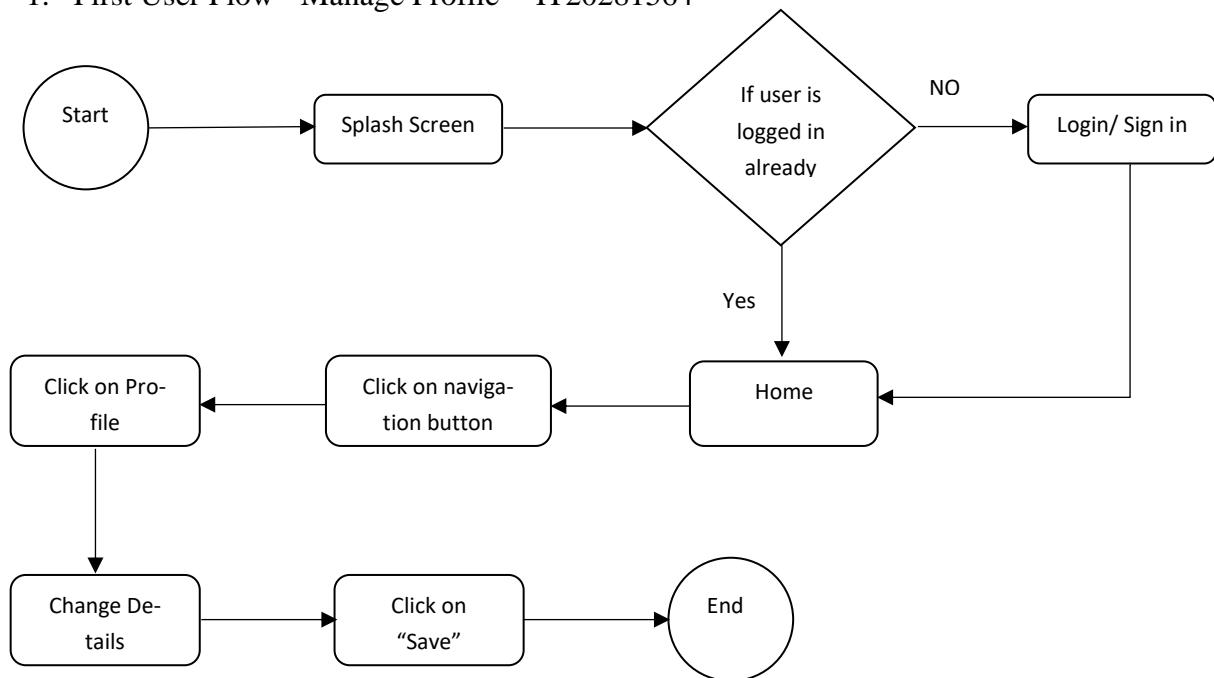


Figure 11 Manage profile user flow

2. Second User Flow - Add Post - IT20039004

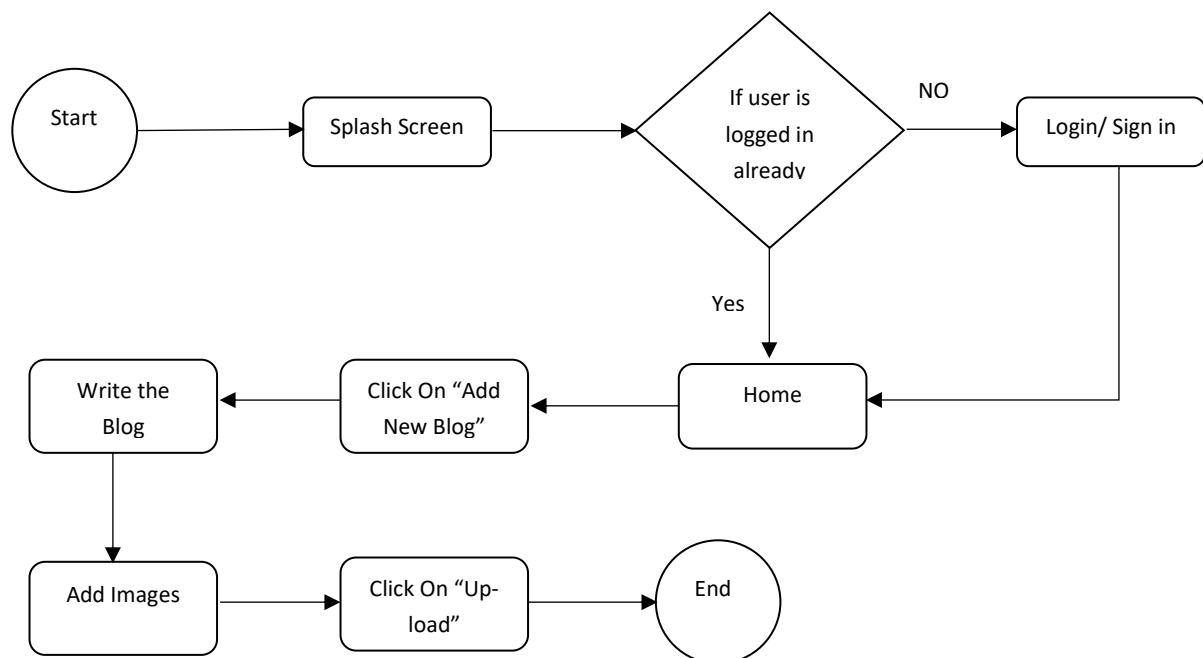


Figure 12 Add post user flow

3. Third User Flow - View Blog – IT20047542

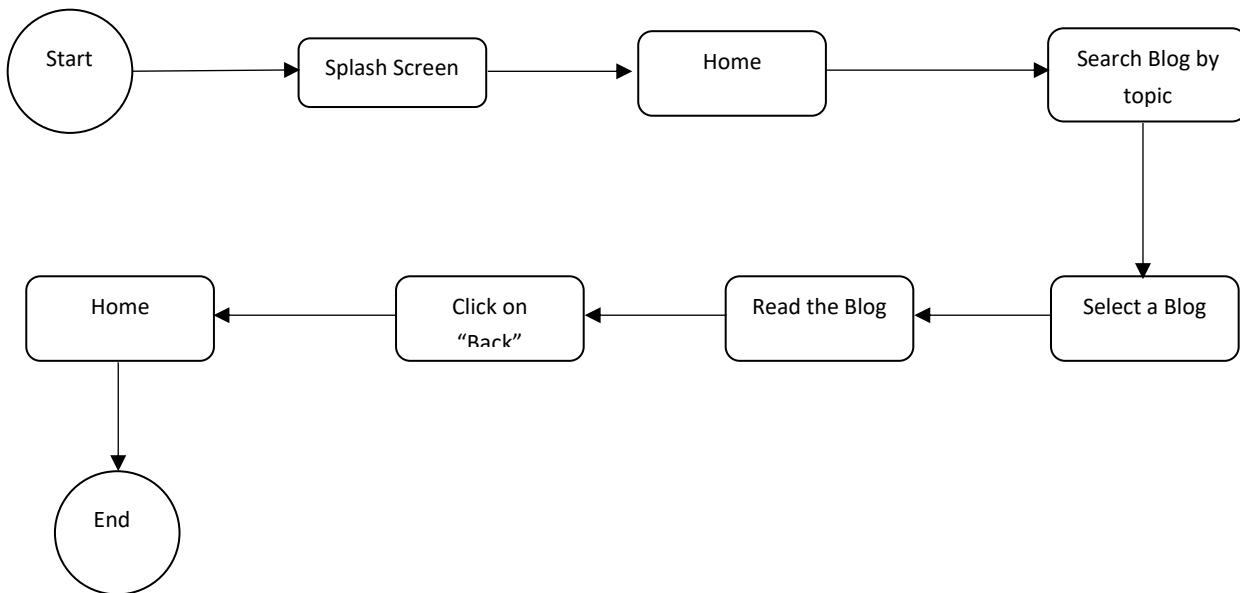


Figure 13 View Blog User flow

4. Forth User Flow - Add Comment – IT20206550

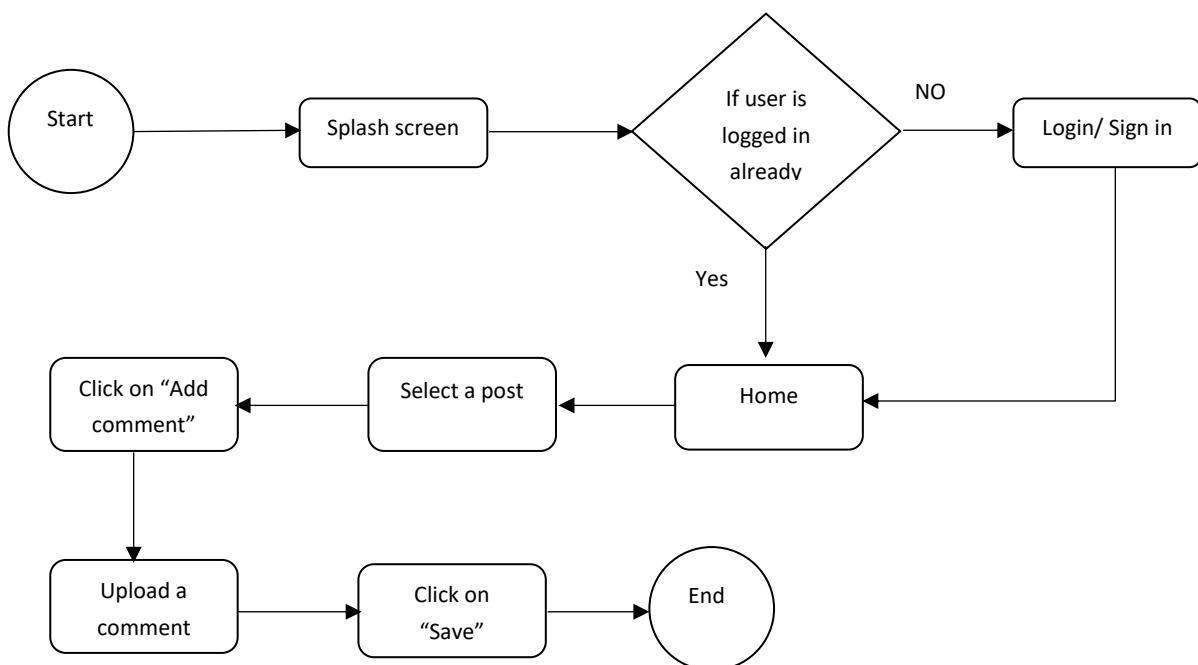


Figure 14 Add comment user flow

4.5 Service Blueprint(s) – 01 Service Blueprint from a group

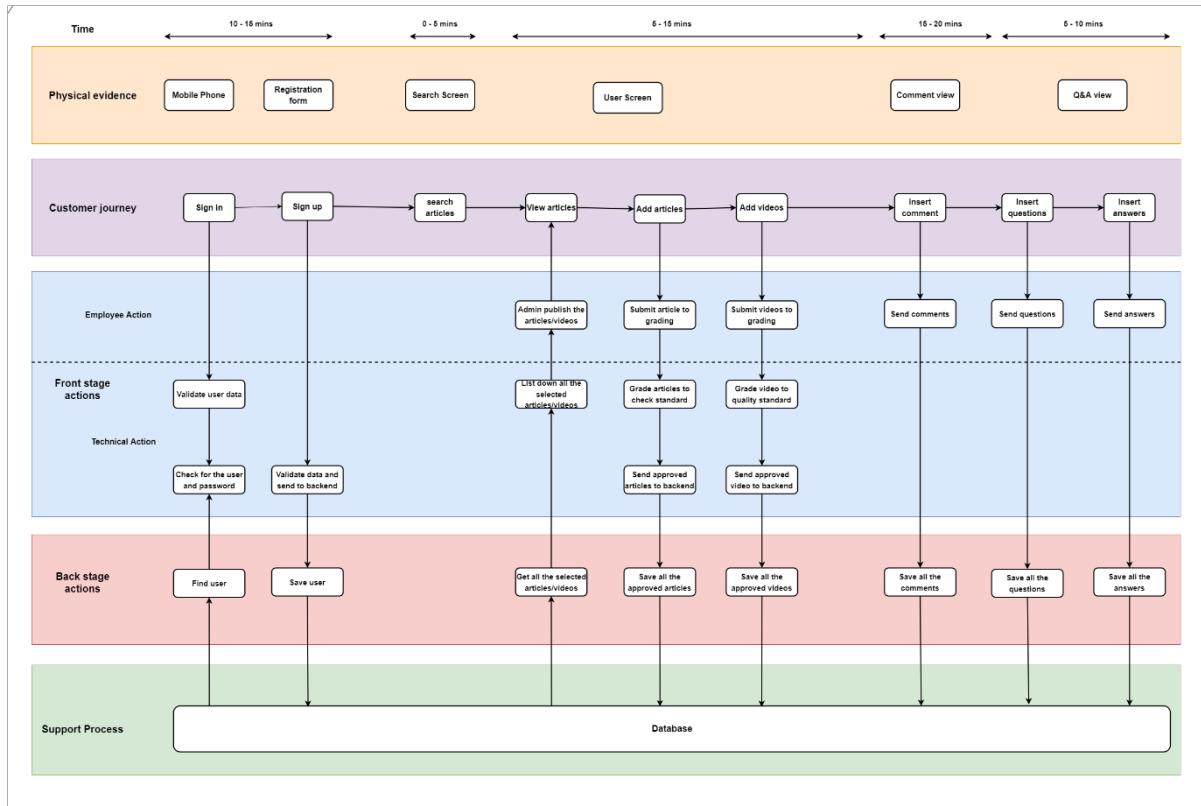


Figure 15 Service blueprint

5 Milestone 2: Plan and conduct user research

Goals

For my persona aquarist,

I use goal as, how aquarist know where the best sea organisms are and how they give publicity to their aquarium.

For my persona researcher,

I use my goal as conservation of coastal ecosystems.

For my persona diver,

I use goal as uplifting divers who dive as a profession.

For my persona sponsor,

I use goal as reduce the carbon footprint in the seas and oceans

User Research Questions

IT20206550

How to provide publicity for the aquariums?

How are the interested in this job field?

How they come up with the problems, that aquarist facing when working with under water?

How they know peoples who are willing to help their aquarium?

How they know places to find rare sea organism and seaweeds?

IT20039004

How to handout marine knowledge among readers?

How to interact the people who are interested in research?

How to identify the ideal problem for research?

How to solve the cause of the root by the research?

How does the research benefit the conservation of the costal environment?

IT20047542

How satisfied are professional divers with their career?

How can professional divers get publicity for the service they provide?

How divers provide service for their consumers?

How can they get knowledge about new diving techniques and equipment?

How does the environmental damage related to oceans and seas affect them?

IT20281564

How to find the main causes of the carbon footprint in oceans and seas?

How it effects the carbon footprint in water?

How it affects the whole ecosystem and the biodiversity?

How to minimize the carbon footprint in the oceans and the seas?

What are the advantages we can get by reducing the carbon footprint in oceans and seas?

Methodology

The user research has been done through Interviewing, Video recording of the interviews and questionnaire related to the selected persona and the goal. A mobile device and an internet connection were equipped to conduct the user research successfully.

Interviewing

- The interview was conducted in a question-and-answer format. We have selected two users and interviewed them. We have selected their homes as the location due to this pandemic situation through the online platforms.

Video recording

- The interview meetings were conducted via Microsoft Teams and recorded.

Questionnaire

- Questionnaire has been conducted using a google form during our user research period. We shared the google form link through the WhatsApp groups and gathered responses from the users and collect their opinions according to their user experience.

Interviewing

IT20206550 – Script for aquarist

Through MS Teams, four one-on-one interviews were done, covering every function. Both closed-and open-ended questions were included in the previously prepared questions.

Introduce myself and application.

1. Have you ever used any application about ocean and seas before?

If "yes", ask what those applications are and was there any difficulties using it.

Show the user flow diagram of adding comment and explain it ask questions while presenting

2. Do you understand the flow of the functionality?

If "No", Explain about the function “Adding comment”

3. Is there anything you need to add to this adding comment function?

If “yes”, what is it

4. Is there anything you need to change in the functionality?

If “yes”, what is it

5. Is this useful for aquarist to have this function in this app?

If “No”, Which kind of function will be useful for you

Demographic Questions – Part A

1. Gender

1.1	Male	
1.2	Female	

Table 2 Demographic Question Part A

2. Age

2.1	Below 18	
2.2	19-29 years	
2.3	30-40 years	

2.4	41-51 years	
2.5	Above 52 years	

Table 3 Demographic Question Part A

Part B

3. Economic contribution and awareness of the people about aquarium and aquarists.

No	Question	Strongly agree (5)	Agree (4)	Neutral (3)	Strongly disagree (2)	Disagree (1)
Economic						
3.1	Aquarium development motivates local Entrepreneurship development in coastal areas.					
3.2	Does government provide reasonable funds					
3.3	Does people are willing to visit your aquarium					
3.4	There are people who are willing to support aquarium					
Awareness						
3.5	Mobile app is useful for publicity more than website					
3.6	Blog writing is more efficient than writing articles to newspapers to take a publicity					

3.7	Using mobile app is easy to read research papers about newly found sea organism					
3.8	Using mobile app, it is easy to share your knowledge about sea organism					
3.9	This mobile app helps to peoples to get to know more details about aquariums and sea organism					

Table 4 Demographic Question Part B

4. Is there any suggestion from your side?

IT20039004 – Script for Researcher

I begin the introduction by presenting myself and describing the goal of the research and the mobile application.

Part A- Demographic Questions

- 1- What is your age?
- 2- What brings you here?
- 3- What is your goal of doing research?

Part B

- 1- What is your point of doing research?
- 2- What are the difficulties you faced as a researcher and how did you overcome them?
- 3- Do you think this app will be a helpful medium to researchers to publish their work?
- 4- What do you think about life below water?
- 5- Do you think an app like this will help people to coexist with the costal eco system?
- 6- Do you think an app like this will affect the livelihood in the costal environment?
- 7- According to you what are the threats towards marine life?

- 8- According to your knowledge what are suggestions to protect life underneath water?
- 9- Tell me your suggestion to improve research underwater without divers?
- 10- If you are doing research in life below water what will be your goal?

IT20047542 – Script for Diver

I begin by introducing myself and explaining the research publishing application.

Part A- Demographic Questions

- 1- What is your age?
- 2- Where are you currently living?
- 3- What is the goal of your diving?

Part B

- 4- How did you start interested in diving?
- 5- What kinds of difficulties do you now experience as a diver?
- 6- What is your initial reaction to our mobile application?
- 7- Do you think that researchers can get a publication for the service of divers by doing research and publicize through this app?
- 8- Do you believe that you can get a solution by presenting the various problems of divers through this application?
- 9- Do you think is this application important to share knowledge about diving?
- 10- Do you think other divers would like to share knowledge problems through this?
- 11- How would you support researchers doing research on ocean and sea divers?
- 12- What do you think about the opportunity to raise your questions through comments?
- 13- Would divers like to submit their problems publicly through this app?
- 14- What kind of problems will divers face if only English language is used to Publicite research?
- 15- What are the suggestions for developing this mobile application on your side?

IT20281564 – Script for Sponsor

Part A - Demographic Questions

Question 1 - What is your age?

Question 2 - Where are you from?

Part B

Question 1 - What is the first impression when you see the sea and the oceans?

Answer – Its beautiful outside but when it comes to inside its polluted.

Question 2 – According to you what is the main cause for this issue?

Answer – Its because the carbon footprint. So, to protect the biodiversity, we need to protect the oceans and seas. Because it is the place where 70% of oxygen is generated. Furthermore, we need to reduce the carbon footprint.

Question 3 – Are you satisfied with the current steps that have been implemented to reduce the carbon footprint?

Answer – No, because there are so many international rules, but no one is following it and we can't find a proper governing body. Furthermore, we need to add more international rules and regulations.

Question 4 – What are the projects we can implement to reduce the carbon footprint?

Answer – Well, it's a large-scale project and we can't do it alone. But according to our capacity we can do a coral reef restoration project.

Question 5 – We are planning to do a coral reef restoration project. Can you invest on our project and be our sponsor?

Answer – Yeah sure. And I have few more sponsors as well we can get their contribution as well.

Question 6 – Do you think this project will create a big difference in the eco system?

Answer – Yes. Every journey starts with a single step and this will create a huge impact

Question 7 – Does this project has any legal obligations or any protocol we need to follow before we start the project?

Answer – Yes, we need to contact environment authority and obtain the necessary permissions and advice.

Question 8 – How long will it take to complete the project?

Answer – It will take about one year and the return on the project is huge and can obtain the return for about 200 years.

video recording

Link - [Milestone2 InterviewVideos](#)

Questionnaire

IT20206550

For the questionnaire I used a G-form to cover up my goal.

Link - <https://forms.gle/kcQUWUGjH1XEHdWq6>

We mainly use blog to give an awareness and publicity to the people who are interested in oceans and sea. From the aquarist response we came up that is good to use blog mobile app to give best publicity to this field. I send this form to 30 aquarists to get a correct idea about their favours. Here are the screenshots of those response.

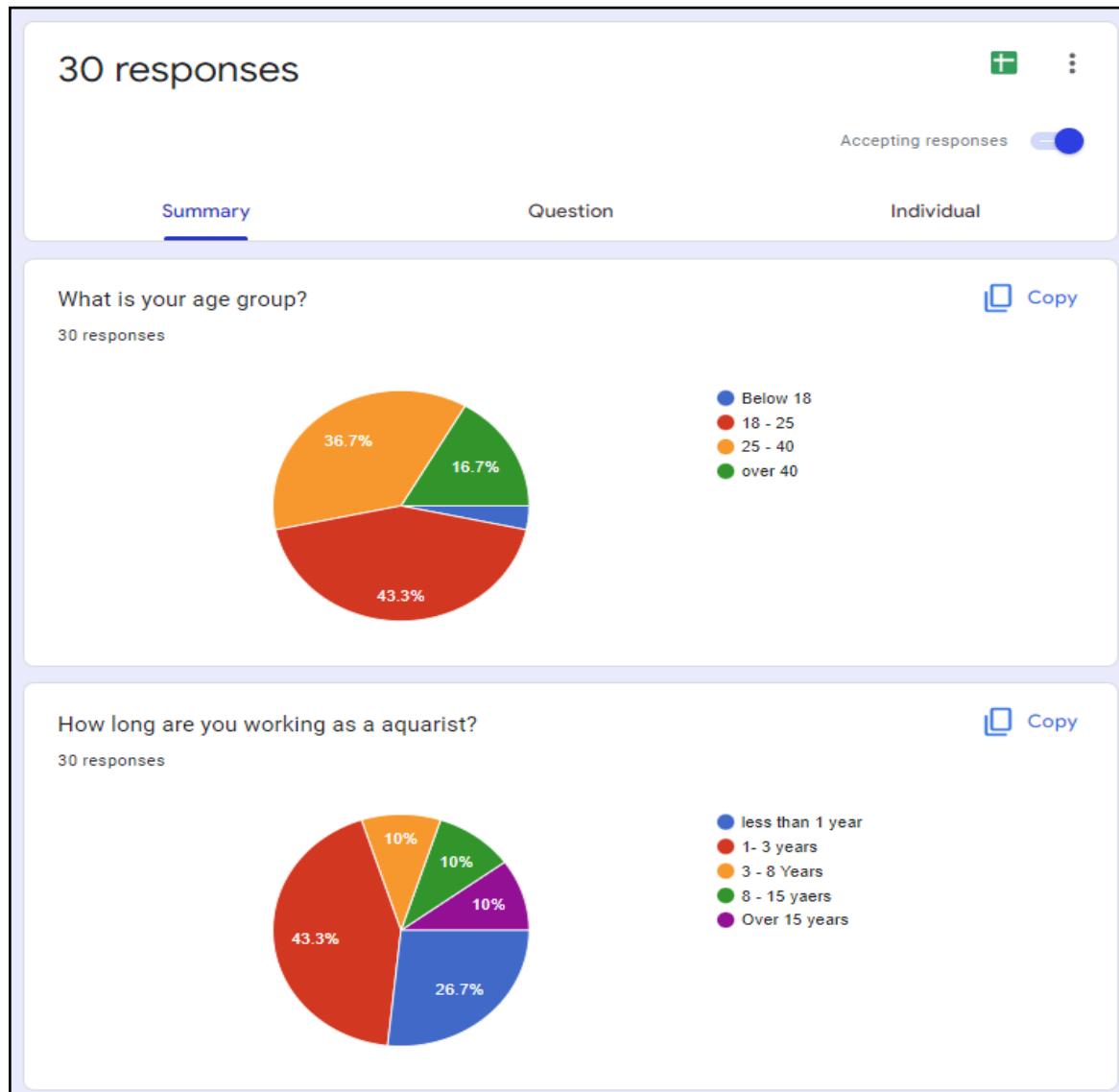


Figure 16 Aquarist responses

In Here I only focus on the people who are working at an aquarium or who are owner of aquarium. I took the response using the people who have an experience in this fields. So, it's given accurate result what they are willing.



Figure 17 Google from question 1

First, I focus on the issues that they have those days. Lot of them have economic issue and government support. In their comment they can't find sponsors. And they don't know best places to find seaweed and sea organism. They have no platform to overcome from those problems.

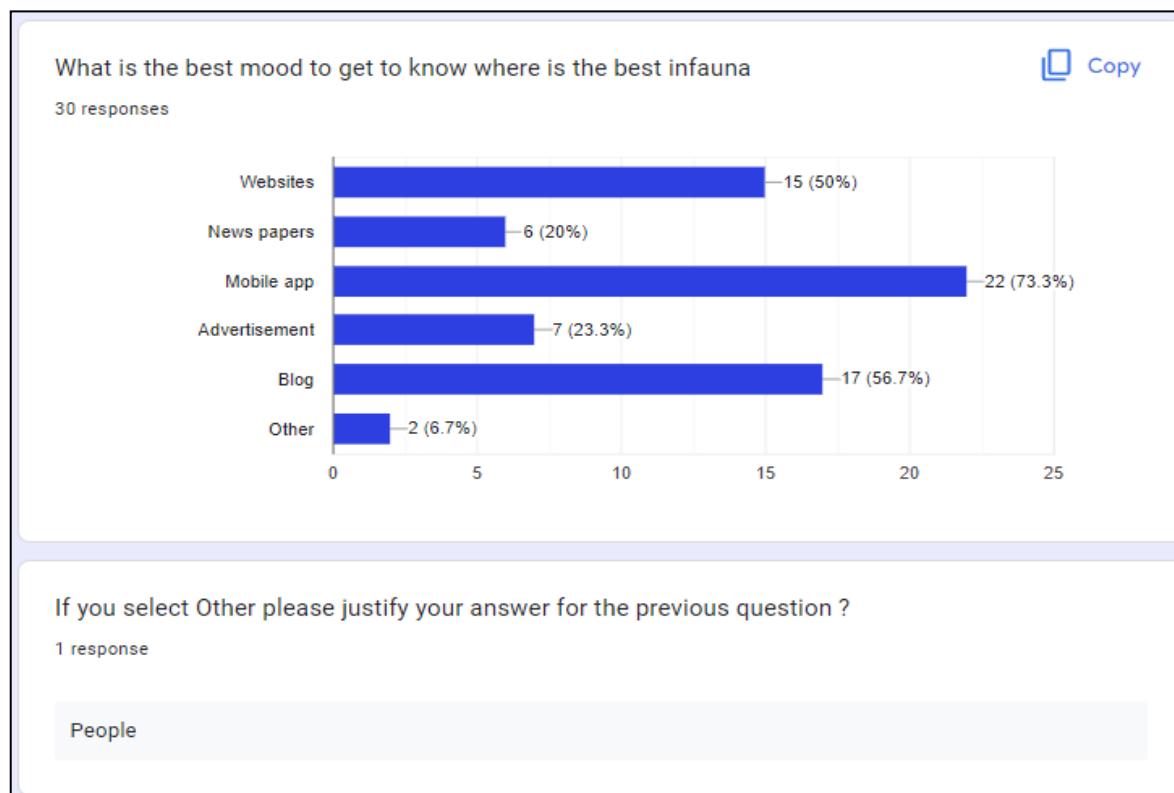


Figure 18 Google form question 2

This is the method that those aquarists willing to find where sea organisms are. Most of them like to have a mobile app which has blogs of other people wrote. So, we came up with this blog and research paper uploading app.

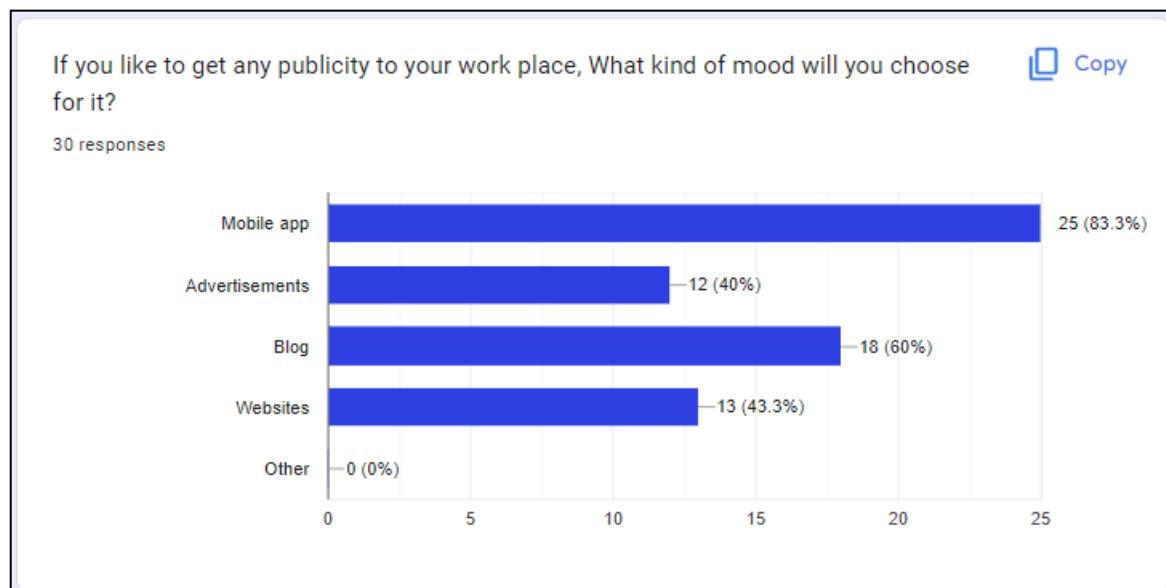


Figure 19 Google form question 3

Those aquarists mainly said that they want a best publicity to their aquarium. But they don't have platform to publicity only aquarium. So, most of aquarist are willing for platform as a mobile app and the blog writing.

If you have any suggestions as an aquarist to build this app please mention it here.
5 responses

I think it should be easy to use without any expert knowledge

Use a function to add comment to those blogs

Use a function to add images with those blogs

Its useful if I am able to find sponsor who are willing to help

Please add function to add post about some aquarist course

Figure 20 Responses from aquarist

Here are the functions that they suggest to our mobile app. And what are the features that they like to have.

IT20039004

For the questionnaire I used a G-form to cover up my goal.

Link - <https://forms.gle/K3fJ3HQqXxWZf8oJ6>

I conducted this survey in order to collect data that required to achieve the target gathering information of people who are interested in research of life underneath water. Answers from questionnaire are favourable for our application.

In here we can see age group of the people who interest in research life below water.

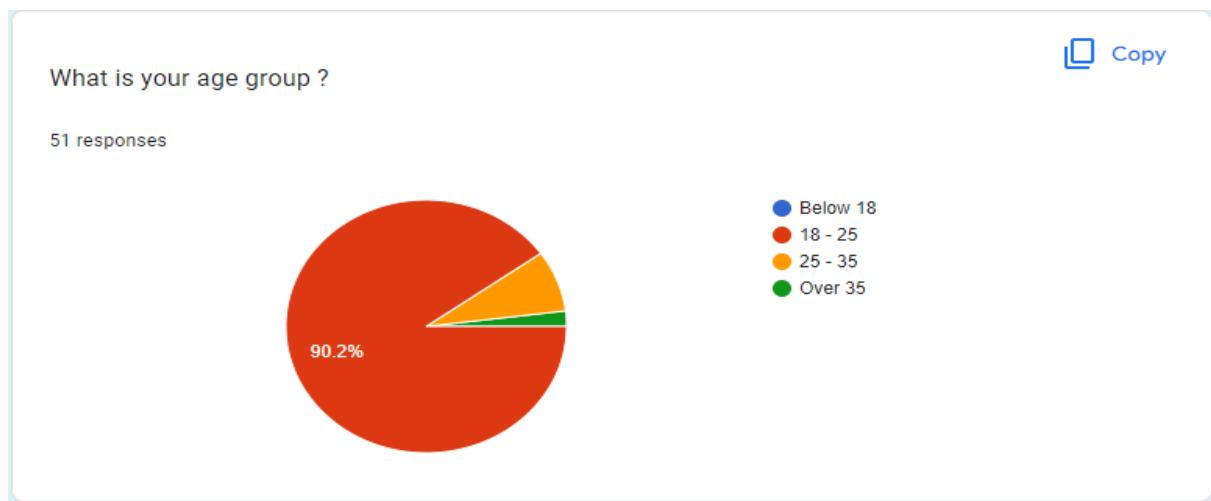


Figure 21 Researcher responses

In here we can see the profession of the people who interest in Life below water.

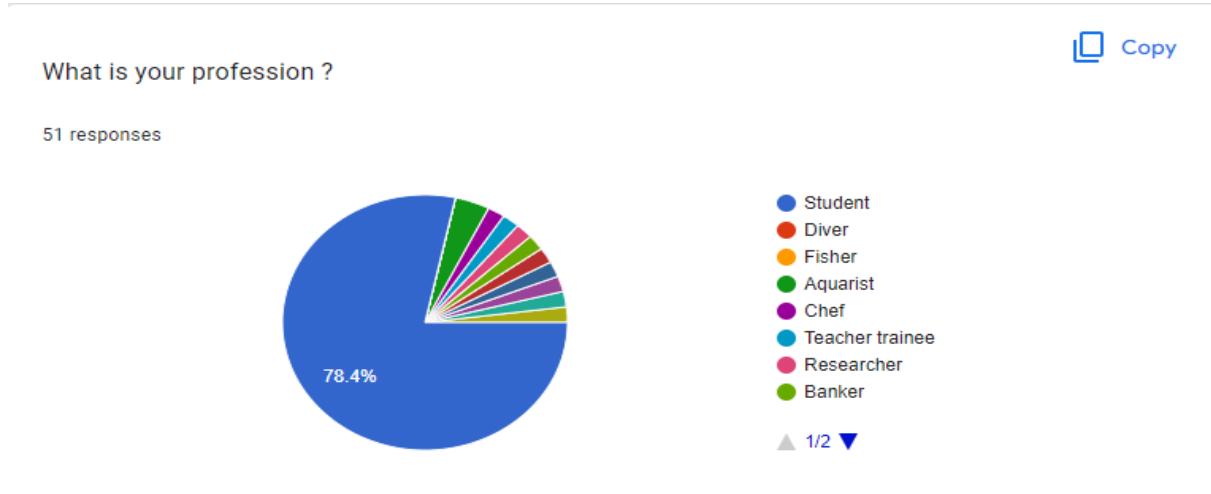


Figure 22 Researcher question 1 response

In here majority of people like to read/write articles/research about life underneath water.

Do you like to read or write articles/researches about the life underneath the water ?

 Copy

51 responses

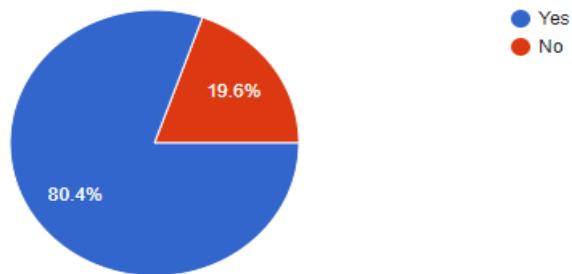


Figure 23 Researcher question 2 response

In here they have justified their reason to write or read articles/research in above question.

Please justify your answer for the previous question ?

51 responses

Because I like to get knowledge about life below water

I think by this app people can get more information regarding under sea

I always wonder about the life underneath the water

I love to know about sea creatures, explore and protect them.

Find its interesting

Read

Personal interest

Life underneath water is so interesting and Important

I love under water

Figure 24 Researcher question 3 response

In here majority of people never came across a project like this before. Proof is given below.
(Figure 20)

Have you came across any similar project like this ?

Copy

51 responses

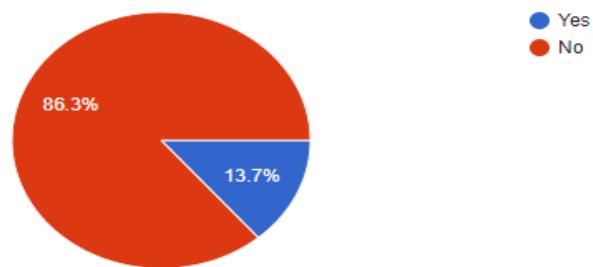


Figure 25 Researcher question 4 response

According to most people this app will be help to the life below water.

Do you think an app like this would help this situation, yes or no please justify your answer ?

Copy

45 responses

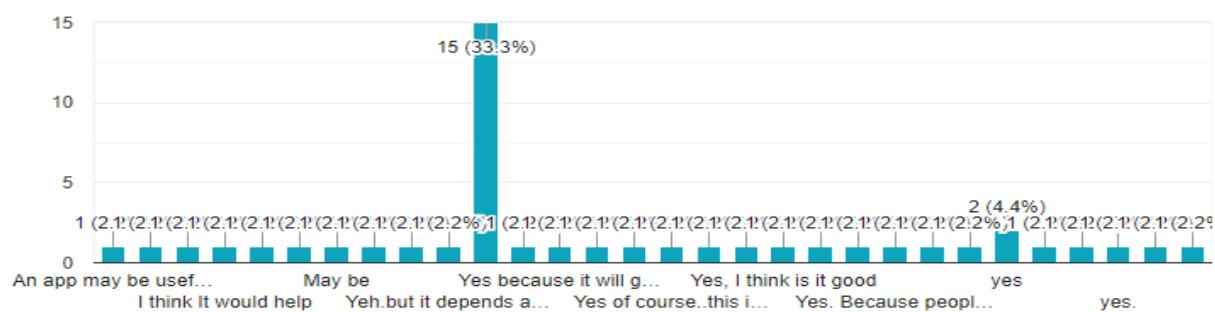


Figure 26 Researcher question 5 response

Most of the people preferred language for the articles/research is shown below.

State your preferred language for the articles ?

Copy

51 responses

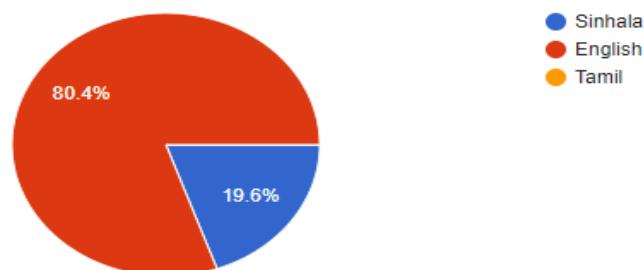


Figure 27 Researcher question 6 response

According to the majority of people this project would help to improve livelihood in the coastal area.

Copy

can this project help/disrupt the livelihood in costal area ?

51 responses

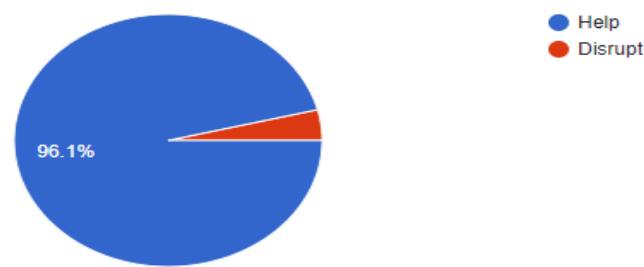


Figure 28 Researcher question 7 response

And also, they have justified their answer in here for the previous question.

Please justify the above answer ?

51 responses

People can learn to care for costal eco system

this app will be informative one

I think so

This will find threats to sea creatures and will help to enhance the diversity and natural beauty of coastal areas. So the people live in coastal areas can find new income by ensuring the sustainable development as well as lives of animals in an environment friendly manner. And also it will help to reduce natural disasters.

It will disturb the existing eco systems sometimes

Help

It creates awareness

Get attention

Figure 29 Researcher question 8 response

According to majority of people mostly negative impact toward the costal ecosystem is “All” option.

In your opinion What does most negatively impact on costal ecosystem ?

Copy

51 responses

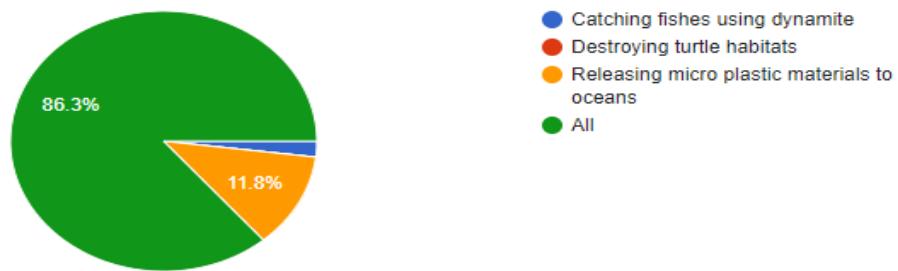


Figure 30 Researcher question 8 response

In here these are the suggestions from the contributors towards the development of the mobile app and most of their answer is “No” and “Let other research to sign in to app and also let them to publish their work”.

If you have any suggestion for this mobile app please mention here ?

Copy

15 responses

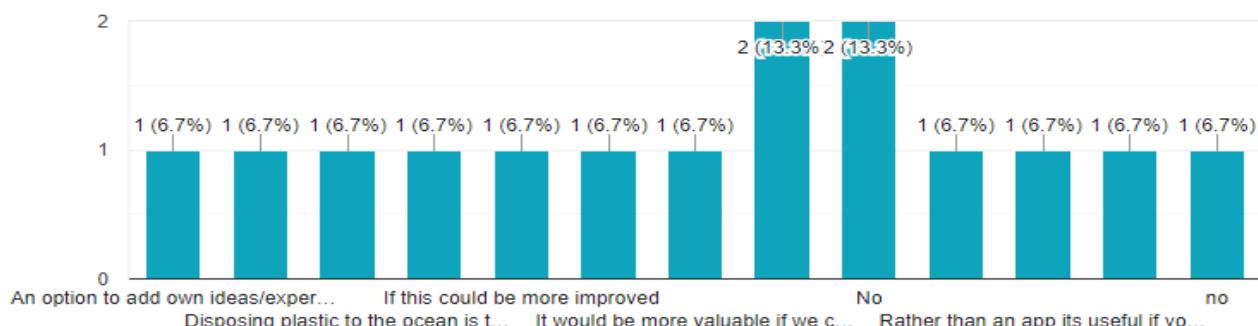


Figure 31 Researcher question 9 response

IT20047542

For the questionnaire I used a G-form to cover up my goal.

Link - <https://forms.gle/pBHmYhJYtzSnaDWXA>

I distributed the questionnaire to many individuals in order to gather the data required to achieve the goal of uplifting divers who dive as a profession. Most of those who answered the questionnaire are interested in diving.

Do you interest about the diving?

Copy

30 responses

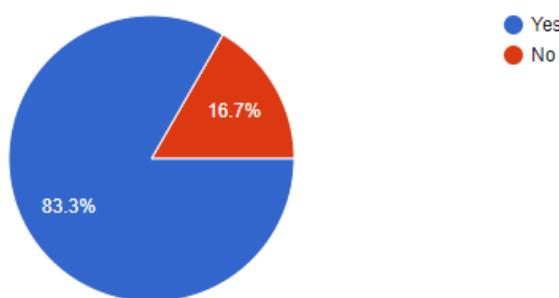


Figure 32 Diver Question 1

From the responses we can get an idea of what purpose the divers are diving for. Here we can see a considerable number of people diving. Doing it as a profession.

For what purpose do divers work?

 Copy

30 responses

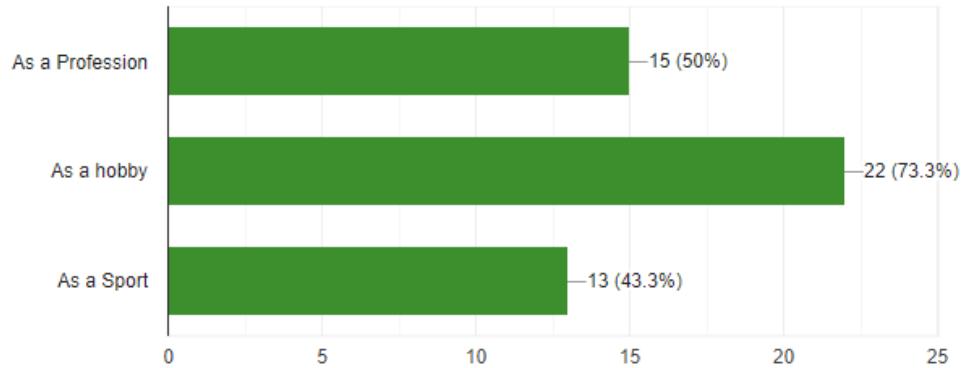


Figure 33 Diver Question 2

The majority opinion of the respondents is that the current professional divers are not satisfied with their career. It can have various reasons. When we asked the reasons from the respondents, they gave various reasons.

Do you believe that today's professional divers are satisfied with their field of work?

 Copy

30 responses

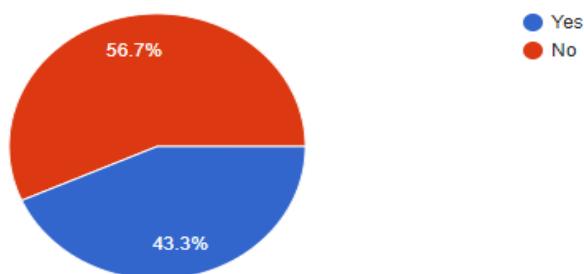


Figure 34 Diver Question 3

Give reasons for your answer

13 responses

As the pollution come across. I think that gives divers worst nightmares

I don't think country like Sri Lanka still promoting these diving activities in coastal areas. If it is, they still not get proper value for that. And also there limited spots for safe diving and nowadays, because of pollution under water lives are also in danger

A decline in tourist arrivals

.

Because there is no facilities in sri Lanka

They face lot of problems nowadays

underwater divers take significant amount of salary according to the risk they take such as underwater welding.

not having enough salary according to the risk they take

Figure 35 Diver Feedback on Question 3

Many respondents believe that many professional divers will leave their jobs today. Various reasons have been presented for that. In addition, the responders have provided solutions to the issues.

Due to the above problems, are those who dive as a profession nowadays likely to abandon their profession?

Copy

30 responses

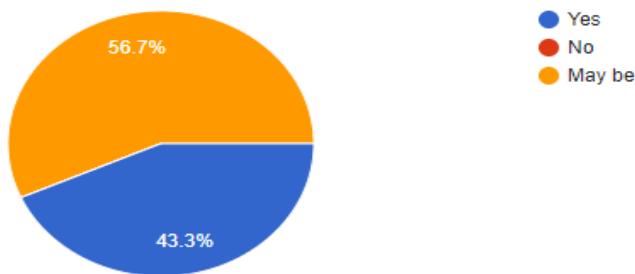


Figure 36 Diver Question 4

Give reasons for your answer

10 responses

As their health is in danger. They could drop their jobs

mostly not having enough government and publicity attention on their field of work cause divers to abandon their profession

diving in a polluted field can cause long term health issue for the divers

Because economic crisis

not having enough government attention

long term health issues

because thats a risky job

divers cant dive in a polluted field

Figure 37 Divers Feedback on Question 4

What kind of solutions do you suggest to solve above issues ?

11 responses

I think changes cannot be done.as people donot change.their attitude become worse .pollution only keep getting high

More publicity

Give a best publicity to diving areas

spread the importance of diving profession through social media

marine base cleaning projects

online publicity

strict rules about polluting ocean

better safety protocols

Figure 38 Divers Feedback about application

When we categorized the problems faced by professional divers and asked from responders, we got different responses.

What kind of problems do you think they are currently facing nowadays?

 Copy

30 responses

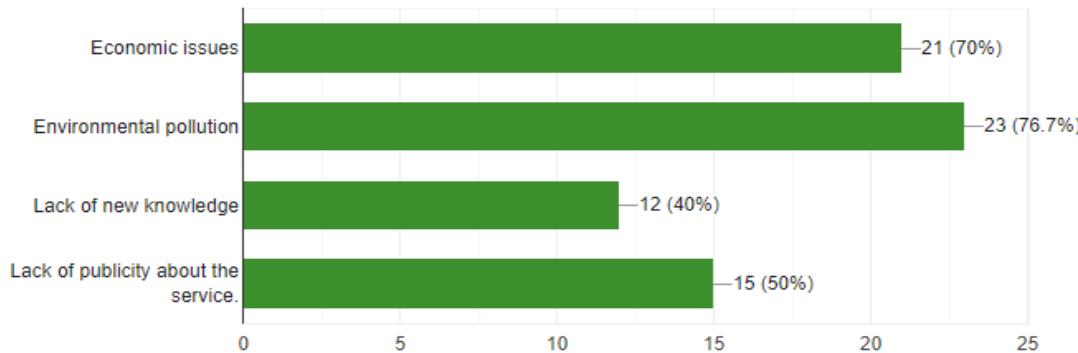


Figure 39 Diver Question 5

Many respondents are of the opinion that using a mobile application to find solutions to the above questions is effective. And we asked the reasons for the no or may be answers.

Do you think it will be effective if a research publishing mobile application is introduced to solve the above problems?

 Copy

30 responses

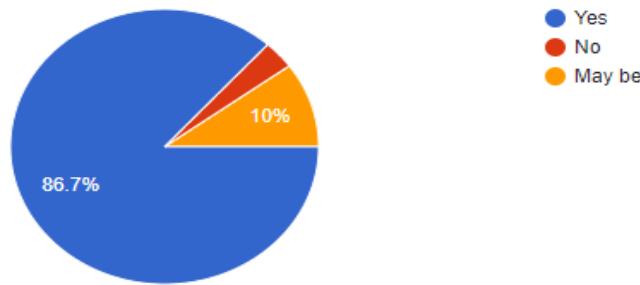


Figure 40 Diver Question 6

If you chose no or may be, explain why?

3 responses

I believe attitude cannot be changed by mobile applications

so people may find safety methods

so people will be aware about that

Figure 41 Divers Responses on Question 6

Then we asked for information about the solutions that can be provided through our mobile application for these categorized problems.

Firstly, we asked the respondents whether it is possible to give a publication to professional divers through the mobile application. Here, the answer of many people was yes. We believe that the researchers who publish research through the mobile application can make people aware of the services provided by professional divers. And we believe that we will be able to create a desire for diving in people's minds.

Do you think such an application can get publicity for their service?

 Copy

30 responses

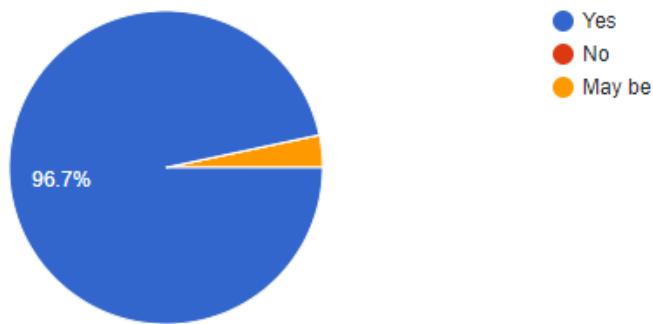


Figure 42 Diver Question 7

Give reasons for your answer

8 responses

Tjose kinds of applications are widely in use

most of people find facts through online nowadays so people tend to find out more about this profession when posting online applications

online publicity draws people attention to it

online applications can add new knowledge about this profession

people who already interested about this profession can get details from this

people may get curious about the profession and start to find out more

there are lot of people who would love to do diving

people can get to know about the profession throughout this online application

Figure 43 Diver's Responses on Question 7

Then we asked whether the mobile application could answer the lack of knowledge of professional divers about the new technology related to diving. No one answered no. Research papers are a great source to discover new knowledge. This makes it clear that we can find a solution to this problem through the mobile application.

Do you think that such an application can provide knowledge about new technology related to diving?

30 responses

Copy

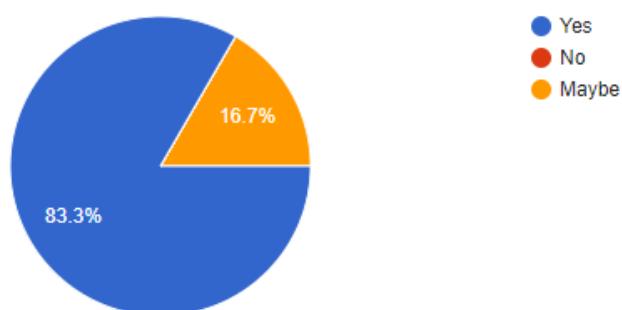


Figure 44 Diver Question 8

Give reasons for your answer

7 responses

- new technology methods can be updated in a online application
- people always tend to find out more about something new when they find the importance of something
- new methods and knowledge can be added on a online application
- new methods and technology can be found throughout this
- people can do diving courses for more knowledge
- new information can be updated in a online application
- there are plenty of sources in the internet which provides new technology methods of the profession

Figure 45 Diver's Responses on Question 8

Then we asked whether the application could provide a solution to the economic problems of professional divers. We mostly got the answer "may be". But divers who have financial difficulties can get help from sponsors. Because sponsors can see divers' problems when divers comment on researchers.

Do you think that this application can solve the economic issues of the divers?

30 responses

Copy

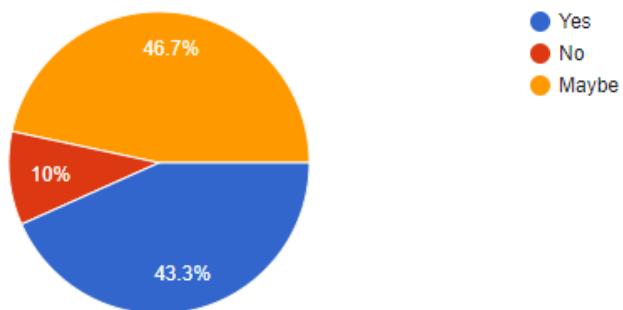


Figure 46 Diver Question 9

Give reasons for your answer

8 responses

Can get help from sponsors by giving publication

maybe through the online publicity divers may get public sponsorships

online publicity might get sponsors to the diving industry

online sponsorships

having strict rules may give opportunities for the marine drive lovers to sponsor

depends on the government attention on the salary

if they have a proper attention from the government

it depends on the attention that divers going to have from publicity

Figure 47 Diver's responses on Question 9

Environmental pollution done by people knowingly or unknowingly is a serious challenge for professional divers. Many people believe that this mobile application can solve it. Through research papers, people can be made aware of the impact of environmental pollution related to oceans and seas on divers and a solution to that problem can also be found.

Do you think that the use of that application can prevent the damage to the ocean and seas due to human activities and thereby avoid the obstacles for divers?

Copy

30 responses

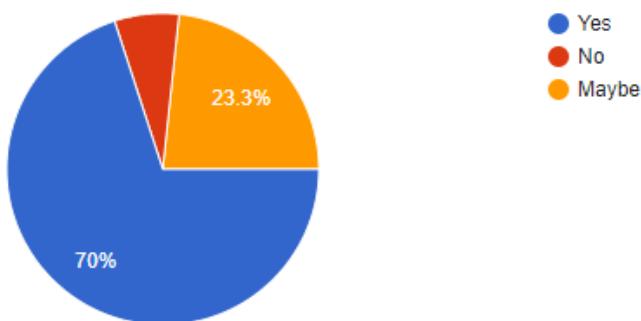


Figure 48 Diver Question 9

Give reasons for your answer

7 responses

people tend to care about the damage that can be done by human activities and online applications such like this draw attention to the marine environment

this can cause people to join such as marine base cleaning throughout online publishing

draws peoples' attention

strict rules

people tend to care when they discover something new

stablishing those protocols may give significant amount of chance on reducing ocean damage

having government attention may cause strict rules on damaging ocean areas

Figure 49 Diver's responses on Question 9

Finally, we asked the respondents' opinions to develop this mobile application.

If there are any other important points or suggestions in developing this mobile application, mention it.

4 responses

no

Forum to talk about meetup for diving adventures

You can get ideas and problems through the app from divers.

Figure 50 Responses about application

IT20281564

For the questionnaire I used a G-form to cover up my goal.

Link - <https://forms.gle/jAdJWc4VTSWYnhb29>

Age
28 responses

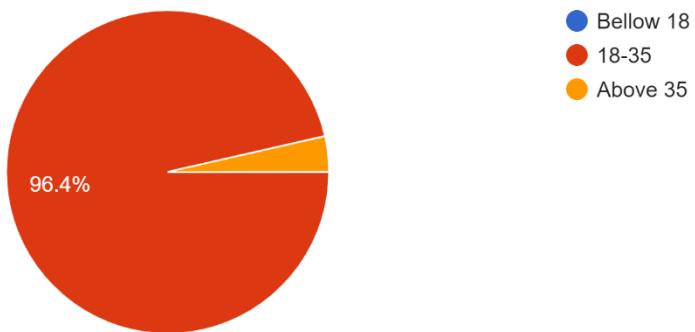


Figure 51 Sponsors Age Groups on Google Form

Most of the people who are interacting with the seas and oceans are in between 18-35 years old. So, we can clearly state that the young crowd of the nation is engage in this sector.

Are you a member of a environmental Club/Society?
28 responses

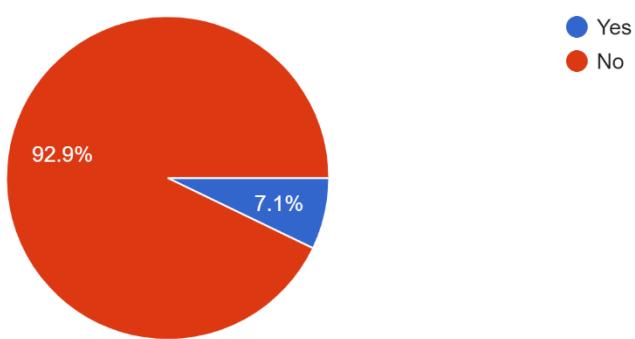


Figure 52 Sponsor's Responses on Question 1

We can clearly see that more than 90% of the youngsters are not engage in clubs. We need to create awareness about the environmental clubs and the societies.

Do you think that Life below water is in Danger

28 responses

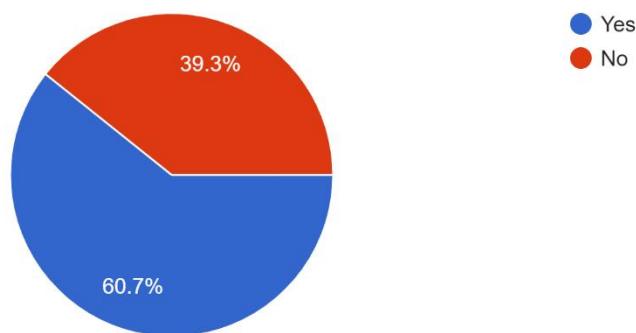


Figure 53 Sponsor's Responses on Question 2

if yes, What are the suggestions to diversify the risks or to eradicate the problems

11 responses

- Reduce marine pollution.
- Removing plastics and other non biodegradables from the oceans
- Reduce water pollution
- Do awareness program for fishermans.
- minimize pollution as much as possible Use eco friendly stuff as much as possible
- Reduce ocean plastic pollution
- Awareness programmes and stern legal framework to protect the biodiversity
- Reduce pollution by alarming people to stop polluting chemicals/waste to the sea. We must reduce the use of plastic so the plastic dumb on the ocean is less.
- Awareness sessions

Figure 54 Sponsor's Feedback on Question

Most of the youngsters are thinking that life below water is in danger and they suggest the above methods to diversify the risks.

As a person do you think you can reduce the carbon foot print in oceans and seas?
28 responses

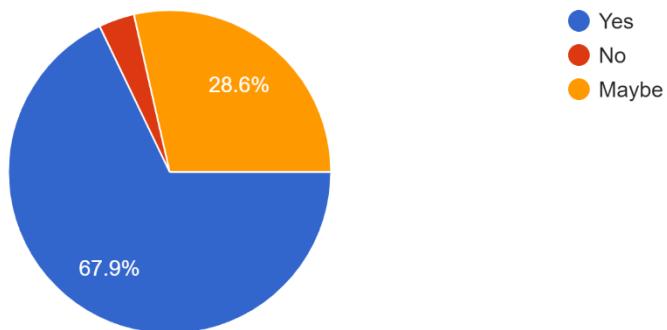


Figure 55 Sponsor's Responses on Question 3

About 60% of the youngsters specify that they can reduce the carbon footprint in oceans and seas. This is a very good response

If Yes, Do you think it requires professional assistance ?
26 responses

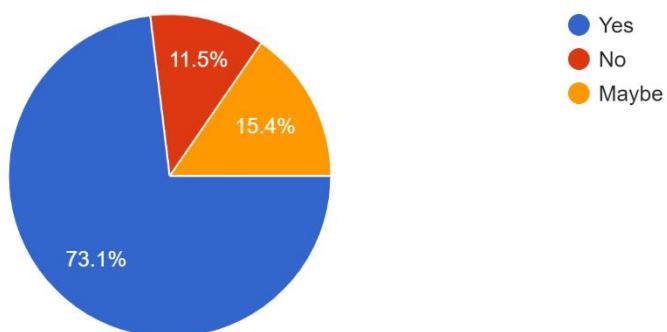


Figure 56 Sponsor's Responses on Question 4

But the challenge is 73% of the youngsters are seeking for the professional assistance to educate themselves to reduce the carbon footprint in oceans and seas.

If Yes, what are the best modes to provide professional assistance ?

25 responses

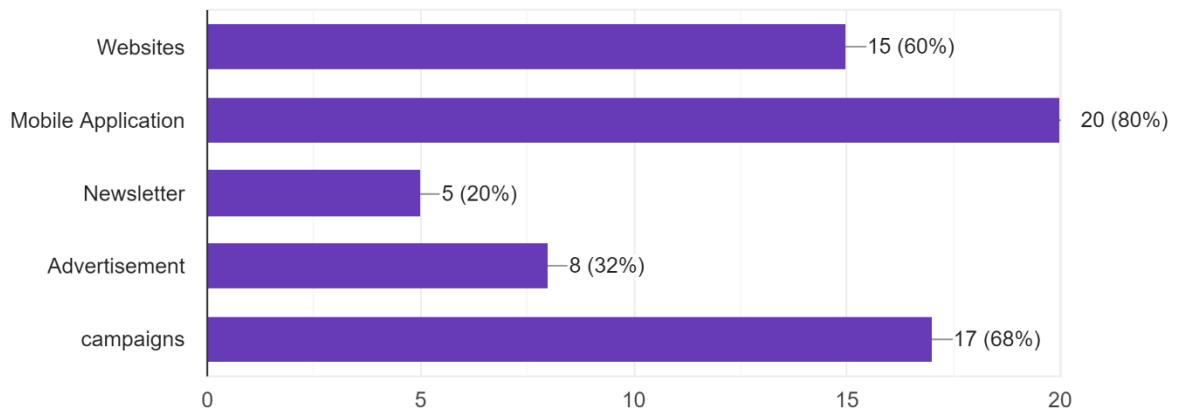


Figure 57 Sponsor's Responses on Question 6

Most of the youngsters suggested that a mobile application will create the necessary awareness among the youngsters.

Is there is a app to provide the professional assistance on how to reduce the carbon footprint in seas and oceans ?

28 responses

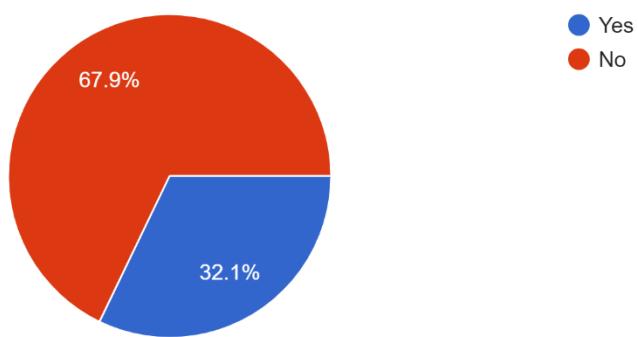


Figure 58 Sponsor's Responses on Question 7

According to this response we can clearly see that there is no app available to create the awareness. So, we decided to build a mobile application

Participation Profile

Name	Demography	Location, Date and Time
Malshi Gunathilaka	Age – 26 Gender - Female Occupation – Owner of aquarium Location - Moratuwa	Location - Online Date - 2022 Sep 25
Ryju Dilna	Age – 31 Occupation – Project Sponsor Location – Sri Lanka	Location - Online Date - 2022 Sep 27
G.S.K.N.D.S Kumara	Age – 25 Gender- Male Occupation – Sailor and Diver Location- Sri Lanka	Location- At a physical location Date – 2022 Sep 26
W. Hasini Wijewardhana	Age – 23 Gender – Female Occupation - Medical Student- Award winner at ICYS (International Conference of Young Scientists) Location- Galle	Location - Online Date - 2022 Sep 26

Table 5 Participation Profile

Protocol

IT20206550

For the interview purpose I selected the team's platform and recorded using its in built feature. I asked to interviewer to share some photos and videos of their aquarium. I prepared some wire frame to show my interviewer to get her opinion about my function add comments. And asked what I should change in this UI.

And I prepared the statistic report about response of G-form. And show them to her what is her opinion about our mobile app. And asked from her that is she agreeing with the result of this survey. And does she also accept features in our app. Are those things useful for aquarist.

I prepared some videos on adding comments to a blog. And share it with the interviewer and get her opinion about them.

Then I got permission to record the video of interview. And I request for appointment from him to do the interview.

IT20039004

I chose the team's platform for interview purposes and recorded using its in-built functionality. It's an internet service. Because of the distance, we prefer the internet platform to the actual platform. Google forms are utilized for data collection. Because it creates useful reports, which are extremely beneficial for analysis and interpretation

Then I obtained permission to videotape the interview. Later, she and I arranged a time for the interview.

IT20047542

I chose a physical location for this interview. Because the interviewer is more interested to do the interview in physically.

Firstly, I asked about his profession. Then He said that he is a sailor and diver. Then I explained about our mobile application and about the interview. I showed the report of collected data using G-form and using that I gave good idea about the application.

Then I got permission to record the video of interview. Later, I made an appointment with him to do the interview.

IT20281564

For the interview purpose we selected the team's platform and recorded using its in built feature. It's an online platform. The reason. we select online platform over the physical platform is because of the distance.

For the data collection process google forms are used. because it generates useful reports, and these reports are very useful for the analysis and interpretation.

Then I got permission to record the video of the interview. Later, we set up a time to conduct the interview.

6 Milestone 3: Verify the key-user flow(s)

IT20281564

	Fall Point/Blocking	Customers requirement.
01 Fail – points / Blocking	I thought details must show after the login	The actual requirement of the customer is to view some details about the sea and oceans to get a brief idea.
02 Fail – points / Blocking	I thought in home user should see the posts only.	The actual requirement of the customer is to view posts and save it.
03 Fail – points / Blocking	I thought in home user should see the posts only.	The actual requirement of the customer is to view posts but user should be able to download the post in the PDF format.

Table 6 Fail Point on Manage Profile

1. First User Flow - Manage Profile

Updated user flow

Showing description at the welcome page

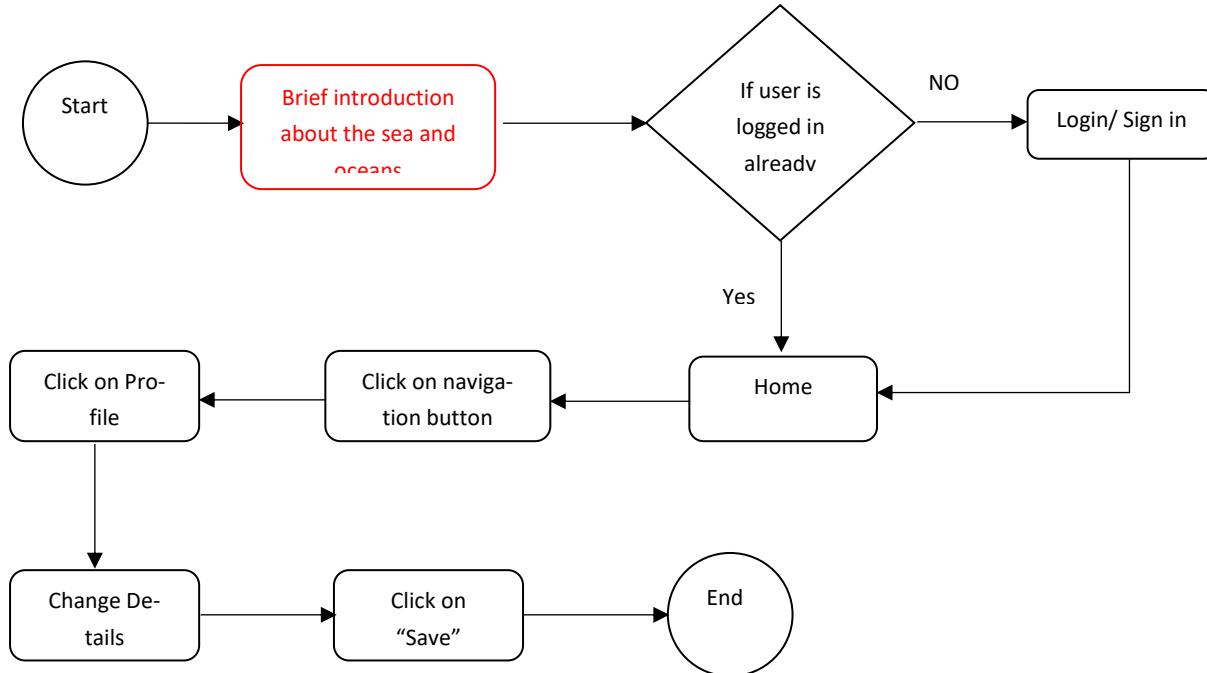


Figure 59 Updated User Flow 1

Adding save post option in the home page for the later reference

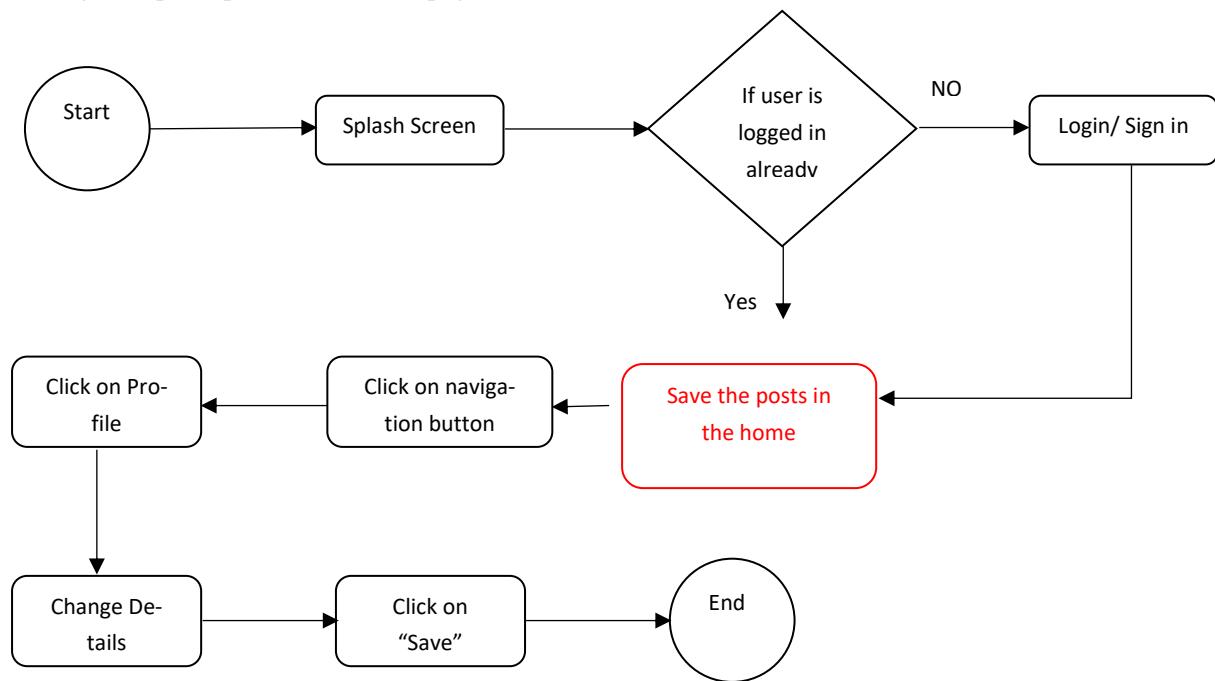


Figure 60 Updated User Flow 2

Adding download post in the PDF format

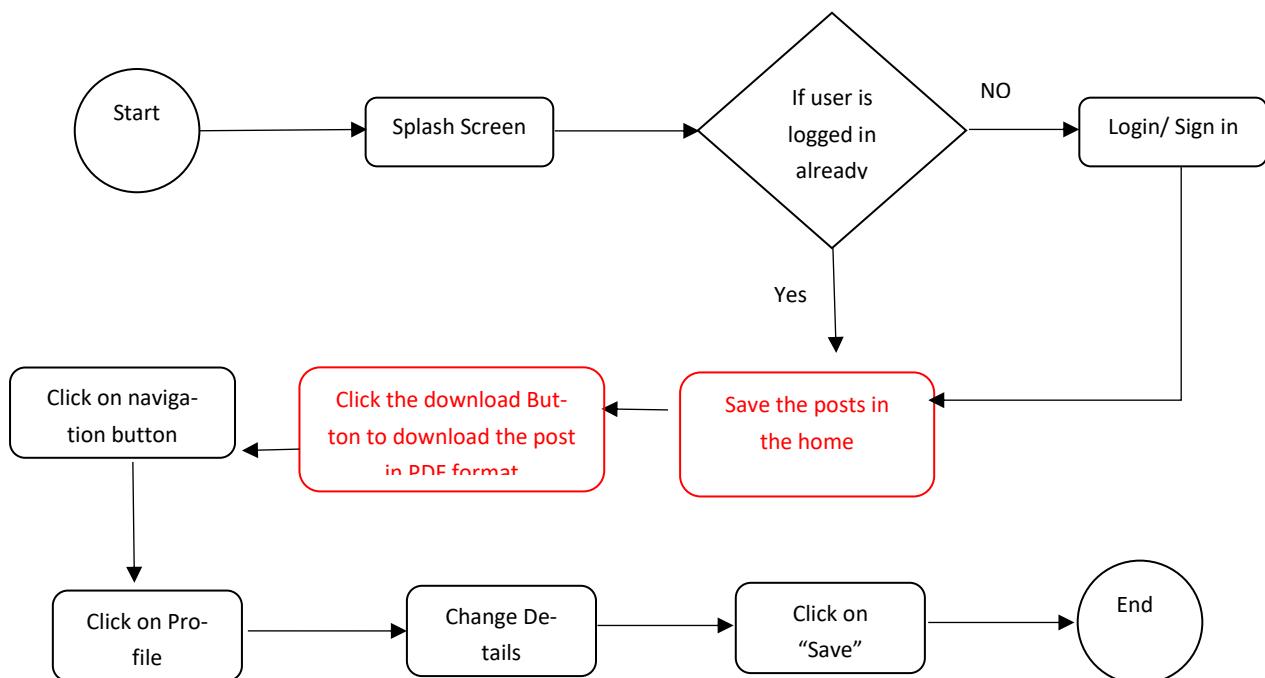


Figure 61 Updated User Flow 3

IT20039004

	Fall Point/Blocking	Customers requirement.
01 Fail – points / Blocking	I thought uploading research is enough with add.	The actual requirement of the customer is to add their profession when uploading research.
02 Fail – points / Blocking	I thought that uploading article is enough.	But user thinks adding videos also interesting
03 Fail – points / Blocking	I thought uploading articles, research and videos are enough.	The actual requirement of the user is to suggest new innovative ideas to readers.

Table 7 Fail Point on View post

Updated user flow

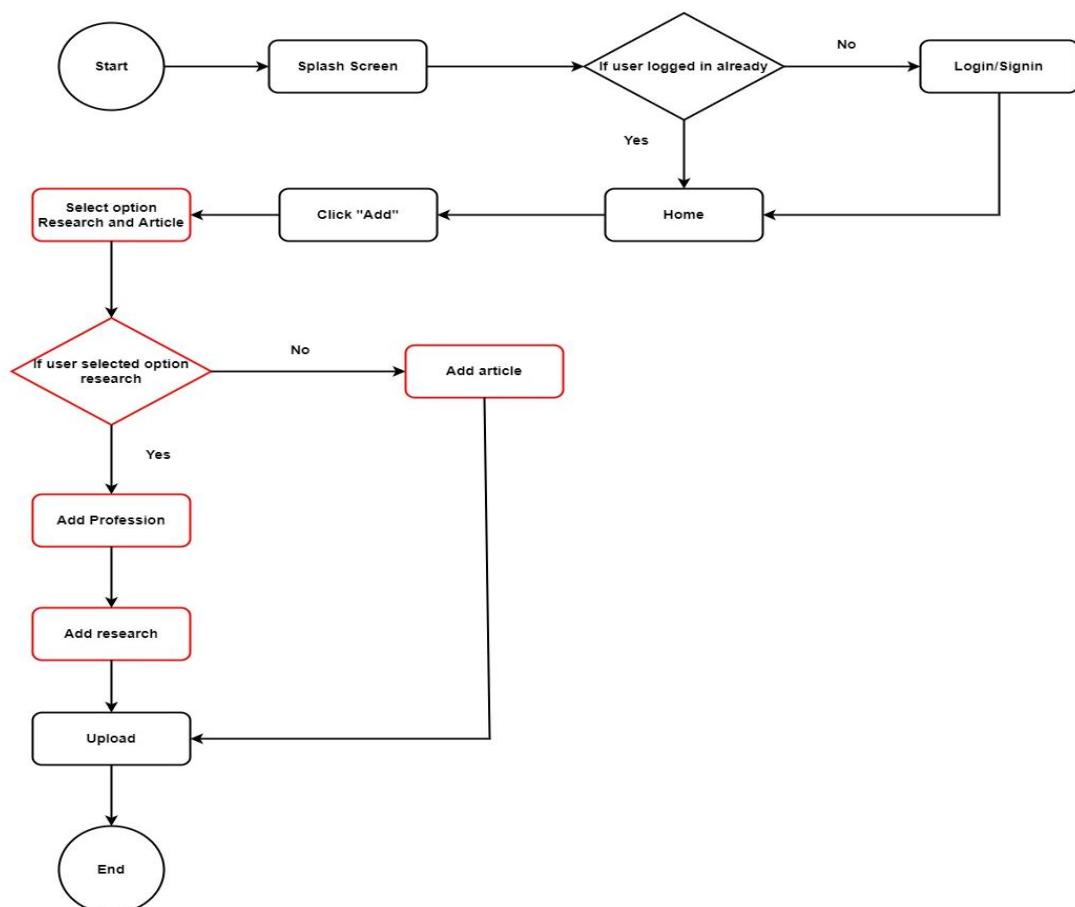


Figure 62 Updated User Flow 4

Newly added features

Add innovative ideas to benefit conserve marine eco system.

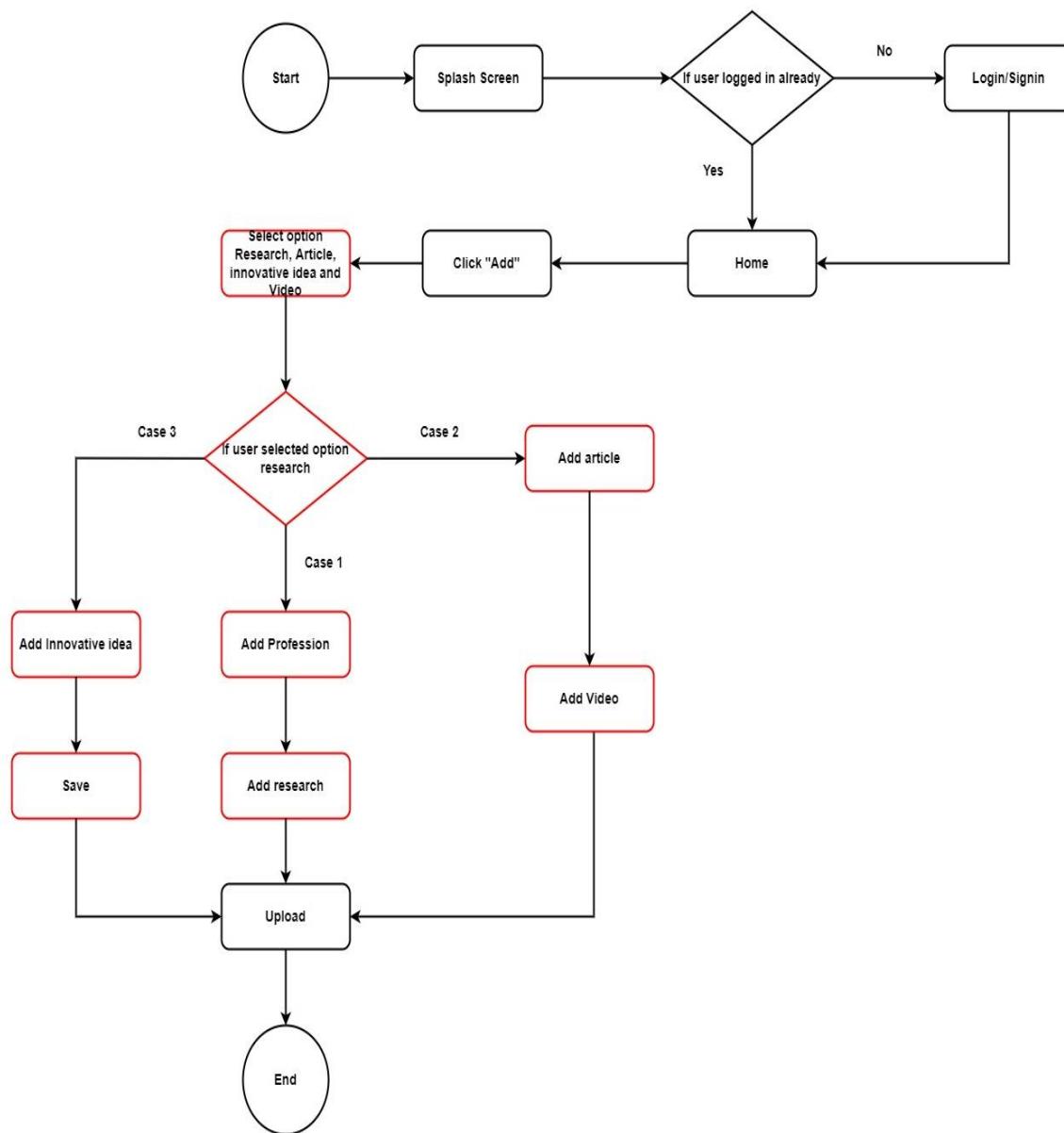


Figure 63 Updated User Flow 5

Add videos.

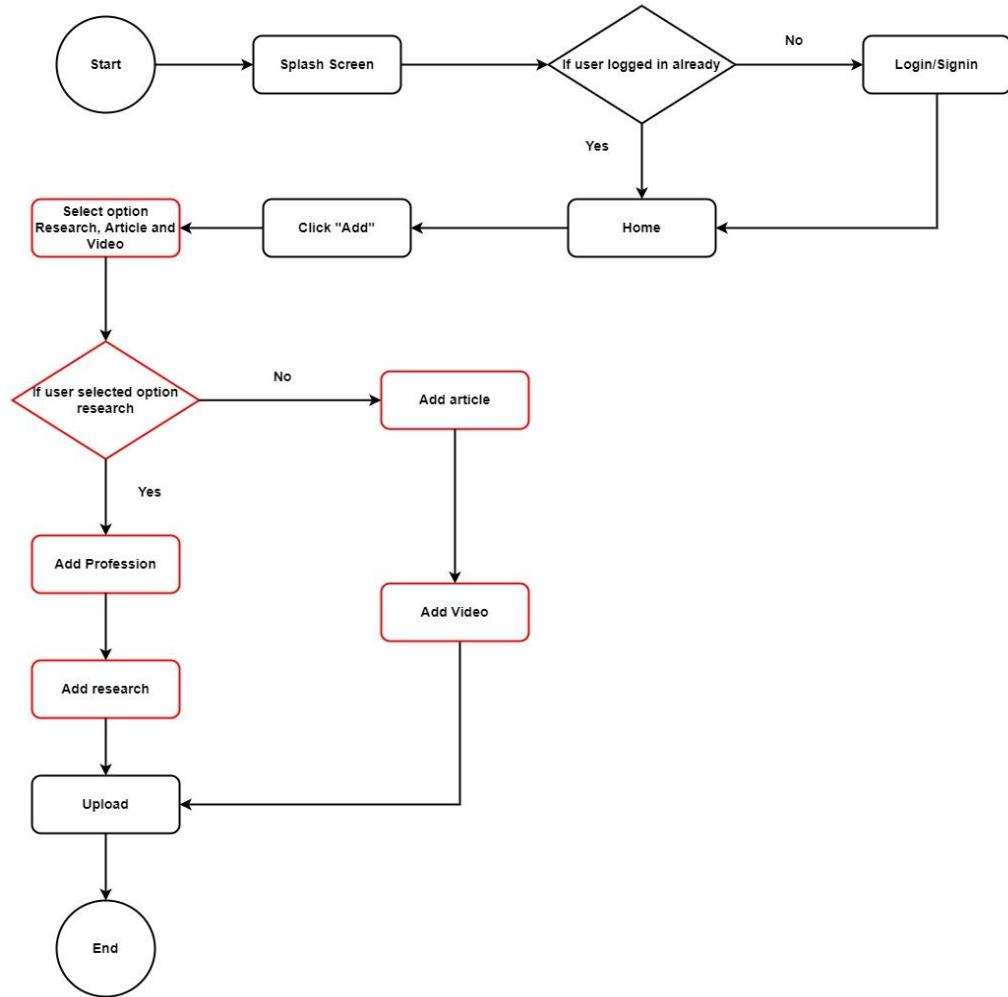


Figure 64 Updated User Flow 6

IT20206550

	Fall Point/Blocking	Customers requirement.
01 Fail – points / Blocking	I thought that text comments are only enough for the, add comment flow	The actual requirements of adding comment that customer hopes to have feature to add image as a comment also.
02 Fail – points / Blocking	I thought that, when we are adding comments there should be display the name of the customer who add the comment.	But sometimes customer think about their privacy. So, they want to choose whether they want to display name or not.

03 Fail – points / Blocking	I thought its good to have button under the blog to navigate comments window.	But customers said its very useful if we are able to read other people's comments under the post without clicking another button.
--------------------------------	---	---

Table 8 Fail Point on Add comment

Updated user flow

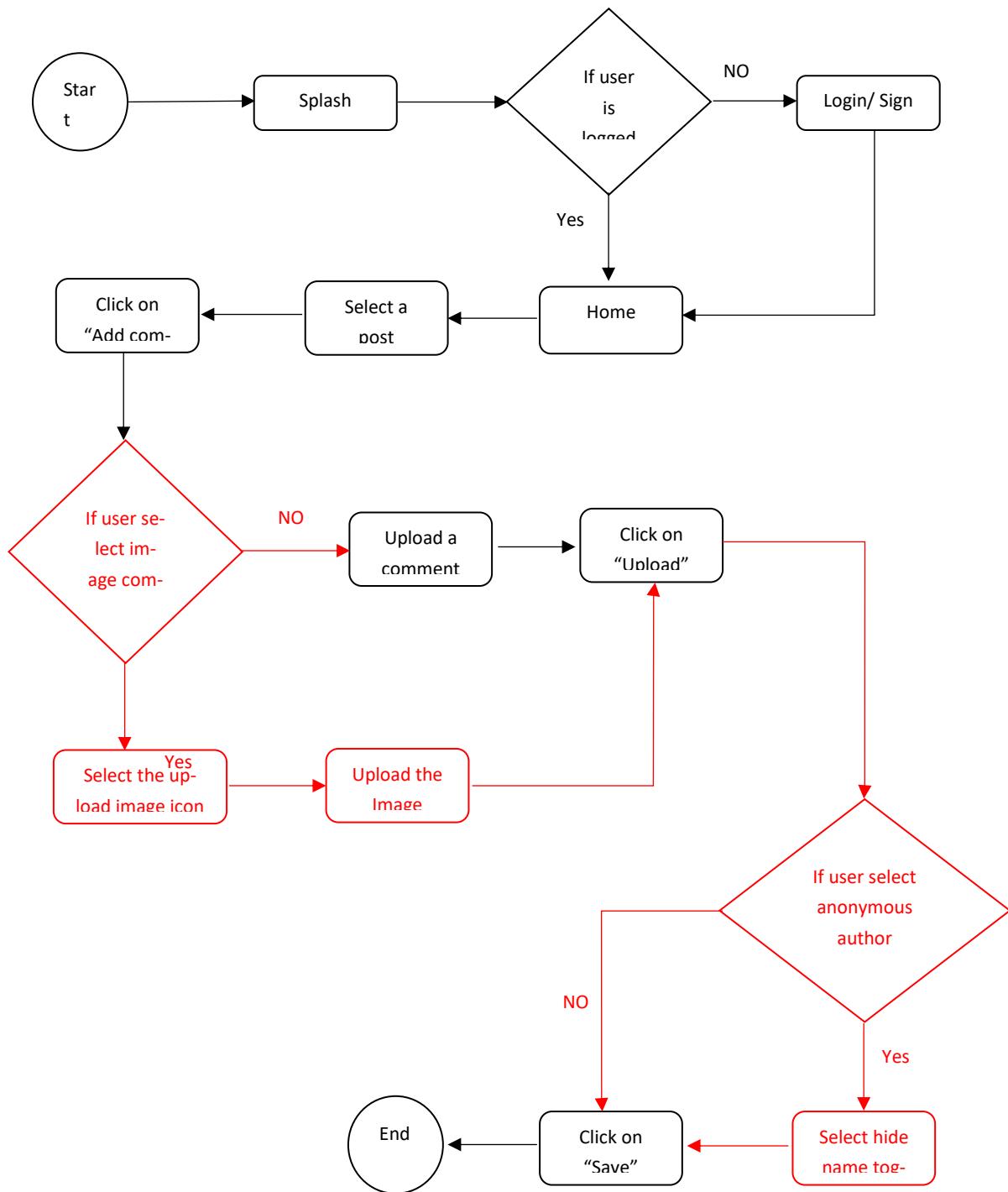


Figure 65 Updated User Flow 7

Newly featured user flows

Rating a Blog.

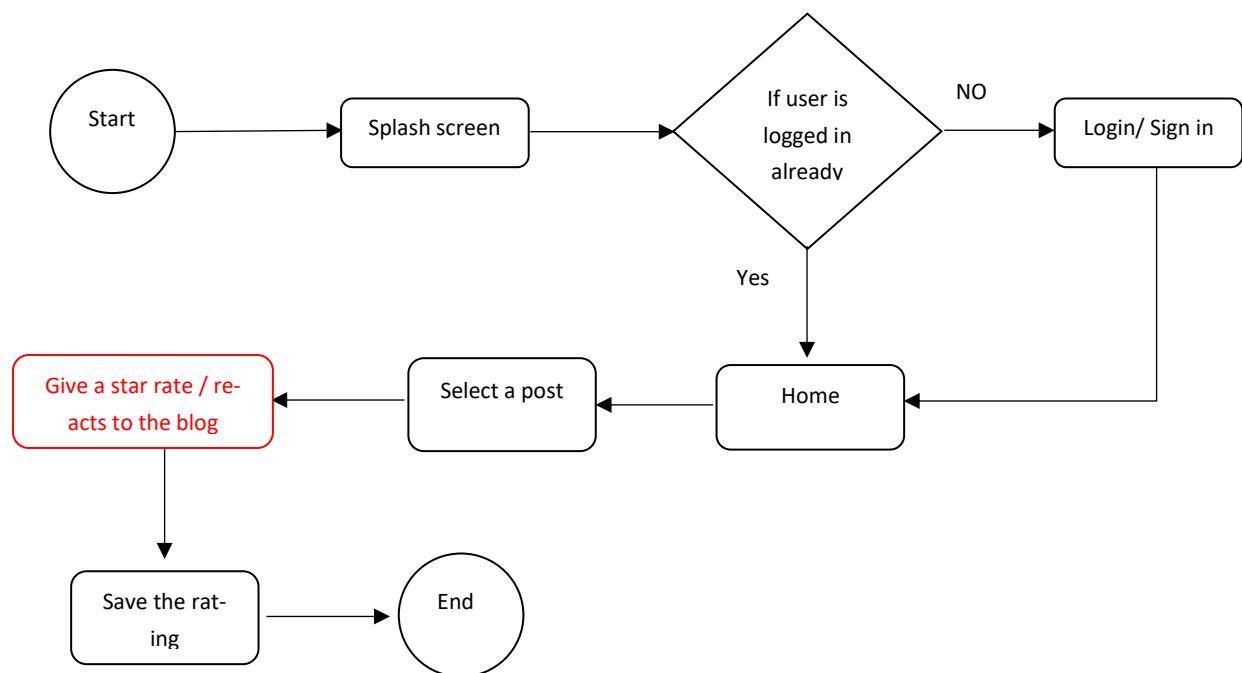


Figure 66 Updated User Flow 8

Edit and delete comment

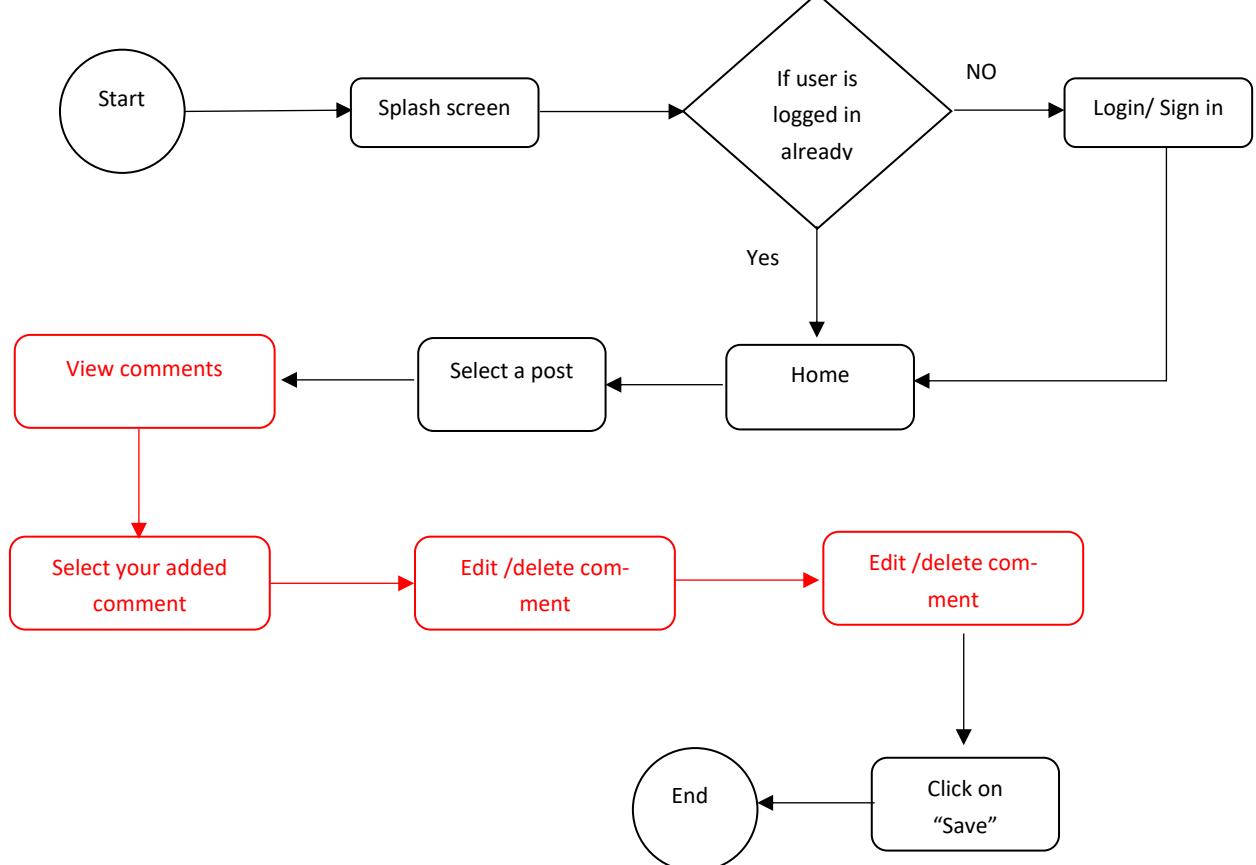


Figure 67 Updated User Flow 9

IT20047542

	Fall Point/Blocking	Customers requirement.
01 Fail – points / Blocking	When a researcher posts a blog, user cannot see the blog owner's details.	Diver wishes to support researchers in their work. After that, they can assist and provide them with fresh ideas.
02 Fail – points / Blocking	Research is conducted in English.	Diver wants to read the blogs in several languages.
03 Fail – points / Blocking	Users do not want to log in when seeing blogs.	Diver wants to view to blog in another language.

Table 9 Fail Point on View Post

Updated user flow

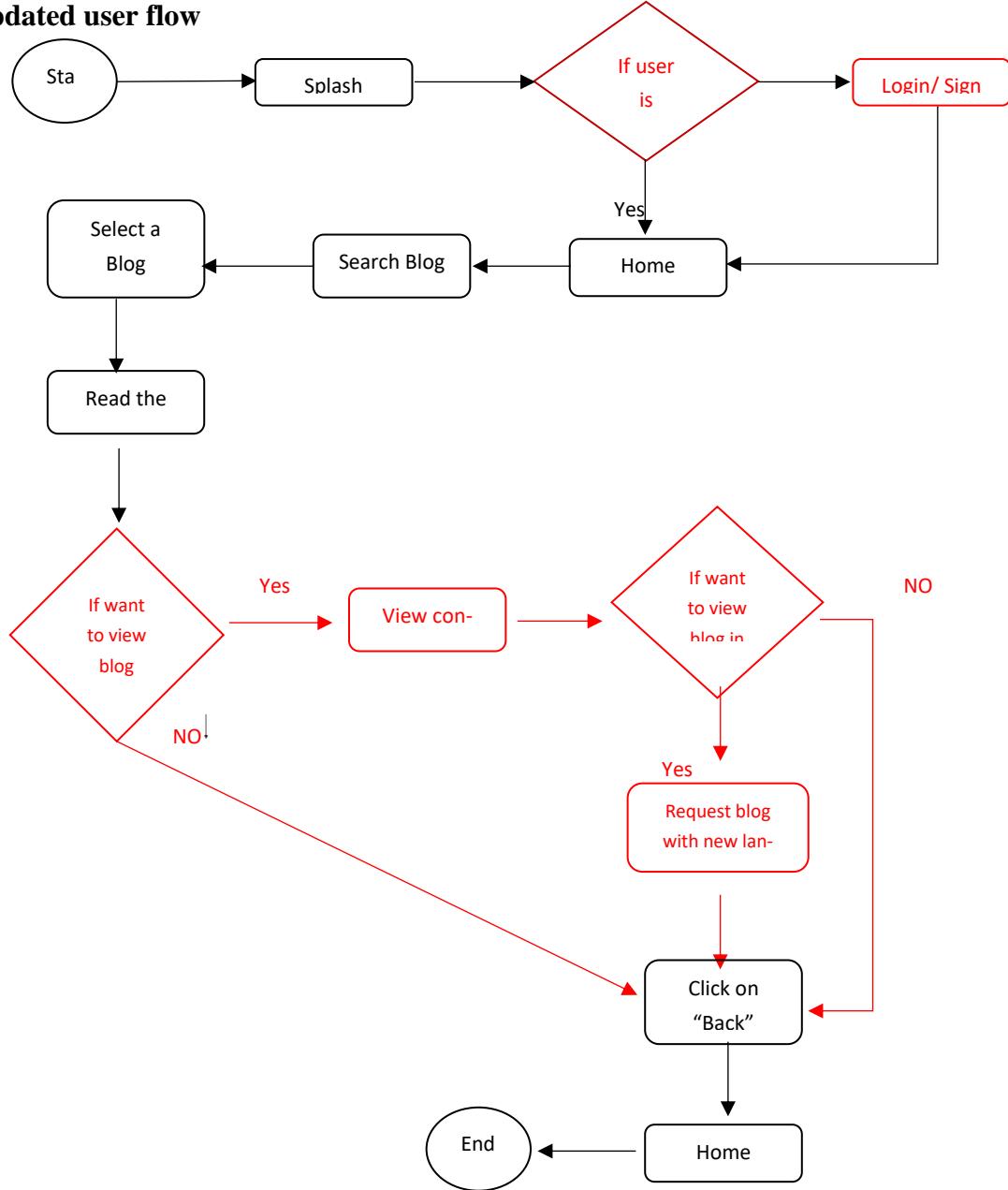


Figure 68 Updated User Flow 10

Newly featured user flows

Add mark feature after reading

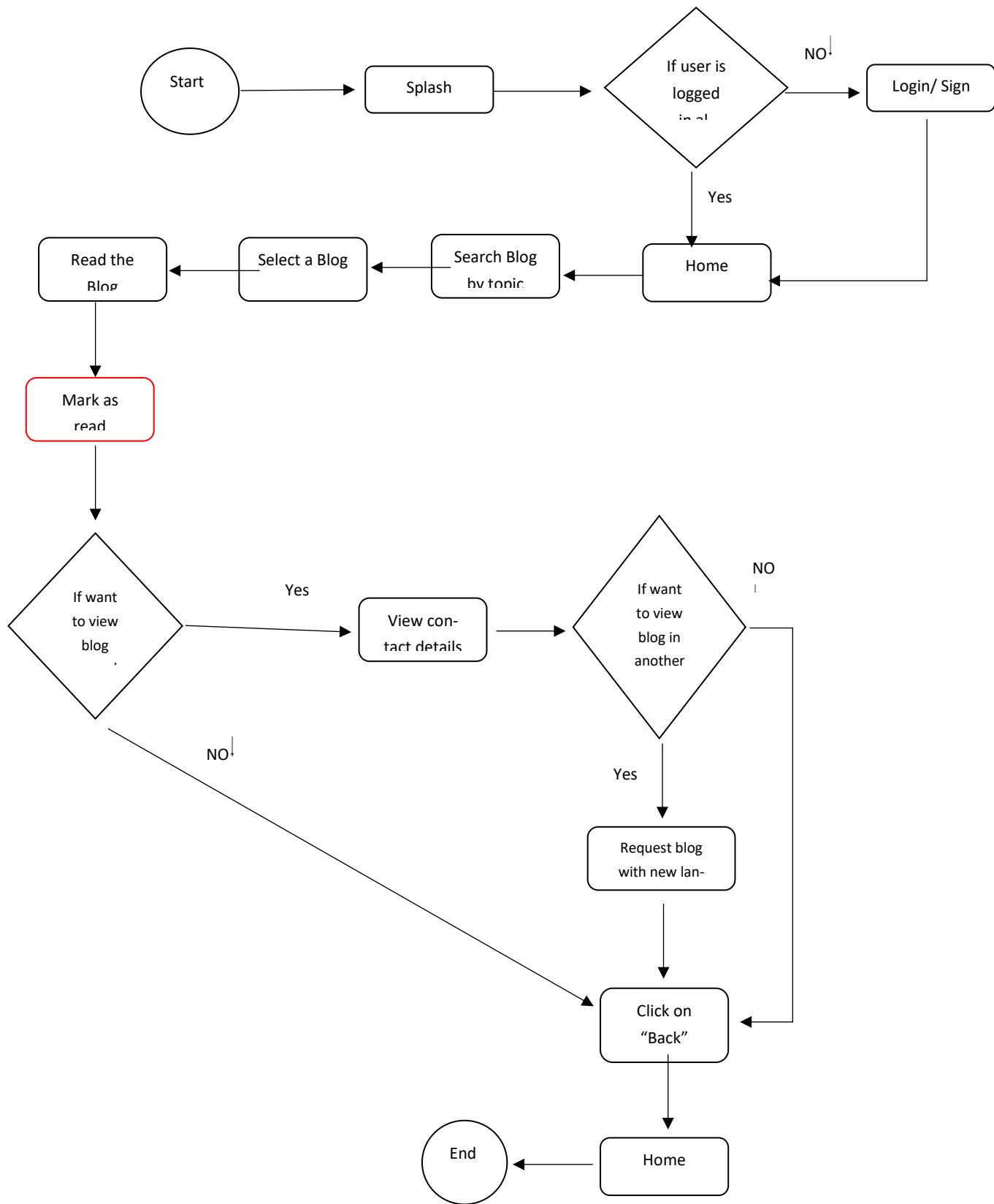


Figure 69 Updated User Flow 11

Sorting the Blog / research Paper

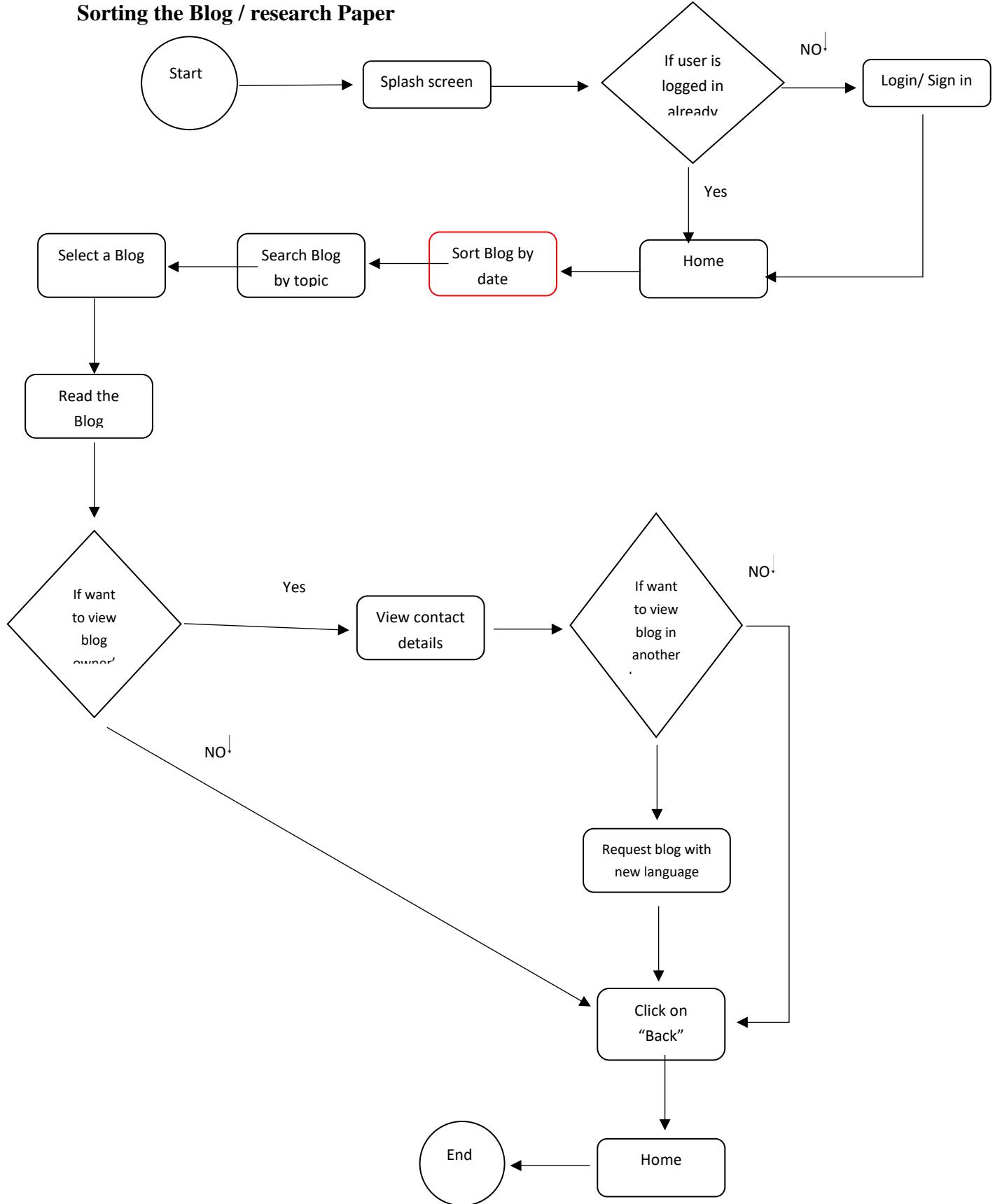


Figure 70 Updated User Flow 12

8 Competitor Analysis

List some of the similar competitor programs or real-world solutions and discuss their advantages and disadvantages. For example, if you are developing a jobs website, competitors may be other job websites or a bricks and mortar HR company. The competitor does not have to be in the same domain but just represent a company that is solving a problem well. Describe some features that the other company does successfully that your team can borrow to use in the context that is relevant to your app.

Choose two or three competitors. Include your design thinking workshop showing your thorough analysis of their features and processes and how they may be translated to your app.

8.1 Benchling

A fully integrated platform featuring a quality digital lab notebook and LIMS experience for all of your research needs. With Benchling's cutting-edge platform, it's simple to follow your study from conception to conclusion. With Benchling, collaborate easily and keep your team informed about every project!

8.2 Advantage

It's so useful when it comes to cloning and helps visualize the plasmids

Easy to visualize everything and to align sequences.

8.3 Disadvantage

Constantly copying and pasting plasmids from one location to another gets annoying after the 30th plasmid.

Sometimes hard to manipulate trash/archived files.

9 Milestone 4: Sketching

IT20281564 - M.T Sanju

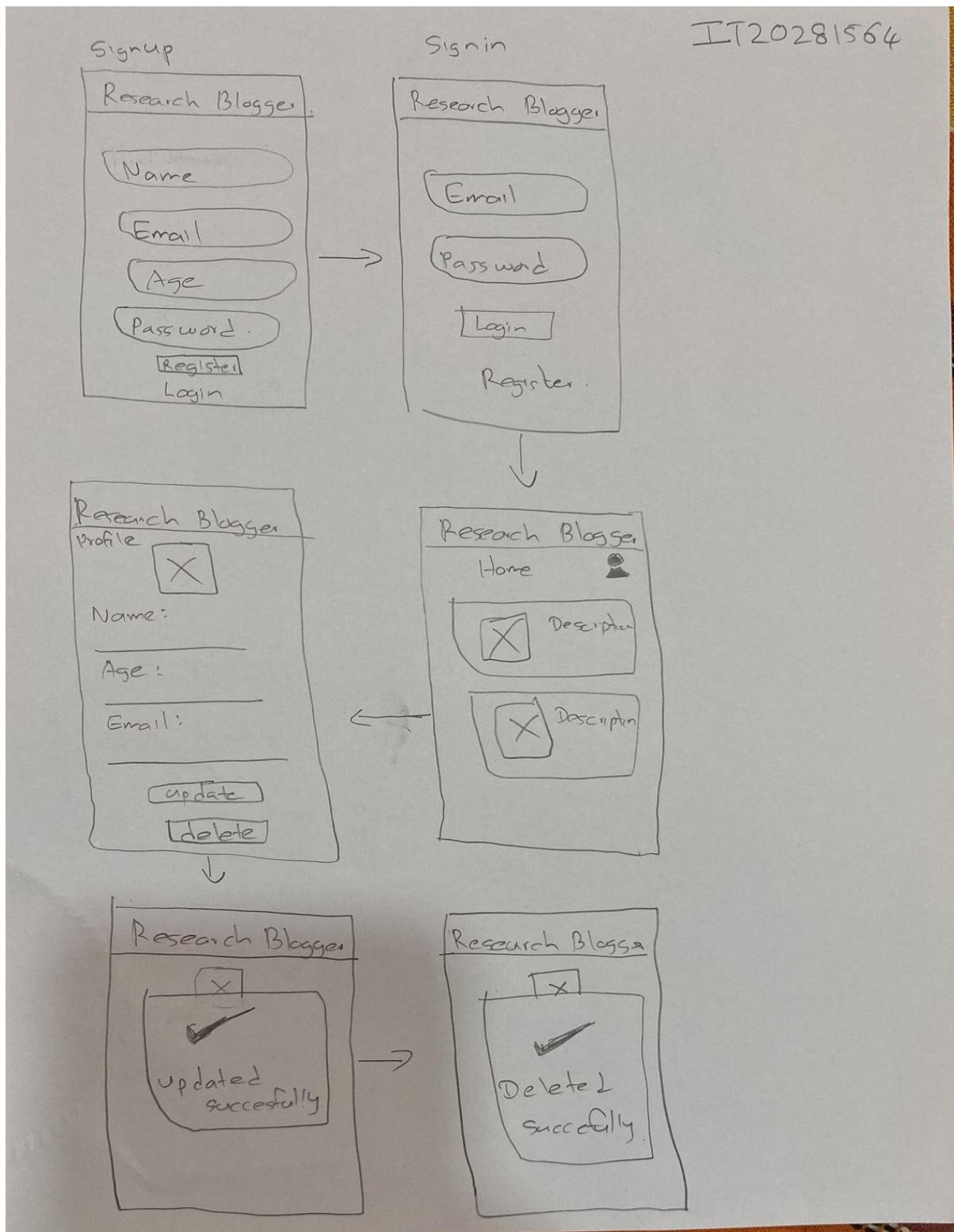


Figure 71 Sketching on User Profile Management

IT20039004 – Liyanage H.C

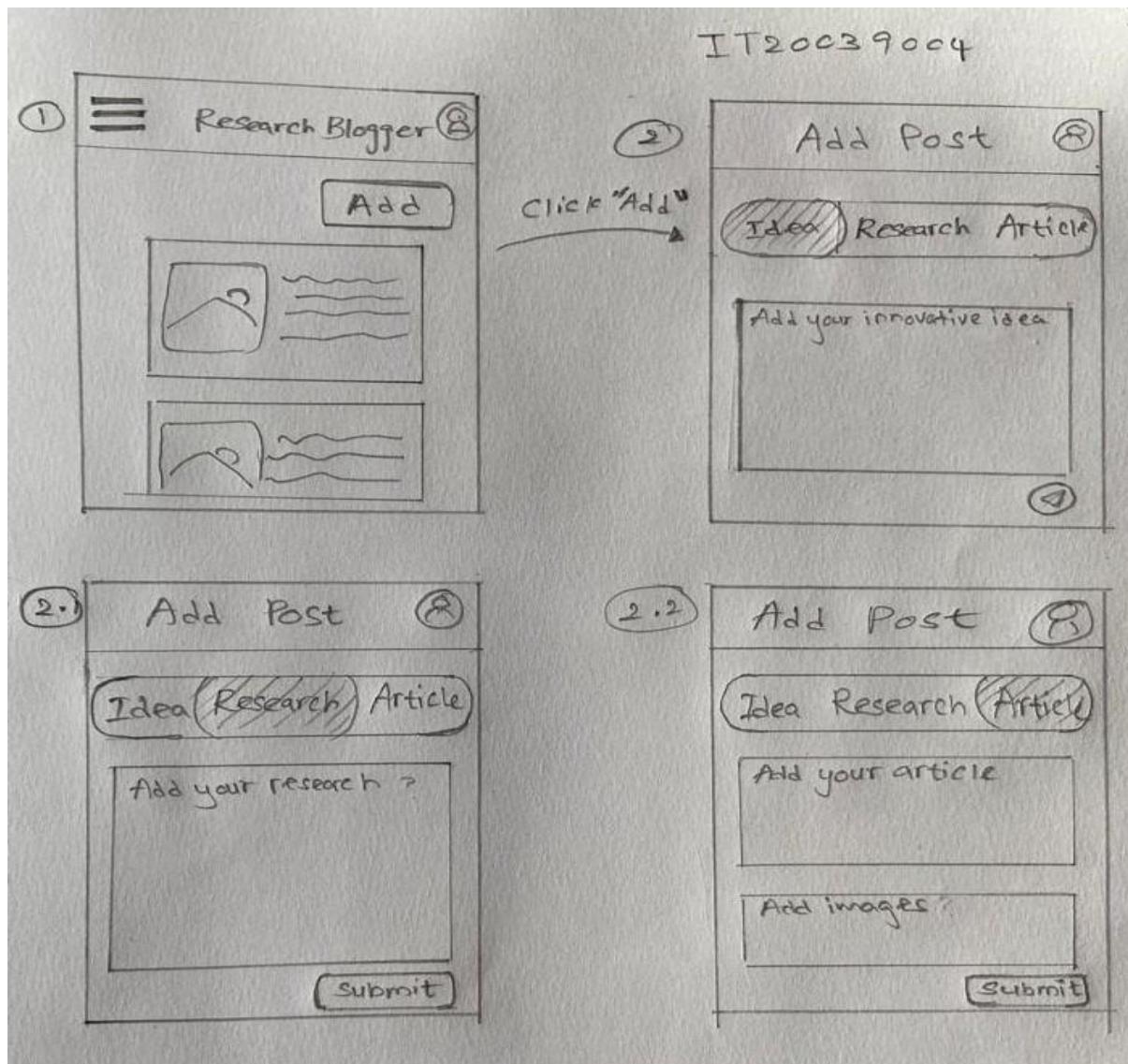


Figure 72 Sketching on Add Post Management

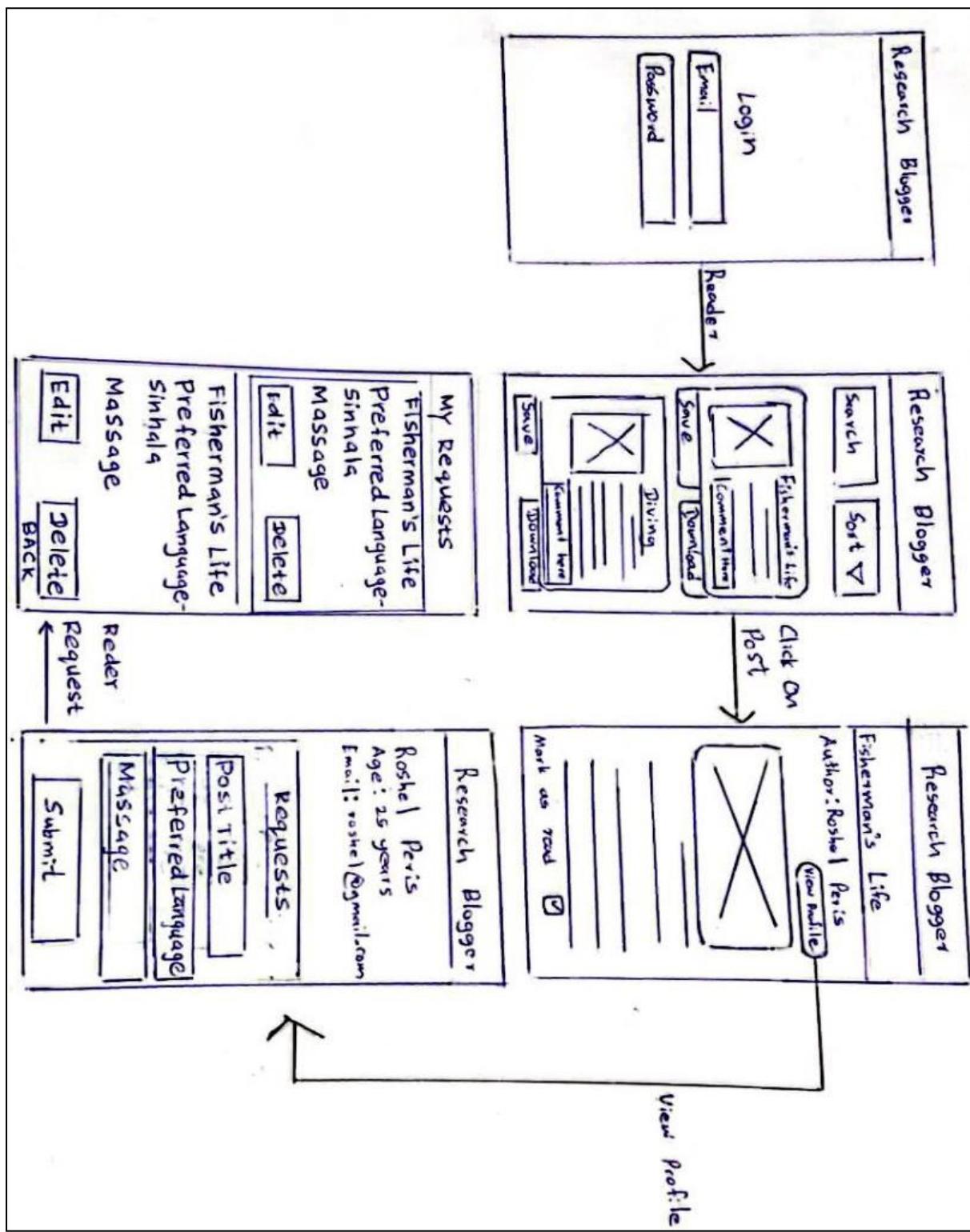


Figure 73 Sketching on View Post Management

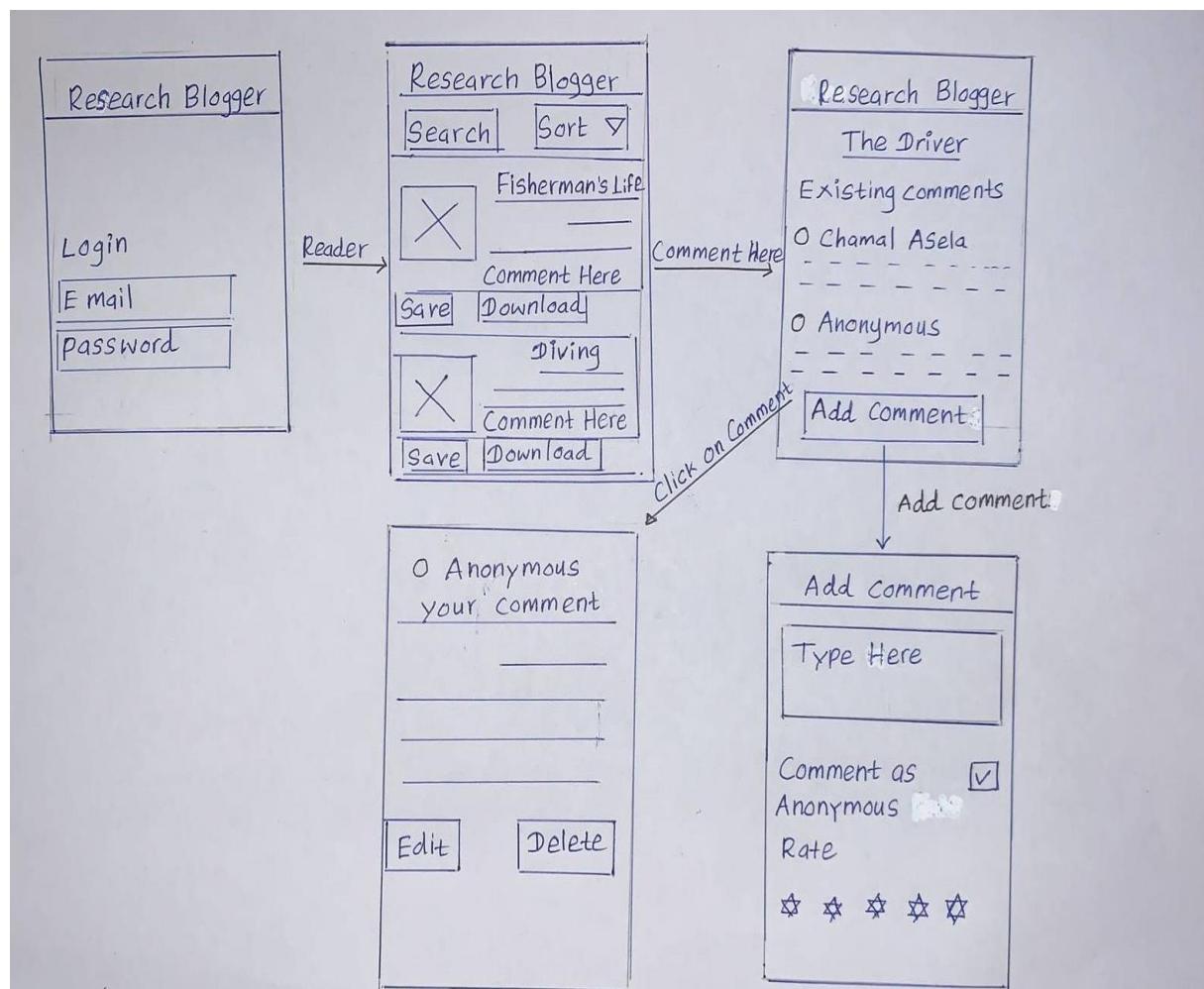


Figure 74 Sketching on Add comment Management

10 Milestone 5: Wireframes, Prototype

This is where you showcase all the prototypes (low-fidelity and high-fidelity). Include as many significant low-fidelity designs as you developed.

10.1 Wireframes

IT20281564 - M.T Sanju

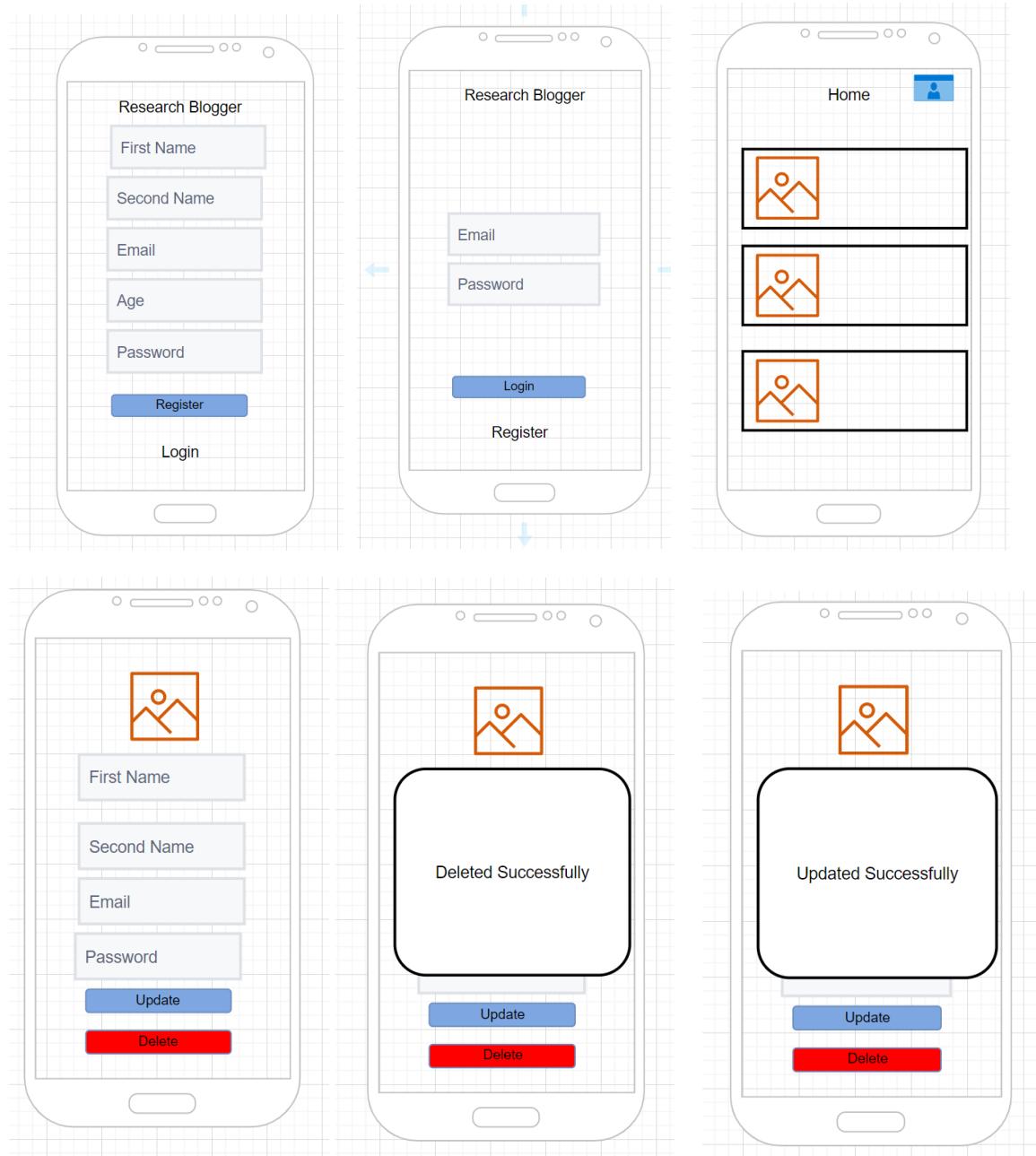


Figure 75 Wireframes on Profile Management

IT20039004 – Liyanage H.C

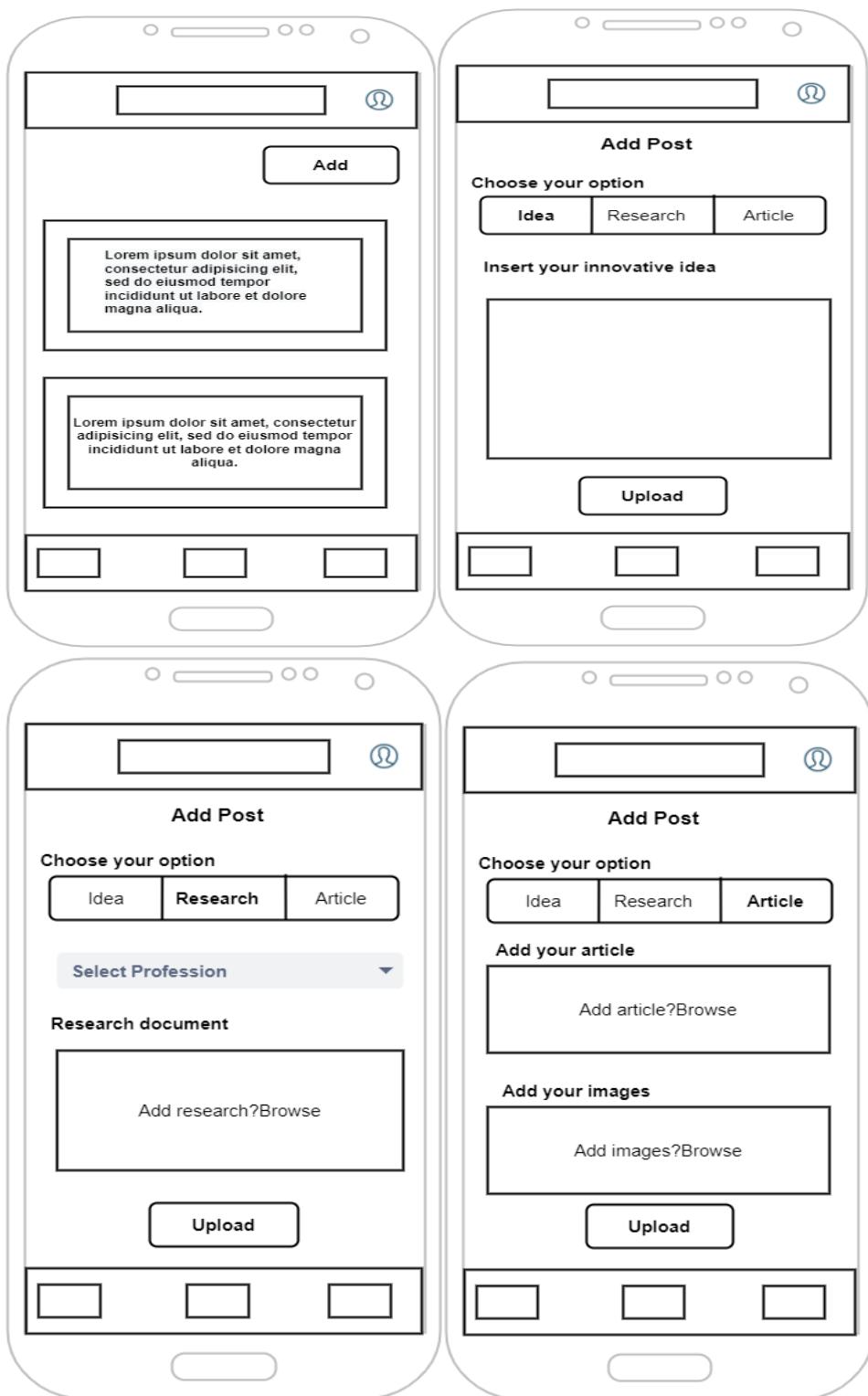


Figure 76 Wireframes on Add Post

IT20047542 – W.M.K.K.B Walisundara

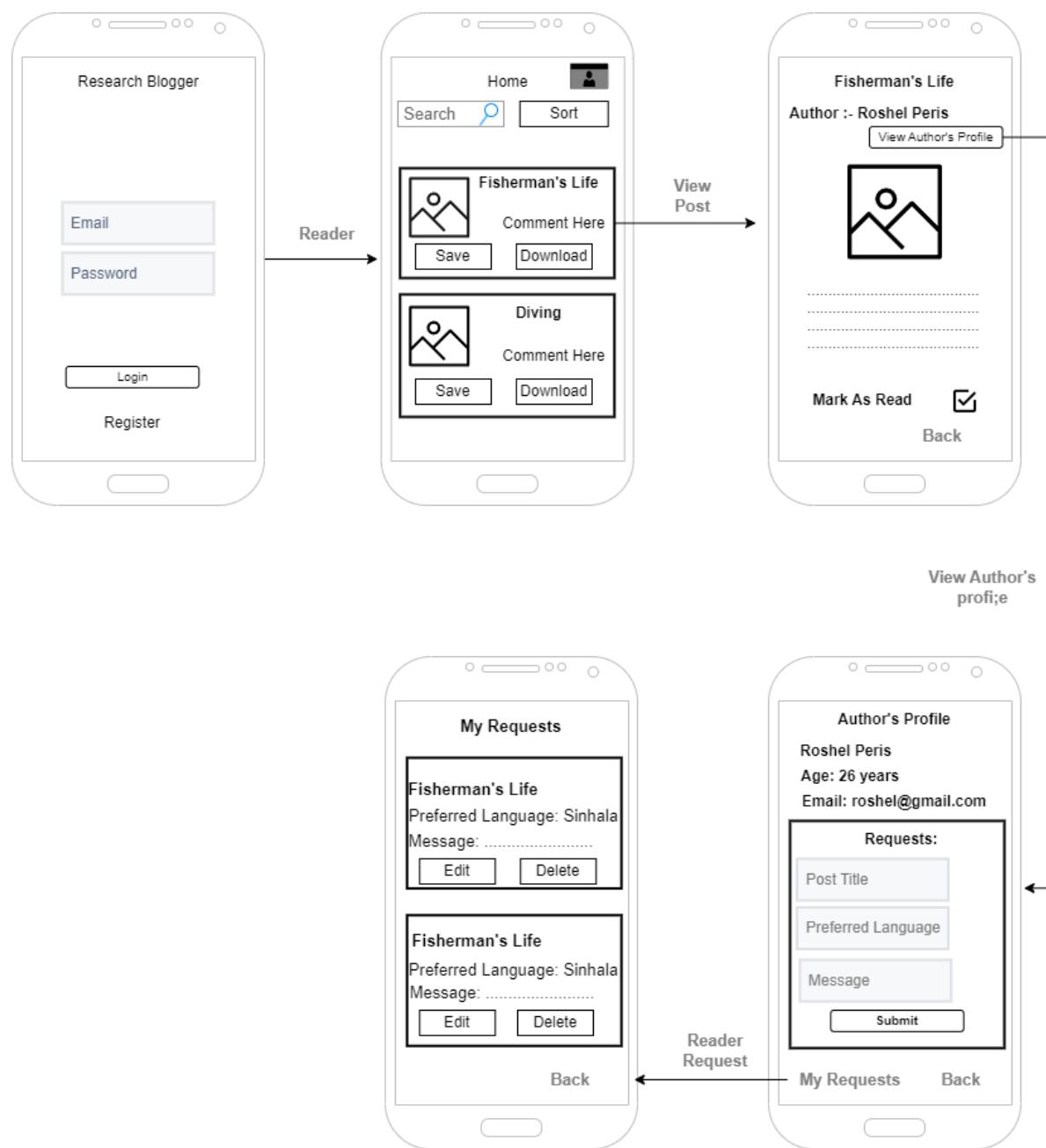


Figure 77 Wireframes on View Post

IT20206550 – K.I.K.R.D.N. Kandakkulama

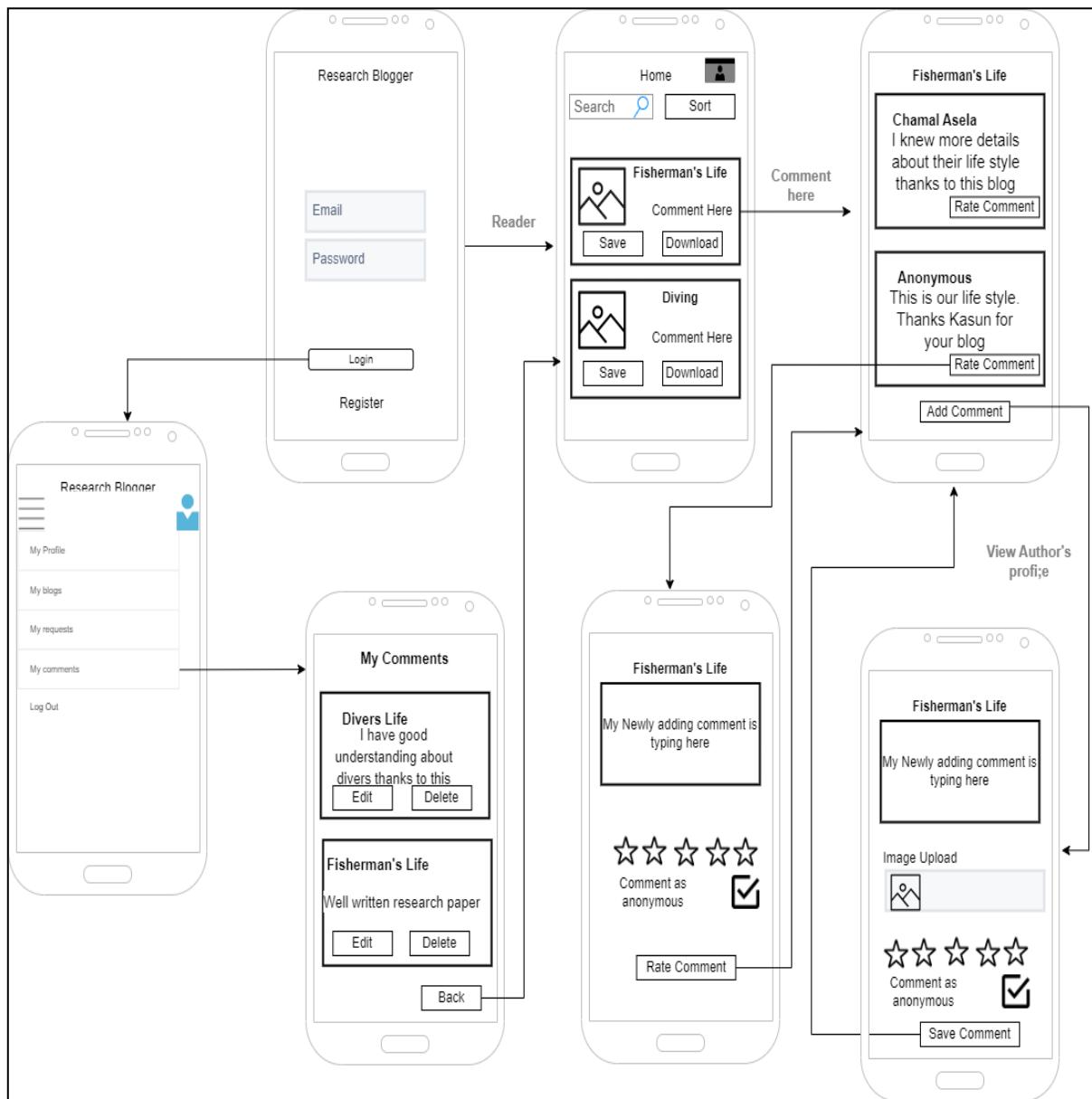
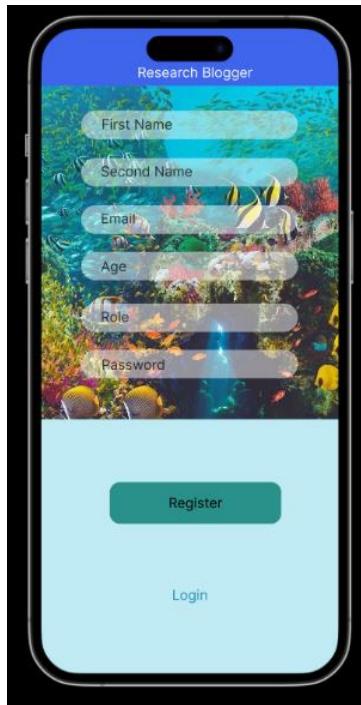


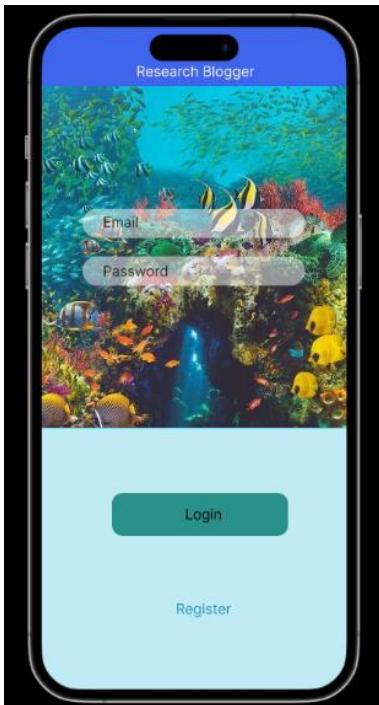
Figure 78 Wireframes on Add comment

10.2 UI Design

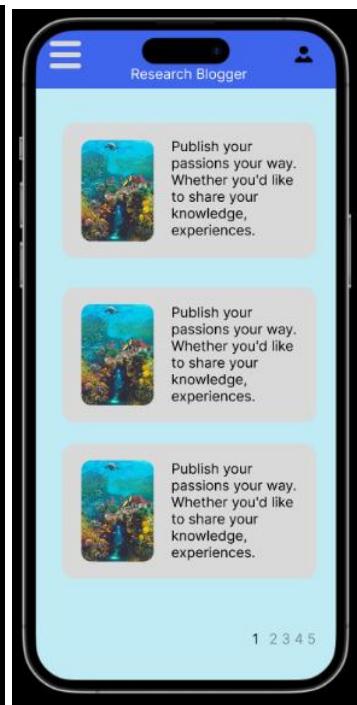
IT20281564 - M.T Sanju



Signup



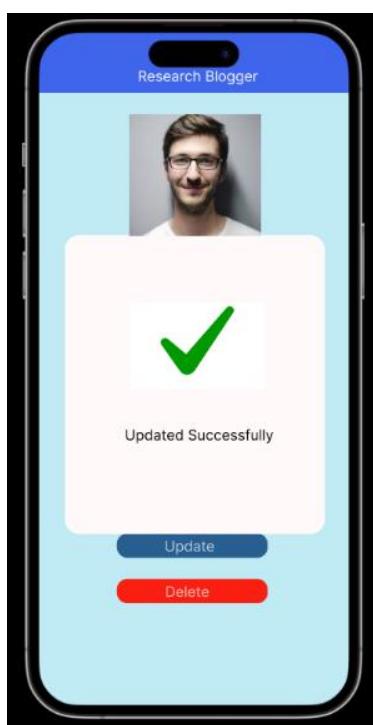
Login



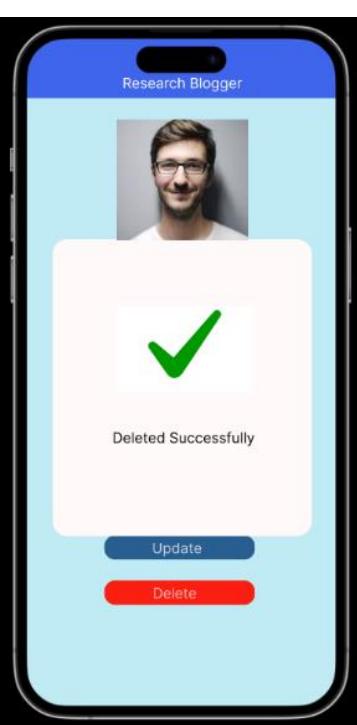
User Home



Update Profile



Popup on Update



Popup on Delete

Figure 79 UI Design on Profile Management

IT20039004 – Liyanage H.C

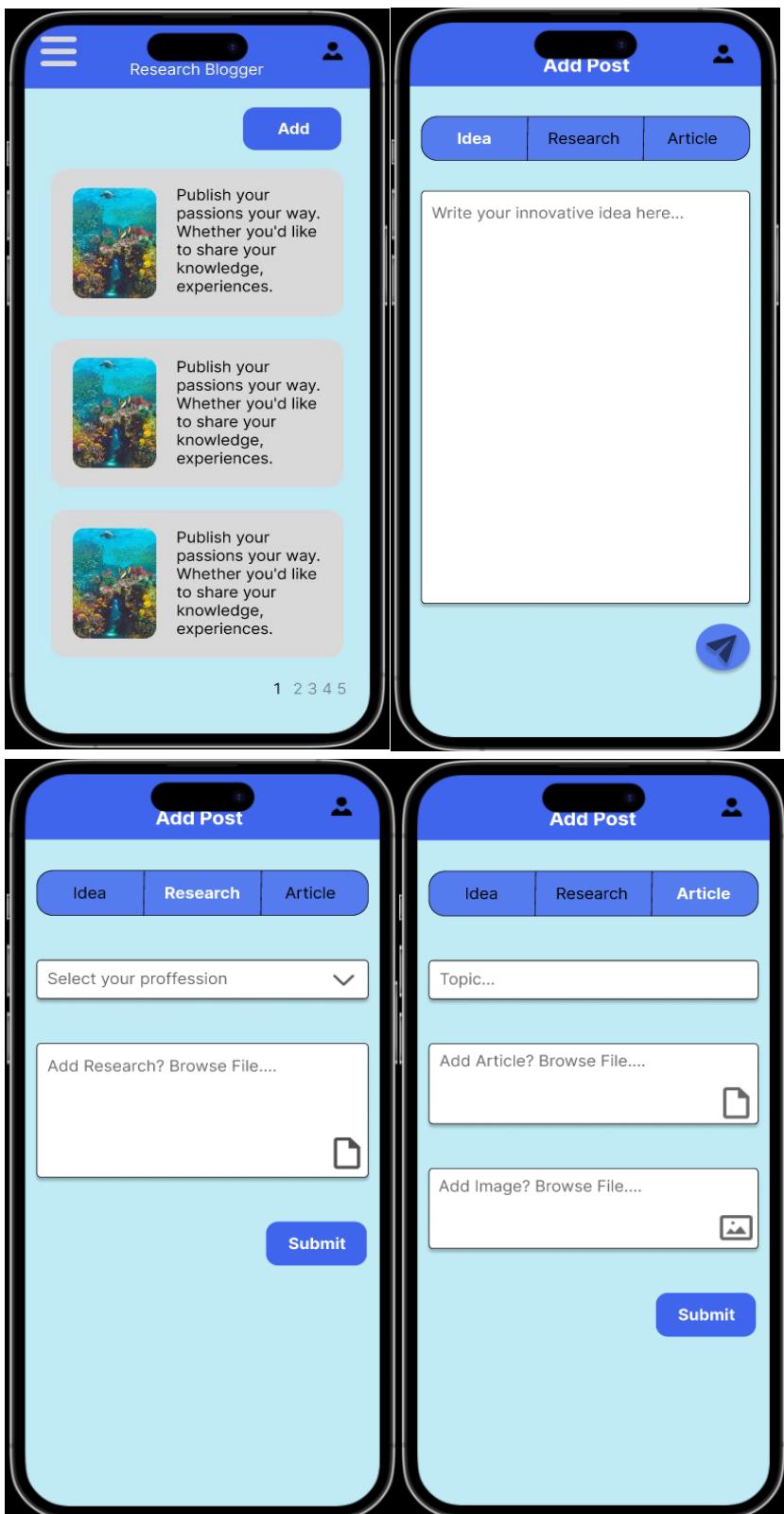


Figure 80 UI Designs on Add post

IT20047542 – W.M.K.K.B Walisundara

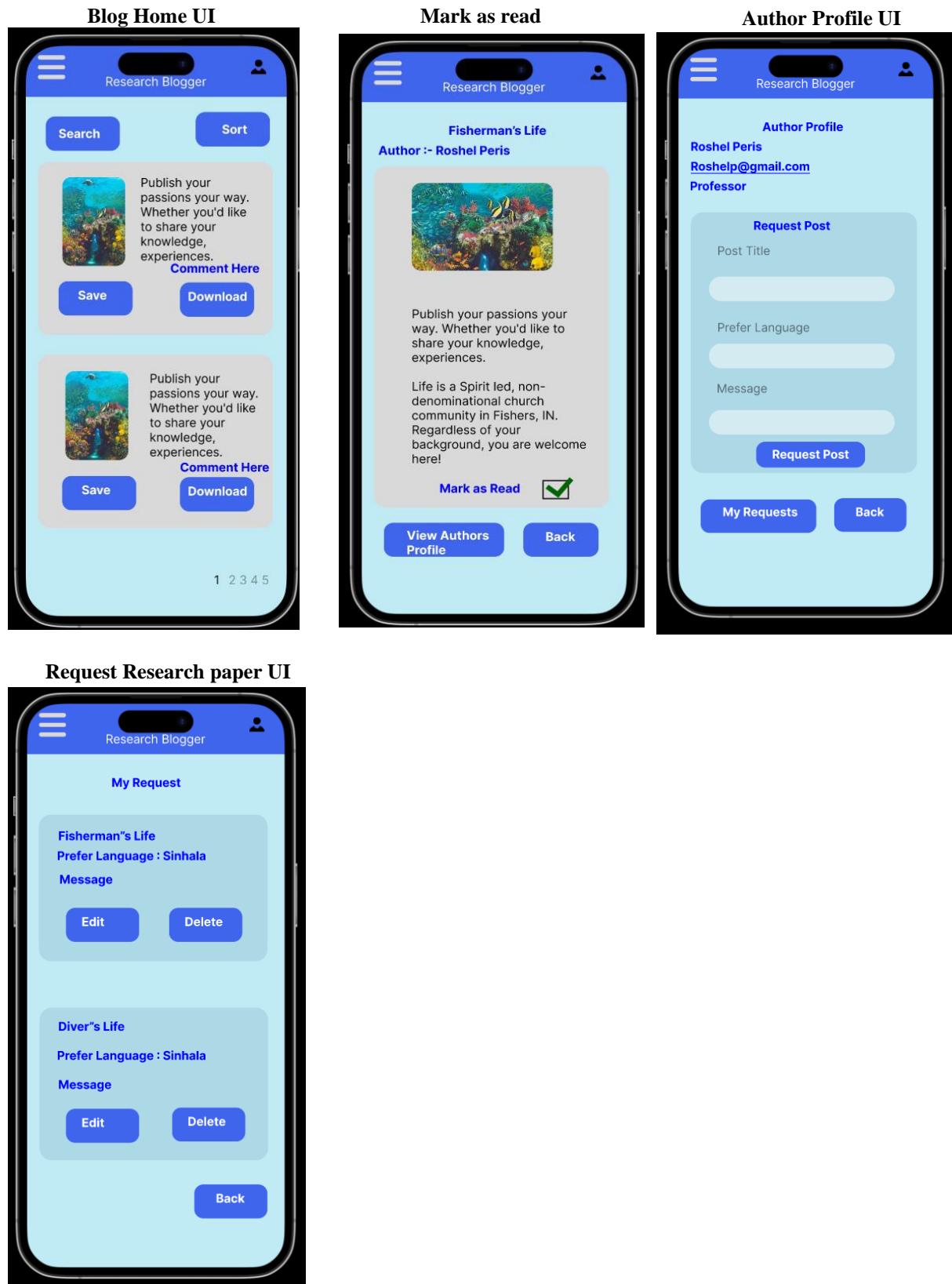


Figure 81 UI Designs on View Post

IT20206550 – Kandakkulama K.I.K.R.D.N

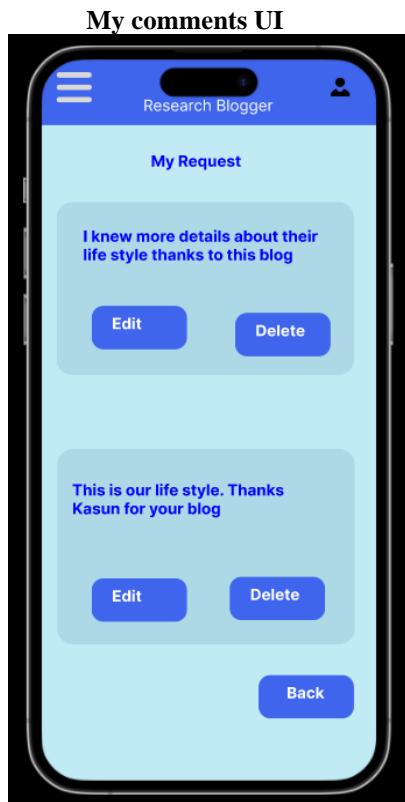
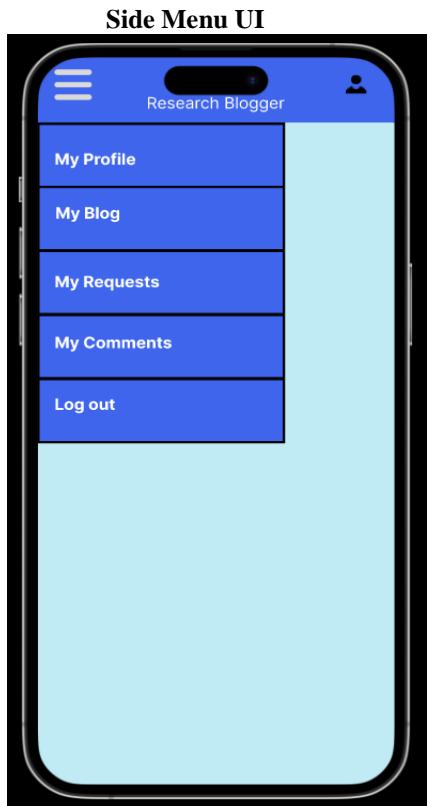
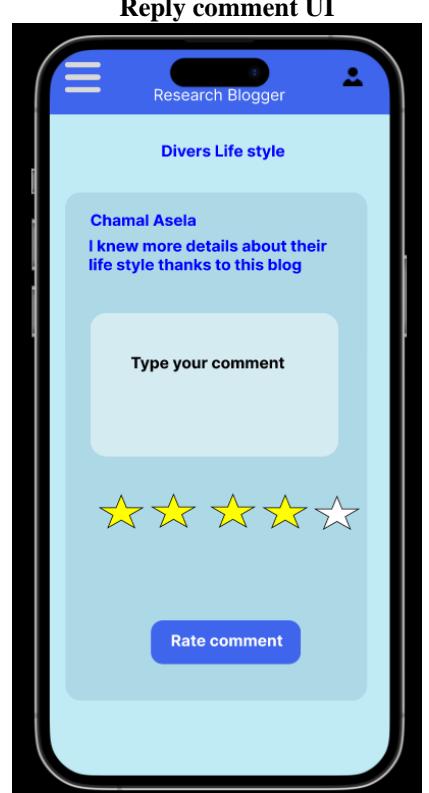
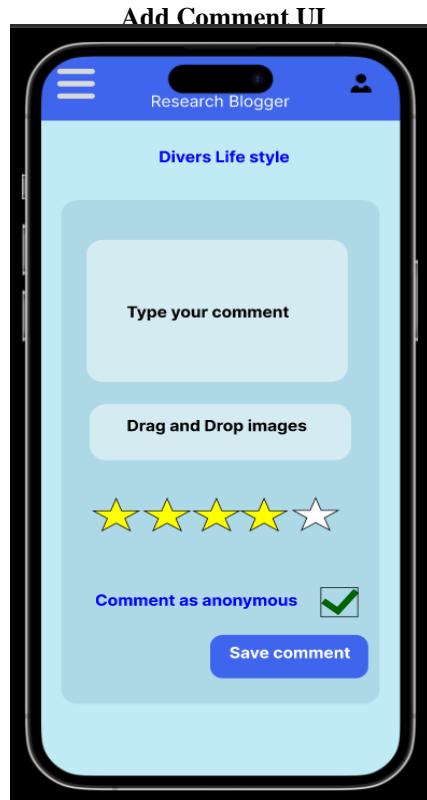
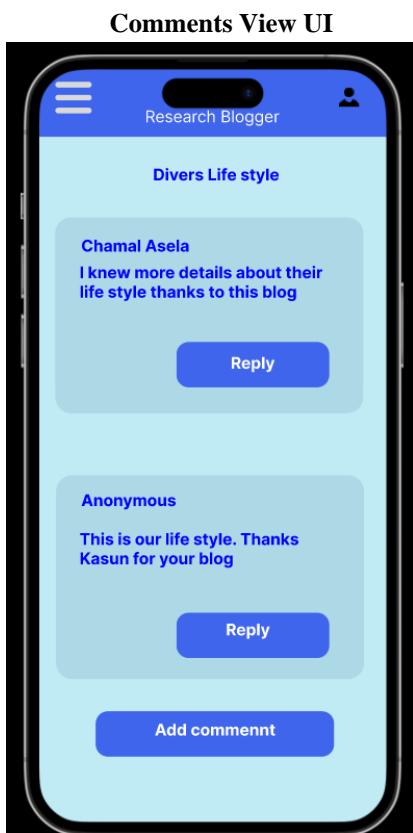


Figure 82 UI Designs on Add comment

10.3 High Fidelity Prototype

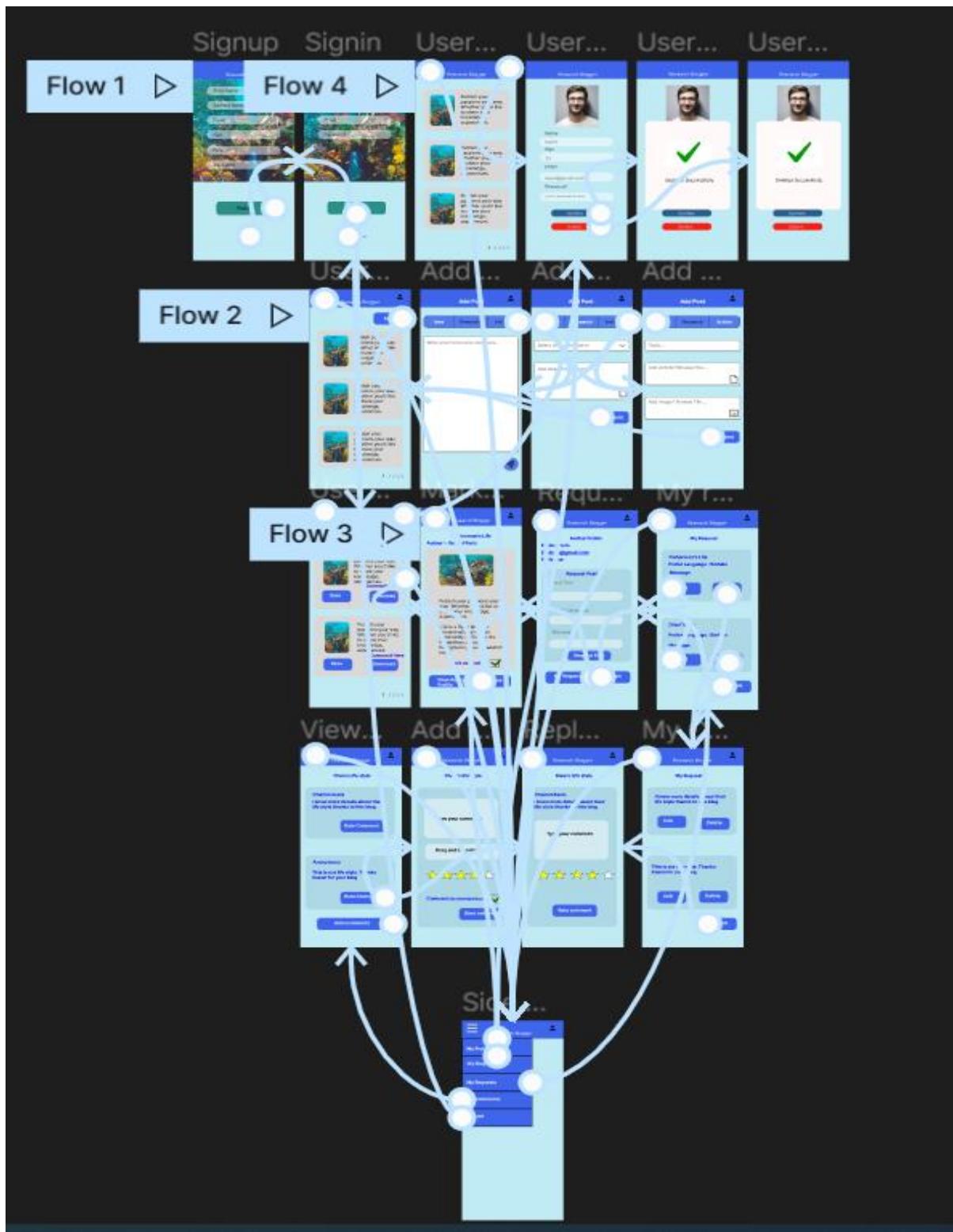


Figure 83 High Fidelity Prototype

10.4 User Feedbacks on UI.

Link - <https://forms.gle/r5zLrzBHENVGXRGY6>

Rating for the Sign up UI

12 responses

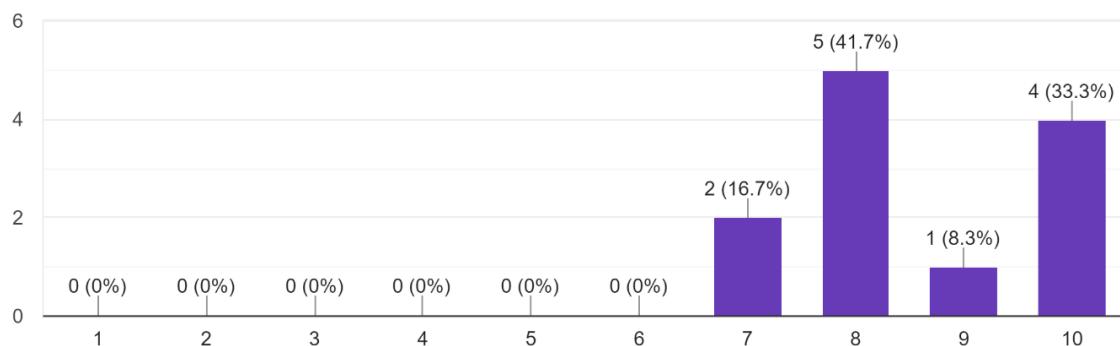


Figure 84 User Feedbacks on UI 1

Rating for the Login UI

12 responses

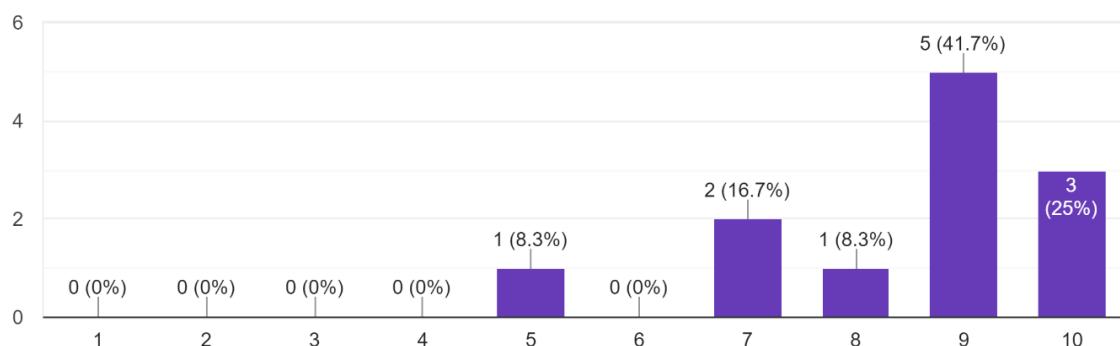


Figure 85 User Feedbacks on UI 2

Rating for the user profile UI

12 responses

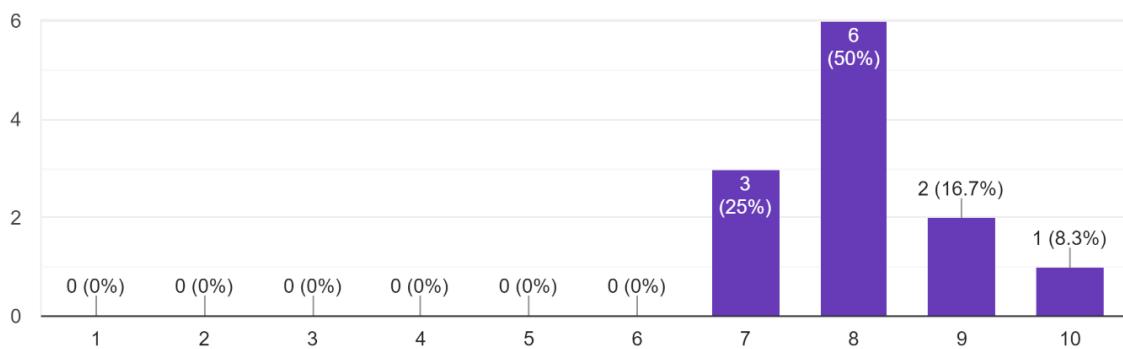


Figure 86 User Feedbacks on UI 3

Rating for the Updated Successfully Popup UI

12 responses

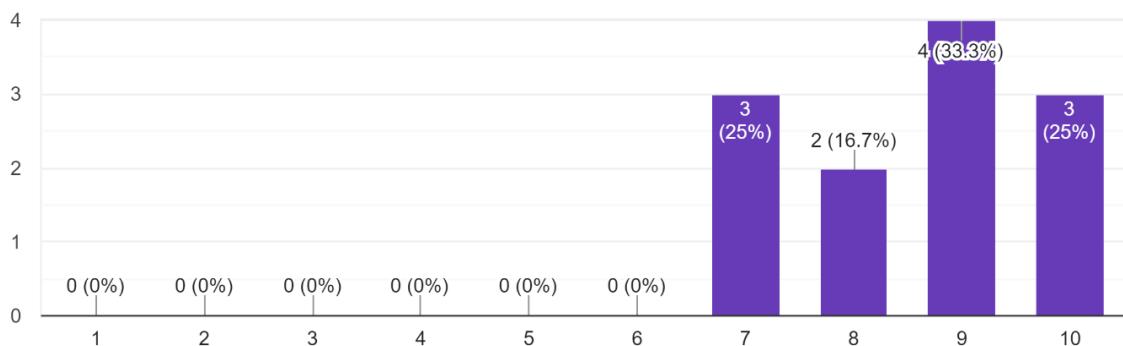


Figure 87 User Feedbacks on UI 4

Rating for the Add Research UI

12 responses

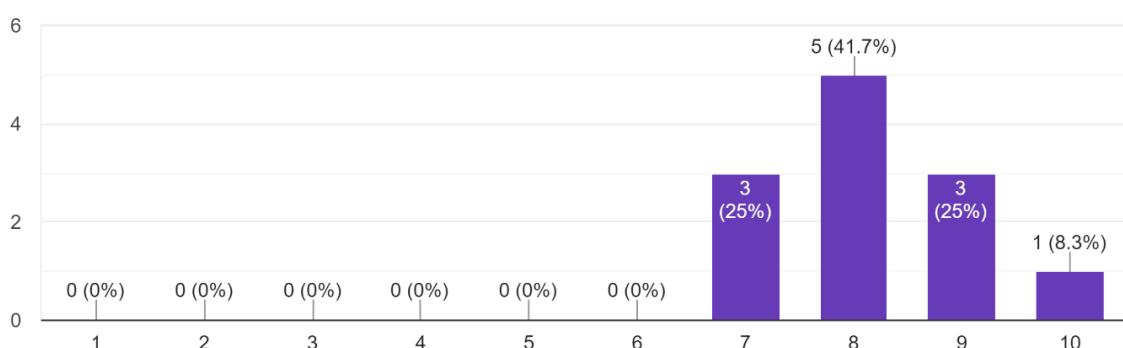


Figure 88 User Feedbacks on UI 5

Rating for the Add Idea UI

12 responses

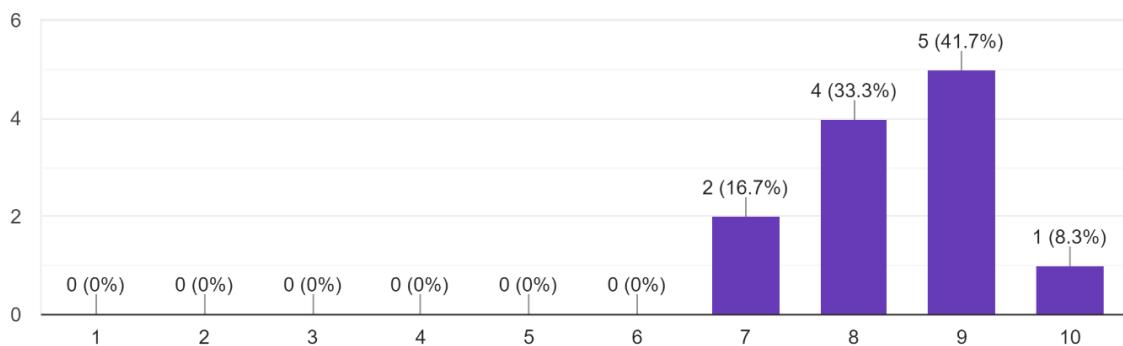


Figure 89 User Feedbacks on UI 6

Rating for the Add Article UI

12 responses

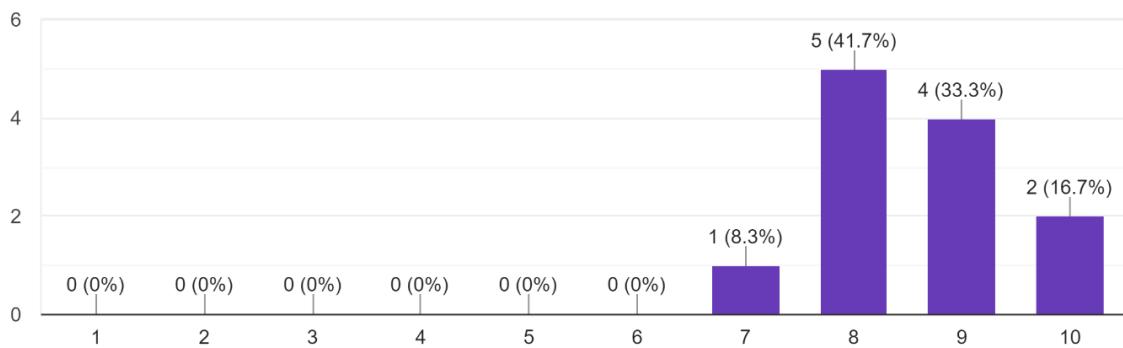


Figure 90 User Feedbacks on UI 7

Rating for the User Home UI

12 responses

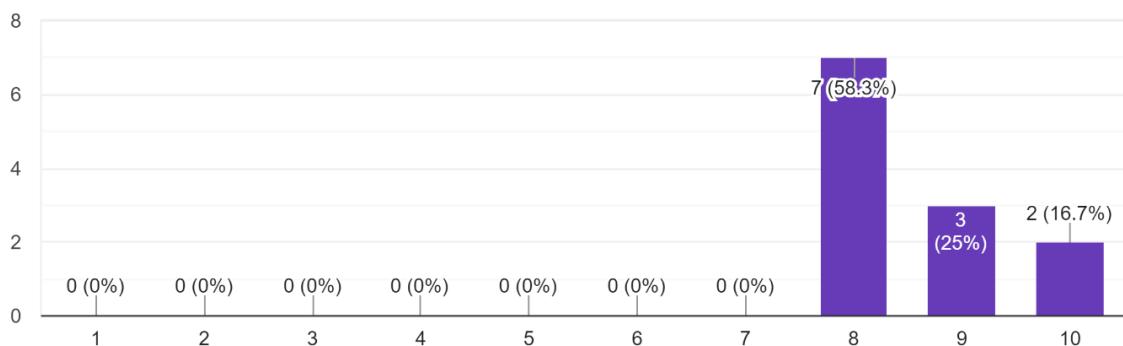


Figure 91 User Feedbacks on UI 8

Rating for the Post view UI

12 responses

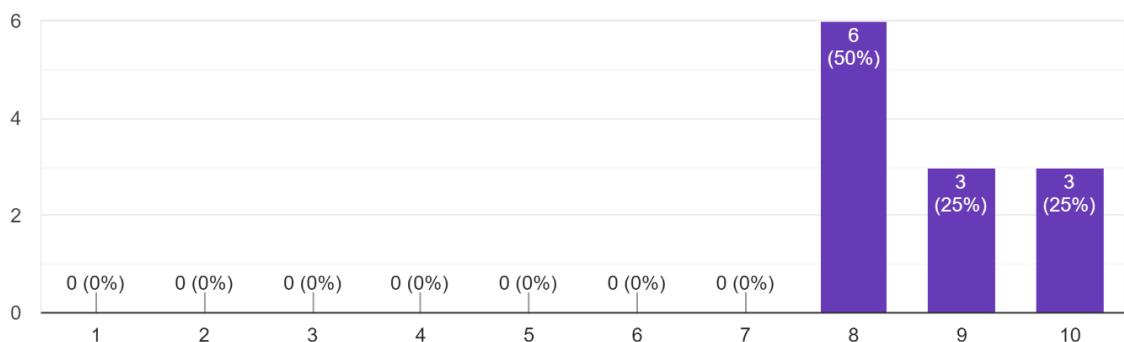


Figure 92 User Feedbacks on UI 9

Rating for the Request Language UI

12 responses

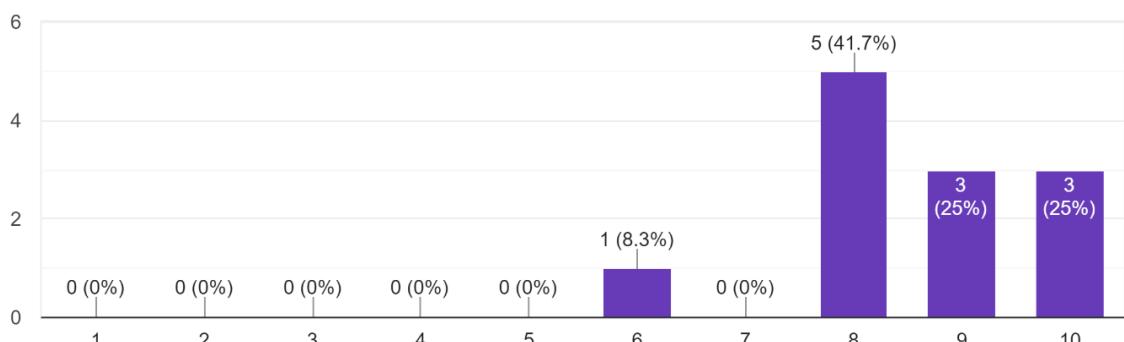


Figure 93 User Feedbacks on UI 10

Rating for the Comments UI

12 responses

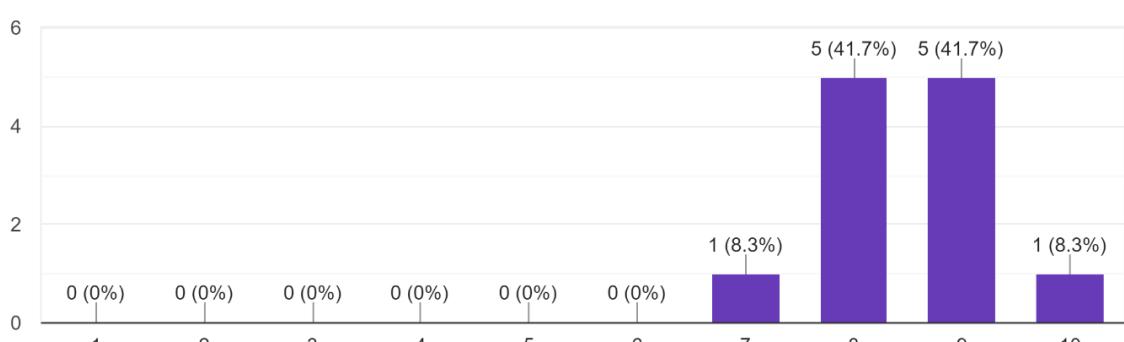


Figure 94 User Feedbacks on UI 11

Rating for the Star Rating UI

12 responses

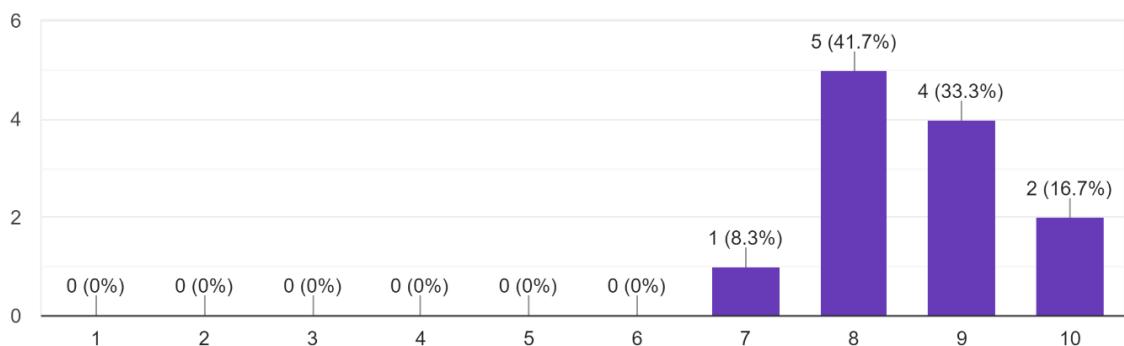


Figure 95 User Feedbacks on UI 12

Rating for the Rate Comment UI

12 responses

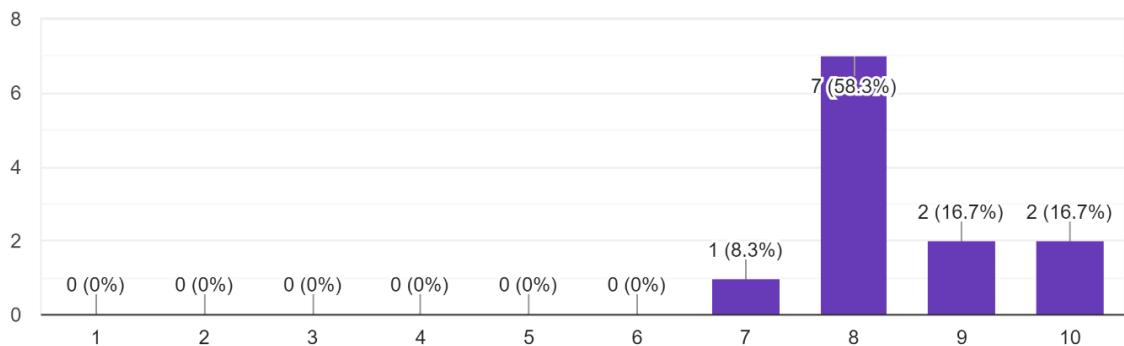


Figure 96 User Feedbacks on UI 13

Rating for the Drawer UI

12 responses

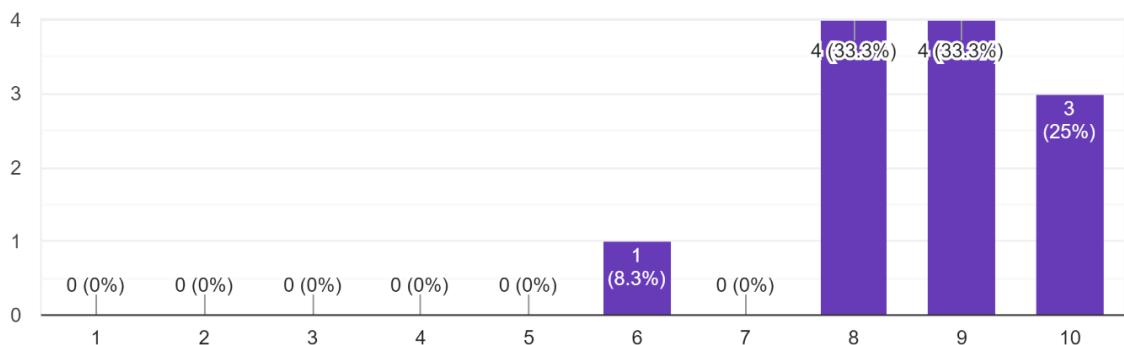


Figure 97 User Feedbacks on UI 14

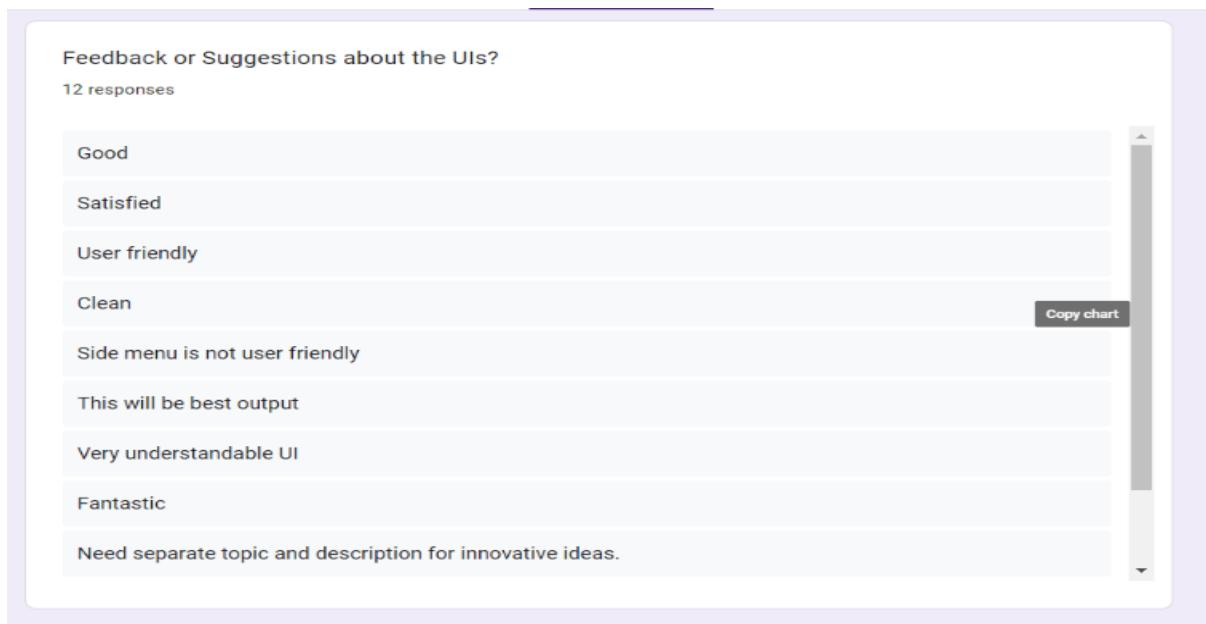


Figure 98 User Feedbacks on UIs

10.5 Updated UI according to feedback

Prototype Working Link –

<https://www.figma.com/file/MRMh9vzXuHbILwv6JqwrFP/UEE?node-id=1%3A2>

IT20281564

Updated UI

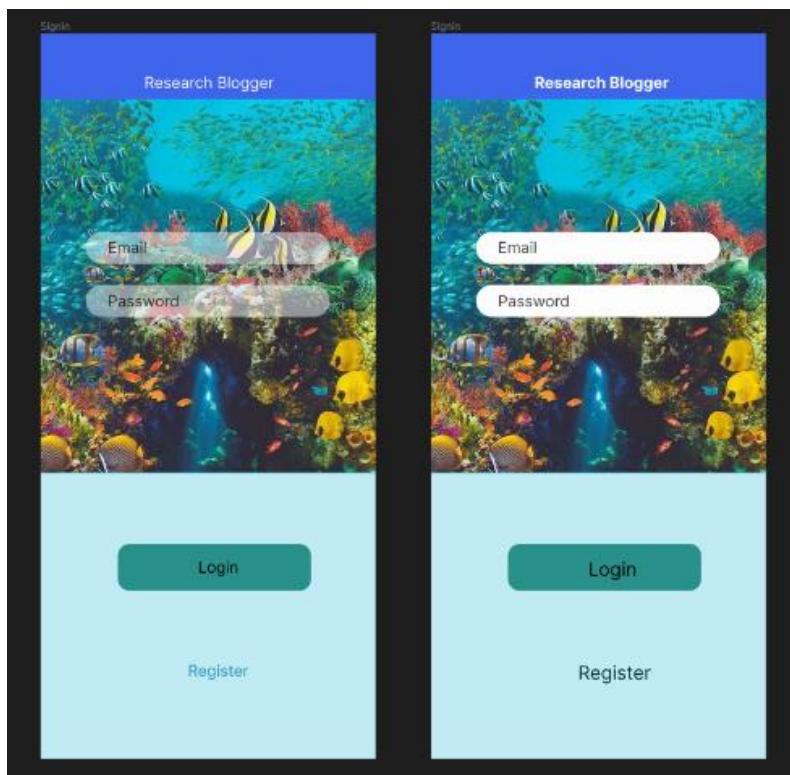


Figure 99 Profile Management Updated UI 1

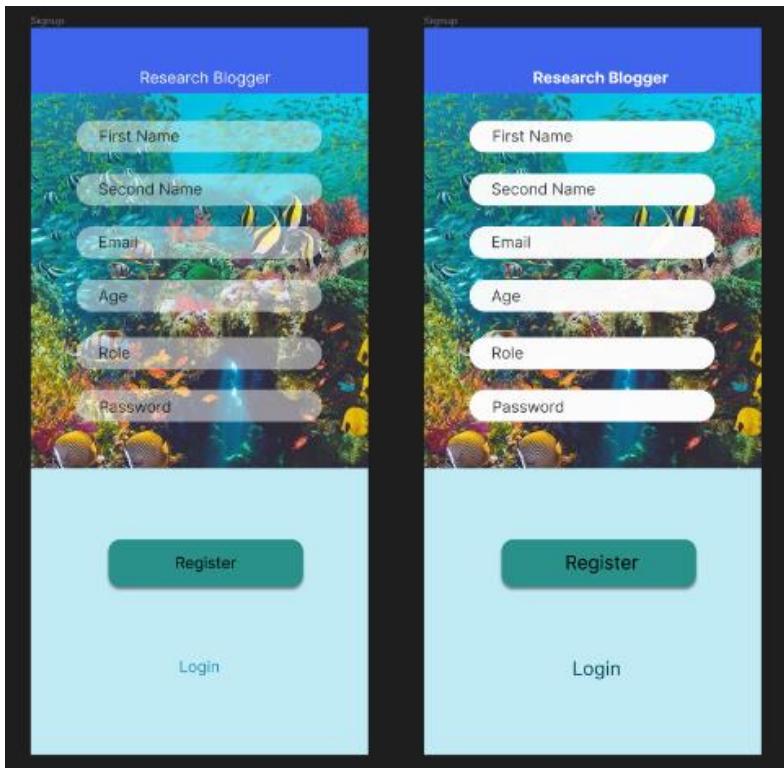


Figure 100 Profile Management Updated UI 2

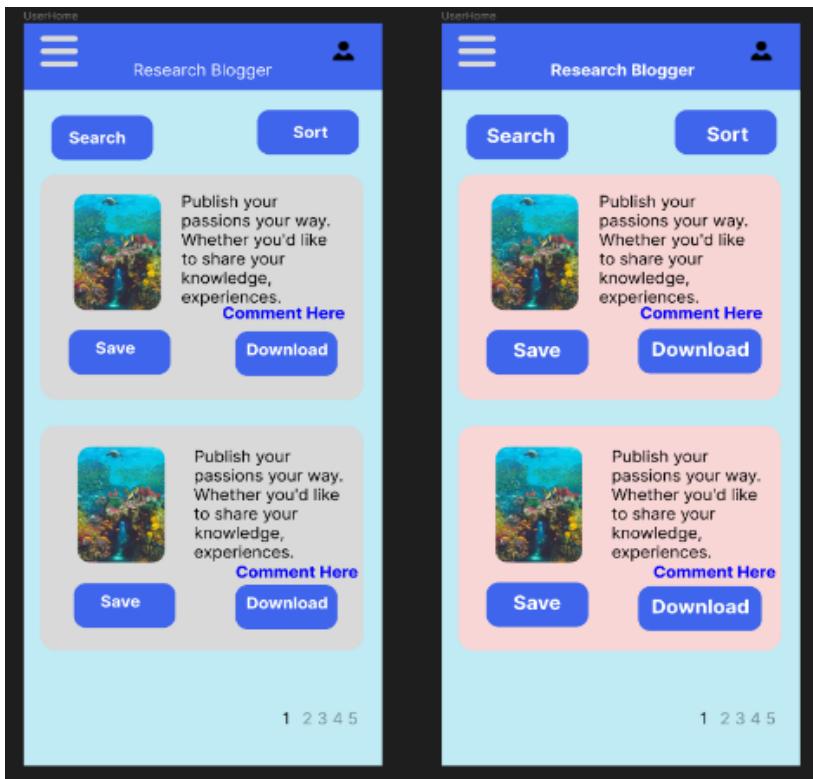


Figure 101 Profile Management Updated UI 2

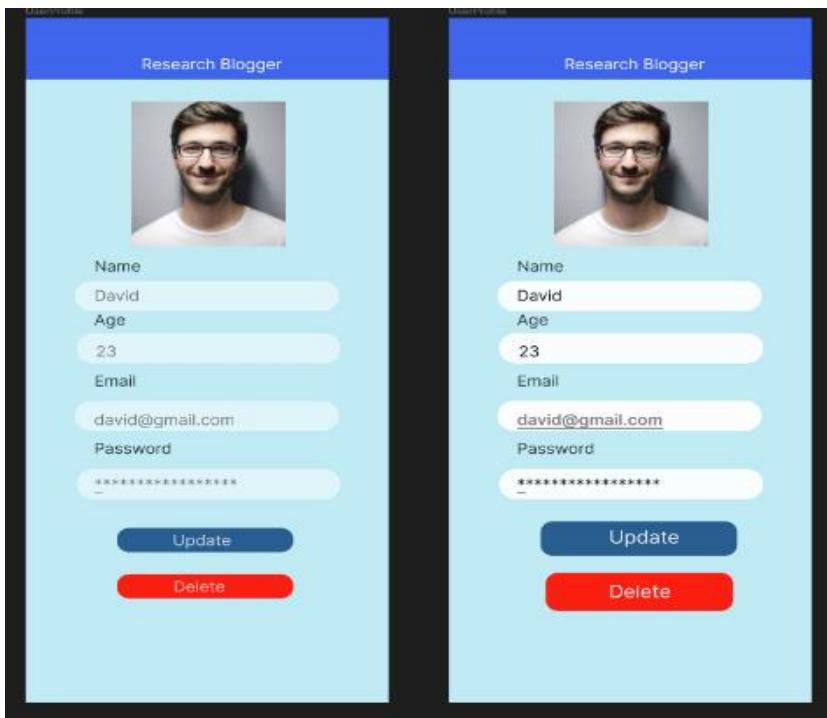


Figure 102 Profile Management Updated UI 3

Feedback Video Link:

[Milestone5_UserFeedbackVideos](#)

User Flow Prototype Link :

<https://www.figma.com/proto/MRMh9vzXuHbILwv6JqwrFP/UEE?node-id=1%3A2&scaling=scale-down&page-id=0%3A1&starting-point-node-id=1%3A2&show Proto-sidebar=1>

IT20039004

Updated UI

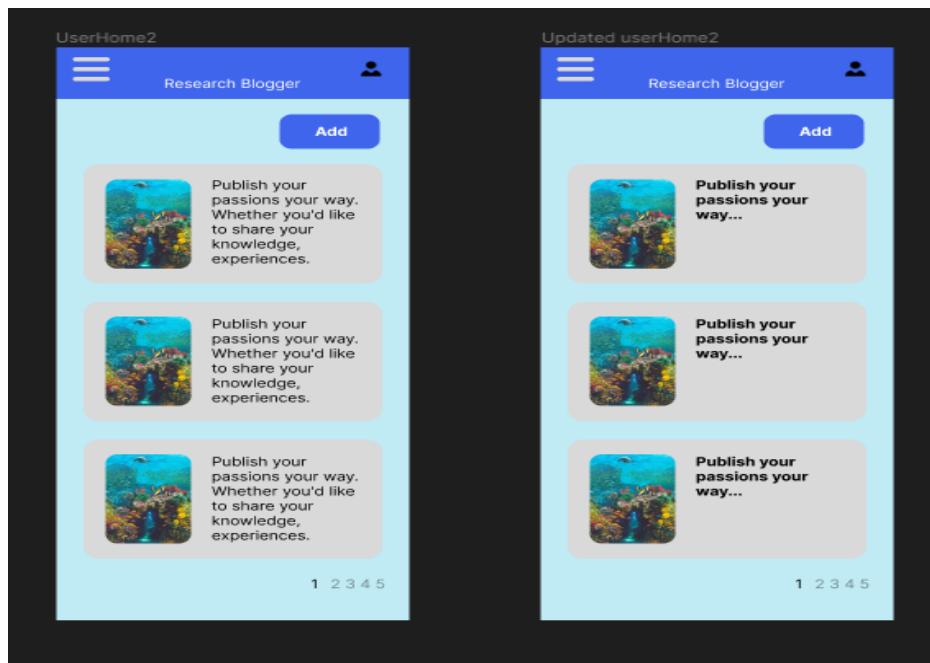


Figure 103 Add Post Updated UI 1

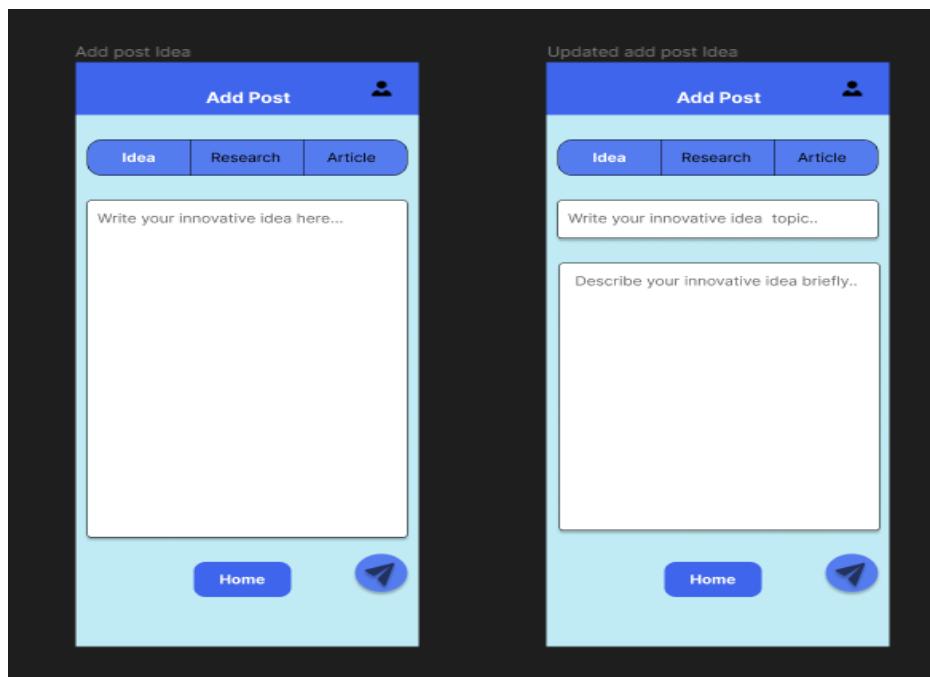


Figure 104 Add Post Updated UI 2

Feedback Video Link [Milestone5_UserFeedbackVideos](#)

User Flow Prototype Link :-

<https://www.figma.com/proto/MRMh9vzXuHbILwv6JqwrFP/UEE?node-id=21%3A119&scaling=scale-down&page-id=0%3A1&starting-point-node-id=21%3A119&show-proto-sidebar=1>

IT20047542

Updated UI

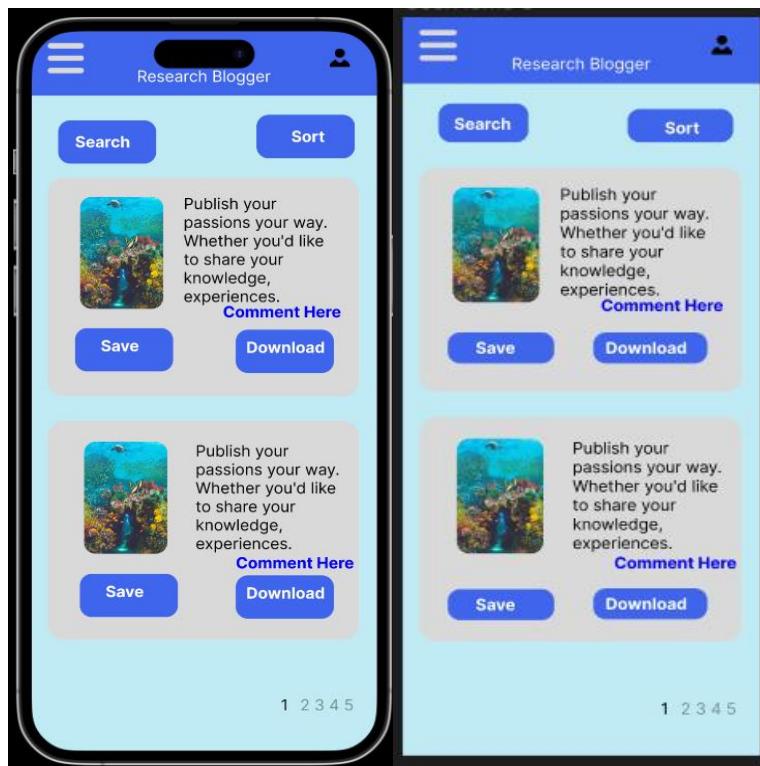


Figure 105 View Post Updated UI 1

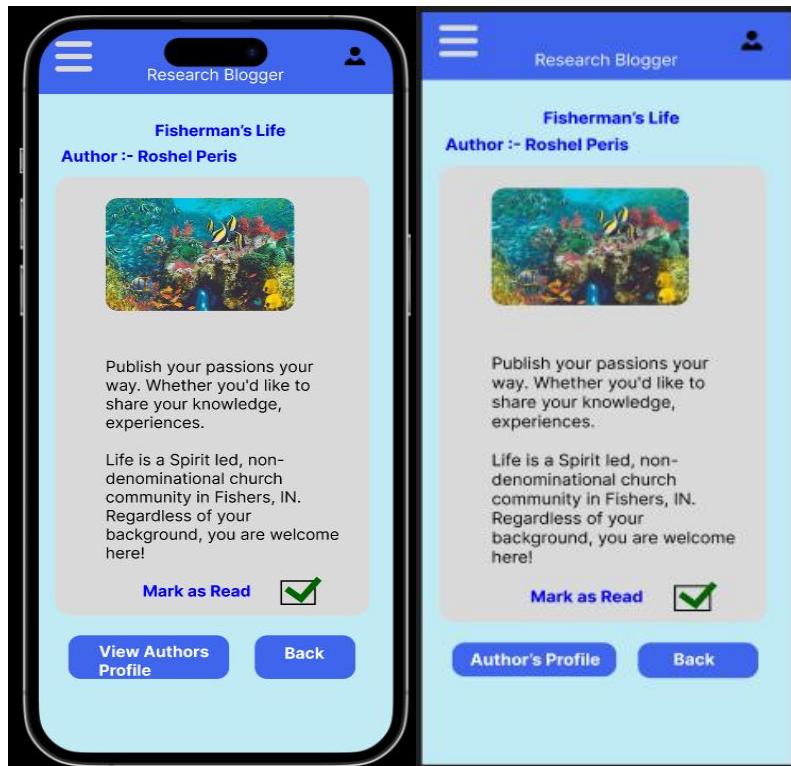


Figure 106 View Post Updated UI 2

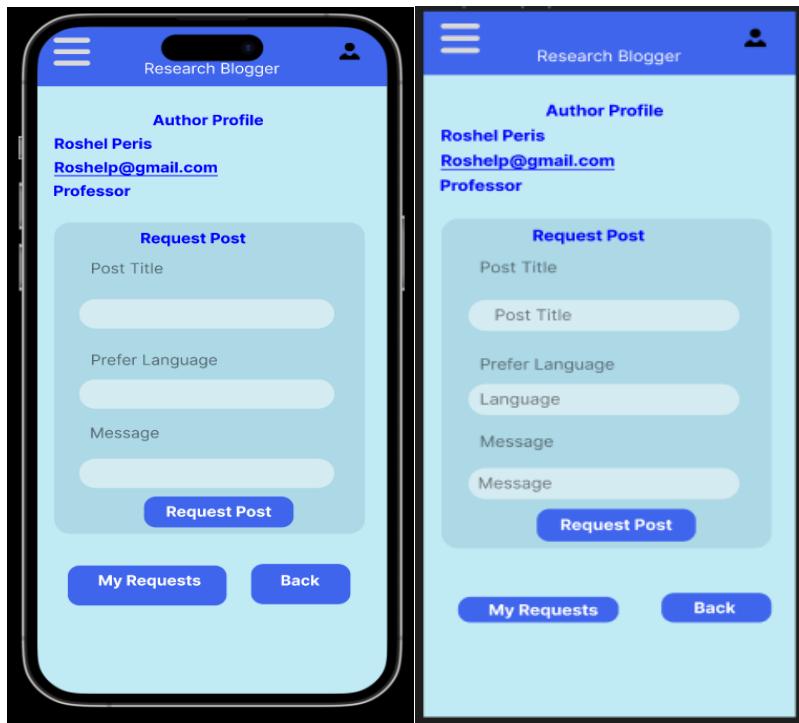


Figure 107 View Post Updated UI 3

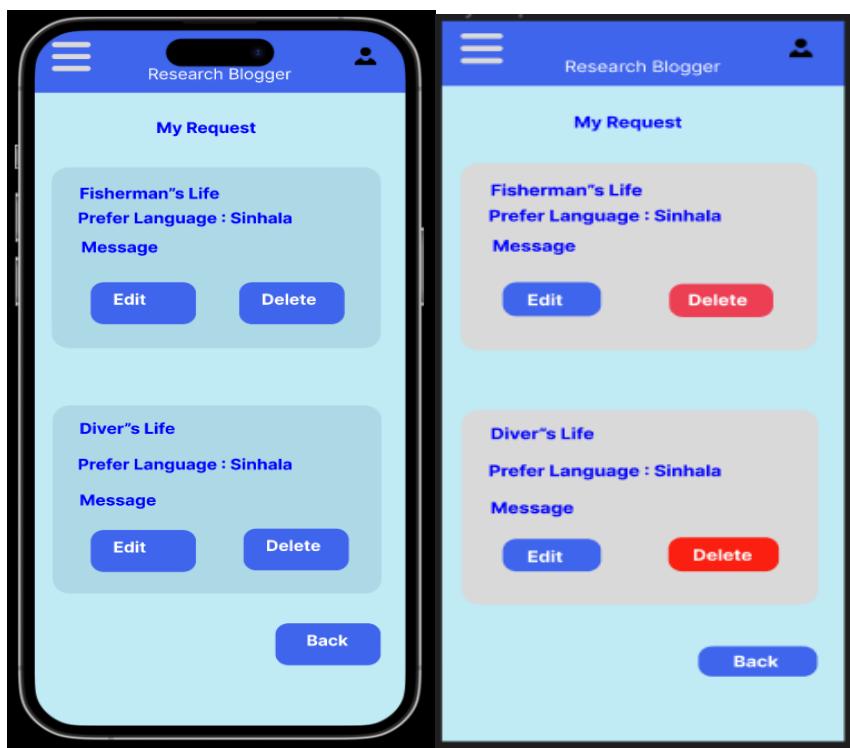


Figure 108 View Post Updated UI 4

Feedback Video Link [Milestone5_UserFeedbackVideos](#)

User Flow Prototype Link:-

<https://www.figma.com/proto/MRMh9vzXuHbILwv6JqwrFP/UEE?node-id=82%3A9&scaling=scale-down&page-id=0%3A1&starting-point-node-id=82%3A9&showproto-sidebar=1>

IT20206550

Updated UI

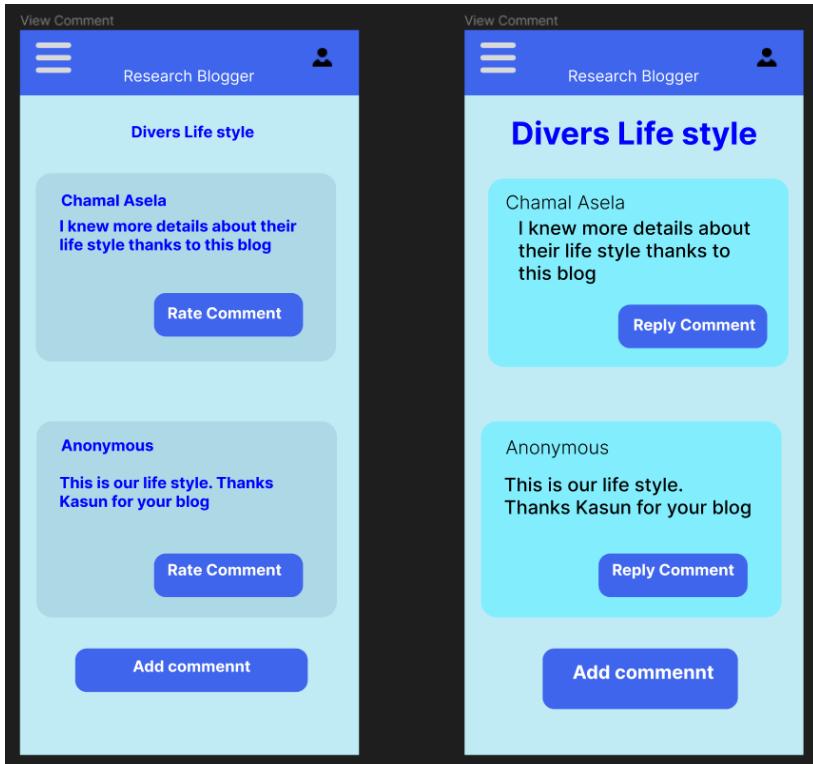


Figure 109 Add Comment Updated UI 1

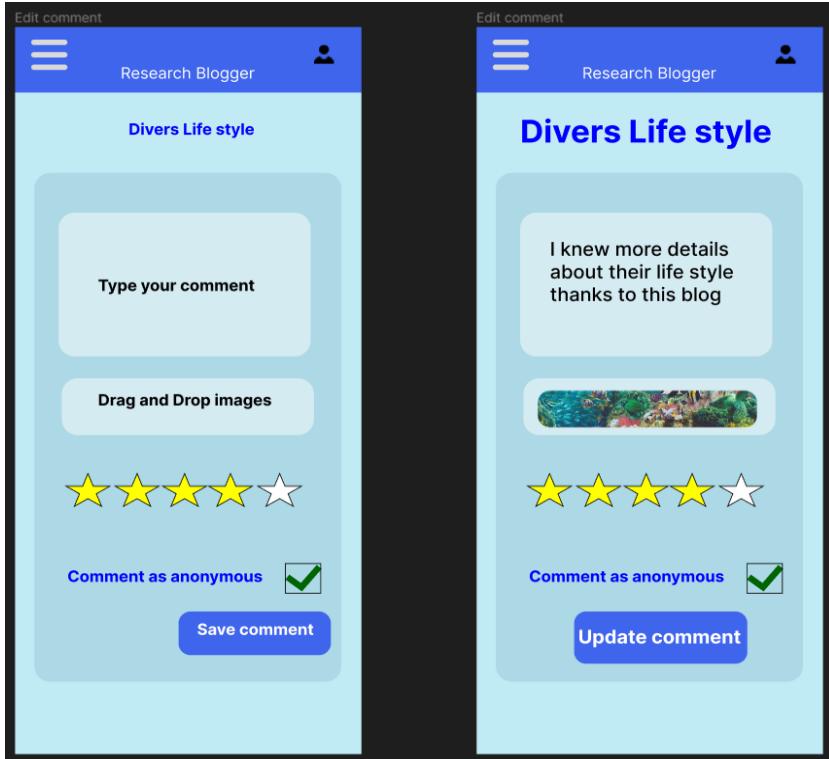


Figure 110 Add Comment Updated UI 2

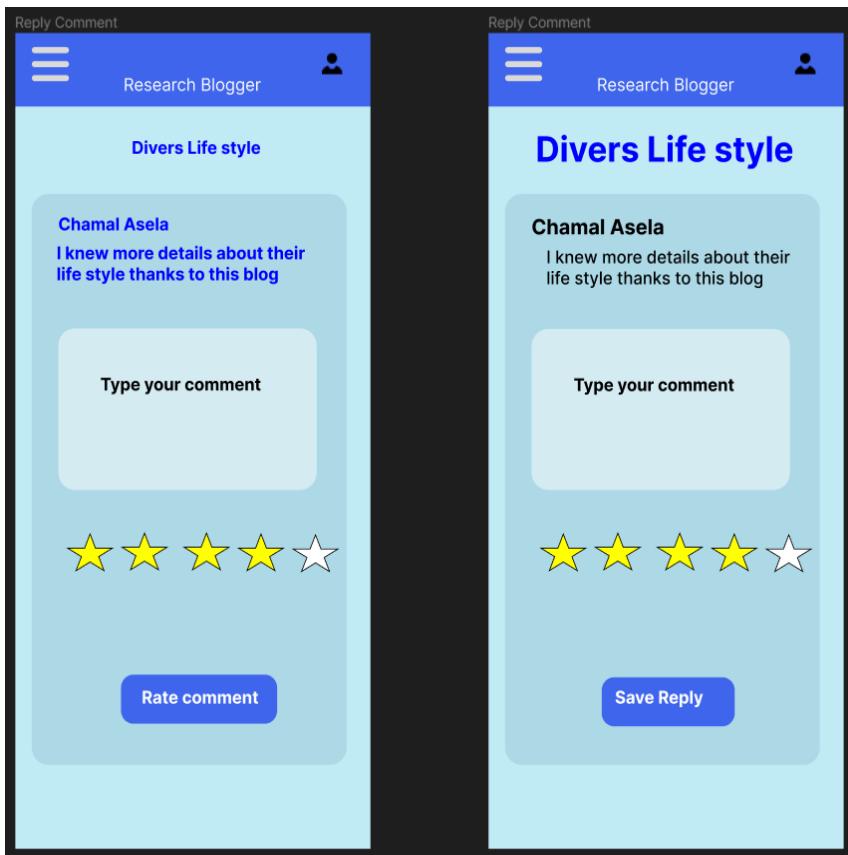


Figure 111 Add Comment Updated UI 3

Feedback Video Link: [Milestone5_UserFeedbackVideos](#)

User Flow Prototype Link:

<https://www.figma.com/proto/MRMh9vzXuHbILwv6JqwrFP/UEE?node-id=81%3A183&scaling=scale-down&page-id=0%3A1&starting-point-node-id=81%3A183&show Proto-sidebar=1>

11 Milestone 6: User Feedback for your Prototype

Feedback Video Link [Milestone5_UserFeedbackVideos](#)

IT20181564

I had an interview with Ms Tharushi Navarathne. She provides her feedback on login signup and user profile management UIs. Comparison displays of designed UIs in section 10.5(page 53). Above mention link provide access to the interview recording.

IT20039004

I had an interview with Thisun Silva. He provides his feedback on post idea user interface and updated the idea user interface. Comparison displays of designed UIs in section 10.5(page 53). Above mention link provide access to the interview recording.

IT20047542

IT20206550

I had an interview with Malshi. And she gave some feedback on our designs UI. Then we updated them again and display a comparison with previous designed UIs in 10.5(page 54) section. Above mention link has the interview recording.

12 Milestone 7: Implementation

GitHub Link - https://github.com/SLIIT-FacultyOfComputing/final-project-uee_fp_ser026_team_alpha

We Used GitHub to communicate our code through the team members.

A screenshot of a GitHub repository page showing the commit history for 'Milestone 06'. The commits are listed in reverse chronological order, all made by 'ThushanthaSanju' 4 days ago. The commits include: Merge branch 'main' into IT20281564/M.T.Sanju; android, assets/images, ios, lib, test, .gitignore, .metadata, README.md, Readme, analysis_options.yaml, pubspec.lock, pubspec.yaml. Most commits are labeled 'SignUp/SignIn/Profile'.

Figure 112 GitHub Commits

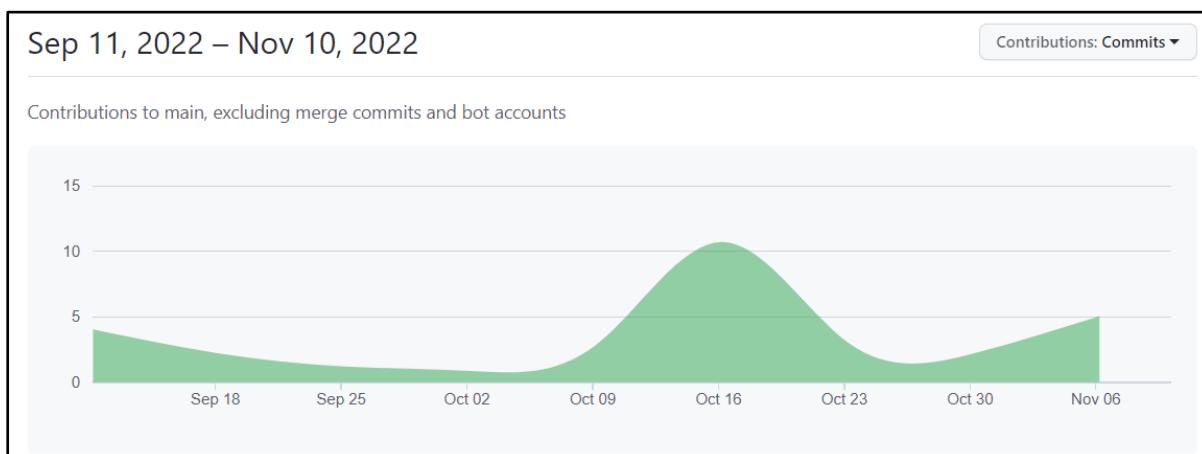


Figure 113 GitHub Contribution table

Here is the final output of our application.

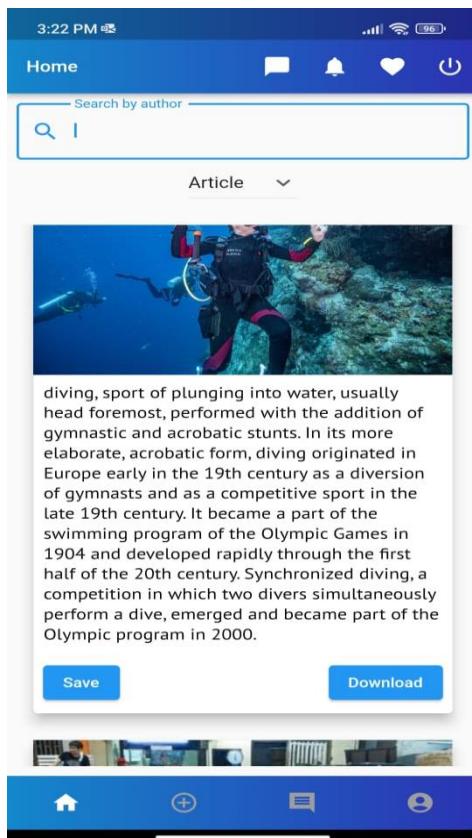


Figure 115 Application UI 1

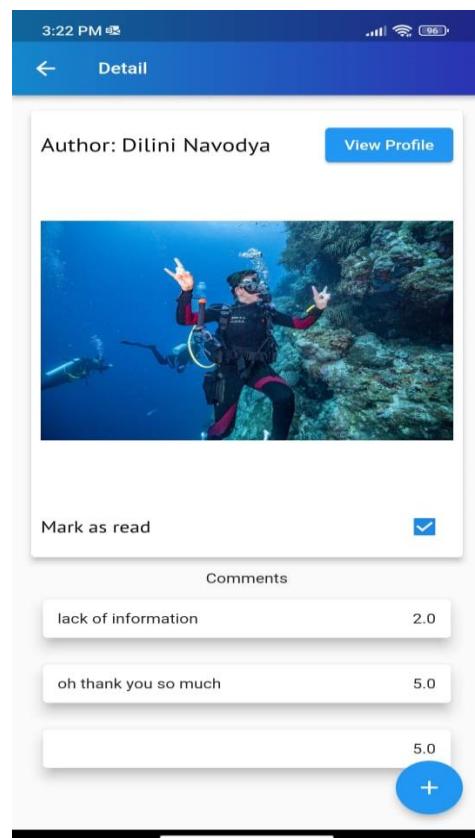


Figure 114 Application UI 2

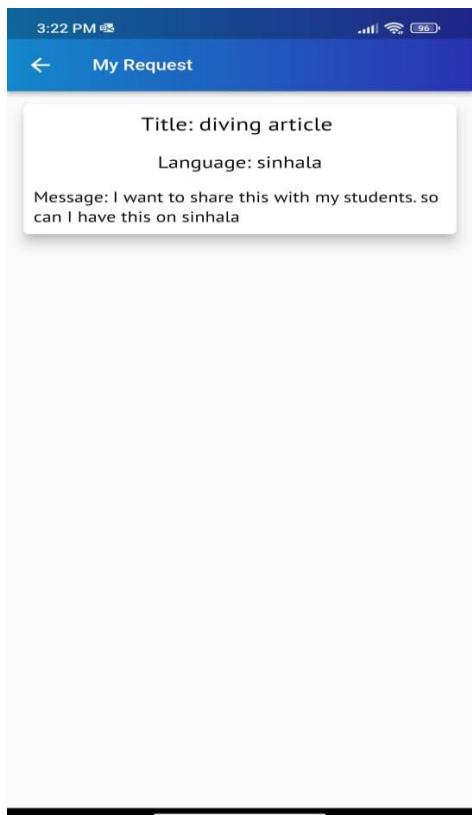


Figure 117 Application UI 3

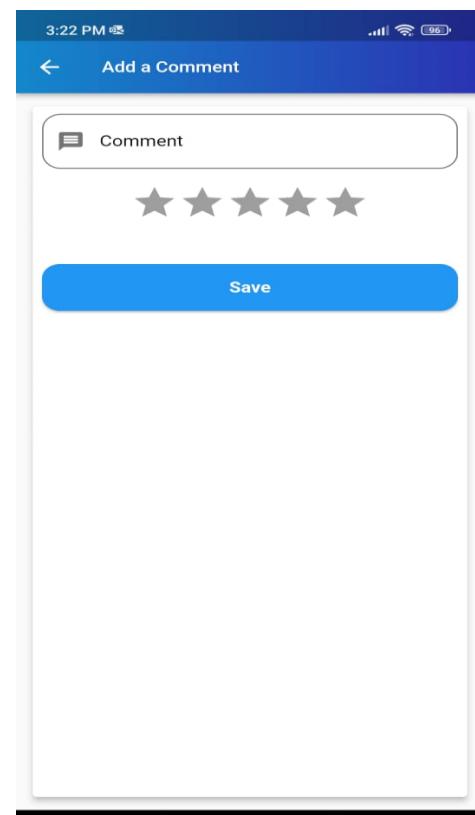


Figure 116 Application UI 4

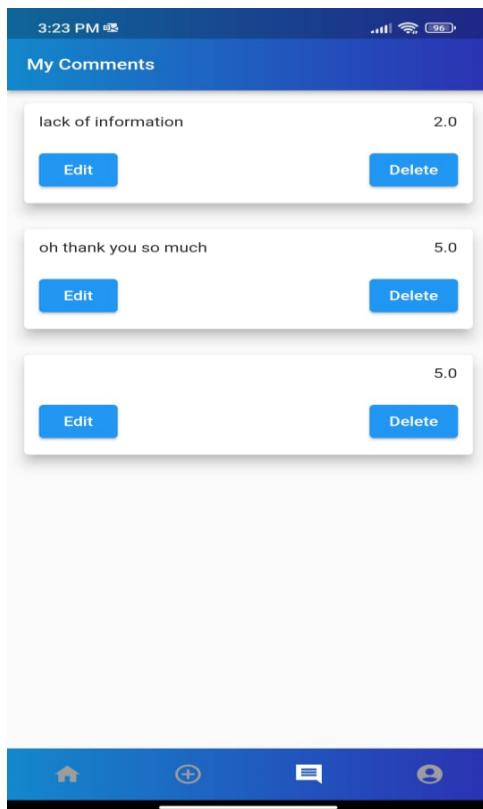


Figure 119 Application UI 5

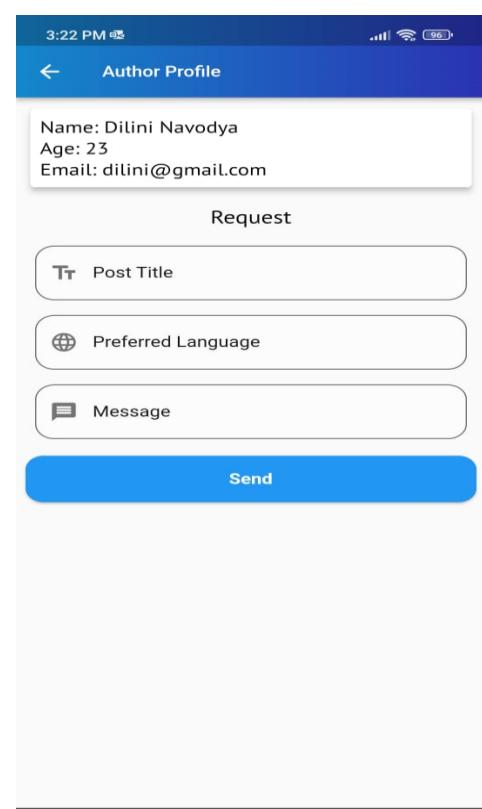


Figure 118 Application UI 6

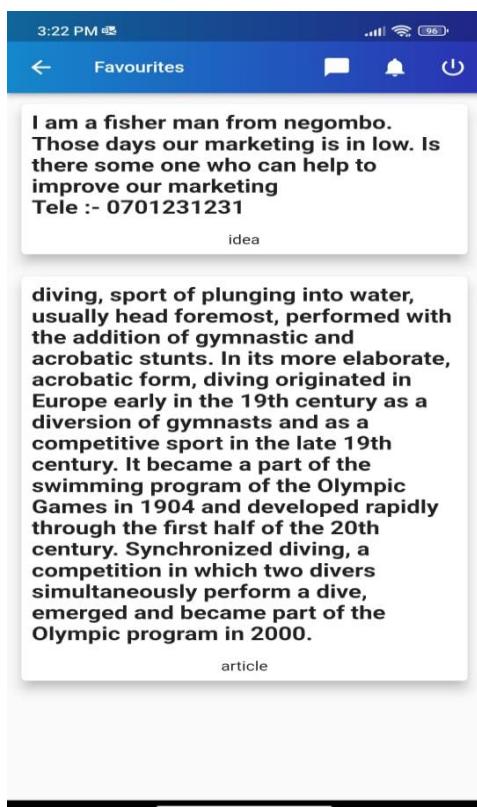


Figure 121 Application UI 7

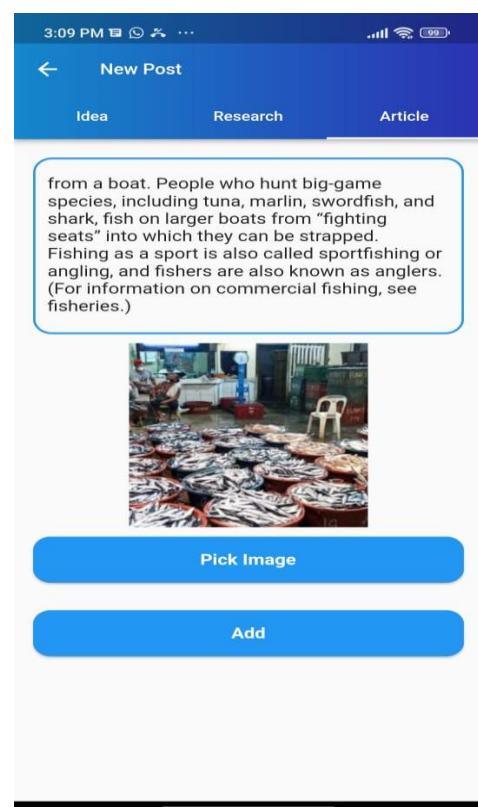


Figure 120 Application UI 8

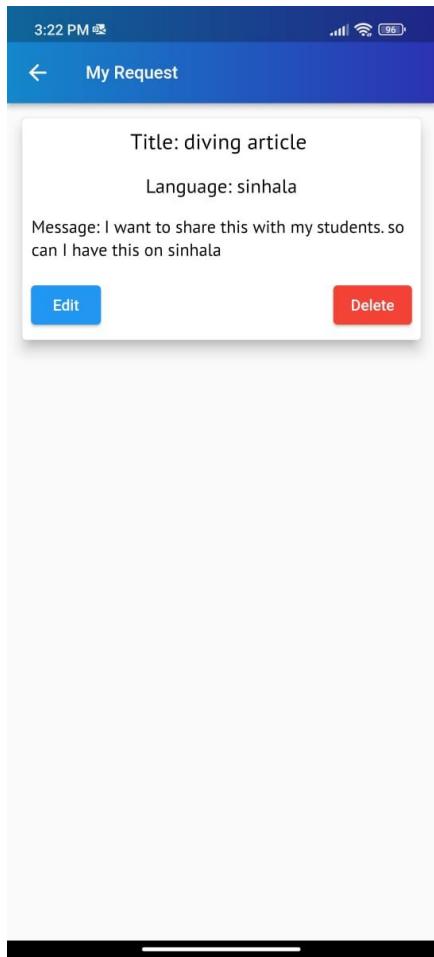


Figure 122 Application UI 9

13 Requirement Specification

13.1 Usability Goals

To present the questions of the people who live in the oceans and seas to those who can provide answers and give answers to people with questions.

13.2 User Experience Goals

Person experience describes how a user feels while utilizing a certain application. It is a general term that can refer to anything, including how easily a user can navigate a product, how simple it is to use, how pertinent the shown content is, etc.

13.3 Functional Requirements

Sign up to the application

Users should register in the system before the log in to the system. We provide signup page to register in the system for users.

Sign in to the application

After Registering process user can log into application using valid login credentials.

Create posts

User can create posts to view others and according to content of the post user can categorize and post them.

View posts

Users can view posts submitted by other users.

Save/ Download posts

Users can save and download posts to different purposes.

Comment on posts

Users can comment on posts about their ideas, problems and suggestions on posts.

Sort/Search Posts

User can sort and search posts for different purposes.

Add star rating

Users can add star rates according to their preference.

View Post owner's details

View user's requests

Create/edit/delete user's requests

Users can request post using other language using this function.

13.4 Non-Functional Requirements

Quality Control

The accountability is assured when it comes to managing user data through systems, and it is quite commendable.

Anyone with a rudimentary understanding of technology can use the application because of its user-friendly design and simple functionalities.

The application is accessible to all users around-the-clock.

There are no issues with any of the functionalities; they all operate flawlessly.

At the same time, multiple users can access the online application.

Security

For security reasons, unregistered users must go through a verified registration process.

There is no significant security breech when registered users sign in using their entered credentials.

Safety

Data redundancy won't happen because each user has a distinct identifier.

The system will check to see if any usernames and passwords are repeated.

Performance

The application won't endanger any machines because it is open source and platform agnostic.

Time Saver

Each interface has a quick response time and processing time.

Because its primary goal is time savings, this application will not permit users to wait in lines.

14 Design Principles

As design principles for research blogger application our team use many design principles improve the user experience so the users can gain optimum feeling of using the application.

Put user's requirement first.

Make the navigation intuitive and user friendly.

Focused on user goals to give them optimum experience.

Allowed users to do personalization.

Made user interface easier.

Allow users to "go back" in single step.

Display the search field prominently.

Provide filter and sorting options.

Permit users to read reviews.

Provide a clear utility before requesting registration from users.

Good onboarding practices.

15 Project Management

Describe the evaluation of your overall design process.

15.1 Meetings

We conducted meetings with our group members and the users using the Microsoft Teams platform.

With our group members we had 2 meetings per week. With the users we had two meetings to collect the requirements and to get the feedback of the UIs we created.

15.2 Risk Management

Risk management is the process of identifying, assessing and controlling threats of the application. The main risk we identified when we building the application is the information technology literacy of the people who are using the application. Because the target users of this application are not educated. Their livelihood is based on the activities related to the oceans and seas.

So, the solution to this problem is multi language support, the user experience and user interface. So, we implemented the UIs following the UI and UX principles. So that we can diversify the risk.

15.3 Milestones

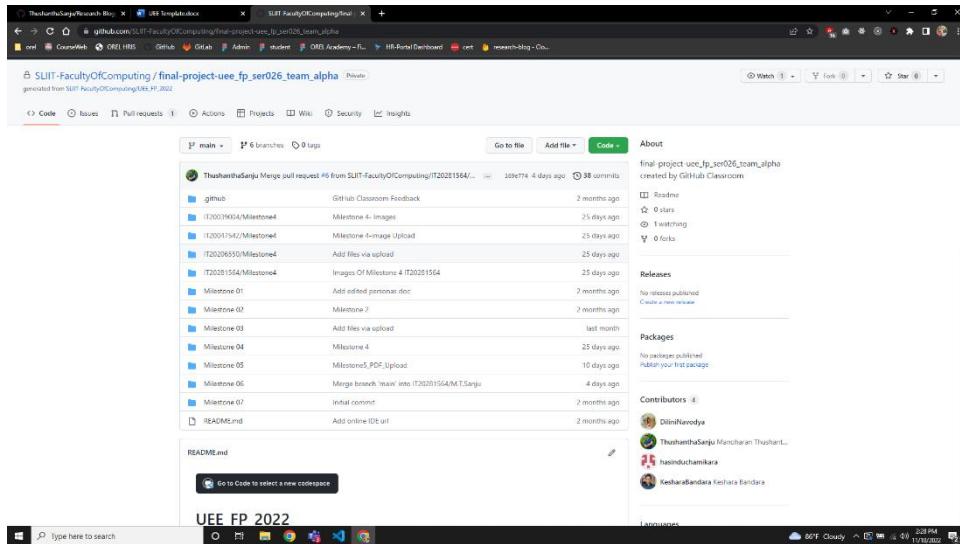


Figure 123 Milestones

15.4 Problems Encountered

When we start to implement the development phase. We encountered a main problem that is selecting the technology stack. There are so many technologies available in the market. All technologies have its own pros and cons. Finally, after research we choose flutter as the technology. VS code as the development environment and firebase as the database.

16Conclusion

The User experience and the user interfaces plays a huge role when it comes to the success of the application. Even the users with poor knowledge can use the application if the UI and UX is in a good state. In this application most of the users does not have good understanding about the mobile applications. But because of the UI and UX design users can use the application without any problem.