



## SE365 - Software Engineering Approach to HCI

# GetTourism

Project Milestones 1,2, and 3

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# GetTourism

Project Milestone 1

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## **Introduction**

In this project the purpose of it is to show an initial description of the GetTourism prototype. Existing and similar products of this prototype are being compared according to some attributes. Moreover, two problem statements, user requirements, and two project objectives are described in this project. Personas and use cases are used to present better and explain the functionality of the product and how it is going to be used in real life.

## **Problem Statements and Problem Objectives**

→ Problem statements:

- Tourism in Saudi Arabia has evolved over the years, which made hundreds of people around the world visit it either for business or pleasure. This is where creating websites and programs takes place to help users make their lives easier. Users using GetTourism will be able to schedule and register activities in a straightforward way. Existing websites we found have some problems in user experience, interface, ordering of functionalities, and delay in the program. Also, some users prefer to sign in as a guest rather than create a profile; this feature is not found on existing platforms.
- Another problem statement is the process of searching for a tour guide. Nowadays, there is no application or website that has both tour guide features and registration for activities. Users spend more time finding both.

→ Project objectives:

- The objective of the project is to improve the website's organization and structure, making it more efficient for users. This will be achieved by implementing a country and category selection process, which will generate relevant search results. Additionally, the project aims to provide three user profiles: guest, member, and tour guide. Furthermore, an activity registration feature will be added, allowing users to schedule activities in advance.

## **Product Comparison**

→ Product 1: By Rahaf (Visit Saudi Arabia Website)

<https://www.visitsaudi.com/en>

It is an interactive website that is created for tourists coming to Saudi Arabia. It provides detailed information about the activities happening in Saudi Arabia as well as several categories of activities and their prices.

→ Product 2: By Nour (Get Your Guide Website)

<https://www.getyourguide.com/saudi-arabia-l169036/>

This is a tourism website designed to help tourists and travelers to explore and discover cities of countries like Saudi Arabia and book their preferable activities there.

- Product 3: By Sarah Aljurbua (Enjoy Saudi)

[https://enjoy.sa/ar/?fbclid=PAAaZBsQDlI46GL7MxpKgCaRTgrBQBV5E6\\_0afA-JMQFACBz6IG8s6xqJeoCA](https://enjoy.sa/ar/?fbclid=PAAaZBsQDlI46GL7MxpKgCaRTgrBQBV5E6_0afA-JMQFACBz6IG8s6xqJeoCA)

An interactive life pacing website that is designed and made by government officials to showcase Saudi's various available activities over the course of many months with deep details of said activity such as pricing, age restrictions, brief details explaining the activity, and duration.

- Product 4: By Hafsa (ebooking)

<https://www.ebooking.com>

This is an interactive website offering booking options for various places including Saudi Arabia. It's connected to two other websites, and for car rental and the other for activities, while ebooking is for accommodations.

- Product 5: By Sarah (Booking.com)

<https://www.booking.com/>

Booking.com is a well-known booking website that allows visitors to book, search and help with flights and finding hotels to stay at. It is used internationally and is considered one of the world's largest travel websites.

Table 1: Describes product comparison.

	Product 1	Product 2	Product 3	Product 4	Product 5
Interface	Nice and clear interface since the user can scroll easily going up and down but the screen must be in full size otherwise half of the data will be displayed only.	The interface is considered attractive, simple, and clear to the user of the website.	Considered a smooth and clear-looking interface with a quick scrolling feature but the color palette used is not vision-impaired friendly.	The interface is clear, easy to use and understandable. includes many languages and currency options. Includes quick scrolling and adjusts to all screen sizes.	Categories are well organized and is easy for visitors to find their desired needs from the site. It focuses on letting the page short to avoid crowdedness
Usability	It is easy to use and makes the	The homepage of the website is	The website gives an "easy	easy to use but doesn't	Once the visitor chooses the

	<p>user plan for activities in advance, but users will need to understand and figure out how the website is ordered first in order to use it.</p>	<p>too long, making it uncomfortable for users to interact with.</p>	<p>to use" first thought, but booking an activity takes up time and requires users to understand how to operate the website first.</p>	<p>have easy access to exploring areas in Saudi or any temporary events. It doesn't answer exclusive questions or give feedback.</p>	<p>category, it seems like the options are too ambiguous and the language is mixed</p>
Features	<p>Displays the prices of the activities in ranges and has two ways of contacting either via email or WhatsApp. Another feature is the ability to display the Saudi calendar to see and predict when Saudi Arabia will be busy.</p>	<p>Filtering places depends on the type of activities and services you want. Showing the prices and ability to book, edit, or remove your booking. The possibility to rate and comment about your experience.</p>	<p>The website displays dates, locations, and a brief introduction to the activity but fails to mention prices. It also fails to help sort activities depending on date, location, or price. Also, the whole website doesn't convert completely to English when that language is chosen.</p>	<p>The website includes tabs for different countries in KSA to choose from, along with the preferred budget, how many people are on the trip, date, if it includes kids. It includes links to car rental, offering different pick up options for the cars. The extended link for activities doesn't have any information for Saudi Arabia tourism.</p>	<p>Instantly shows an approximation of the prices of each flight/ night at a hotel. Shows the most relevant hotels and flights according to the desired date, price, and a number of partners. It depends mostly on filters where the visitor would have to pick from the listed filters for better findings.</p>
User experience	<p>Users will feel angry while using this website due to the fact that it is slow and has many animations.</p>	<p>Users may not be attracted to using the website, considering it can be boring</p>	<p>Users might be mildly unsatisfied due to the overcomplexity during booking</p>	<p>The user will need to open it using a tablet, the extended links don't show when</p>	<p>Although it depends on filtering which can be helpful, it may sometimes</p>

		since it has no animations.	as well as due to no guest profile option during sign up/log in.	using a mobile phone. Users might be frustrated when they're not able to find tickets or information about activities.	cause the user to be overwhelmed by the amount of choices they need to pick in order to fulfill their needs.
Understandability	This product is not well organized because after launching the website a picture will be displayed after that you should scroll down and then search for the activities and if you want to search in a specific city, you should scroll down again and use Google Maps to choose which city to search in.	The website is understandable to users, Timing, prices, and services of each activity are obvious to them. The possibility to change the language and currency of the website. But users have to scroll all the way down to change language and currency.	The Product offers too many features and compartments that it might be considered confusing for the user.	Has very simple features and doesn't require much understanding or time. Everything is obvious for users to understand. However, the many links included will confuse the user.	Visitors will find it easy to navigate through the website, but it can get a bit tricky when looking at the names of hotels or flights since some can be translated into a different language automatically (even with the English option is active)
Clearness	It is clear that this website is for tourism because it used a welcoming logo for Saudi Arabia. Also, categories are used to indicate the types of activities happening in Saudi Arabia.	The website is clear enough to guide tourists. At the top of the page, it shows some different activities and services like wheelchair accessibility and guided tours.	The website makes it clearly-states that it is intended for tourism and activities but fails to make it abundantly clear that those activities are only in Saudi Arabia.	This website isn't clear for any user, it gives options on places to stay, and car rental but it requires the user time to understand.	Booking.com is known internationally for booking flights and hotel stays, which makes it obviously clear to visitors, however, their language interface is not clear due to seeing descriptions of the hotel in their

					native language. Their services are well stated and clear to the visitor from flights to hotels or even homes to care rentals and more!
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## Analysis of Product Comparison

As it is described above in table 1, there are some existing products that have specific features/ attributes. Each existing product has its own way of performing tasks but there is no one perfect existing product since some of them are slow, colorless, and lack some features that make the user experience bad.

## Users Requirements

### ❖ Data Gathering

In this project, the used data gathering techniques are interviews and surveys. They are being conducted online or face to face depending on user availability. Surveys are created using google forms. At the same time, interviews with the interviewee's consent are being voice recorded and made either via Google Meet or face-to-face.

### ❖ Data Analysis

#### ➤ Survey Data Analysis

One data gathering technique that is used in this project is the survey. It was shared with the participants that meet our user profile around us for instance family members, colleagues, and friends. The platforms that we used to distribute the survey were WhatsApp, email, and SMS. The form was open for responses for four and a half days to reach the maximum number of participants which is 91 responses.

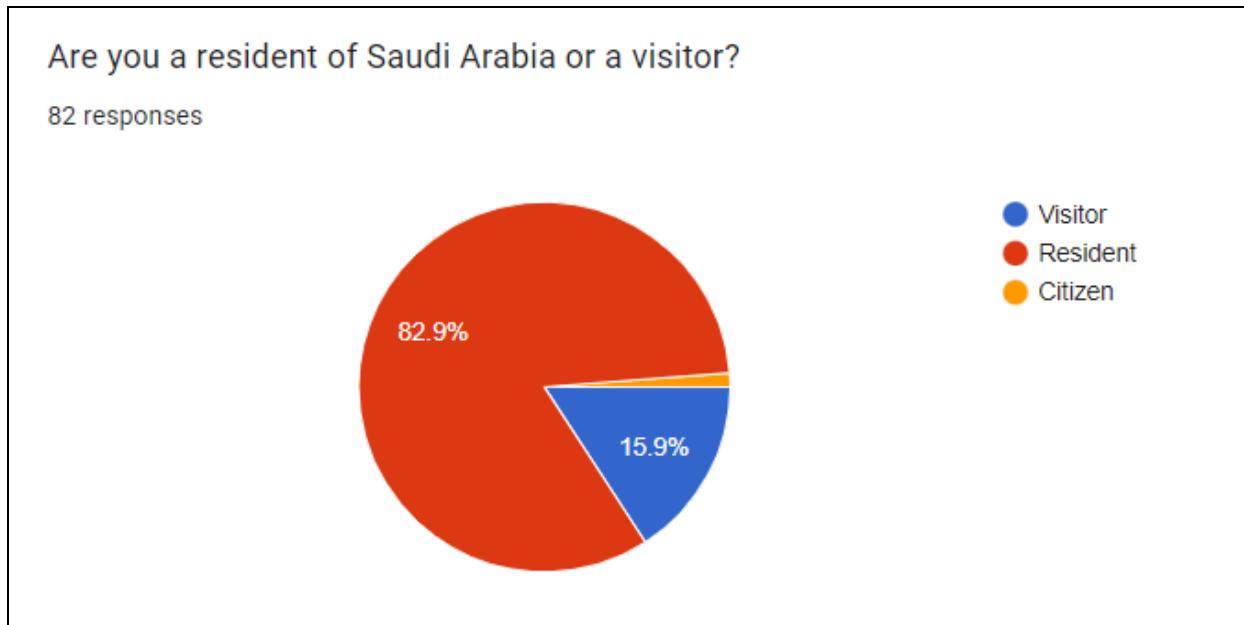


Fig. 1: in this figure, a pie chart is used to represent the responses to the first question in the survey. Most of the participants (82.9%) were residents, 15.9% of participants were visitors, and 1.2% were citizens.

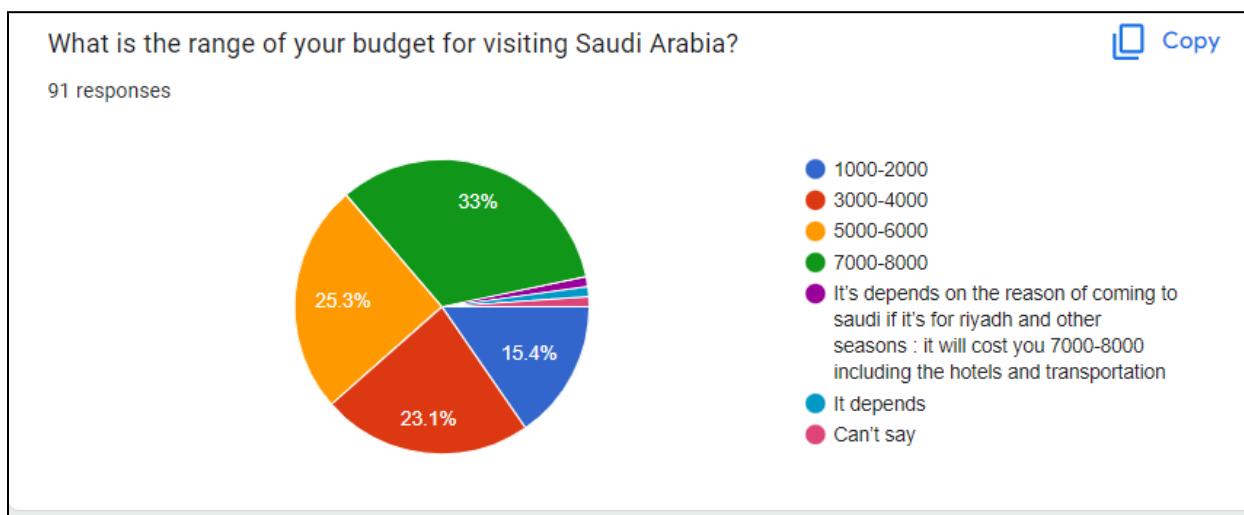


Fig. 2: for the second question, the participants were asked about the range of budget they would use for traveling to Saudi Arabia. The majority of participants (33%) chose 7000-8000 SR. 25.3% chose 5000-6000 SR, 23.1% chose 3000-4000 SR, and 15.4% of the participants chose 1000-2000 SR. Moreover, some of the participants (1.1%) did not prefer to share their budget and some (1.1%) said that it depends on the reason for traveling.

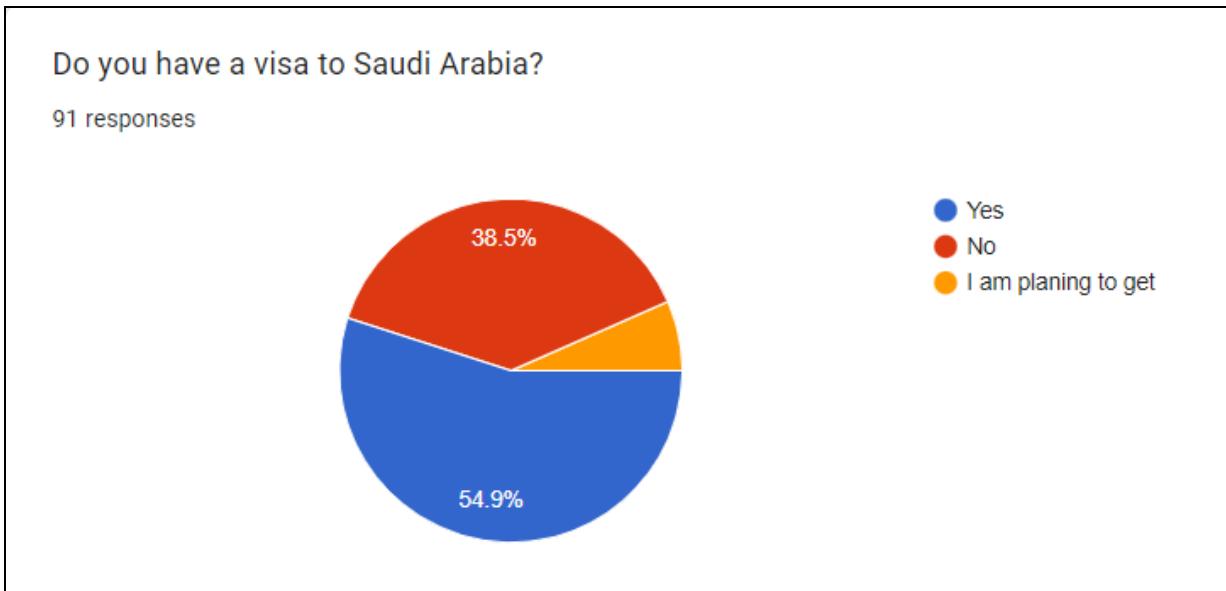


Fig. 3: for the third question, the participants were asked to indicate whether they had a Visa for Saudi Arabia or not or planning to get one. 54.9% of the participants chose yes they have, 38.5% chose no they do not have, and 6.6% are planning to get.

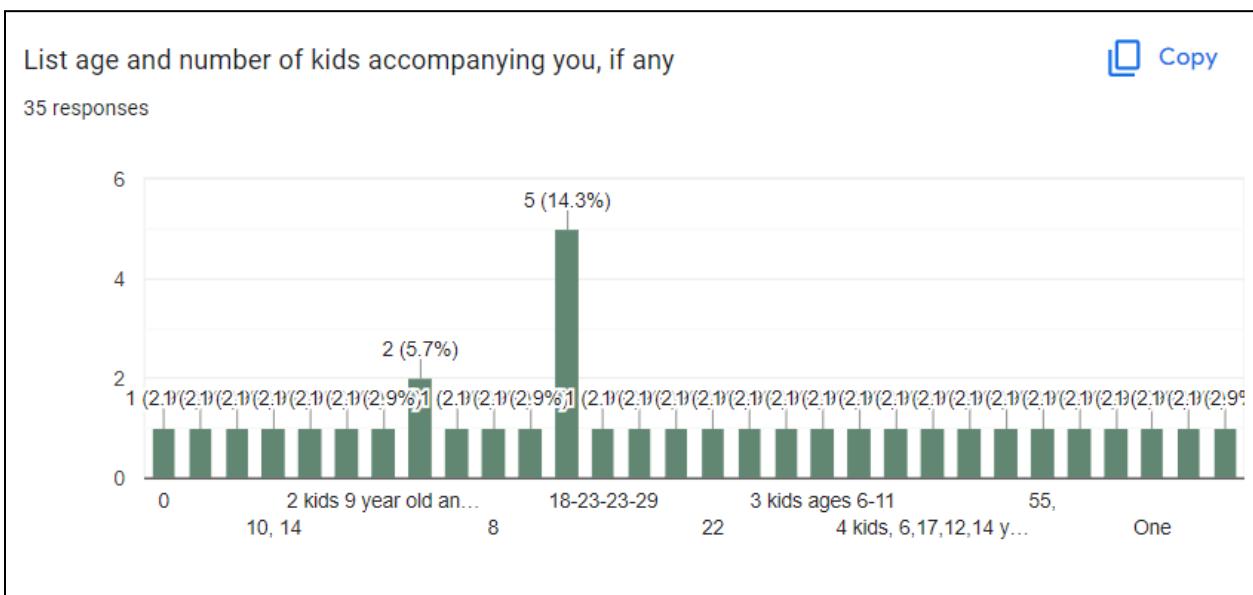


Fig. 4: This figure shows the results of the fourth question. It is an open-ended question which has a variation in the answers. 58 of the participants do not have kids, nine of the participants misunderstood the question and wrote their ages and the responses are 35, 45, 21, 55, 29, (25 29 58), 22, 20, 23. Moreover, the following list shows the rest of the responses:

- One child is 3 years old.
- Two children 10, 14
- 12 years old girl
- 2 kids 9 years old and a year old

- One kid, 2 years old
- 12 and 5
- 18-23-23-29
- 12
- 5
- 10 years
- 22
- 20
- Age 23
- 1
- Three children 13, 12, 7.
- 4 kids, 6,17,12,14 years
- One
- Three children 9,11,16
- 3 kids ages 6-11
- 5-14 years, maybe 4 kids
- 8

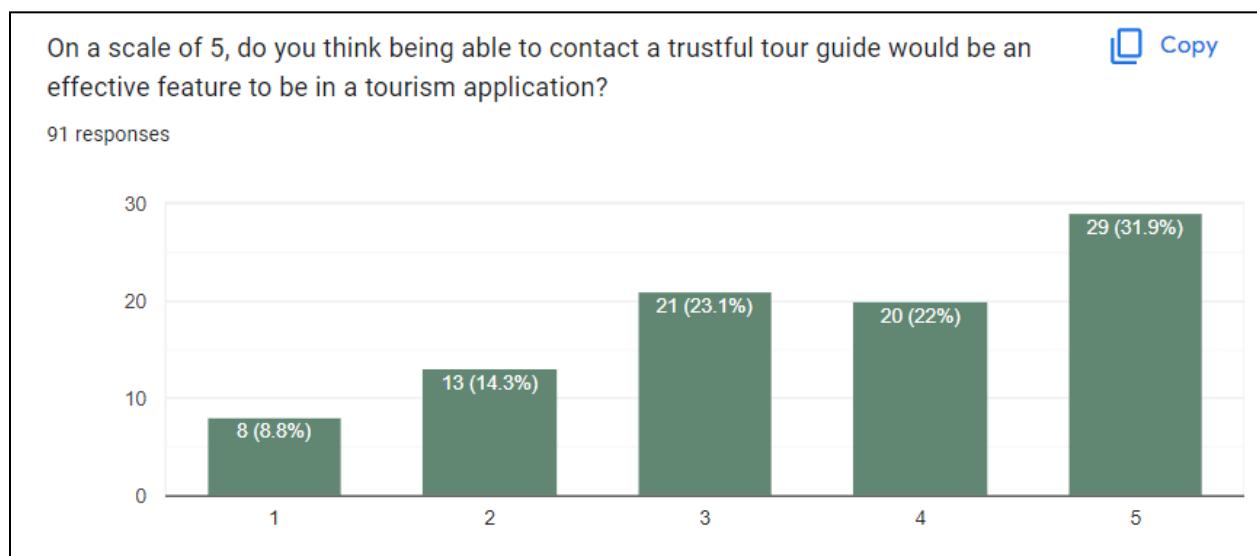


Fig. 5: This question was written to ask the participants on a scale of 5 in terms of necessary or not whether a tour guide feature would be beneficial to add in a tourism prototype. 31.9% of the participants indicated that it is a necessary feature, 23.1% are neutral, 22% choose 4, 14.3% chose 2, and 8.8% chose it as not necessary.

What is your intention of visiting different cities in Saudi Arabia?

90 responses

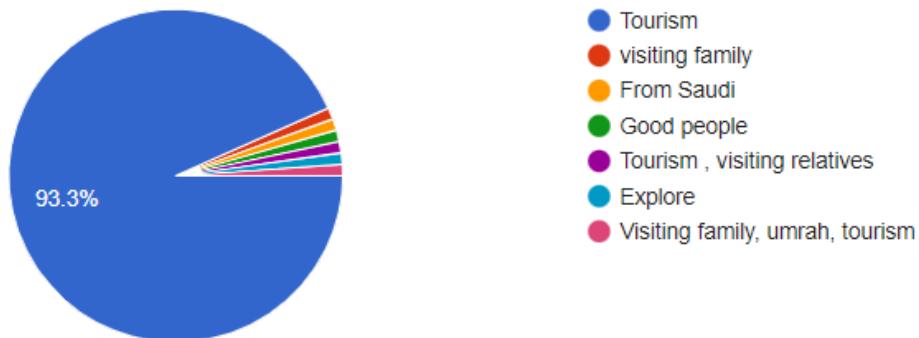


Fig. 6: the participants were asked to choose or write their intention of visiting Saudi Arabia. 93.3% of the participants chose tourism, 1.1% wrote visiting family, 1.1% wrote their intention of visiting because they are from Saudi Arabia, 1.1% wrote because Saudi people are good, 1.1% for exploring, and 1.1% for umrah.

What is your duration of stay?

91 responses

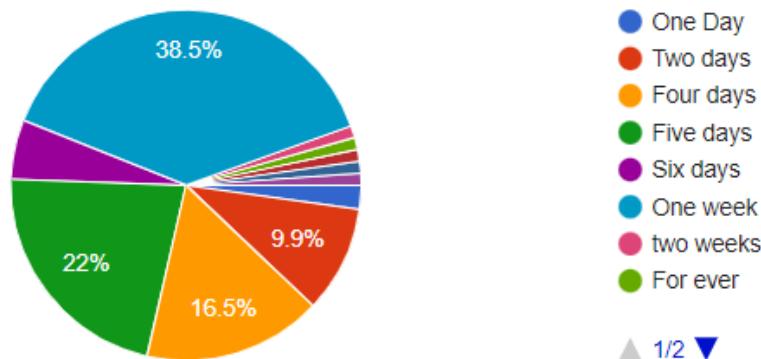


Fig. 7: the participants were asked about their duration of stay in Saudi Arabia. 38.5% of the participants chose one week, 22% chose five days, 16.5% chose four days, 9.9% chose two days, 5.5% chose six days, 2.2% chose one day, 2.2% chose forever, 1.1% chose three days, and 1.1% chose two weeks.

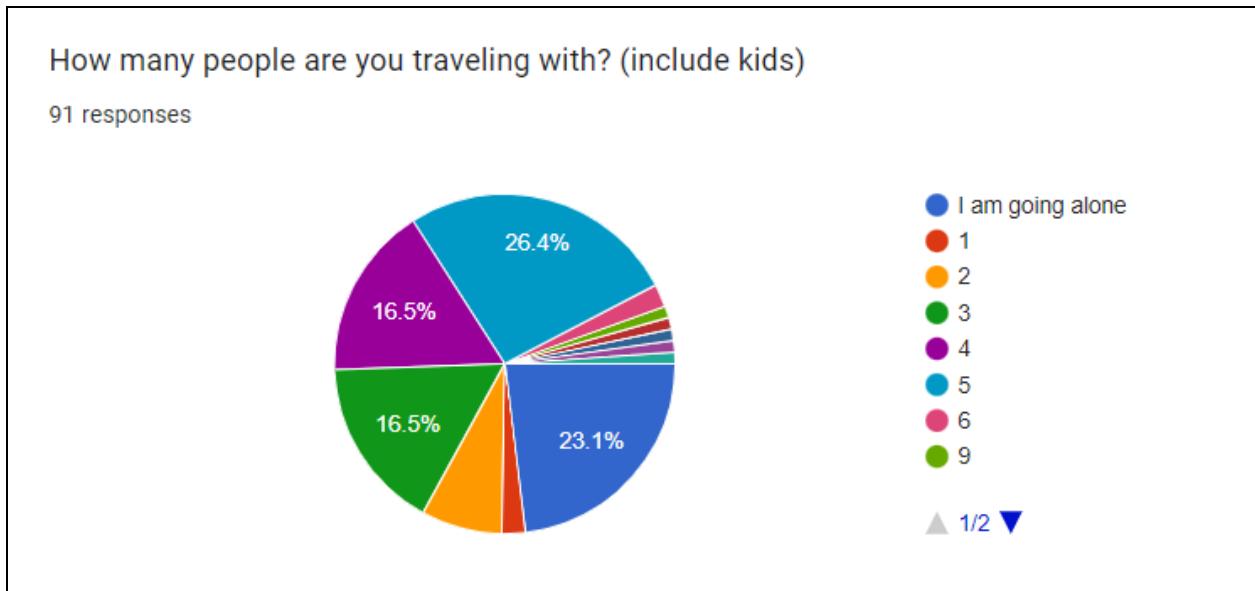


Fig. 8: In this question, the participants were asked about how many members they are traveling with. 26.4% of the participants are going with 5 members, 23.1% are going alone, 16.5% are going with four members, 16.5% are going with three members, 7.7% are going with 2, 2.2% are going with one member, 2.2% are going with six members, 1.1% are going with eight members, 1.1% are going with nine members, and 1.1% are going with seven members.

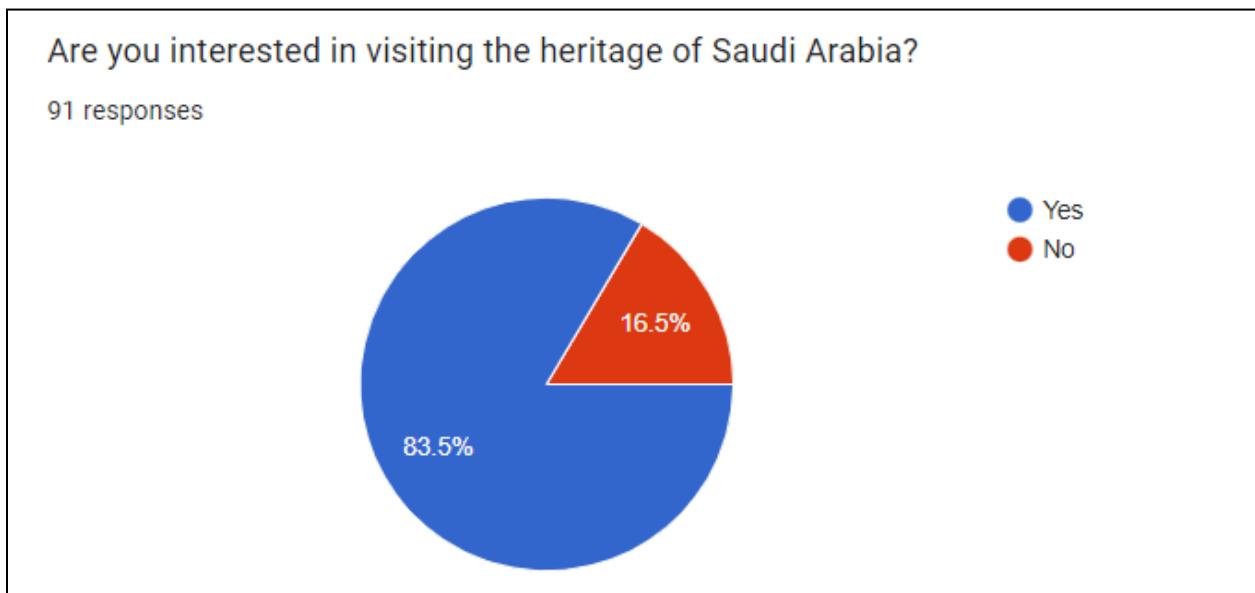


Fig. 9: The question was written for the participants to know whether they are interested in the heritage of Saudi Arabia or not. The majority of the participants (83.5%) chose yes, and 16.5% chose no.

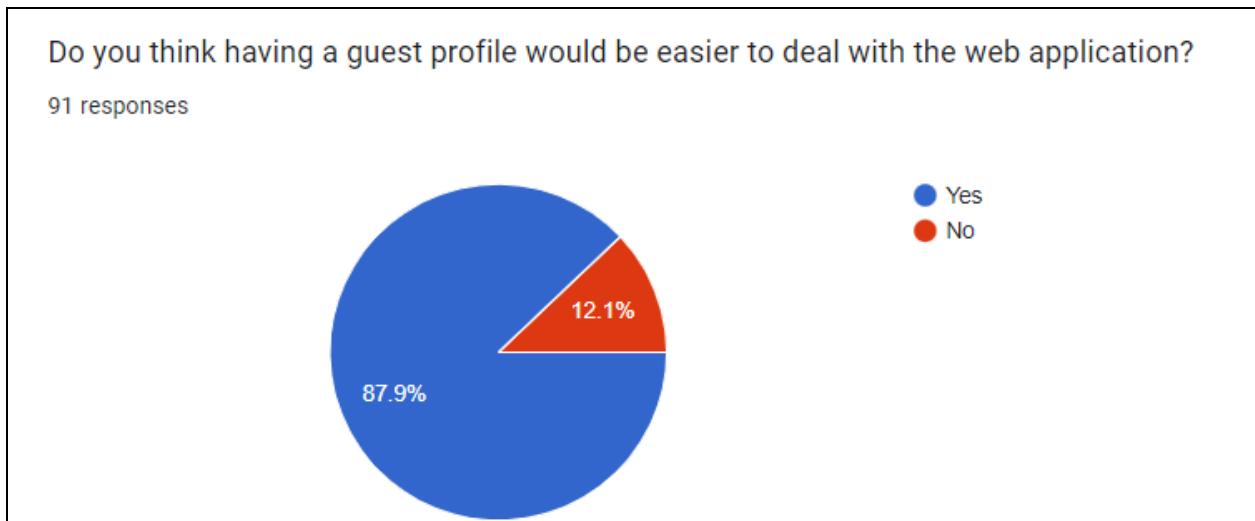


Fig. 10: This figure shows that the participants were asked whether having a guest profile would make dealing with the prototype easier or not. 87.9% of the participants chose yes and 12.1% chose no.

List any feature that you think is important to include in a tourism application.

23 responses

Good pics of KSA that persuades people to visit it, a fast server, a good amount of honest reviews, easy access, a simple process, and a rewards system for people who book through through the app.

a list of places to visit

Rate the guests

Spread the facts that Saudi is a safe country

Better hotels

Closing days for reservation  
Information about events at the specific time

As much as the prototype is fast and easy to use I would be happy to use it. Also less is more so less animation and colors will make it perfect.

I would prefer to choose a specific city and language first and then the results should be displayed

Fig. 11

List any feature that you think is important to include in a tourism application.

23 responses

Recommendation for visiting places that actually would fascinate the tourists

Using different languages

Planning

Map

Comprehensive coverage of the most prominent landmarks of Saudi Arabia

Yes

Budget, Number of ppl .. ect

A tourist map containing all the places worth visiting

Clear and full pricing.

Fig. 12

List any feature that you think is important to include in a tourism application.

23 responses

Activities, internet packages

A lot

google maps

pictures/videos of the places to be visted

review and rating feature for the places.

weather feature.

Let people suggest what others might take with them ( special clothes, food, etc ..)

Booking hotel

Renting car

Booking car or bus with driver.

Guide for how to use public trasportation.

Also for one who is going alone and looking for friends to go with you may gather people who are interested in going to same place at the same time.

Also you may add feature of random decision for those who couldn't decide where to go.

Fig. 13

List any feature that you think is important to include in a tourism application.

23 responses

Also you may allow users to pick a list of locations, save it and sort it based on the distance/ needed budget / Extent of walking, climbing, etc

You may allow users to save notes with each location.( private notes that other cannot see)

Also users must be able to share the places information with others ( i think its better to be able to share them as organized text to allow people who dont have the app to see the information)

In my opinion the main feature would be to match hotels/transportation/ restaurants (with specific meals) with the selected budget.

Good luck

موفقان 

Google maps is a good feature

Fig. 14

Finally, in figures 11, 12, 13, and 14 the participants were asked an open-ended question to list any feature they think is important to include in a tourism prototype. Some of the answers were a google map, a list of places to visit, good pics of KSA that persuade people to visit it, a fast server, a good number of honest reviews, easy access, a simple process, and a rewards system for people who book through the app, and more that are shown in the figures.

To sum up, the majority of participants stated that it is important to include a tour guide feature, a guest profile, and more features that are going to be in the GetTourism prototype. Most of the participants are aiming to visit Saudi Arabia with at least one member so a category for each activity must be stated. Moreover, since most of the participants prefer a tour guide feature this indicates that it is a needed feature that an existing product does not use along with activity registration.

#### ➤ Interview Data Analysis

In this project the interviews are conducted with the participants who are interested in using solution websites or applications to register their activities. Their knowledge about registration applications was stated as well as what they prefer to be included in the prototype.

## ❖ User Profile Screen Shots

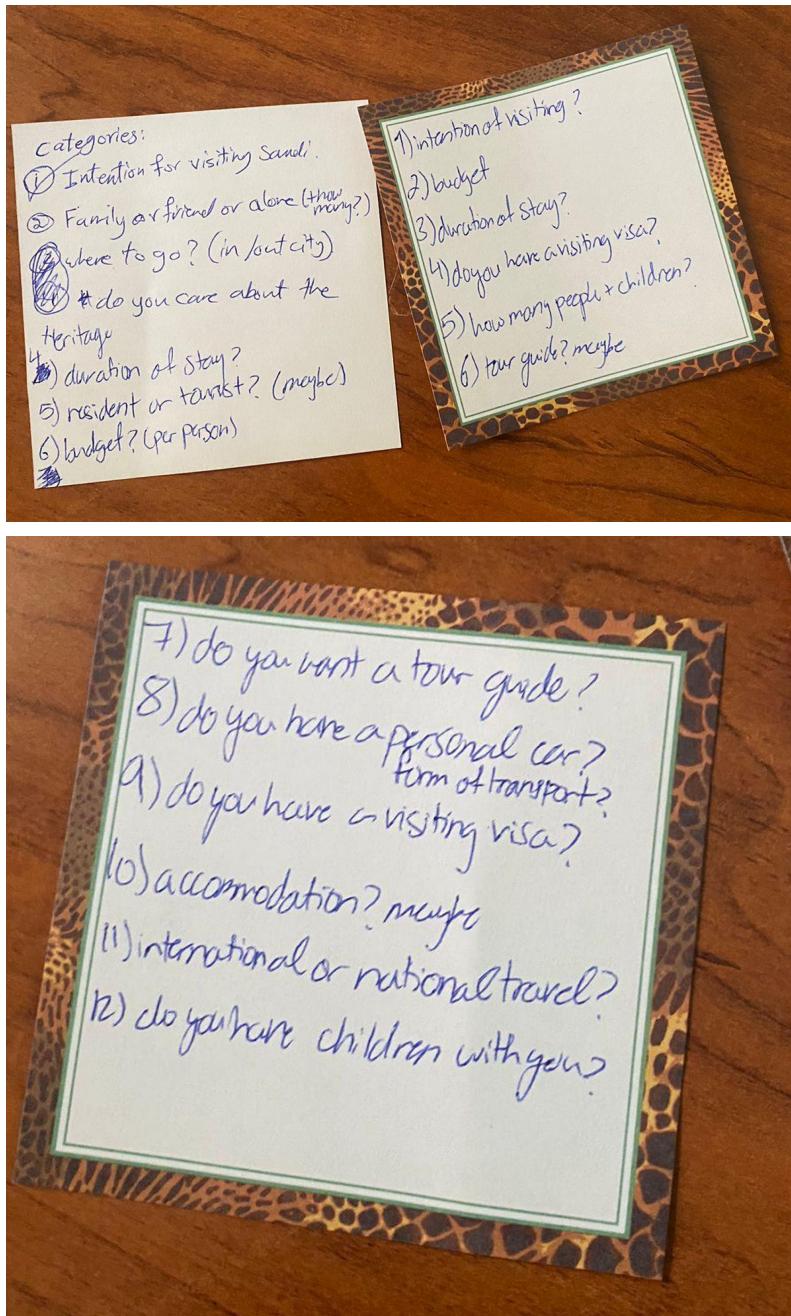


Fig. 15: shows the user profile notes that were written while brain storming.

## ❖ User Profile

- Age: range between 14-90.
- Type of personality: outgoing personality.
- User type: Adventurous users.
- Computer experience: has an average computer experience (intermediate).
- Domain Knowledge: novice/ intermediate background in Saudi.

- Intention: tourism.

## ❖ Extracted requirements from Analysis

- Functional requirements:
  1. The system should allow users to register activities.
  2. The system should allow users to log in.
  3. The system should allow users to sign up.
  4. The system should allow users to continue as guest profiles.
  5. The system should allow the user to use the map to see the location of the activity.
  6. The system should allow users to contact a tour guide.
  7. The system should allow the tour guide to contact users.
  8. The system should show an activity registration message to indicate that the booking has been successfully made.
  9. The system should allow users to check their history list.
  10. The system should allow users to delete the registered activity within 10 hours of the activity time.
  11. The system should display a page that asks users which city and language to view in the process of activity registration.
  12. The system should allow users to edit their profiles.
  13. The system should be able to be scrolled up and down.
  14. The system should be able to be scrolled right and left when needed.
  15. The system should indicate the percentage of the dangerousness of each activity.
  16. The system should display the price of each activity.
  17. The system should show the location of each activity.
  18. The system should provide a brief description of each activity.
  19. The system should allow users to log out.
  20. The system should allow users to search for activities using the search engine in the prototype.
  21. The system should allow users to use the forgot password button to reset their password in case they forget it.
  22. The system should allow the tour guide to log in or sign up.
- Non-Functional requirements:
  1. The system should be accessible to everyone.
  2. The system must be able to manage and support 1000 users at once.
  3. The system should be clear and usable, not ambiguous, and hard to understand.
  4. The system should be used only via mobile devices and IOS specifically.
  5. The system should not have a delay time in a task presenting more than one minute.
  6. The system should not take more than 15 minutes to complete the login process.

7. The system should not take more than 15 minutes to complete the registration process.
8. The system should not take more than 5 minutes to complete the guest registration process.
9. The system should provide a history list of the user's previous registrations.
10. The system should be secure from any external attacks.
11. The system should have different color palettes.

## Persona

→ Rahaf

<p>Karla Benson</p>  <p>Age: 35 Occupation: Dentist Location: London</p>	<p><b>"Traveling and exploring the world is my passion in life, because exposing your self to different cultures help you in understanding people better. So, my next destination is to Saudi Arabia!"</b></p> <p><b>Background:</b> My name is Karla, I am 35 years old. I am a dentist from London and comfortable in learning new technologies. I am a mother of three girls. Since I was little, I loved exploring new places so me and my family enjoy travelling to different places. My favorite season is summer, which made me curious about Saudi Arabia that has incredible history and places to visit.</p> <table border="0"> <tr> <td> <b>Motivations:</b> <ul style="list-style-type: none"> <li>• Searching for new places and activities to do with the family.</li> <li>• Exploring new cultures to have better communication skills with my customers from different cultures.</li> <li>• Keeping up with different technologies to book activities.</li> </ul> </td> <td> <b>Goals:</b> <ul style="list-style-type: none"> <li>• Find interactive applications or websites to register and find activities to do while travelling.</li> <li>• Visiting the heritage of Saudi Arabia.</li> <li>• Contacting a good tour guide that we can trust.</li> </ul> </td> </tr> <tr> <td> <b>Frustrations:</b> <ul style="list-style-type: none"> <li>• Not coping with the culture and practices of the new place.</li> <li>• Being fooled by a tour guide that is not trustful.</li> <li>• Feeling zoned out because being outside of this culture.</li> </ul> </td> <td> <b>Behavior:</b> <ul style="list-style-type: none"> <li>• Adventurous and outgoing person.</li> <li>• Loves to have a company while traveling.</li> <li>• Multitasker.</li> <li>• Interested in technologies and has a great computer experience.</li> <li>• Familiar with the history of Saudi Arabia.</li> </ul> </td> </tr> </table>	<b>Motivations:</b> <ul style="list-style-type: none"> <li>• Searching for new places and activities to do with the family.</li> <li>• Exploring new cultures to have better communication skills with my customers from different cultures.</li> <li>• Keeping up with different technologies to book activities.</li> </ul>	<b>Goals:</b> <ul style="list-style-type: none"> <li>• Find interactive applications or websites to register and find activities to do while travelling.</li> <li>• Visiting the heritage of Saudi Arabia.</li> <li>• Contacting a good tour guide that we can trust.</li> </ul>	<b>Frustrations:</b> <ul style="list-style-type: none"> <li>• Not coping with the culture and practices of the new place.</li> <li>• Being fooled by a tour guide that is not trustful.</li> <li>• Feeling zoned out because being outside of this culture.</li> </ul>	<b>Behavior:</b> <ul style="list-style-type: none"> <li>• Adventurous and outgoing person.</li> <li>• Loves to have a company while traveling.</li> <li>• Multitasker.</li> <li>• Interested in technologies and has a great computer experience.</li> <li>• Familiar with the history of Saudi Arabia.</li> </ul>
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## → Sara Aljurbua

### Sydney Bellaire



**Age:** 28  
**Work:** Project manager  
**Family:** Single  
**Location:** New York  
**Character:** Archetype

**Goals**

- Advancing to a higher position in the company.
- Expand her social network in relation to her PM design position.
- Increase her team's efficiency and productivity.

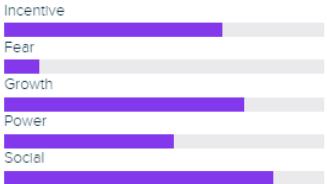
**Hobbies**

- Sydney enjoys exploring the city's vibrant arts and culture scene, attending concerts and gallery openings, and traveling to new and exciting destinations around the world. She is also an avid runner and fitness enthusiast, and can often be found pounding the pavement in Central Park or practicing yoga in her local studio.

**Bio**

Sydney Bellaire is a driven and creative project manager at a top-tier design firm. Born and raised in New York City, Sydney has always been drawn to the city's energy and diversity. She attended college at the prestigious Parsons School of Design. Sydney is known for her ability to balance the needs of clients with the realities of budget and timelines, and she takes great pride in delivering projects that exceed expectations.

**Motivation**



"The greatest glory in living lies not in never falling, but in rising every time we fall."

**Preferred Channels**



## → Nour

*Lana*  
**ALRANO**



Gender Female  
Age 25  
Education Marketing degree  
Work Manager  
Address United states

**BACKGROUND**

My name is Lana. I am 25 years old. In the summer, I am planning to go to Saudi Arabia to discover its culture and explore new places there

**BEHAVIOR**

Sociable █  
Friendly █  
curious █

**MOTIVATIONS**

- Discover new heritage
- Try exciting activities
- making memories

**GOALS**

- Find a website that can guide me during my trip to Saudi Arabia
- Getting to know new people and make friends
- Having a good tour guide.

**FRUSTRATIONS**

- Language barrier and different habits.
- Feeling lonely and not having good communication.

24

## → Sara Alojayan

### EMILY KYLE



Gender : Female  
Age : 30  
Education : Bachelor's degree  
Job : Engineering  
Address : 123 Boulevard St., Los Angeles

**BACKGROUND**

I'm Emily and I Graduated Engineering at the university of California at the age of 25 which made me so intrigued to travel the world to discover more architecture and this made me want to see Saudi Arabia and discover it!

**PERSONALITY**

Confident	Insecure
Ambitious	Passive
Adventurous	Cautious
Decisive	Indecisive

**MOTIVATIONS**

- Uncover old architecture
- Rule out the influence culture has over architecture and engineering
- Learn more about other cultures.

**TECHNOLOGY**

Email Marketing	High
Public Relations	Medium
Content Marketing	Low

**GOALS**

- To get guided by an experienced person
- To find intriguing structures and engineering
- To fulfill my dream to visit Saudi

**FRUSTRATIONS**

- Afraid of cultural differences
- Finding someone to help me through the trip
- Not finding what I came for

## → Hafsa

### Isabel Mercado

**PROFILE**

Gender : Female  
Age : 28  
Education : Bachelor's degree  
Occupation : Marketing



**BIOGRAPHY**

I'm Isabel, im a traveler, i love exploring different countries and since i work remotely Im able to do my work while visiting new countries, my life goal is to see all parts of this earth and Saudi Arabia has been one of my biggest interests. id love to be one of the people who have seen the kingdom and are familiar with it.

**GOALS**

Explore every country specially ones different from my own culture

**FRUSTRATIONS**

- unable to find the activities locals go to
- not being able to plan before the trip

**MOTIVATIONS**

seeing locals live their daily lives and them interacting in their own language.

**PERSONALITY**

Energetic	Unenthusiastic
Passionate	Indifferent
Friendly	Unfriendly

**TECHNOLOGY**

Search Engines	High
Mobile Apps	Medium
Live Streaming	Low

## Use Case Diagram

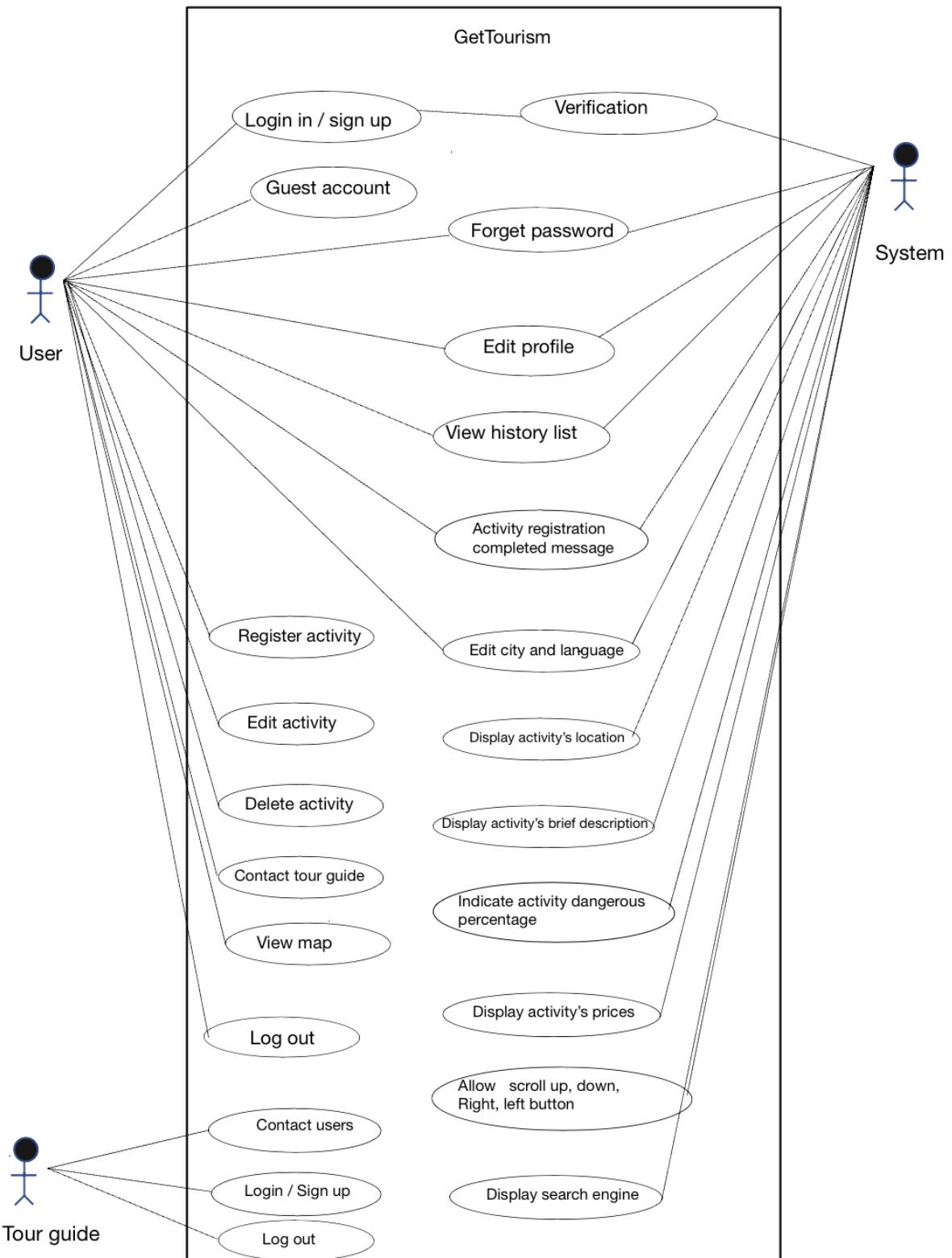


Fig. 16: shows the usecase of the GetTourism prototype.

## Use Case Diagram Description

This use case diagram describes the operations that are going to be included in the system and some are going to be used by the user and the tour guide. The user will be able to log in or sign up while the system verifies the registration. In case the user or the tour guide forgets their password, the system gives access to them and verifies the process. Users can continue using the system with a guest profile. Moreover, the user can edit her/ his profile, view activity registering history, edit city and language, register activity, edit activity, delete the activity, and more of the operations that are described in table 2. All these operations are managed by the system in terms of giving access.

Table 2: Describes the use cases for the actor user.

	<b>Use Case</b>	<b>Description</b>
1.	Log in/ Sign up	The user can sign up/ log in to the prototype.
2.	Log out	The user can log out from the prototype.
3.	Guest Account	The user can continue using the prototype with a guest profile.
4.	Forgot password	The user can edit and reset the password when he/ she forgets it.
5.	Edit profile	The user can edit the information on his or her profile and manage the account.
6.	View History	The user can view the history of their activity registering.
7.	Activity registration completed message	A message will be displayed after activity registration is done.
8.	Edit city and language	The user can change the city and language used in the prototype.
9.	Register activity	The user can book/ register a seat in the activity.
10.	Edit activity	The user can edit the registered activity.
11.	Delete activity	The user can delete the registered activity.
12.	Contact tour guide	The user can contact a tour guide.

13.	View map	The user can view the map to see the location of the activity.
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Table 3: Describes the use cases for the actor tour guide.

	<b>Use case</b>	<b>Description</b>
1.	Contact users	The tour guide can contact users.
2.	Log in/ Sign up	The tour guide can log in or sign up for the prototype.
3.	Log out	The tour guide can log out from the prototype.

Table 4: Describes the use cases for the actor system.

	<b>Use case</b>	<b>Description</b>
1.	Verification	The system verifies the login and sign-up process.
2.	Forgot password	The system gives access to change the password and verifies them.
3.	Edit profile	The system gives access to edit profiles.
4.	View history list	The system gives access to view history lists of the user and manages it.
5.	Activity registration completed message	The system gives displayed a message to indicate an activity registering process has been completed.
6.	Edit city and language	The system gives access to change both city and language in the prototype.
7.	Display activities' brief description	The system will display a brief description of the activity.
8.	Display activities' location	The system will display the location of the activity.
9.	Indicate the activity's dangerous percentage	The system will display the percentage of the dangerousness of the activity.
10.	Display the activity's price	The system will display the price of the

		activity.
11.	Allow scrolling left, right, up, and down	The system will give access to scroll up, down, right, and left.
12.	Display search engine	The system will display a search engine to search for activities.

## Conclusion

The survey conducted on tourism in Saudi Arabia provides valuable insights into the perceptions and attitudes of both domestic and international tourists towards the country's tourism industry. The results indicate that there is a growing interest in Saudi Arabia as a tourist's destination, with respondents highlighting the country's cultural and historical attractions, natural beauty, and hospitality as major draws.

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## Appendices

### ❖ Interview transcript

- Rahaf  
 → Pre-Elicitation:

The interviewer first prepared the interview questions and searched for a user that meets the user profile. After the user is found the interviewer arrives before the participant and organizes everything. Then the

participant arrived, and the interview started. The interviewer introduced herself to the participant and the purpose of the study was well explained with the consent of the participant. The interviewer started to ask questions. The following questions were asked to know the knowledge of the participant and whether she used an application to book an activity or not:

1. Q: Have you ever used an application or a website to register for activities?  
A: "Oh a lot of them, I used Riyadh season to book a ticket".
2. Q: Do you think that the online registration process is a good way or a bad way?  
A: "They are good because they are time-reducing and easier than the traditional way of registration".

→ During Elicitation:

In this part, the interviewer started to ask the participant the target questions and focused on making sure that the participant is relaxed and not influenced by anything. The following questions are the questions used in this part with their answers:

1. Q: Are the languages English and Arabic enough to be included in the prototype?  
A: "No, I feel like more languages should be added for other foreign countries and people".
2. Q: Does using different color palettes in the prototype make it better?  
A: "Yes, personally I love seeing different colors".
3. Q: Is having a guest profile important to be included in the prototype?  
A: "Yes, sometimes I would like to keep my personal information from some websites and to explore them first".
4. Q: How do you prefer to get a confirmation message of your booking or registration process?  
A: "I prefer via email".
5. Q: On a scale of 5, speed of the prototype is important?  
A: "5, very important".
6. Q: Do you prefer to see more animations in the prototype?  
A: "Yes, it makes the website more alive".

7. Q: On a scale of 5, do you think adding a feature that provides reviews of previous users is important?  
 A: "Very important, because sometimes the previous review can tell what might occur in the future".
8. Q: Do you think that adding a live help chat would improve the quality of the prototype?  
 A: "No, talking to a robot is a very wrong way of finding answers".
9. Q: In your opinion, do you think that a tour guide feature is good to be added to the prototype?  
 A: "Personally I have been here in Saudi Arabia for a long time, I already know some places, but I would like to explore more. For me it is not necessary but for others, they might need it".
10. Q: Do you think that stating the percentage of the dangerousness of each activity results in a better interactive prototype?  
 A: "Yes".
11. Q: When you first open the prototype would it be better to select the country you want to search in first and which language to display?  
 A: "Yes it minimizes the options for me, and I will do less scrolling."
12. Q: Do you prefer to have the ability to change the display of the prototype in terms of brightness and night mode?  
 A: "Yes, because for example, old people have a problem in their eyesight".
13. Q: Do you think that having a button that takes you to the top of the page is an important feature?  
 A: "Yes for sure, because when you scroll all the way down and you want to go back to the top of the page, it needs lots of scrolling which makes it a needed feature".
14. Q: Do you think that having a recommendation list of activities would help in finding and choosing activities better?  
 A: "Yes because I get confused when searching for activities so a recommendation list would help a lot".
15. Q: On a scale of 5, is it important to include a search engine for activity finding?  
 A: "5, very important".
16. Q: Do you think that adding pictures of the activity is an important feature?  
 A: "Yes it attracts me since they help me visualize the activity".

17. Q: Do you think that adding a brief description of the activity is important?

A: "Yes, it gives me a great idea about the activity".

→ Post Elicitation:

In this part, the interviewer started to ask questions that indicate we are close to a conclusion. After these questions, the participant was thanked and appreciated to be a part of this study. These are the questions that are asked:

1. Q: What are the most important features of a website that makes it stand out for you as a user?

A: "As long as the website is easy to use, helpful, and fast it is a good website for me".

2. Q: Do you have any questions about this interview?

A: "No thank you for this interview".

- Sarah AlJurbua

→ Pre-Elicitation:

In this part, the interviewer introduced themselves and the purpose of this interview in relation to the prototype at hand. Consent was asked by the interviewer and reciprocated by the interviewer; the interviewee introduced themselves. These are the questions asked:

→ During Elicitation:

1. Q: Are the languages English and Arabic enough to be included on the website?

A: Yes, I think so

2. Q: What are the most important features of a website that makes it stand out for you as a user?

A: Most importantly it must have an ease of usability, speed, guest pathway, and FAQs part

3. Q: Is a FAQ side of the prototype necessary in your opinion?

A: Yes, definitely

4. Q: How do you prefer to get a confirmation message about the booking/ registration process?

A: I prefer all ways as in like email or SMS or even pop-ups on the screen of the website itself

5. Q: Does having a guest registration pathway important to include in the prototype?

A: Yes

6. Q: On a scale of 5, speed of the prototype is important?  
Agree/disagree

A: 5

7. Q: Do you prefer to see more animations in the prototype?

A: No

8. Q: On a scale of 5, do you think adding a feature that provides reviews of previous users is important?

A: Yes, 5

9. Q: Do you think that a live help chat would improve the quality of the prototype?

A: Yes

10. Q: Do you think that stating the percentage of the dangerousness of each activity would result in a better interactive prototype?

A: Yes

11. Q: When you first open the prototype would it be better to select the country you want to search in first and which language to display?

A: Yes of course

12. Q: Do you prefer to have the ability to change the display of the prototype in terms of night mode and brightness?

A: Yes

13. Q: Do you think that having a recommendation list of activities would help you in choosing activities?

A: Yes

14. Q: Do you think that having a button that takes you to the top of the page would make your user experience better?

A: No

15. Q: Do you think that adding pictures of the activity is an important feature?

A: Yes

→ Post-Elicitation:

In this part, the interview reached an end with a thank you to the interviewee as well as asking if they have any extra questions.

- Sarah Alojayan

- Pre-Elicitation: The interviewer arrives at the virtual interview 10 minutes before the interview starts to avoid any technical issues. The interviewee was chosen according to their interest in visiting Saudi Arabia from the UAE. The interviewer made sure that all questions were clear and answered according to the needs of the interviewer.
  
- During Elicitation: It is crucial that the given answers were not affected or influenced by outside factors and the interviewer should focus on getting the right answers from the interviewee. They should also repeat the questions if needed and give their interviewee the time they need to answer each question.
  1. **Q:** Are the languages English and Arabic enough to be included on the website?  
**A:** “English is an international language, and a lot of countries should be able to speak English and Arabic for the Middle East.”
  2. **Q:** What do you think about having a 24h help live chat available at all times? And is it crucial?  
**A:** “Yes, especially due to the different time frames, it would be a great accessibility.”
  3. **Q:** Do you think adding images of the selected activities is an important feature?  
**A:** “Yes because for me for example, I'm quite a visual person, and when I go into a website, I expect to see pictures for better understanding.”
  4. **Q:** Do you think that adding a brief description of the activity is an important feature?  
**A:** “Yes you must elaborate on what this activity is, I'm not going to click and choose without understanding what the activity is.”
  5. **Q:** On a scale of 5, do you think adding a feature that provides reviews of previous users is important?  
**A:** “yes, it's a good thing to have reviews as naturally for example you book a hotel or a restaurant, the first you look for is reviews.”
  6. **Q:** What are the most important features of a website that makes it stand out for you as a user?  
**A:** “Ease of use and not overcomplicating a website where the menu bar is quite easy such as language option without having to struggle to find it.”
  7. **Q:** Does the use of different color palettes on a website make it better?

- A:** "Yes of course sometimes when I go into really dark-colored websites, it really throws me off and I don't trust the website as much. colors make the website more authentic."
8. **Q:** How do you prefer to get a confirmation message of the booking/ registration process  
**A:** "Yes of course, you must have something to go back to."
  9. **Q:** Is having a guest registration pathway important to be included in the prototype?  
**A:** "Yes, I would say so."
  10. **Q:** Do you prefer to see more animations in the prototype?  
**A:** "Not too much, just an acceptable level. You want people to be able to visualize what they're getting themselves into but not overly so that it gets overwhelming."
  11. **Q:** Do you think that stating the percentage of the dangerousness of each activity would result in a better interactive prototype?  
**A:** "I would say yes but not in a way that would throw people off like you don't want to scare people but instead put caution messages."
  12. **Q:** When you first open the prototype would it be better to select the country you want to search in first and which language to display?  
**A:** "I would rather have to choose the country and preferred language first."
  13. **Q:** Do you prefer to have the ability to change the display of the prototype in terms of night mode and brightness?  
**A:** "This is just an accessory and not something that's vital."

- Post Elicitation: after the interview is inducted the interviewer thanked and showed their appreciation to the interviewee who answered the full 13 questions according to what they would like to see as a user of the website.

(Link to the interview is attached in the drive link below)

- Hafsa
- Pre-Elicitation:

In this part, the interviewer introduced themselves and the purpose of this interview in relation to the prototype at hand. Consent was asked by the interviewer and reciprocated by the interviewee; the interviewee introduced themselves. These are the questions asked:

- During Elicitation:

1. Q: Are the languages English and Arabic enough to be included on the website?  
A: Yes
2. Q: What are the most important features in a website that makes it stand out for you as a user?  
A: The website design
3. Q: Does the use of different color palettes on a website make it better?  
A: Yes
4. How do you prefer to get confirmation message of the booking/registration process?  
A: Via email or SMS
5. Q: Is having a guest registration pathway important to include in the prototype?  
A: No
6. Q: Is the speed of the prototype important? On a scale of 5 how important is it?  
A: Agree, 4
7. Q: Do you prefer to see more animations in the prototype?  
A: Yes, animation makes it better.
8. Q: On a scale of 5, do you think adding a feature that provides reviews of previous users is important?  
A: Agree, it's very important to have reviews as it makes the website look more trustworthy, 5
9. Q: Do you think that a live help chat would improve the quality of the prototype?  
A: Yes. It would help solve problems faster with less confusion
10. Q: In your opinion, do you think that a tour guide feature is good to be added to the prototype?  
A: Yes, for certain people having a tour guide will help tourists explore the country better.
11. Q: Do you think that stating the percentage of dangerousness of each activity would result in a better interactive prototype?  
A: No, I don't think adding a danger percentage is important
12. Q: When you first open the prototype would it be better to select the country you want to search in first and which language to display?

A: Yes, it would make it better to select those from the beginning

13.Q: Do you prefer to have the ability to change the display of the prototype in terms of night mode and brightness?

A: I don't think that's necessary for a prototype

14.Q: Do you think that having a recommendation list of activities would help you in choosing activities?

A: Yes, it would give an idea about what options there are and help choose activities I'd enjoy.

→ Post Elicitations:

In this stage, the interviewer has conducted the interview and thanked the interviewee for answering all 14 questions and participating. (The interview link is attached in the drive link)

- Noor

→ Pre-Elicitation:

In this stage, the interviewer looks for a user that meets the user's profile and prepares questions to ask the user about the prototype. Once the interview gets started, the interviewer will introduce themselves to the interviewee, informing him about the goal of the interview and asking for his consent. The starting questions are mainly to have a better background about the user.

1. Are you a fan of technology?

Ans: Yes, I am.

2. Q: Have you ever tried using a tour-guiding website before?

Ans: Yes, I did. It was a good experience.

→ During Elicitation:

In this stage, the interviewer will ask the targeted questions to the user in a logical order, ensuring that the interviewee is relaxed and not distracted. Making sure the first questions are easy, not complicated.

1. Q: In your opinion, what makes a website easy to use for users?

Ans: I believe that a website should be easy to use, clear and obvious, and of course secure and safe.

2. Q: Do you feel having different color palettes makes the website better to view?

Ans: Well, I think different colors make the website more organized and understandable to me, letting me go through it.

3. Q: Do you prefer to see more animation on the homepage of the website?  
Ans: Yes absolutely, I feel animations can make a website attractive, and get anyone's attention easily to have an enjoyable experience
4. Q: Do you think that Arabic and English are enough to include on the website?  
Ans: Yeah, I feel they are enough but adding more languages can optimize user experience for non-English or Arabic speakers.
5. Q: Do you prefer the traditional way for registration or guest mode?  
Ans: Well, I think both are important. As a user, sometimes I explore several websites and I don't think I have the time to register every website I click on, so the guest mode is good for that
6. Q: Do you feel that a virtual chat assistant could help you while using the website?  
Ans: Yeah, but I think a real chat assistant is more effective since a virtual assistant sometimes doesn't understand you or really helps you that much.
7. Q: Do you prefer adding a search engine to the website?  
Ans: Yes, I do. It makes it easy to find what you are looking for and not waste your time.
8. Q: When you are using the website, what features could help you choose activities?  
Ans: I would normally see the FAQ page to guide me, the ratings, reviews, and tourist's comments.
9. Q: What is the suitable way to reach you such as confirming your booking on the website?  
Ans: I think SMS and email are fine for notifying users. But the pop-up notification at the top only is not enough
10. Q: Do you prefer having a subscription option to keep you up to date?  
Ans: Yes, this would be great to get informed about new events and activities, without checking the website frequently.

→ Post Elicitations:

In this stage, the interviewer will ask ending questions to conclude the session, then will thank the interviewee for participating in the study.

1. Q: What would you suggest adding to the website for a better user experience?

Ans: I would suggest adding a chat group for other tourists who are interested in joining in a particular activity. I feel this could help make new friends and have better communication.

2. Q: Is there any question about the interview?

Ans: No thanks.

❖ **Survey Link**

[https://docs.google.com/forms/d/e/1FAIpQLScCMmE7XaQCY-F2DnlaOw3echBP6pEzYu8tJ97yNK3wHGvtFg/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLScCMmE7XaQCY-F2DnlaOw3echBP6pEzYu8tJ97yNK3wHGvtFg/viewform?usp=sf_link)

❖ **Interview Voice Recordings Link**

<https://drive.google.com/drive/u/0/folders/0AHxejo5aRTGHUk9PVA?ifhs=2>

## Individual Contribution

Table 5: Describes the individual contribution.

Name	Individual Contribution
Rahaf Daas	Product comparison, problem statements, project objectives, data gathering, persona, references, survey and interview, introduction, interview transcript, survey link, interview voice recording, user requirements, use case diagram description, and tables 2,3, and 4.
Sarah Aljurbua	Project Objective, (some) Data Gathering, (some) Survey Questions and My Interview, Interview Transcript, Interview Voice Recording, (some) User Requirements, Conclusion, Product Comparison, References, Persona.
Sarah Alojayan	Product comparison, some survey questions, references, persona, interview recording, interview transcript, survey link (video of the interview included).
Nour Mohammed	Product comparison, persona, use case diagram, interview transcript, interview voice recording, references.
Hafsa Al Siddiky	Product comparison, persona, (some) survey questions, interview voice recording.



# SE365 - Software Engineering Approach to HCI

## GetTourism

Project Milestone 2

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6/April/2023

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## Introduction

In this milestone, the purpose is to create a low-fidelity prototype as a means of envisioning the application, portraying our project's conceptual design, and recognizing any possible design weaknesses before progressing to the high-fidelity prototype. During this phase, our attention centered on user experience and interaction design to guarantee our prototype's user-friendliness and ease of use. We found flowcharts and storyboards to be extremely helpful in guiding our design process. They helped us visualize the low-fidelity prototype and chart the sequence of events in it. Moreover, screenshots of the participants trying the low-fidelity prototype.

## Design Sketches

### → Storyboard

#### ◆ Tour guide profile

The tour guide should be able to open the application and see the first page, which includes log-in, signup, continuing as a guest, or go to the tour guide section. Once the guide is logged in or signed up, they will be able to see the edit display page. After proceeding from the edit display page, the home page of the prototype for the tour guide side will appear. It shows all the members that are chatting with the tour guide and a Google map will be available to access the location of activities. Finally, the tour guide can press the chat box and a page will be displayed to chat with the members.

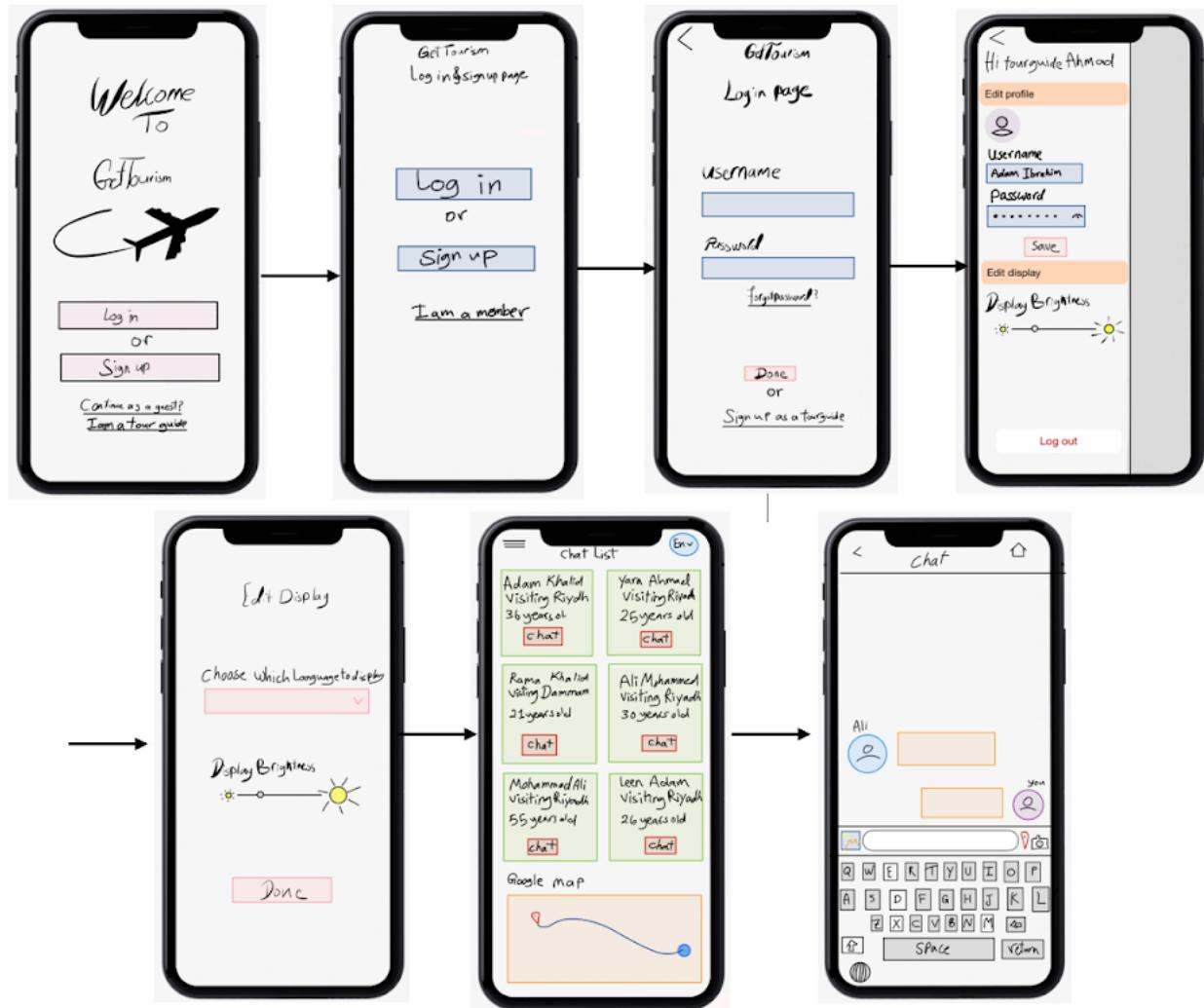


Figure 1: shows the storyboard in case the tour guide is using the prototype.

## ◆ Member profile

The member should be able to log into their account (if they already have an account, otherwise they should choose “sign up”). After logging in, the member should be able to look at the profile options and settings where there should be an option to contact a tour guide then follows it a page that would let the member choose between a male and a female tour guide, and finally, the member can chat and get the help they need with the chosen or desired tour guide.

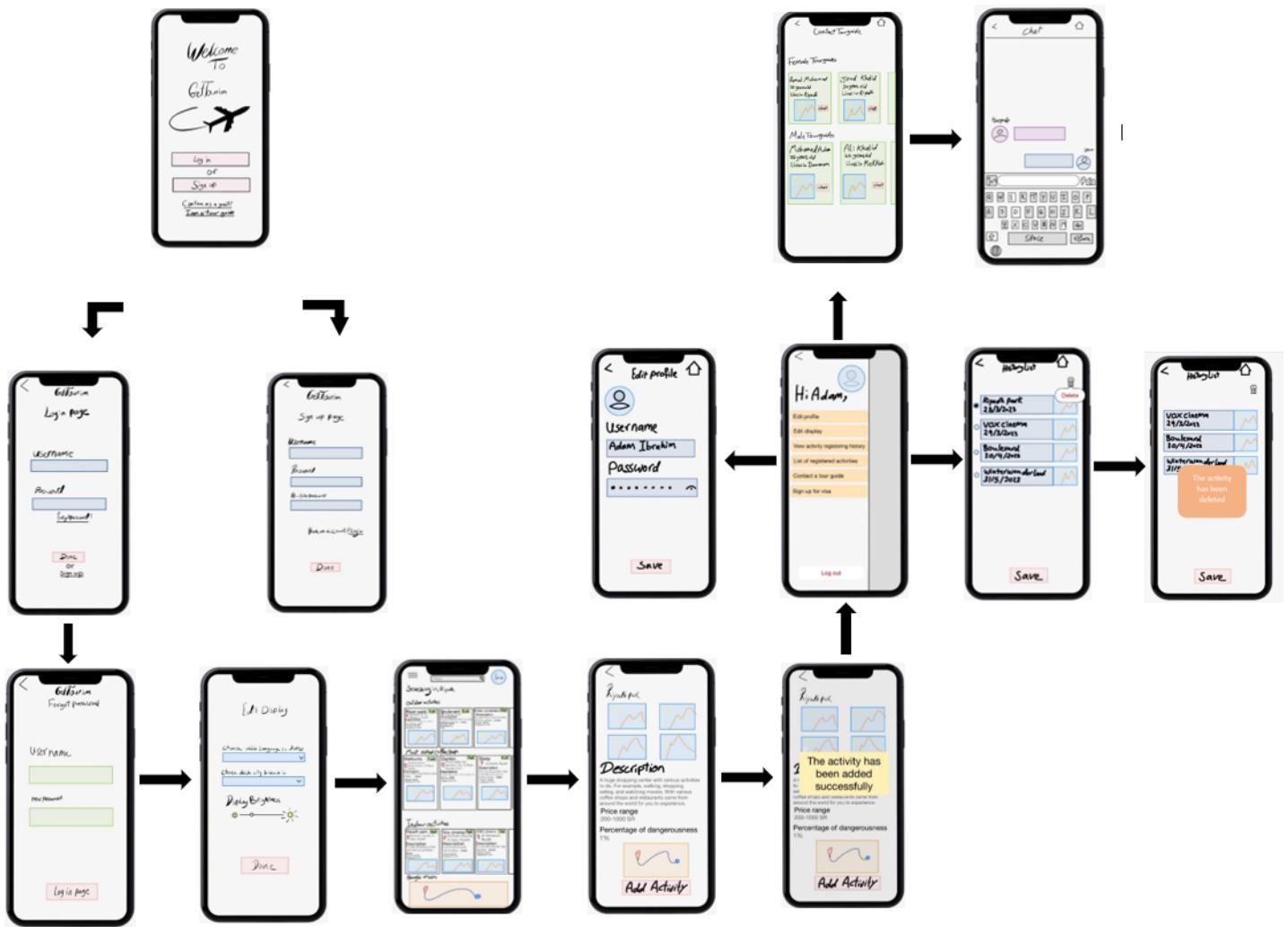


Figure 2: shows the storyboard in case a member is using the prototype.

## ◆ Tools used to create the study board and low-fidelity evaluation

A GoodNotes application that is downloaded on an iPad was used to design the low-fidelity prototype and each page was created alone to

focus on each feature and visualize the application. However, for the storyboard, a Word document was used to put them in sequence.

- ◆ Pictures of the participants using the prototype
  - Participant 1(by Rahaf)

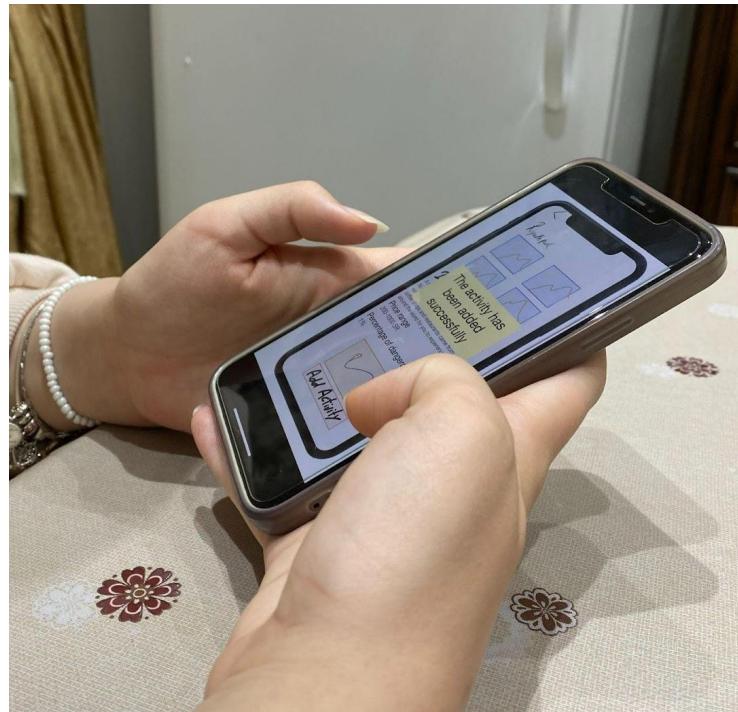


Figure 3: A snapshot of Participant 1 while using the evaluation.

- Participant 2 (by Sarah Alojayan)

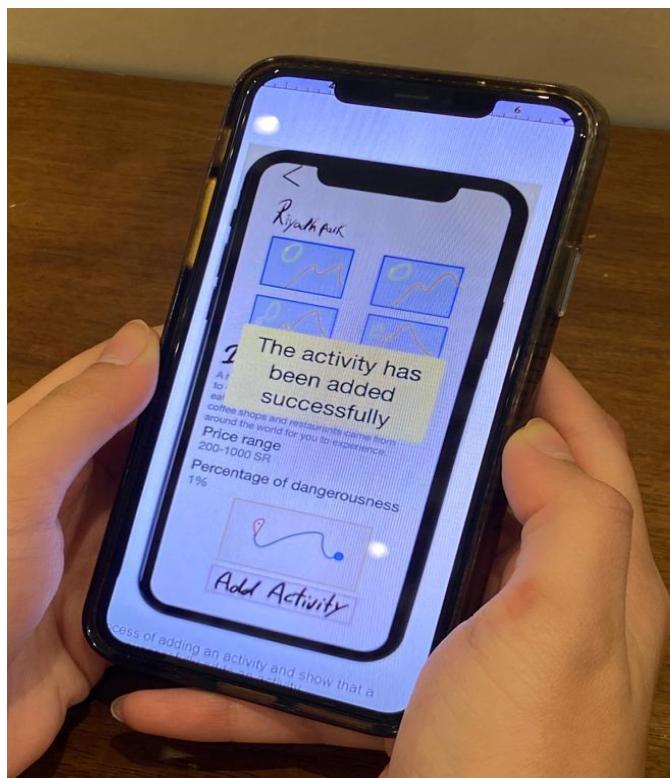


Figure 4: A snapshot of participant 2 while using the evaluation.

- Participant 3 (by Sarah Aljurbua)

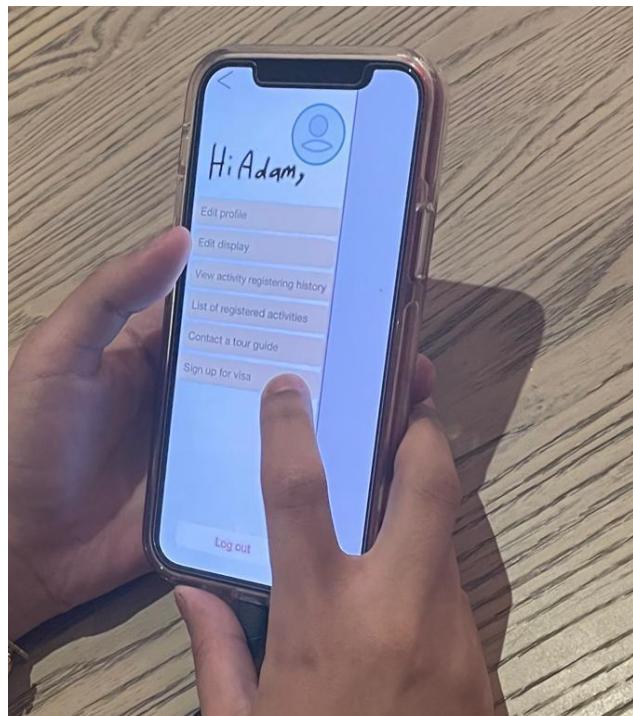


Figure 5: A snapshot of Participant 3 while using the evaluation.

- Participant 4 (by Noor)

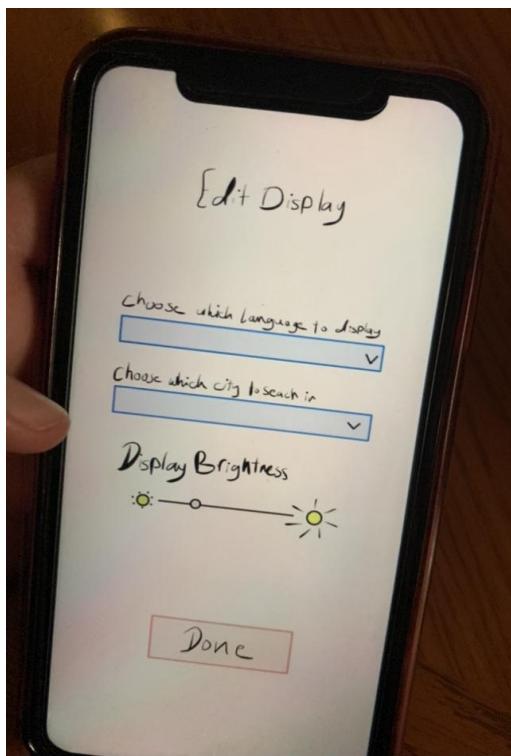


Figure 6: A snapshot of Participant 4 while using the evaluation.

- Participant 5 (by Hafsa)

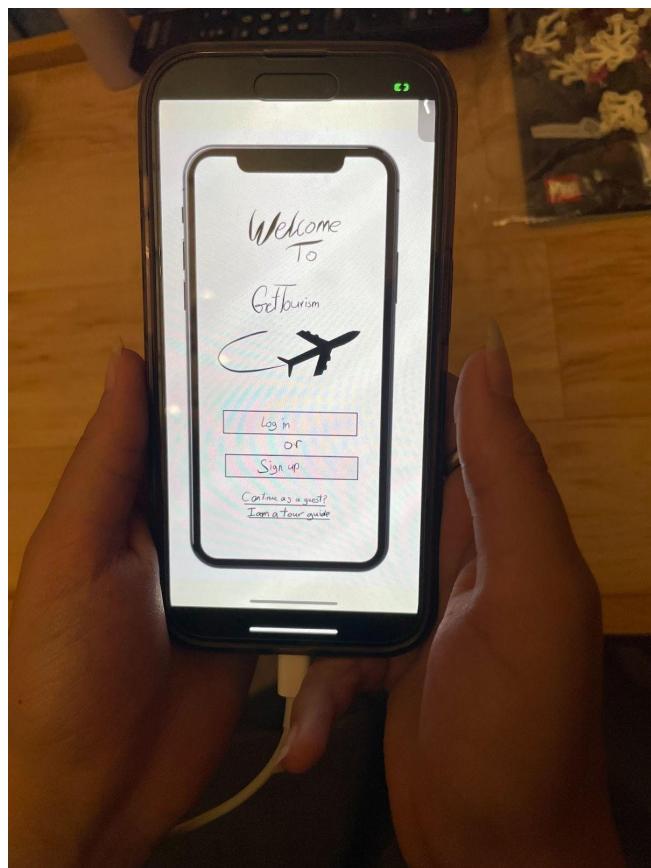


Figure 7: A snapshot of Participant 5 while using the evaluation.

→ Flowchart

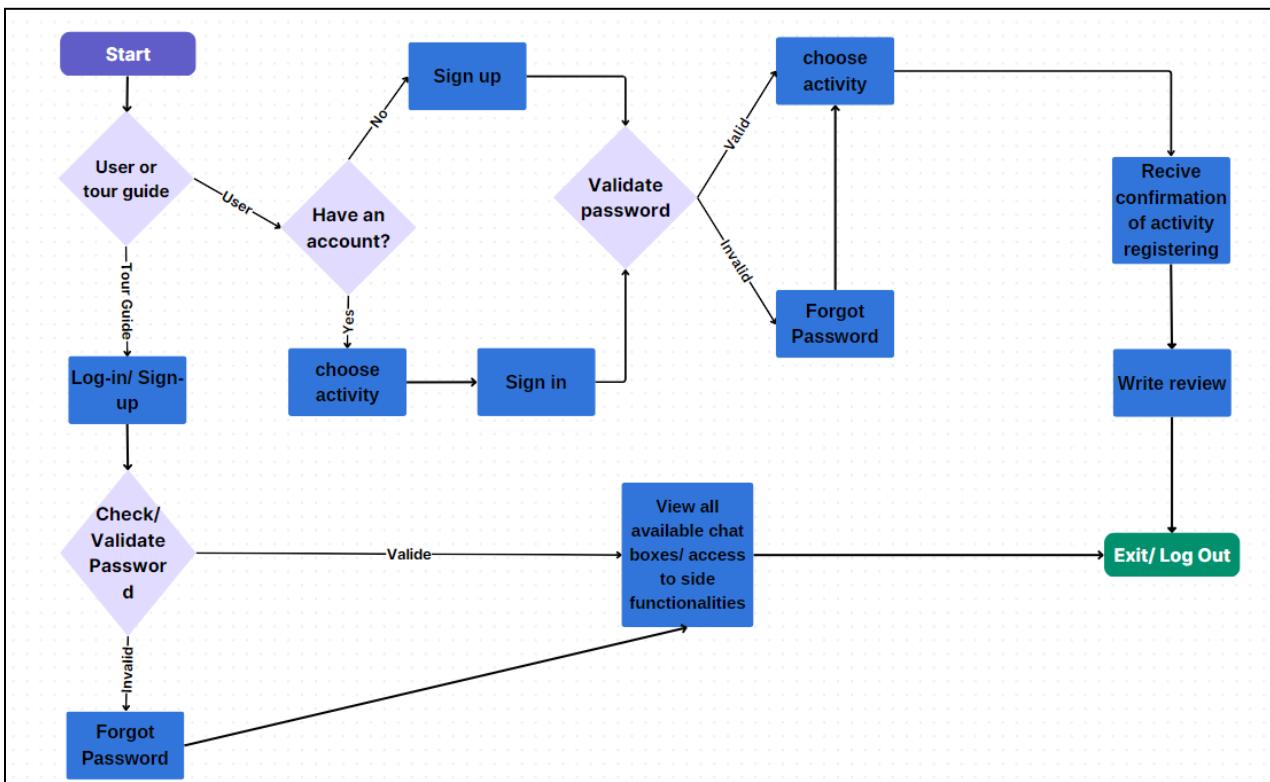


Figure 8: shows the flow chart of the prototype made using Lucid Chart website.

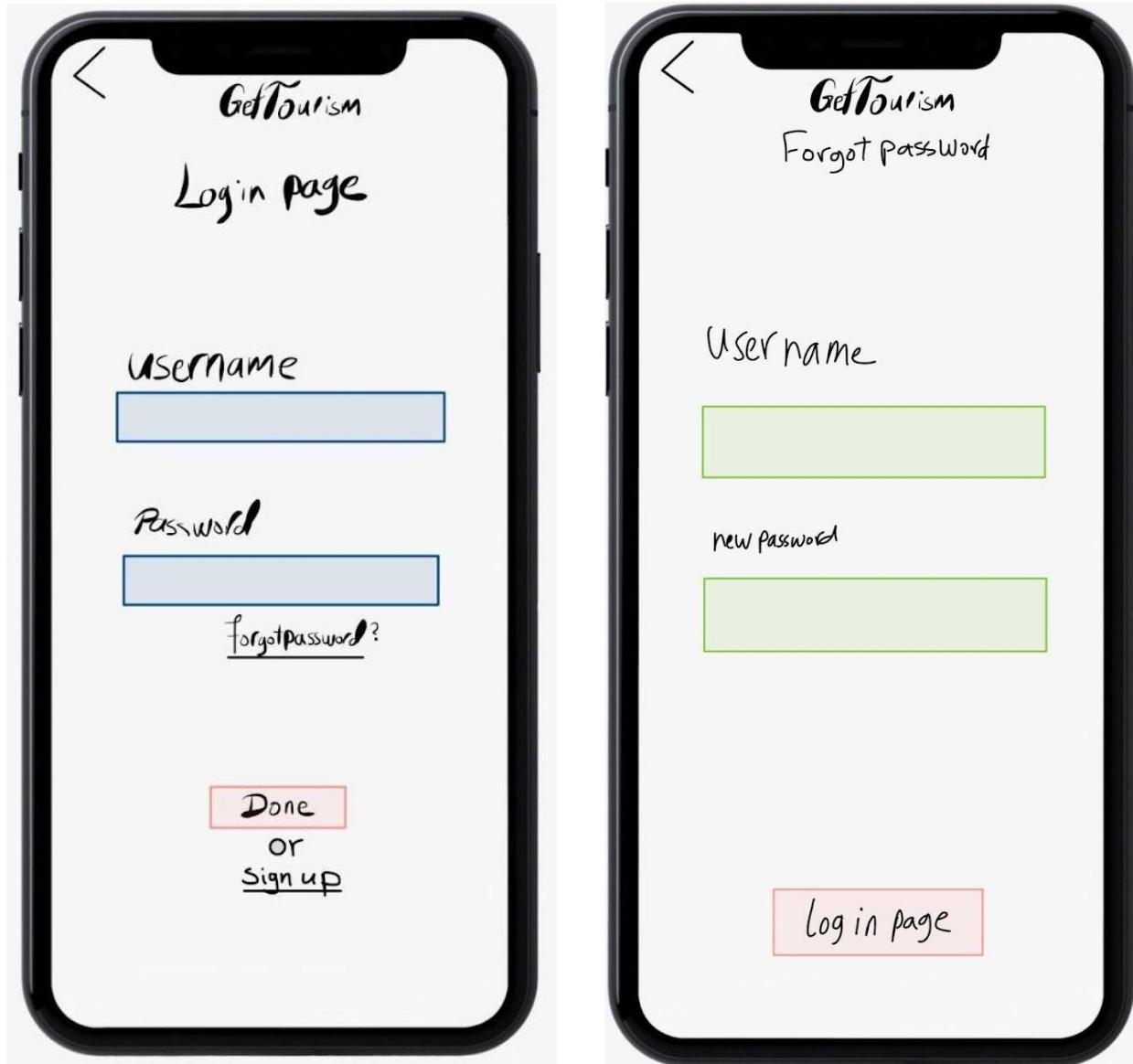
→ Low Fidelity-Prototype

In our prototype we have two scenarios of using it. One scenario is the member or a guest which allows the member to have an account in the application while guests will directly be directed to the first page in the prototype. The second scenario is when a tour guide is using the prototype. Anyone can sign up to be a tour guide and the registered ones will be able to log in with username and password.

- ◆ The scenario of using the prototype as a member



Figure 9: This figure is the first page to be visible for the users, it allows them to log in/ sign-in as a member, sign up as a new member, continue as a guest, or proceed to the tour guide page.



Figures 10 & 11: these figures show the login page, if users have an account, they can click on sign in. If they forgot their password, they can press the “forgot password” button and proceed to the Figure 3 forgot password page where they can save the new password and go back to the log-in/ sign-in page.



Table 1: describes two pages in the low-fidelity prototype which are signing up and the first page to be launched after logging in or signing up.

Figure 12: This figure shows the sign-up page for new users, they can create a username associated with their unique password. If they already have an account they can log in/ sign-in.

Figure 13: This page will appear once the user logs in or signs up. It allows the user to choose which language to display and which city to search in before proceeding to Figure 6.

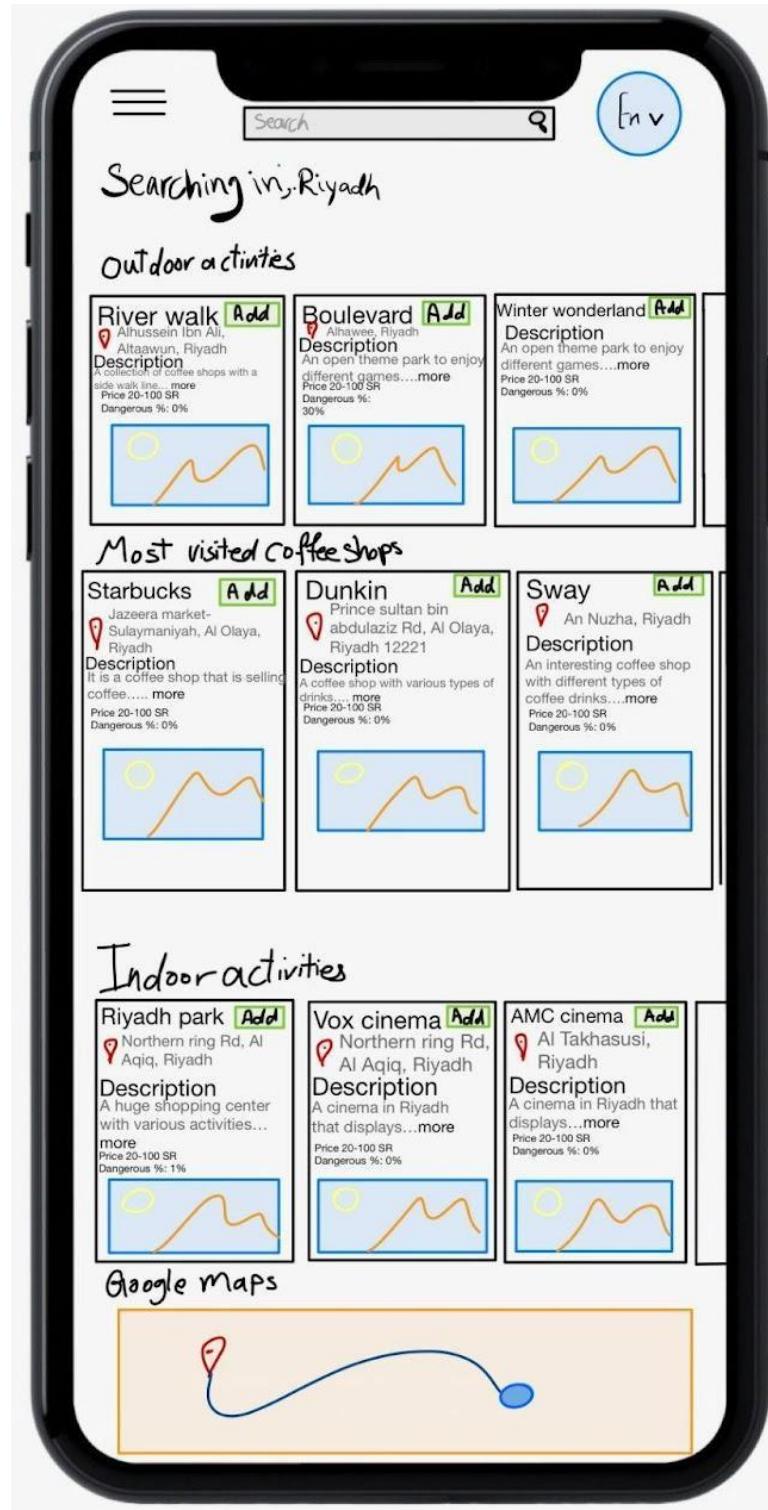


Figure 14: This page is the home page of the prototype, where users can see all activities that they can register for and access Google maps. They can also change the displayed language and open the list at the top left to see other functionalities.



Figures 15&16: These pages describe the process of adding an activity and show that a message will be displayed whenever the user successfully adds an activity.

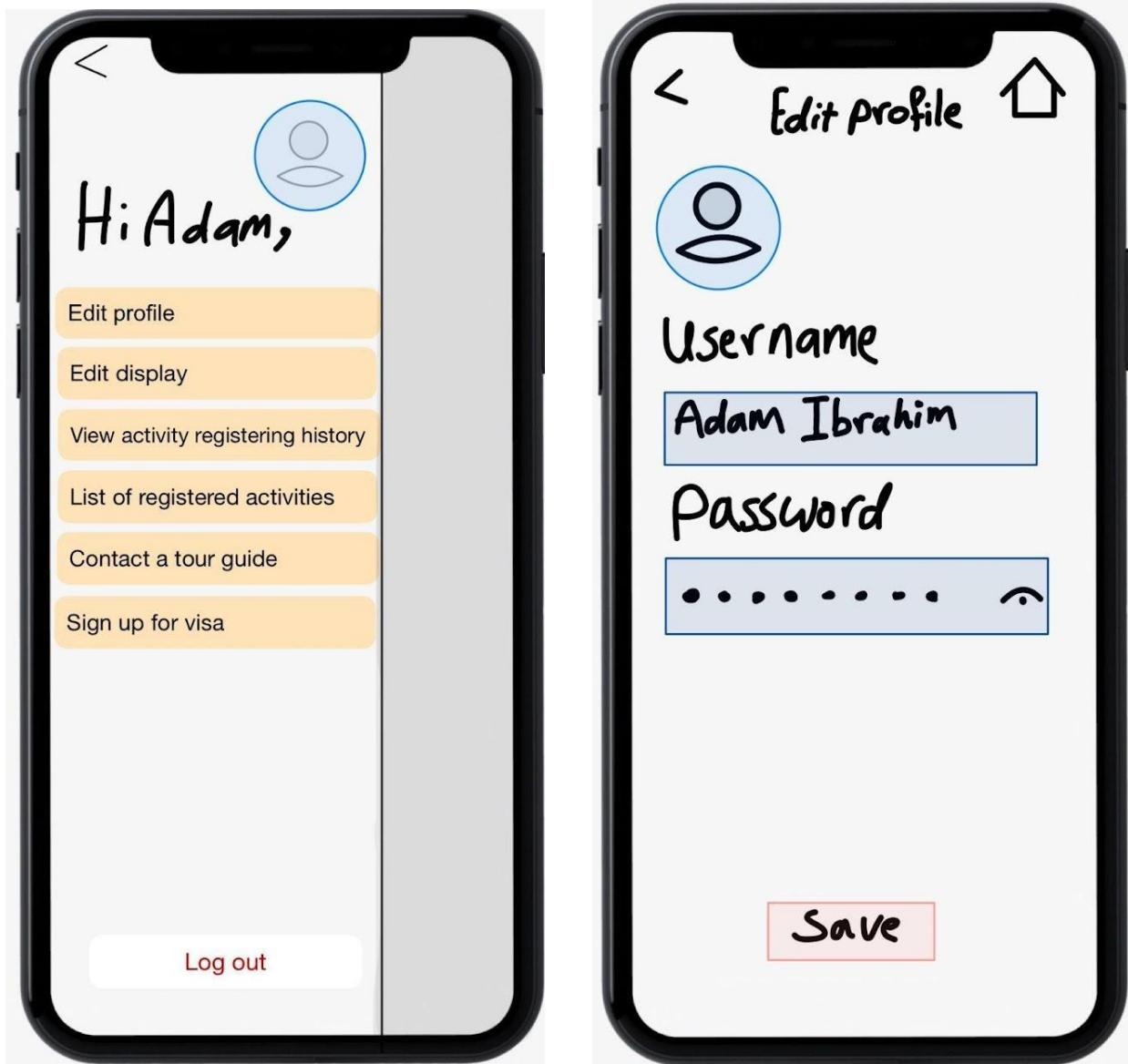


Table 2: describes two pages in the prototype which are a list of additional functionalities and the edit profile.

Figure 17: This page shows the list of other provided functionalities that the user can access to modify the brightness of the page and other things that are described in figures 10-17.

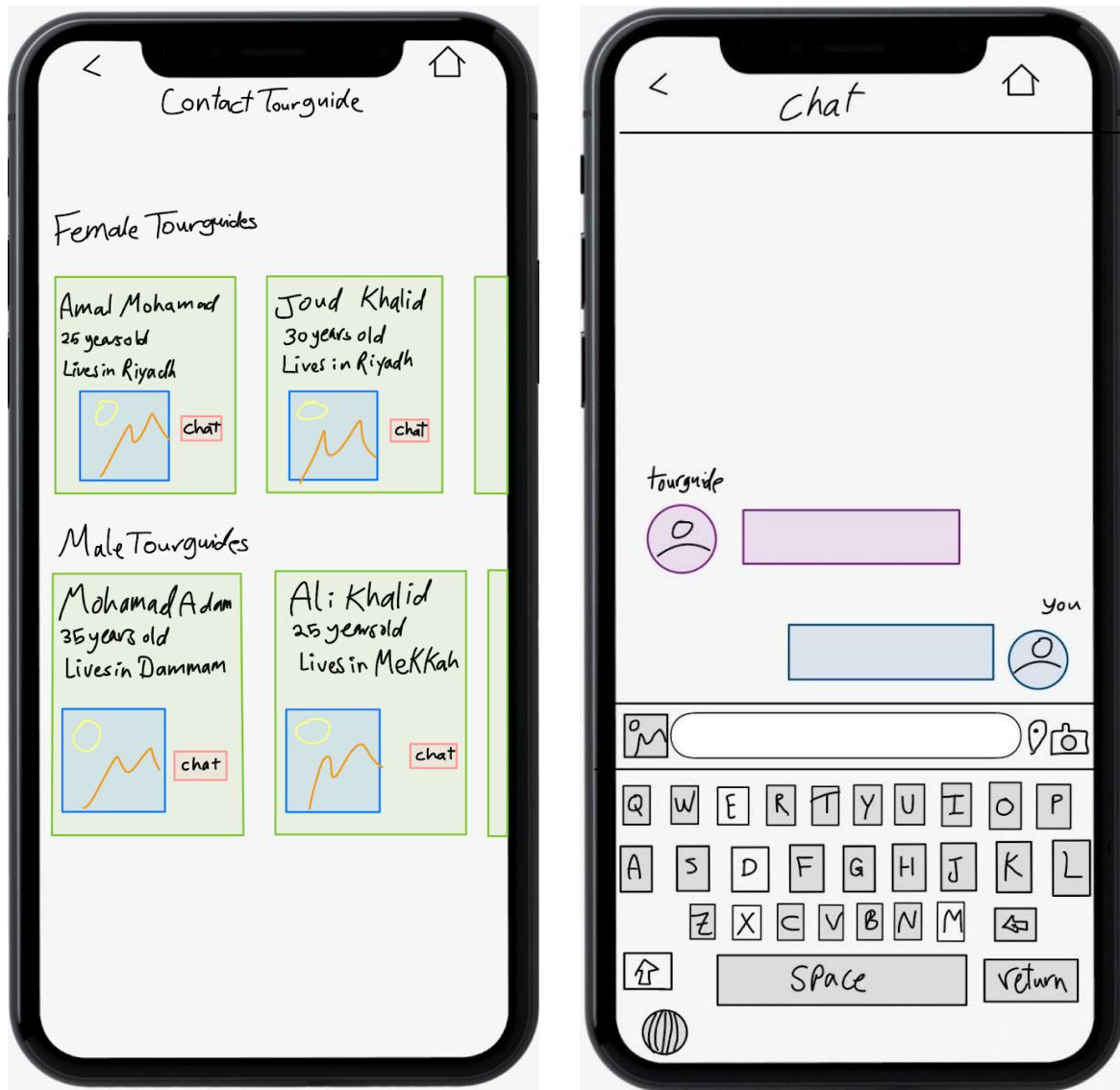
Figure 18: This page shows that users can edit their profiles in terms of changing their usernames, editing passwords, and saving changes. Also, they can either go back to the home page by pressing the home button or go back to the list of functionalities.



Figure 19: This page shows that the user can manipulate the brightness and the displayed language on the page, and then by pressing the done button they will go back to the home page.



Figures 20, 21, and 22: These pages describe the process of viewing the history list of registered activities. Users can delete any activity by pressing the trash can on the top right of the page and a message will be displayed to notify the user about the deletion process. Also, they can either go back to the list of functionalities or the home page.



Figures 23 & 24: These pages represent the process of contacting a tour guide. Users will first choose their preferred tour guide and press the chat box to communicate with the tour guide. The chat box will allow them to take pictures, send pictures, send locations, and type in any language they choose.



Table 3: describes two pages in the prototype which are visa link and logging out.

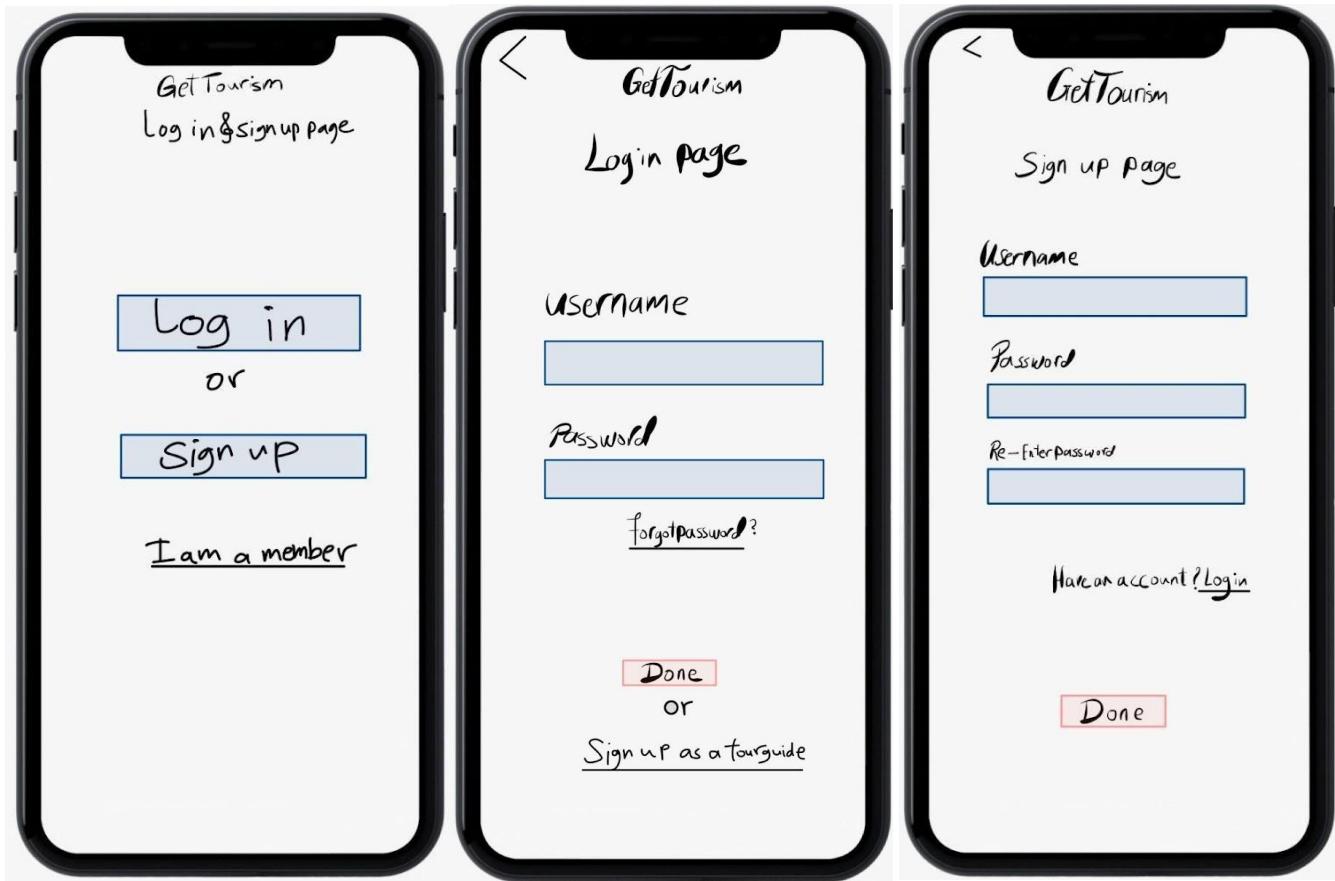
Figure 25: This page shows a link to register for a visa to visit Saudi Arabia.

Figure 26: This page will be presented again when the user presses the log-out button.

- ◆ The scenario of using the prototype as a tour guide



Figure 27: this page represents the welcoming page where the tour guide can press the “I am a tour guide” button to proceed to the login and sign-up page for the tour guide figures 28, 29, and 30.



Figures 28, 29, and 30: These pages will be available when a tour guide is using the prototype. So, the tour guide will be able to choose whether to log in, sign up or go back to logging in as a member.



Table 4: describes two pages in the prototype which are the edit display and the home page.

Figure 31: This page will be displayed after the tour guide logs in or signs up, it will give the tour guide access to modify the language that is displayed and the brightness of the page. By pressing done they will be directed to the home page.

Figure 32: This page represents the home page of the prototype for the tour guide side. It shows all the members that are chatting with the tour guide and a Google map will be available to access the location of activities. Also, the tour guide can change the language to any language that suits her/him. A list of additional functionalities is also provided at the top left of the page.



Table 5: describes two pages in the prototype, which are a chat box and list of additional functionalities.

Figure 33: After the tour guide presses the chat box in Figure 22 this page will be displayed to chat with the member.

Figure 34: This figure shows the list of additional functionalities that the tour guide can access. Which are editing profiles and editing the display of the page.



Figure 35: This page is the first page of the prototype so if the tour guide logs out this page will be represented again.

### Low-Fidelity Evaluation

The low-fidelity prototype is created by some sketches using the Goodnotes app. These sketches illustrate how the user, whether he/she is a tour guide or a tourist, would interact with the prototype. The sketches start with user login/sign up then it continues with other screens showing options and buttons for users to choose from.

#### → Methods

The low-fidelity prototype is created by handwritten sketches to give a general idea to users about the prototype and to validate graphical user interface under user profile. This is not the final version of the prototype, team members of this project will improve the high fidelity prototype through analyzing users

interactions and preference while doing the low fidelity evaluation and interview. Also, all suggestions will be taken into consideration.

◆ Participants

1. Interviewer 1: Rahaf  
Participant 1: Network Engineering and Security student in her second year studying at Al Yamamah University.
2. Interviewer 2: Sara Alojayan  
Participant 2: A doctor that works in the plastic surgery field.
3. Interviewer 3: Sarah Aljurbua  
Participant 3: Second-year CS student at PSU.
4. Interviewer 4: Nour  
Participant 4: Accounting student in second year.
5. Interviewer 5: Hafsa  
Participant 5: Second-year PSU IS student

◆ Setting of the Evaluation

The evaluation setting was set to meet participants' needs to get their honest feedback and great results. Some of the participants were physically in a quiet indoor place and others were doing the evaluation via Google Meets. Moreover, a soft copy of the prototype was given to participants to explore the prototype freely without any restrictions. Three of the evaluations were conducted in person and the remaining two were conducted through Google Meets, with a duration of around 6 minutes each.

◆ Materials Used in the Evaluation

- A mobile phone to present the prototype.
- Private room for participants and a google meet.
- Audio recording application and camera for video recording or taking pictures.
- Notes to write some remarks about what is observed.

◆ Transcript

- Question 1: What was your first impression of the GetTourism prototype?
- Question 2: Were there any ambiguous or unclear stated features?
- Question 3: In your opinion, what is the feature that you think is unnecessary in the prototype?
- Question 4: What are the features that you favored the most?
- Question 5: After using the prototype was the process of adding and deleting activities easy and clear?
- Question 6: Were you able to distinguish the designated place where you can modify the display settings and language in the prototype?

- Question 7: Have you experienced a bad font style/ color or unfavorable color pallet used in the prototype?
- Question 8: Did finding the chat box with the tour guide easy?
- Question 9: Were you able to go back to the previous page?
- Question 10: Were you able to see the logout button?

◆ Procedure

- Pre
  - A prototype is created and ready to be presented.
  - The participants were welcomed.
  - Informed consent forms were distributed and then collected from participants when they finished signing.
  - Questions related to the evaluation process were written and ready to be asked.
- During
  - Describing the procedure, idea of the study, and purpose of the study to the participants in brief.
  - Let participants explore the prototype freely.
  - Observing participants' interaction with the prototype and writing notes about the observed actions.
  - Pay attention when the participants face some troubles in exploring the prototype.
  - Answer any question the participant asks.
  - Ask questions about some functionalities to make sure that they understood them.
- Post
  - The participants were asked about their experience while using the low-fidelity prototype and what in their opinion should be improved for the high-fidelity prototype.
  - The participants are thanked for participating in the study.
  - Review written notes and listen again to the recording.
  - Evaluate all the positive or negative feedback and take it into consideration.

→ Findings

- ◆ Participant 1 (Network Engineering and Security student)  
 The participant gave consent to participate and to take a video of the evaluation. During the evaluation, a misunderstanding happened with the visa link feature. However, the participant understood the idea of it and said that it is a very good feature to be included in a tourism application. Moreover, the process of evaluation went smoothly, and the participant

commented on modifying the font to have it bigger in the home page and to include a contact us functionality in the prototype.

◆ Participant 2 (A doctor that works in the plastic surgery field)

The participant was friendly and understood what was needed from the interview, therefore, giving their full consent beforehand. They answered the questions asked by the interviewer while they were looking at the prototype at the same time. The participants gave short and clear answers just like the answers that were needed, neither too ambiguous nor too detailed. They had a lot to say about question number 7 which stated "Have you experienced a bad font style/ color or unfavorable color pallet used in the prototype?" and they felt like the fonts were not as they desired. The participant also stated that the screen brightness was unnecessary.

◆ Participant 3 (Second-year CS student at PSU)

The participant was cooperative and gave the consent to participate in the research as well as be recorded while using the prototype. In midst of the evaluation of the prototype, the participant ran into a misunderstanding of one of the functions offered by the website prototype (the tour guide log-in option, wasn't clarified if she could sign up to be one or look for one during her activities). However, the rest of the evaluation process went smoothly and we were supplied with some recommendations to be implemented in the high-fidelity prototype.

◆ Participant 4 (Accounting student in second year)

The participant was cooperative and friendly, and we got his consent to be part of the evaluation process. He explored our low-fidelity prototype for a while, then he was able to answer all the questions related to it. The participants gave positive feedback about the prototype, but he recommended making some changes in the prototype, such as letting the user change the size of the fonts as preferable and using a unified color palette, not random colors, to make the user experience better. Other than that, the evaluation process went smoothly, and we got some suggestions to add to the high-fidelity prototype.

◆ Participant 5 (Second-year PSU IS student)

Participant was very polite and cooperative; we got her consent prior to the evaluation. She answered the questions asked and explored the prototype. The feedback given was all positive, she stated that the prototype was clear, and everything was obvious. She suggested adding a feature under the activities in which users can leave reviews for their experience.

## → Main findings

To summarize all the findings of the low fidelity prototype and interviews, the participants had some difficulties during the evaluation process and every question they asked was answered by interviewers to clear out the confusion. Most of the confusion was in the visa feature and logging in as a tour guide. The recommendations of the participants were to change the color palette to a unified one, make the fonts bigger, add reviews feature, and have a contact us feature. All these are a must to include in the high-fidelity prototype since they insisted on them. Moreover, the low-fidelity prototype was created to visualize the application and to find what are the negatives that we should avoid and the positives we should focus on. Some of the positive features that are going to be improved in the high-fidelity prototype are the visa feature, editing the display in Figure 19, categorizing activities in Figure 14, and continuing as a guest feature. However, the negatives are using small font sizes and unclear font styles.

## → Discussion

In the low-fidelity evaluation participants were able to explore and understand each feature and icon. Hence, they answered the questions while doing the evaluation and showed that they understood the features clearly. The findings of the low-fidelity prototype are going to be taken into consideration and applied to the high-fidelity prototype. Moreover, functionalities that will be added in the next milestone were recommended by the participants, which are contact us, a recommendation list of the activities, and making the fonts bigger.

## → Conclusion

In conclusion, the flow of the application was shown in the storyboard, and the low-fidelity prototype was developed according to the user requirements that were extracted in the previous project milestone (1). The low-fidelity evaluation provided project members and users with a visualization of what should be included in the prototype and the weaknesses and strengths of the prototype. The usability, user experience, and quality were evaluated through the interviews. The feedback from participants is taken into consideration to enhance the performance of GetTourism in the next milestones.

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- Saudi eVisa | The Official website for Tourist Visa to Saudi Arabia. (n.d.-d). <https://visa.visitsaudi.com/>

## Individual Contribution

Table 6: Describes the individual contributions of each group member in this project.

Name	Individual Contribution
Rahaf Daas	Low fidelity prototype, references, design sketches (Tools and snapshots of evaluation), table of content, low fidelity evaluation (transcript, findings), modifications on (discussion, conclusion, procedure, methods), and appendices.
Sarah Alojayan	Member storyboard, low fidelity evaluation, findings, procedures, setting, materials, appendices, rework on the conclusion, checked overall spelling/grammar mistakes.
Sarah Aljurbua	Flowchart, Appendices, References, Intro, rework on Table of Contents and low-fidelity evaluation, findings, transcript, voice recorded interview, picture of user using prototype, voice recording of evaluation.
Nour Mohammed	low fidelity evaluation (Introduction, method, evaluation setting, materials, and procedure), finding, voice recording for transcript and evaluation.
Hafsa Al Siddiky	Tour guide storyboard, Low fidelity evaluation- discussion, findings, and conclusion, checked spelling/grammar errors, voice recording for transcript and video of the evaluation, picture of user using

prototype, appendices.

## Appendices

### → Audios/ Videos of the evaluation

All audio and video recordings are attached in the google drive file in a folder named as “Audio/ Video Recordings of the Evaluation”.

### → Consent forms

All consent forms are attached in the google drive in a folder named as “Consent Forms of the Participants”.

### → Transcript of the evaluation and interview

◆ Participant 1(interviewer Rahaf): the participant explored the prototype easily and there was only one issue while using the visa feature and it was solved immediately. Also, some suggestions were given by the participants which are to include contact us feature and maximizing the font. The followings are the interview questions and participants' answers:

- Question 1: What was your first impression of the GetTourism prototype?
  - Answer: It is a very fun, well-structured, and colorful prototype which did attract my attention since I like colorful websites and programs.
- Question 2: Were there any ambiguous or unclear stated features?
  - Answer: The visa feature was a little shocking because I am already living in Saudi Arabia and did not consider in my mind that there might be other people who should have a visa to enter the Kingdom. However, if I am coming to Saudi Arabia this would be a good and helpful feature.
- Question 3: In your opinion, what is the feature that you think is unnecessary in the prototype?
  - Answer: Everything fits very well and is related with no gaps.
- Question 4: What are the features that you favored the most?
  - Answer: Editing display and having many categories of activities to show various options.
- Question 5: After using the prototype was the process of adding and deleting activities easy and clear?
  - Answer: Yes, very Easy.
- Question 6: Were you able to distinguish the designated place where you can modify the display settings and language in the prototype?
  - Answer: Yes.

- Question 7: Have you experienced a bad font style/ color or unfavorable color pallet used in the prototype?
  - Answer: “In the activity list (Home page) the font was small, so I prefer to have it bigger and less crowded”.
- Question 8: Did finding the chat box with the tour guide easy?
  - Answer: Yes, very easy.
- Question 9: Were you able to go back to the previous page?
  - Answer: Yes, I was able to do them on every page when needed.
- Question 10: Were you able to see the logout button?
  - Answer: Yes, it was very clear that it is the log-out button.

◆ Participant 2 (By interviewer Sara Alojayan)

- Question 1: What was your first impression of the GetTourism prototype?
  - Answer: That it's about guiding tourists.
- Question 2: Were there any ambiguous or unclear stated features?
  - Answer: No, everything was clear such as the login and sign-up.
- Question 3: In your opinion, what is the feature that you think is unnecessary in the prototype?
  - Answer: That I am a tour guide (where they thought that they are a member and not a tour guide)
- Question 4: What are the features that you favored the most?
  - Answer: The editing display
- Question 5: After using the prototype was the process of adding and deleting activities easy and clear?
  - Answer: They are all clear.
- Question 6: Were you able to distinguish the designated place where you can modify the display settings and language in the prototype?
  - Answer: Yes
- Question 7: Have you experienced a bad font style/ color or unfavorable color pallet used in the prototype?
  - Answer: Yes, the font is the most unfavorable, didn't like it at all.
- Question 8: Did finding the chat box with the tour guide easy?
  - Answer: Yes, it's easy, yeah.
- Question 9: Were you able to go back to the previous page?
  - Answer: Yes
- Question 10: Were you able to see the logout button?
  - Answer: Yes, it's very clear.

◆ Participant 3 (By interviewer Sara Aljurbua)

The participants enjoyed the ease of use in the prototype for the GetTourism website, and only came across a simple misunderstanding of

one of the functions available on the website. Many recommendations and ideas were given by the participant to help make the user experience better.

- Question 1: What was your first impression of the GetTourism prototype?
  - Answer: Very simple to navigate and straightforward. Good UI design.
- Question 2: Were there any ambiguous or unclear stated features?
  - Answer: No, everything was very clear.
- Question 3: In your opinion, what is the feature that you think is unnecessary in the prototype?
  - Answer: The "display brightness" feature, since any device a user would boot up the prototype on would most likely have that feature in the device's settings.
- Question 4: What are the features that you favored the most?
  - Answer: The access to Google Maps, specifically the mini maps shown with each listed activity.
- Question 5: After using the prototype was the process of adding and deleting activities easy and clear?
  - Answer: Yes.
- Question 6: Were you able to distinguish the designated place where you can modify the display settings and language in the prototype?
  - Answer: Yes.
- Question 7: Have you experienced a bad font style/ color or unfavorable color pallet used in the prototype?
  - Answer: Yes, I believe the font should be changed to something more legible and clearer. Also, including contrasting colors would benefit the users by making different elements clearer.
- Question 8: Did finding the chat box with the tour guide easy?
  - Answer: Yes.
- Question 9: Were you able to go back to the previous page?
  - Answer: Yes.
- Question 10: Were you able to see the logout button?
  - Answer: Yes.

#### ◆ Participant 4 (By interviewer Nour)

The participants enjoyed using the tourism prototype. He suggested making some modifications to certain features. He also suggested adding features to the prototype.

The following, are interview questions and the participant's answers:

- Question 1: What was your first impression of the GetTourism prototype?

- Answer: The prototype seems organized, clear, and not complicated to use at all.
- Question 2: Were there any ambiguous or unclear stated features?
  - Answer: No, there is no ambiguity. All the stated features are obvious and most of them are provided with icons to make it faster to allocate them.
- Question 3: In your opinion, what is the feature that you think is unnecessary in the prototype?
  - Answer: I feel all the features are important to include in the prototype. But maybe the history list is not that necessary to include.
- Question 4: What are the features that you favored the most?
  - Answer: I liked the ability to change the brightness till it's preferable and having multiple languages to choose from rather than having one language.
- Question 5: After using the prototype was the process of adding and deleting activities easy and clear?
  - Answer: Yes, it was easy and clear. There are obvious buttons to add or delete the activities. And the prototype notified the user when I added or deleted an event.
- Question 6: Were you able to distinguish the designated place where you can modify the display settings and language in the prototype?
  - Answer: yes, I can distinguish the display and language settings. There's a button at the top of the page that has some options including the Edit display option.
- Question 7: Have you experienced a bad font style/ color or unfavorable color pallet used in the prototype?
  - Answer: The font seems okay, but adding an option to edit the font size would be a great idea, to make it convenient for all the users. Also, having a unified color pallet, instead of random colors, would make the prototype better to use.
- Question 8: Did finding the chat box with the tour guide easy?
  - Answer: Yes, it's easy. There is an obvious option included in the list to contact the tour guide and the chat box page seems easy to use.
- Question 9: Were you able to go back to the previous page?
  - Answer: Yes, there is an option to go back to the previous page.
- Question 10: Were you able to see the logout button?
  - Answer: Yes, the logout button is color-coded in red, it's at the end of the list.

◆ Participant 5 (By interviewer Hafsa)

- Question 1: What was your first impression of the GetTourism prototype?

- Answer: It was very clear and well organized
- Question 2: Were there any ambiguous or unclear stated features?
  - Answer: No, everything was very clear.
- Question 3: In your opinion, what is the feature that you think is unnecessary in the prototype?
  - Answer: The edit brightness feature isn't very important.
- Question 4: What are the features that you favored the most?
  - Answer: The activity description and the option to contact a tour guide
- Question 5: After using the prototype was the process of adding and deleting activities easy and clear?
  - Answer: Yes, everything was clear and not confusing at all
- Question 6: Were you able to distinguish the designated place where you can modify the display settings and language in the prototype?
  - Answer: Yes easily
- Question 7: Have you experienced a bad font style/ color or unfavorable color pallet used in the prototype?
  - Answer: No, everything was perfect.
- Question 8: Did finding the chat box with the tour guide easy?
  - Answer: Yes, it was
- Question 9: Were you able to go back to the previous page?
  - Answer: Yes, I did.
- Question 10: Were you able to see the logout button?
  - Answer: Yes, it was at the bottom of the profile page.



# SE365 - Software Engineering Approach to HCI

## GetTourism

Project Milestone 3

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## **Introduction**

The purpose of this project milestone is to show the high-fidelity prototype of the GetTourism application and to present the evaluation feedback of the prototype. In this phase, there will be two types of evaluation which are user and expert evaluations. Moreover, all the information related to the evaluation will be listed and described. For example procedure of the evaluations, setting, materials, findings, discussion, and transcript of each evaluation.

## **High-Fidelity Prototype**

For this project we have used protopie as a prototyping tool to create the high fidelity prototype of the application GetTourism. The reason of using it is because it has multiple functionalities and tiggers to be used for a better user experience. Also for specific conditions simple coding was allowed. We have created 737 pages for this project and the following link is the preview of the application.

<https://cloud.protopie.io/p/21dd6abb9c108b7bb9f6d5ff>

## High-Fidelity Prototype Description



Fig. 1: Shows the welcome page of the prototype where users, tour guides, and guests should use it first to see the rest of the application. By pressing the login button the user will be redirected to the log in page fig. 2. After pressing the sign up button the user will be redirected to the signup page. But if the user presses the continue as a guest button it will direct the user to the edit display page.

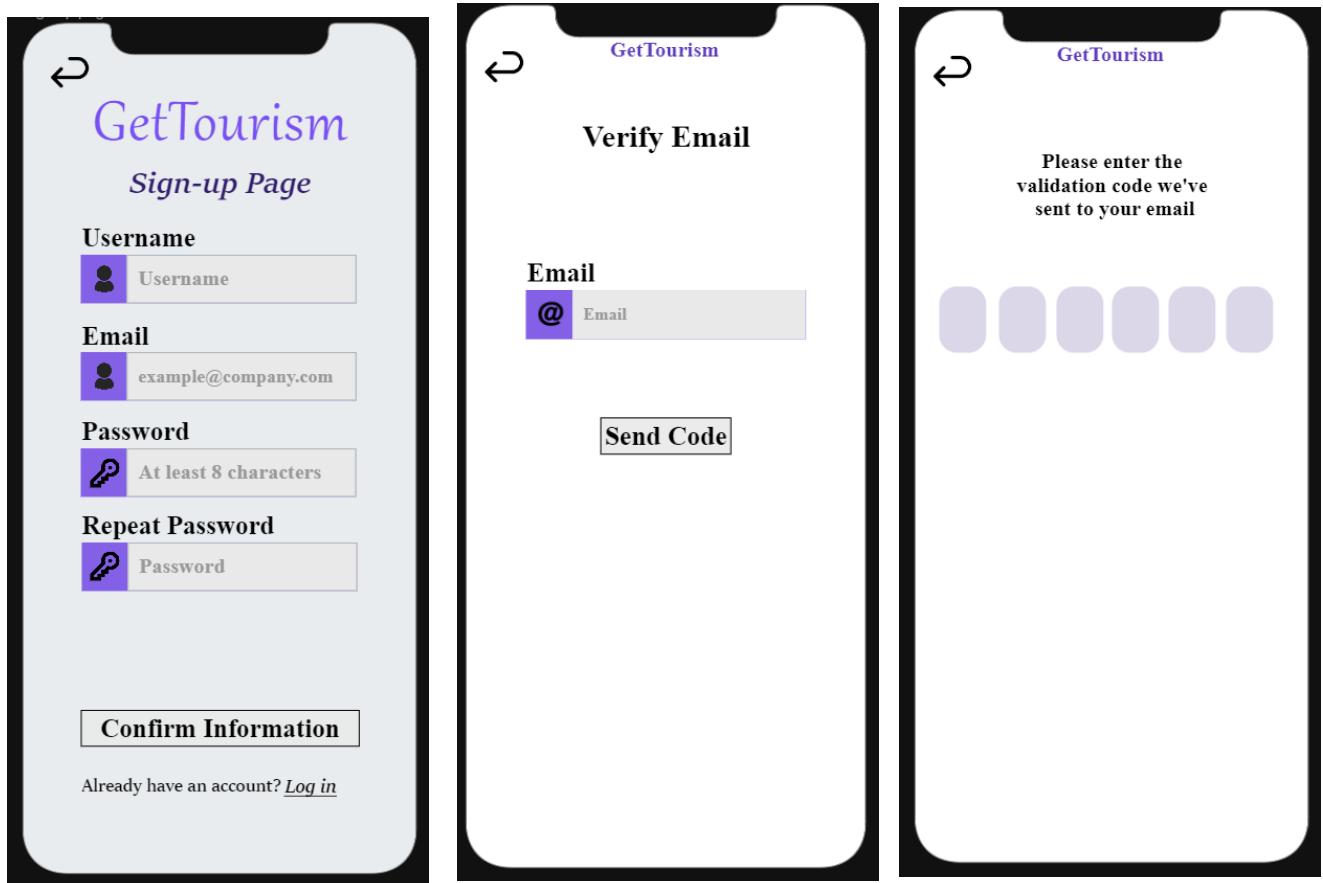


Fig. 2,3 and 4: These pages show the sign up page and when the users press on confirm information they will be redirected to the verify email page to verify the email. Then if they press on send code, the validation code page will appear for them to enter the 654321 verification code. If they already have an account then they can go back to the welcome page using the back button.

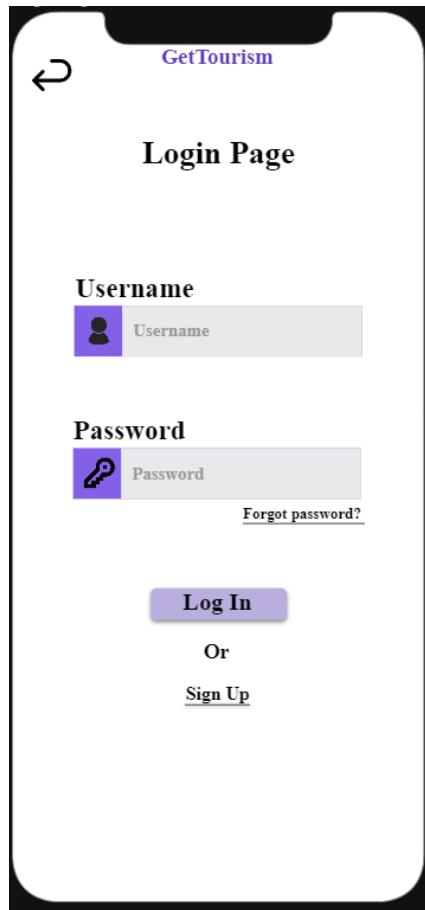


Fig. 5: This page shows the log in page for the users if they forget their password they can press the “Forgot password?” button to reset it (refer to fig. 6,7, and 8). After filling the information required, if the entered data is incorrect an error message will appear. However, if the information is correct then the user will proceed to the edit display page.

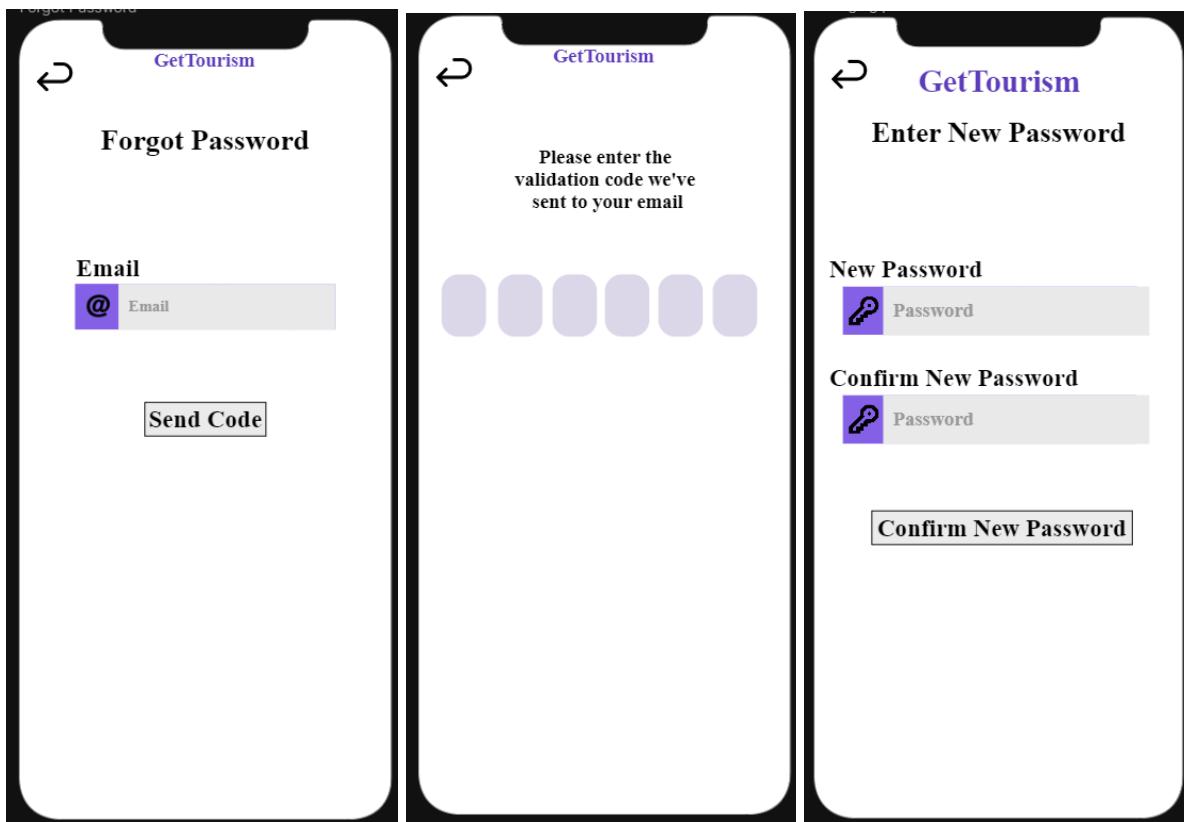


Fig. 6,7,&8: These pages show the forgot password, email validation and password reset pages. If the entered code is incorrect an error message will be displayed but if correct then the user can reset the password. If the new password and the confirmed new password do not match an error message will be displayed. After pressing on confirm new password users will be redirected to the log in page.

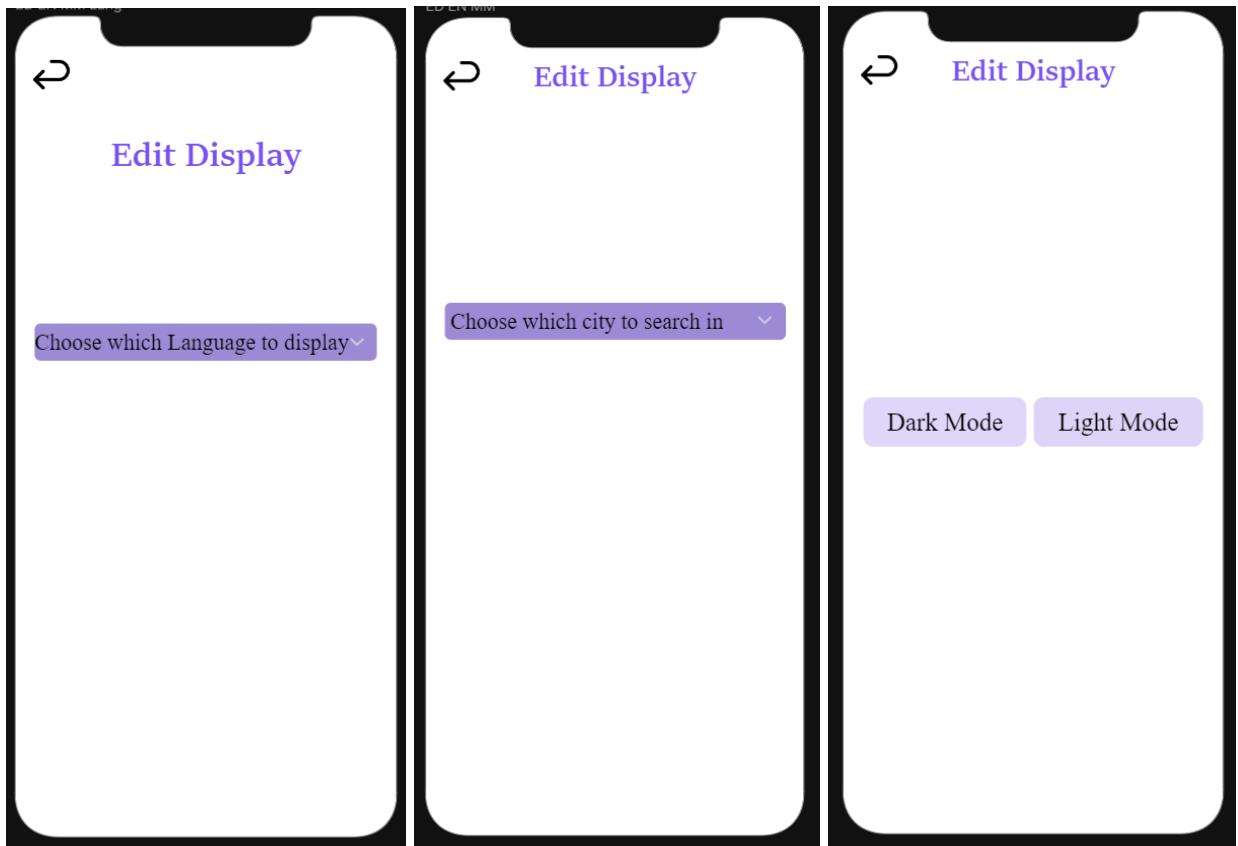


Fig. 9, 10, &11: These pages show the edit display pages. The first page is a drop down list where the user chooses which language to display English, Arabic, or Turkish. Then the next page will allow the user to choose which city to search in. And the last page before the home page is choosing which mode the user prefers to continue with. According to the choices the home page will be displayed. Additionally, Going back to the previous page is allowed on each page using the back button.



Fig. 12, 13 &14: These pages shows the home page of the member path. It is available in AR, EN and TR from the drop down menu on top left of the page. Also users can change the city that they are searching in from the drop down menu on the right. In addition, in each home page there are outdoor, indoor, and most visited activities. When the user presses on one of them they will be redirected to list of activities available in this prototype. At the top left of the home page there is a list of additional functionalities that the user can use to modify the prototype (refer to fig.15 and 16). Moreover, these pages can also be viewed in light or dark mode.

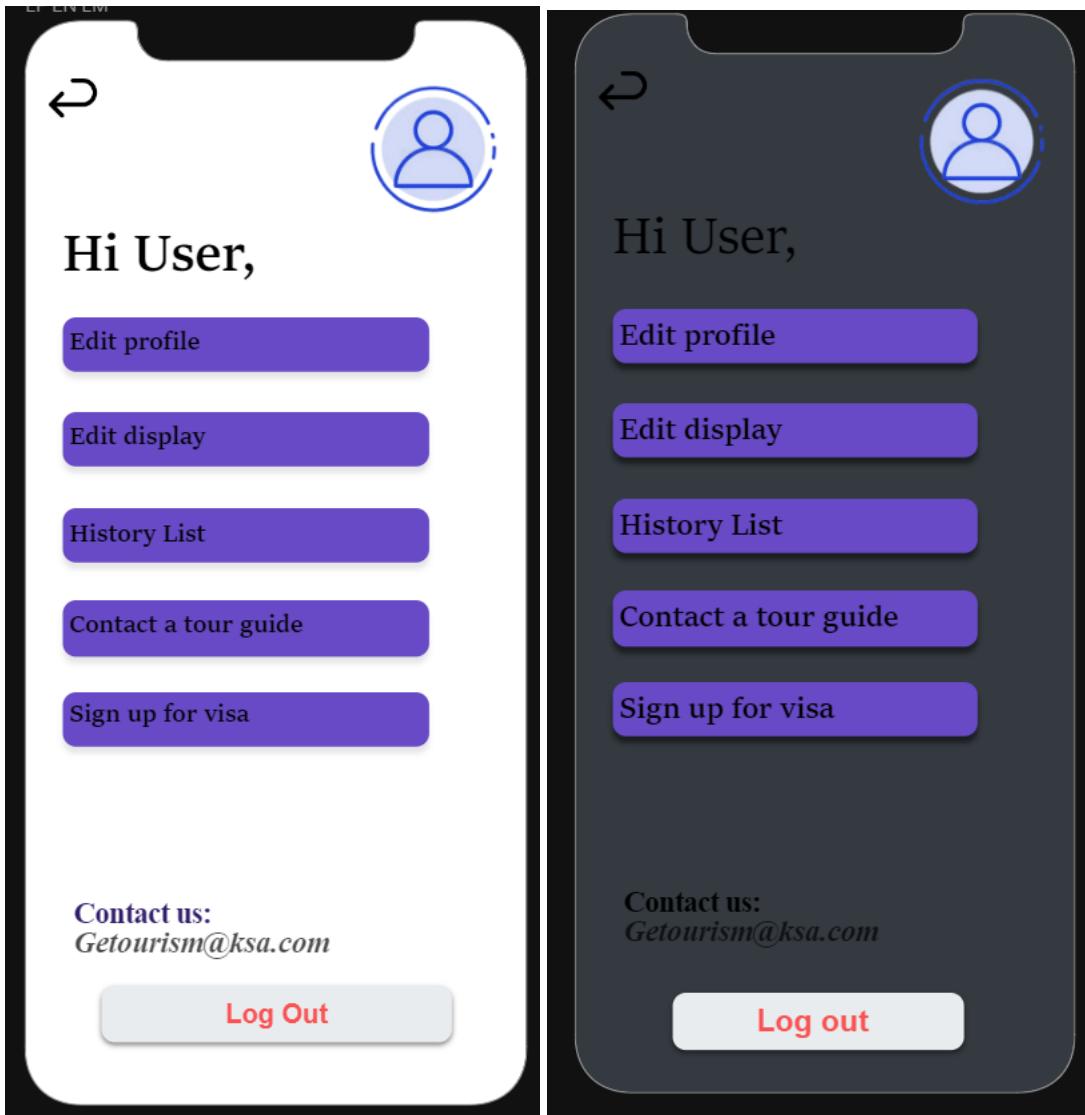


Fig. 15 and 16: These two pictures shows the list of additional functionalities that the user can use in the prototype. It includes edit profile, edit display, history list, contact a tour guide, signing up for a visa, contact us email, and logging out. After pressing any button users will be redirected to the chosen page. They can also go back to the homepage using the homepage button. These pages are also available in arabic, english and turkish. The sign up for visa button if you hover on it, a message will be displayed that says “click to sign up for visa”, and if this button is clicked it will take you to the visa registering website on your downloaded search engine. Lastly, when the user presses on the log out button fig. 1 will appear again.

**Outdoor Activities**

**River Walk**

**About**

An oasis in Riyadh that is a neighborhood gathering place for dining and shopping. Although a commercial collection of.....More.

**Address**

7258 3160 Al Hussein Ibn Ali,  
At Taawun, Riyadh 12475.

**River Walk Activity**

**About**

An oasis in Riyadh that is a neighborhood gathering place for dining and shopping. Although a commercial collection of shops and cafes, it is designed to have a public sense of place that is a hub for the neighborhood of Al Taawun and as a destination for people from other parts of Riyadh.

**Address**

7258 3160 Al Hussein Ibn Ali,  
At Taawun, Riyadh 12475.

Fig. 17 and 18: The first page shows the outdoor list of activities in Riyadh, all activities are in a container that allows users to scroll right, left, up, and down to see and know everything about the activity. When the user presses anywhere in the rectangle the second page (fig. 18) will appear. The second page includes all the information related to the activity. For instance, description, address, google map button, price of the activity, the percentage of dangerousness, recommendation list for other activities in Riyadh, and a reviews list. If the user presses on the google map picture fig. 19 will appear. These two pages are available in Arabic, Turkish, and English, as well as dark and light modes. All these functionalities are also applicable for searching in Jeddah, Dammam, and Khobar.



Fig. 19: This page shows the google map of the activity. If you hover on the red pin a message will display to state that the red pin is pressable to show the link of the activity. Pinch ,drag and move triggers are used to make the user able to zoom in, out, and to pinch the map. Going back to the previous page is allowed as well.

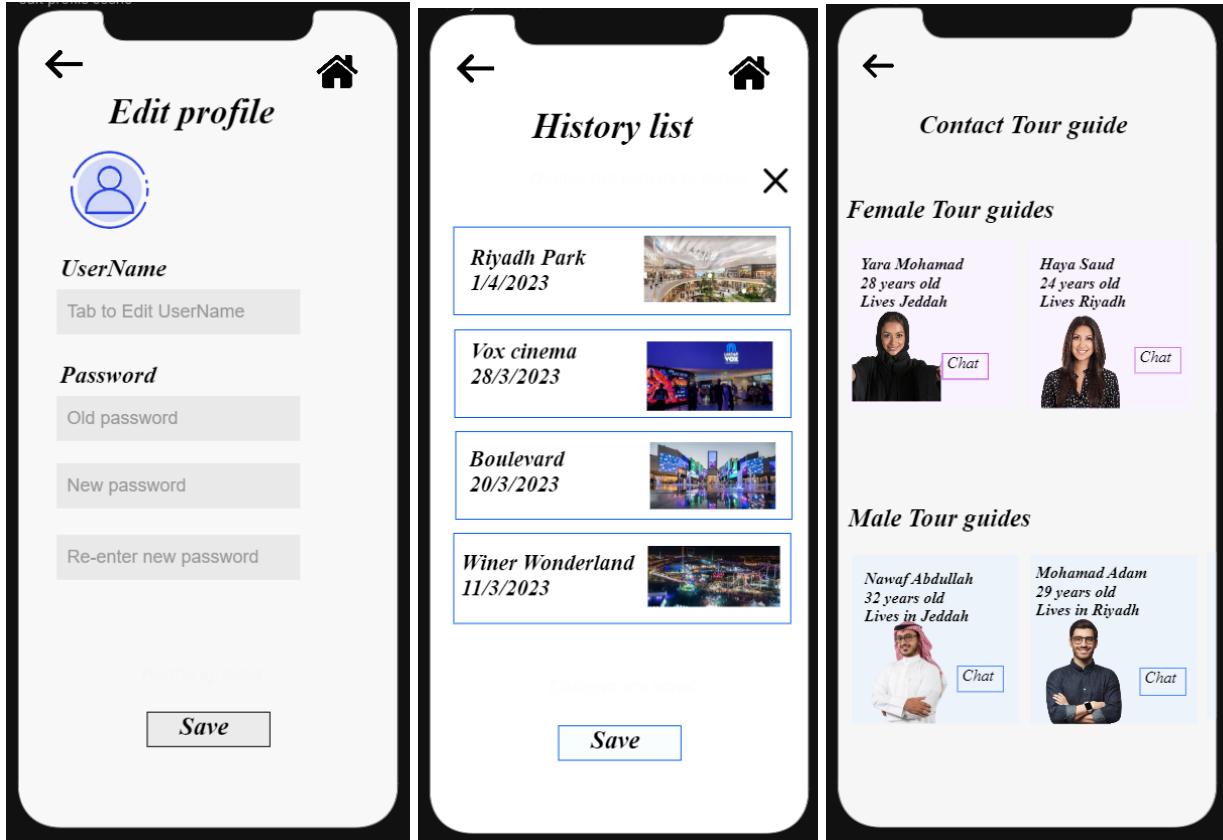


Fig. 20, 21, & 22: The first page shows the first functionality in the list of functionalities. It allows the user to reset username and password, by pressing the save button a message will be displayed to indicate that the data is saved. The back button takes the user to the list of functionalities and the home button redirects the user to the home page. The second page represents the history list of activities; it includes all the activities added previously. The user can delete a previous added activity by double tapping on the activity, if the user tries to delete with one tap an instruction will be displayed to double tap for deleting. The save button will show a message to indicate that the changes are saved. Same as the first page user can go back to the list of functionalities or the home button to the home page. Lastly, the third page represents contacting a tour guide. The user can scroll right and left to find a suitable tour guide and by pressing the chat box users will be able to chat with the chosen tour guide. Fig. 23 shows the chat box.



Fig. 23: Represents the chat box that happens between the tour guide and the user. The user will type any message and an automatic message will be displayed for the user as “wait for the tour guide to respond”. This page is also included in the tour guide path where the tour guide chooses from the home page a user and chats with the user by typing a message. The respond will also tell the tour guide to wait until the user signs in again.

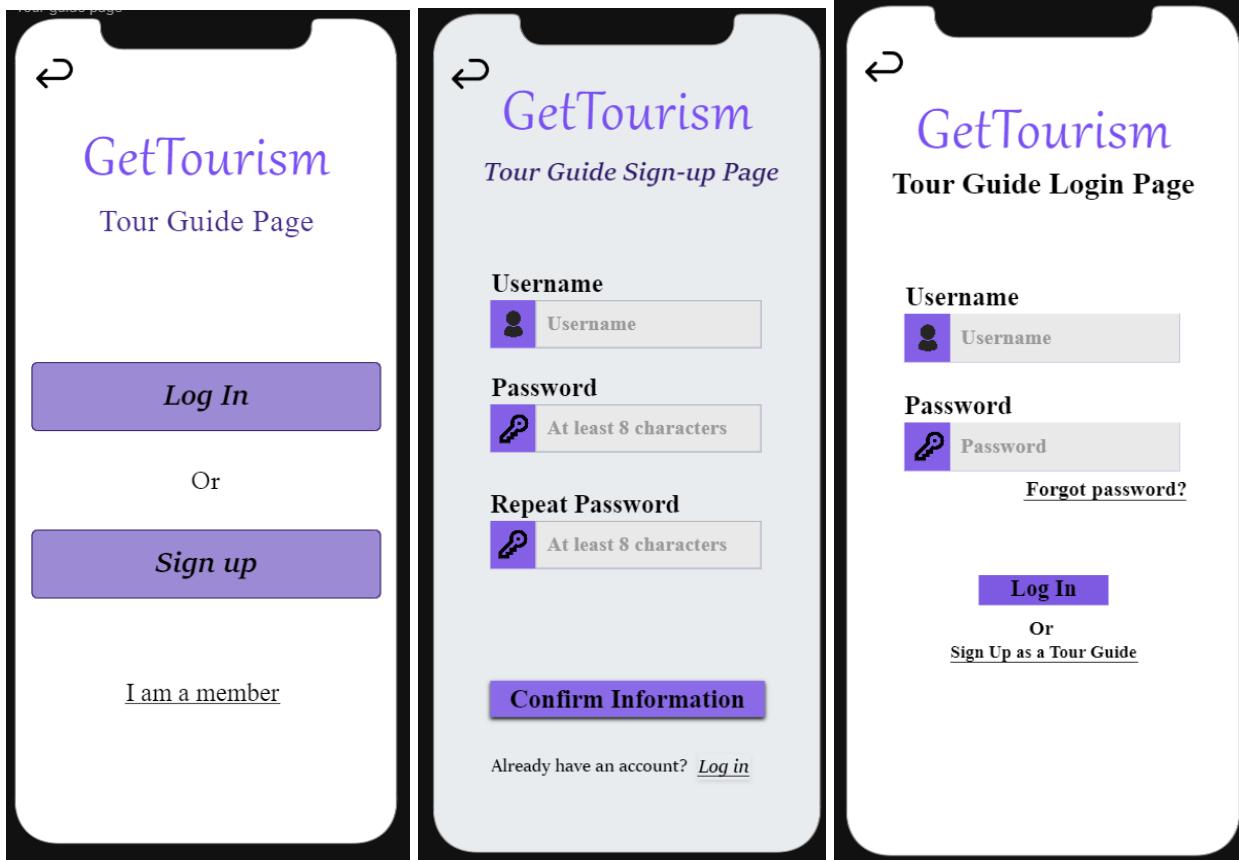


Fig. 24, 25 & 26: The first page represents the tour guide page where it allows the tour guide to choose whether to login, signup, or go back to the welcome page. By pressing the back button the welcome page will appear again. The second page represents the sign up page for tour guides. If you already have an account you can press the login button, if not then confirm the information in fig. 25. After pressing the confirm information button you will be redirected to login page for tour guides. By pressing the login button the edit display page will appear fig. 27.

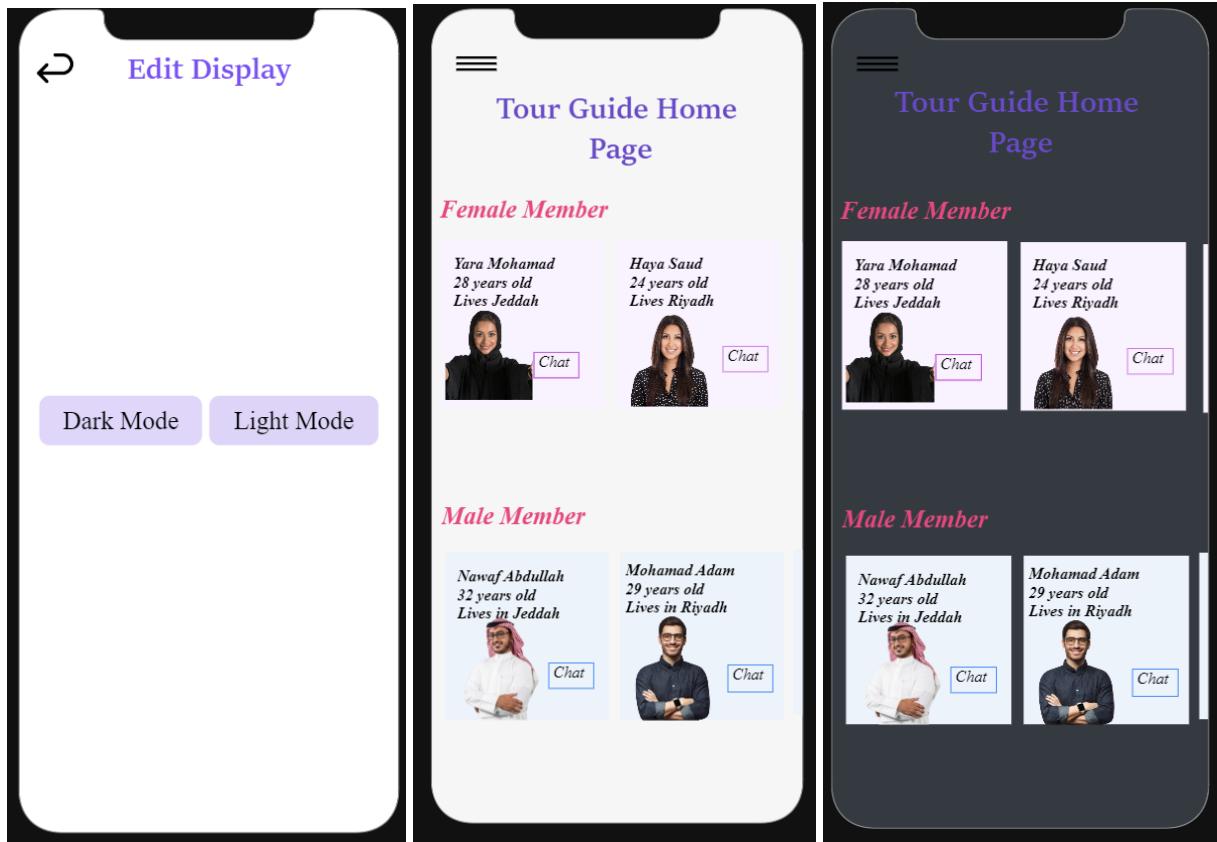


Fig. 27, 28,& 29: The first pages shows the edit display page for the tour guides where they can choose either light or dark mode. The second page represents the home page of the tour guide path, it includes both female and male members that are chatting with the tour guide. You can scroll right and left to see all the member and by pressing the list of functionalities at the top left of the page you will be redirected to the list of functionalities provided to the tour guide. The third page represents the dark mode of the home page.

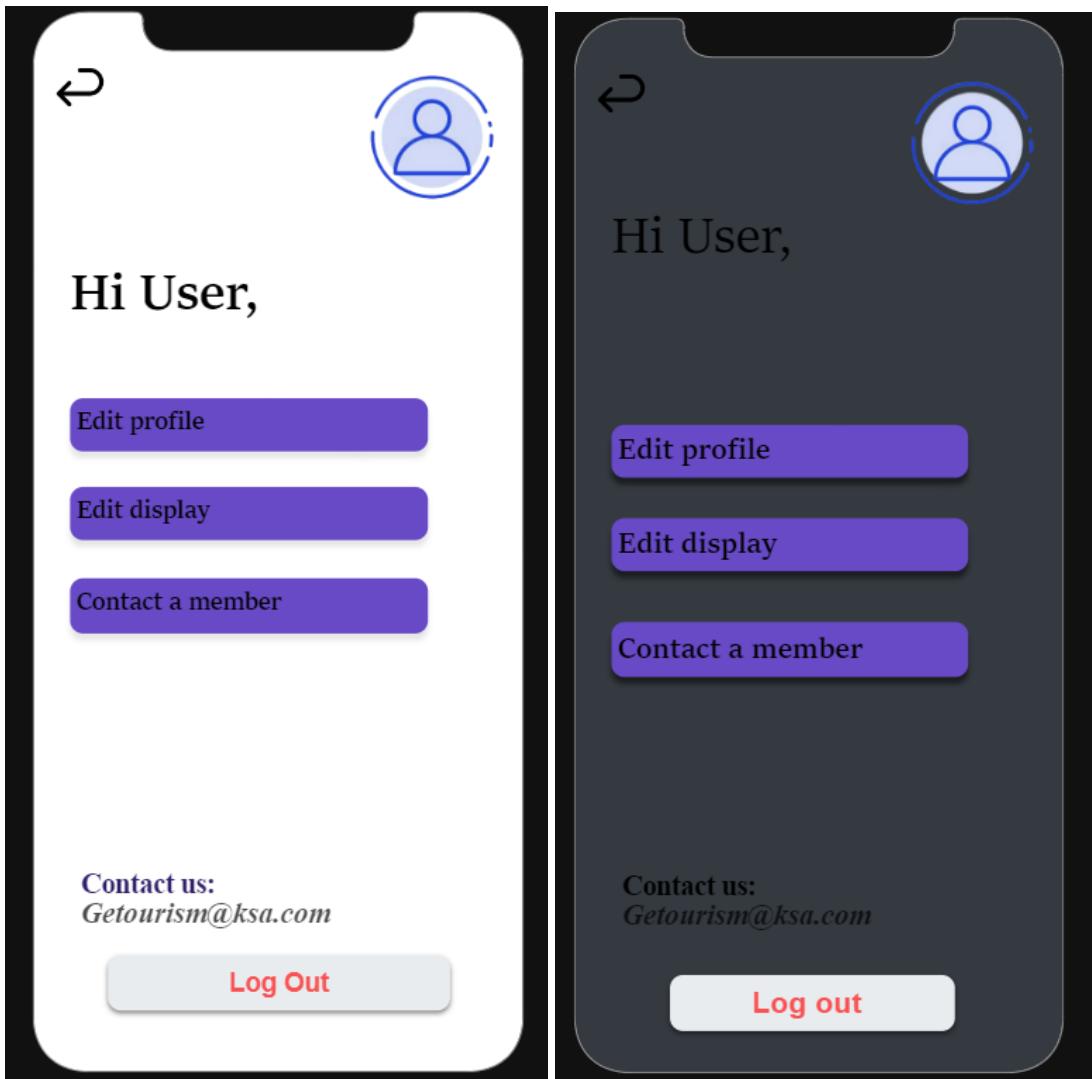


Fig. 30 & 31: The first picture shows the list of functionalities provided for the tour guide. It includes edit profile, edit display, contact a member, contact us, and log out button. By pressing the edit profile button you will be redirected to fig. 32, while edit display button will take the tour guide back to edit display fig.27. The contact member button will show the chat box between the tour guide and the member (fig. 23). The last two things in the first page are contact us email and the log out button where the first page will appear again. The second page represents the dark mode of the list of functionalities.



Fig. 32: Shows the page that will appear when the logout button is pressed.

## High-Fidelity Evaluation

### → Methods - User Evaluation

The high-fidelity prototype was created using the ProtoPie application to reveal the graphical user interface to the users who meet our user profile. It helped in giving a great visualization of how the GetTourism application would work in real life and how it would function for potential users. Moreover, this high-fidelity prototype could simulate realistic user experiences, provide interactive features,

test different user scenarios, and collect user feedback during user evaluations. Therefore, it aided us in refining and improving our application design as well as applying the user's suggestions and feedback from previous project milestones which is the low-fidelity prototype.

◆ Participants

1. Interviewer 1: Rahaf  
Participant 1: Network Engineering and Security student at Al Yammamah University.
2. Interviewer 2: Sarah Aljurbua  
Participant 2: Second-year CS student at PSU.
3. Interviewer 3: Sara Alojayan  
Participant 3: A doctor that works in the plastic surgery field.
4. Interviewer 4: Nour  
Participant 4: Accounting student in second year.
5. Interviewer 5: Hafsa  
Participant 5: Second-year PSU IS student

◆ Heuristic Evaluations

For each user evaluation a heuristic evalutaion table was provided in the beggining of the evaluation. The users were asked to explore all aspects of the prototype first then follow the tasks written in the table. After finishing the tasks the table was filled in this order whether the task is applied, violated, or needs any improvements. The users finished their tables and submitted them to us then the interviews were conducted. Lastly, all user heuristic evaluations are attached in the google drive folder named as "Heuristic Evaluation Tables for User Evaluations".

◆ Evaluation Setting

The setting of the evaluation was set and determined to help meet the participants needs to receive the feedback on the high-fidelity prototype. To collect teh feedbacks, the participants were met either via Google meets or face-to-face in a quiet secluded space. A soft copy of the fully functioning prototype was given to participants to explore it freely with no constraints. Some of the user evaluations were done face-to-face and others were conducted through Google meets. Both were were completed within a duration of approximately 5-8 minutes each. While the interviews were conducted within a maximum of 3 minutes each.

◆ Evaluation Material

- A laptop to present the prototype.
- Audio recording applications and camera for video recording.
- A private room to conduct the evaluations quietly.
- Heuristic evaluation tables.

◆ Transcript

- Question 1: Were you able to log in and was it difficult?
- Question 2: Were you able to add and delete an activity?
- Question 3: Were you able to continue as a guest?
- Question 4: Were you able to access the history of activities easily?
- Question 5: Were you able to reset your password from the list of functionalities page?
- Question 6: Were you able to log out easily?
- Question 7: Were you able to view the location of the activity on the map?
- Question 8: Were you able to change the display mode from the list of functionalities page?
- Question 9: Was the chosen color palette suitable?
- Question 10: Do you have additional notes and feedbacks?

◆ High-Fidelity Expert Evaluation Snapshots

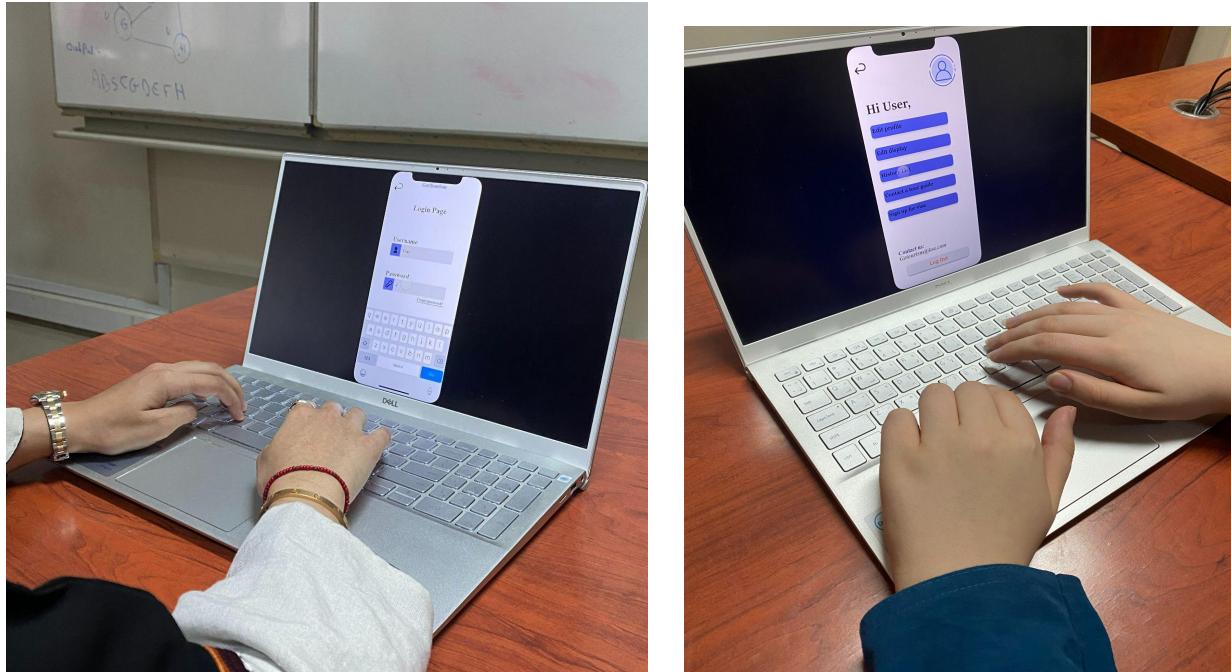


Fig. 1&2: Shows the snapshots of the expert evaluations.

- ◆ High-Fidelity User Evaluation Snapshots
  - Rahaf



Fig. 3: Shows the user evaluation of participant 1.

- Sara Al Jurbua

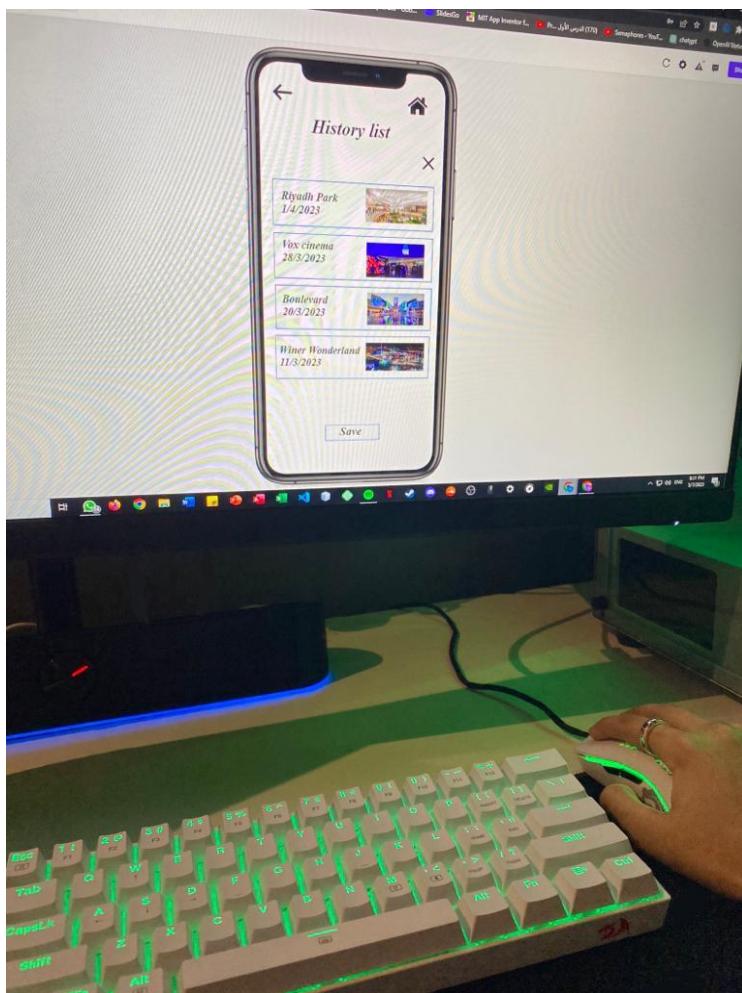


Fig. 4: Shows the user evaluation of participant 2.

- Sara Al Ojayan

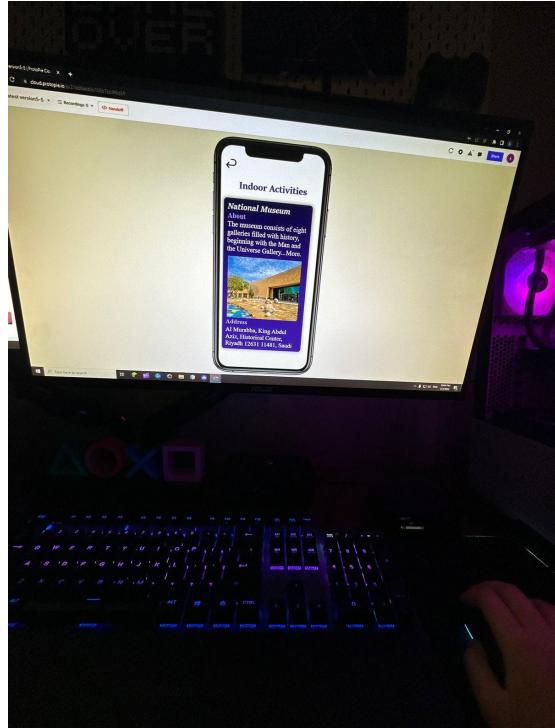


Fig. 5: Shows the user evaluation of participant 3.

- Nour

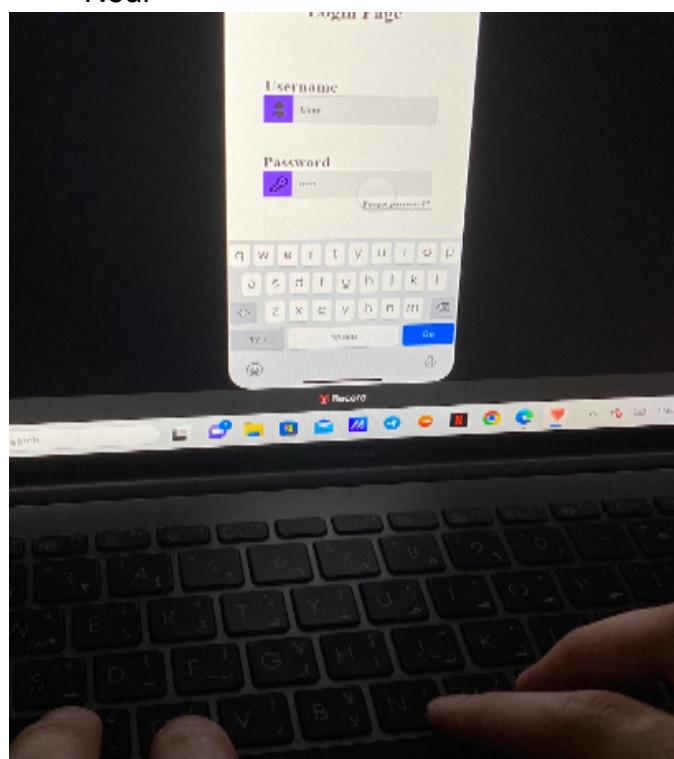


Fig. 6: Shows the user evaluation of participant 4.

- Hafsa

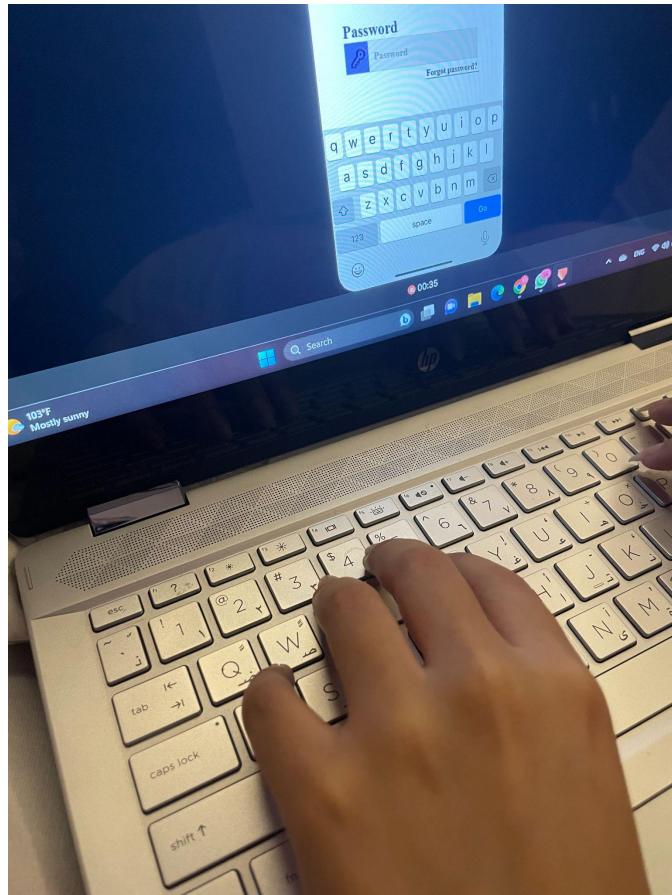


Fig. 7: Shows the user evaluation of participant 5.

◆ Procedure of User Evaluation

- Pre
  - Create a high-fidelity prototype using Protopie prototyping tool.
  - Prepare the consent forms and heuristic evaluations for the users.
  - Book appointments for the evaluation.
  - Participants were welcomed and informed of the procedure.
  - Inform participants about the consent form and ask them to read it, sign it and submitted it back to the interviewers.
  - Questions related to the evaluation process were written and ready to be asked after the user finishes the evaluation.
- During
  - Describe the nature of the procedure and purpose of the study.
  - Let the participants freely explore the prototype.

- Provide the users with the heuristic evaluation table for them to fill it and follow the tasks.
- Overlook participants' interactions with the prototype.
- Pay attention and note down any errors or difficulties that participants face when exploring the prototype.
- Answer any question that the user asks while evaluating the GetTourism prototype.
- Post
  - Ask the prepared questions to the participants that revolve around the functionalities in the prototype.
  - Record the whole interview.
  - The participants were thanked for taking part in the interview.
  - The participants were asked about their general experience with the high-fidelity prototype.
  - Go over the notes taken when we overlooked the participants during the interview.

#### → Methods - Expert Evaluation

The Protopie website was used to create a high-fidelity prototype of the GetTourism application. With its intuitive drag-and-drop interface and interactive features, we were able to design a realistic experience for our evaluators to test. Additionally, Protopie provides users the ability to simulate complex interactions and animations in their prototypes which allowed us to showcase our application's functionalities in a dynamic and engaging way. As a result, Protopie was an essential tool in helping us to create a polished and professional prototype for our prototype.

#### ◆ Heuristic Evaluations

The experts were provided with a heuristic evaluation table which includes specific tasks to be completed and explain how these tasks are applied in the prototype. The experts of our prototype were three experts, as a result only three tables were submitted to us. Moreover, we have summarized all the three heuristic evaluation tables into one descriptive table that summarizes and combines all the expert evaluations.

Table 1: shows the summary of heuristic evaluation of the expert evaluations.

Rule of Thumb	Is this rule being applied? How so?	Is this rule violated? How so?	How can this rule further improve

			<b>usability, utility and desirability?</b>
<p>1. Visibility of system status</p> <ul style="list-style-type: none"> <li>• <b>Being able to go to the home page by pressing the home icon.</b> Also, an error message will be displayed If the entered password is wrong.</li> <li>• Task1: You are now on the welcome page press Log In.</li> <li>• Task2: Enter “user” as username and user12 as password an error message must be displayed.</li> <li>• Task3: Enter “User” as username and “User1234” as a password. Then you must be directed to the edit display page.</li> <li>• Task 2: choose the language, city, and display mood you prefer.</li> </ul>	<p>1. Yara AlMubarak: The visibility tasks are all applied professionally.</p> <p>2. Noura: Yes, the visibility tasks are all applied professionally.</p> <p>3. Yara Aljarboa: Yes I can see all features of the system after logging in and I can search for what I want easily.</p>	<p>1. Yara AlMubarak: No it is not, everything is done well.</p> <p>2. Noura: No, everything is done well.</p> <p>3. Yara Al Jarbua: No it is not violated.</p>	<p>1. Yara AlMubarak: This rule will improve usability, utility, and desirability by including detailed features that help us move smoothly between pages.</p> <p>2. Noura: This rule will improve usability, utility, and desirability by including detailed features that help us move smoothly between pages.</p> <p>3. Yara Aljarboa: This rule helps users’ usability of the system as it confirms that everything is visible to the user.</p>

<p>2. Match between the system and the real world</p> <ul style="list-style-type: none"> <li><b>Using words and concepts that are familiar to users and used on a daily basis for example, home page button or the display list.</b></li> <li><b>Task: you are now in the home page, choose the outdoor activities then go back to the home page.</b></li> </ul>	<ol style="list-style-type: none"> <li>Yara AlMubarak:Yes, when choosing an outdoor activity it navigates us to a page which has different outdoor activities.</li> <li>Yara Aljarboa:Yes, the system uses icons that are familiar to the real world.</li> <li>Noura:yes, the words used are familiar and easy to know what page it will take me too</li> </ol>	<ol style="list-style-type: none"> <li>Yara AlMubarak:no not violated</li> <li>Noura:No this rule have not been violated.</li> <li>Yara Al Jarbua: No it is not violated.</li> </ol>	<ol style="list-style-type: none"> <li>Yara AlMubarak:It has different activities that makes the user chooses whatever's they desire.</li> <li>Yara Aljarboa:It helps usability by letting users know what each icon is for without guidance.</li> <li>Noura:It has different activities that makes the user chooses whatever's they desire</li> </ol>
<p>3. User control and freedom</p> <ul style="list-style-type: none"> <li><b>Forgot the password, they are able to change it.</b></li> <li><b>Task 1: press the list of functionalities at the top left of the home page and log out.</b></li> <li><b>Task2: press log in then press the forgot password button to</b></li> </ul>	<ol style="list-style-type: none"> <li>Yara AlMubarak:Yes. The login function was used very smoothly.</li> <li>Yara Aljarboa:Yes, the user has freedom to reset their password.</li> <li>Noura:yes, freedom and user control is applied very well.</li> </ol>	<ol style="list-style-type: none"> <li>Yara AlMubarak&gt;No it's not violated.</li> <li>Yara Al Jarbua: No it is not violated.</li> <li>Noura:No this rule have not been violated.</li> </ol>	<ol style="list-style-type: none"> <li>Yara AlMubarak:There is a forget password button.</li> <li>Yara Aljarboa:This improves the desirability at the user doesn't have to stick to one password.</li> <li>Noura:There is a forget password button.</li> </ol>

<b>reset the password.</b>			
<p>4. Consistency and standards</p> <ul style="list-style-type: none"> <li>● <b>We maintain consistency to decrease users' cognitive load by designing the login to be as similar to most used applications.</b></li> <li>● Task 1: log in again with "User" as the username and "User1234" as the password, then change the language on the page.</li> <li>● Task 2: choose any type of activity.</li> <li>● Task 3: choose any activity and then go back again.</li> </ul>	<ol style="list-style-type: none"> <li>1. Yara AlMubarak:Yes, this function was working very well.</li> <li>2. Yara AlJarboa:The application is very consistent and simple to use.</li> <li>3. Noura:yes the login page is familiar and easy to use.</li> </ol>	<ol style="list-style-type: none"> <li>1. Yara AlMubarak:No violation.</li> <li>2. Yara Al Jarbua: No it is not violated.</li> <li>3. Noura:No this rule have not been violated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Yara AlMubarak:The functions are working very well.</li> <li>2. Yara Aljarboa: Improves learn ability as the app is easy to understand.</li> <li>3. Noura:The functions are working very well.</li> </ol>

<p>5. Error prevention</p> <ul style="list-style-type: none"> <li>• <b>Incorrect input.</b></li> <li>• <b>Task 1: log out again.</b></li> <li>• <b>Task 2: You are now on the welcome page press login.</b></li> <li>• <b>Task 2: Enter user as username and user12 as password an error message must be displayed.</b></li> <li>• <b>Task3: Enter “User” as username and “User1234” as a password.</b></li> </ul>	<ol style="list-style-type: none"> <li>1. Yara AlMubarak:Yes, there are error preventions.</li> <li>2. Yara Aljarboa:The app does a good job of preventing errors from the user.</li> <li>3. Noura:Yes, error prevention have been well applied.</li> </ol>	<ol style="list-style-type: none"> <li>1. Yara AlMubarak:no violation.</li> <li>2. Yara Al Jarbua: No it is not violated.</li> <li>3. Noura:No this rule have not been violated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Yara AlMubarak: Very well done for adding information about the sold out tickets.</li> <li>2. Yara Aljarboa: Helps reduce user. frustration from errors</li> <li>3. Noura: Very well done for adding information about the sold out tickets.</li> </ol>
<p>6. Recognition rather than recall</p> <ul style="list-style-type: none"> <li>• <b>An arrow is used to indicate that a list of languages should not be displayed.</b></li> <li>• <b>Task1: in the home page, change the language displayed in the prototype.</b></li> <li>• <b>Task2: in the home page change the</b></li> </ul>	<ol style="list-style-type: none"> <li>1. Yara AlMubarak: Yes, we could change languages very easily and it was very clear.</li> <li>2. Yara Aljarboa: The system makes the options clear and recognizable.</li> <li>3. Noura: Yes the dropdown menu and the title on top clearly indicates that this is the change language button</li> </ol>	<ol style="list-style-type: none"> <li>1. Yara AlMubarak: No violation.</li> <li>2. Yara Al Jarbua: No it is not violated.</li> <li>3. Noura:No this rule have not been violated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Yara AlMubarak: By making the user choose whatever languages that they understand.</li> <li>2. Yara Aljarboa: Improves learn ability as users don't need to memorize.</li> <li>3. Noura: By making the user choose whatever languages that they understand.</li> </ol>

city you are searching in.	and the change city button		
7. Flexibility and efficiency of use  • <b>Being able to proceed as a guest in the prototype.</b> • <b>Task1: log out.</b> • <b>Task2: press the continue as a guest button.</b>	1. Yara AlMubarak: Yes, the logout button was very clear. 2. Yara Aljarboa: Allows flexibility to none users who want to check the website. 3. Noura: yes flexibility was applied.	1. Yara AlMubarak: No violations. 2. Yara Al Jarbua: No it is not violated. 3. Noura: No this rule have not been violated.	1. Yara AlMubarak: Users can log out easily. 2. Yara Aljarboa: Improves usability for new users. 3. Noura: Users can log out easily.
8. Aesthetic and minimalist design  • <b>The color palettes are very discrete.</b> • <b>Task: choose light mood.</b>	1. Yara AlMubarak: Yes, the colors are matching with the idea of the project. 2. Yara Aljarboa: The colors are very minimalistic and not very high in contrast. 3. Noura: yes the colors were very calm and there was an option for dark theme.	1. Yara AlMubarak: No violation. 2. Yara Al Jarbua: No it is not violated. 3. Noura: No this rule have not been violated.	1. Yara AlMubarak: There is a light mood option. 2. Yara Aljarboa: Improves usability and comfort to users eyes. 3. Noura: There is a light mood option.

<p>9. Help users recognize, diagnose and recover from errors</p> <ul style="list-style-type: none"> <li><b>When an error message is displayed in the log in page it will be shown in human language not in coding language.</b></li> <li><b>Task1:</b> you are now on the home page press the list of functionalities</li> <li><b>Task2:</b> press history list and try to delete an activity.</li> </ul>	<ol style="list-style-type: none"> <li>Yara AlMubarak: Yes, users can delete an activity very easily.</li> <li>Yara Aljarboa: Users can confirm if their username or password is wrong.</li> <li>Noura: Yes this rule was applied.</li> </ol>	<ol style="list-style-type: none"> <li>Yara AlMubarak: Not violated.</li> <li>Yara Al Jarbua: No it is not violated.</li> <li>Noura: No this rule have not been violated.</li> </ol>	<ol style="list-style-type: none"> <li>Yara AlMubarak: The user can delete the activity that they have chosen.</li> <li>Yara Aljarboa: Improves learn ability as user can learn from mistakes.</li> <li>Noura: The user can delete the activity that they have chosen.</li> </ol>
<p>10. Help and documentation</p> <ul style="list-style-type: none"> <li><b>A contact us feature in the prototype will help users in solving problems.</b></li> <li><b>Task1:</b> go back to the home page.</li> <li><b>Task2:</b> find the contact us email and</li> </ul>	<ol style="list-style-type: none"> <li>Yara AlMubarak:Yes, I can contact help very quickly.</li> <li>Yara Aljarboa:Users can contact help if needed.</li> <li>Noura:yes this rule was applied and it was easy to find the contact us email.</li> </ol>	<ol style="list-style-type: none"> <li>Yara AlMubarak:No violations.</li> <li>Yara Al Jarbua: No it is not violated.</li> <li>Noura:No this rule have not been violated.</li> </ol>	<ol style="list-style-type: none"> <li>Yara AlMubarak:Contact for help is the most important part in every application so it could support the customers.</li> <li>Yara Aljarboa:Improves usability for users who need guidance.</li> <li>Noura: Contact for help is the most</li> </ol>

<b>copy the email.</b>			important part in every application so it could support the customers.
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◆ **Participants**

The participants in the expert evaluation were from the fifth group in this section. They have freely evaluated our prototype individually in person.

1. Expert 1: Noura Al Saud.
2. Expert 2: Yara Al Mubarak.
3. Expert 3: Yara Al Jarbua.

◆ **Evaluation Setting**

The evaluation took place in university's classroom, as the interviewers met the experts. Experts were sat down in the classroom and given the heuristic table of tasks to help them assess the high-fidelity prototype, the experts explored the prototype freely without constraints and filled the tables.

◆ **Evaluation Material**

- University's stationary PC.
- Personal Ipads and laptops.
- Document: Heuristic table.
- The GetTourism prototype in Protopie application.

◆ **Procedure of Expert Evaluation**

- **Pre**
  - Create a high-fidelity prototype using Protopie prototyping tool.
  - Prepare the heuristic evaluations for the experts.
  - Book appointments for the expert evaluation.
  - Experts were welcomed and informed of the procedure.
- **During**
  - Describe the nature of the procedure and purpose of the study.
  - Let the experts freely explore the prototype.
  - Provide the experts with the heuristic evaluation table for them to fill it and follow the tasks.
  - Overlook expert's interactions with the prototype.
  - Pay attention and note down any errors or difficulties that experts face when exploring the prototype.
  - Answer any question that the experts ask while evaluating the GetTourism prototype.

- Post
  - Ask the experts for their feedbacks and notes.
  - The experts were thanked for taking part in the evaluation.
  - The experts were asked about their general experience with the high-fidelity prototype.
  - Go over the notes taken when we overlooked the experts during the evaluation and feedbacks.

→ Findings

◆ User Evaluation Findings:

- Participant 1 (Network Engineering and Security student at Al Yammamah University)
 

Before the evaluation starts the participant was provided with a consent form, heuristic evaluation table, and the prototype. The participant signed the form and approved to conduct the evaluation then the interview afterwards. The participant started exploring the prototype freely with no issues and filling the table. The participant has finished the evaluation and is ready to provide the feedback. From the interview feedback the participant said that they did not face any issue while dealing with the prototype. Moreover, the user stated that the color palette, functionalities, constraints, triggers and animations that are applied in the prototype helped in creating an interactive and enjoyable prototype. As a result the participant was glad from the prototype and that it met the requirements from previous interviews and phases.
- Participant 2 (Second-year CS student at PSU)
 

The participant was helpful and understood the given study and prototype. The participant had given their consent via signing and sending over the consent form beforehand. They fully answered all the stated questions post going through the prototype, and the returned responses from the participant were concise but helpful and enough. The participant did not run into any issues during exploring the prototype.
- Participant 3 (A doctor that works in the plastic surgery field):
 

A consent form was filled by the user before the interview starts, but I also made sure to get their verbal consent when the interview was first conducted. The participant showed a great deal of professionalism and honesty throughout the interview. All 10 questions were answered accurately without any external influence. The user checked and explored the prototype freely without any influence from the interviewer.

- Participant 4 (second year Accounting student)  
The participant was cooperative and helpful for our study. He gave us his consent by signing the consent form before we started the evaluation process and the interview. Then we gave him the prototype to explore it freely, asking him to do some simple tasks mentioned in the heuristic table. He was able to run the prototype smoothly without having any issues. After that, we asked him some questions in the interview to get his feedback, and he fully answered them. As a result, the participant was glad with our prototype, stating that the prototype is well structured and organized, and all features are easy to understand and use.
- Participant 5 (Second-year PSU IS student): consent form was filled by the user before the interview. Intervenor made sure the participant knew her rights before starting. The participant was honest and professional throughout the interview. She answered all the questions with her honest opinion after exploring the prototype fully. She also followed the tasks and made sure all points were not violated.

◆ Expert Evaluation Findings:

A group of experts examined our high-fidelity prototype using a set of rules. They assessed various features of the software, such as the visibility of the system status, match between the system and the real world, user control and freedom, consistency, error prevention, recognition rather than recall, flexibility, and efficiency of use. The experts then evaluated these features to determine if they adhered to established guidelines/tasks and if there were any areas of improvement. Based on the experts' responses, it appears that the prototype being evaluated follows the guideline rules effectively. The experts stated that there are no violations of the guidelines and agreed that the system was easy to use, with familiar concepts, and icons. It also offered good control and flexibility to both users and experts. However, there were some suggestions for improvement. One expert noted that including more detailed features to move smoothly between pages would enhance usability, utility, and desirability. Another expert suggested that including more guidance for the icons would help users better understand their purpose. Additionally, the experts agreed that error prevention was well-implemented, but one expert pointed out that providing more information about sold-out tickets was a helpful feature that improved the user experience.

#### → Main Findings for both User and Expert evaluations

In both evaluations the participants agreed that the GetTourism prototype is very well structured and designed prototype. Users stated that the requirements from the low-fidelity prototype are applied in this project milestone and that no other notes or modifications are needed. On the other hand, experts stated that the prototype is perfect but the transition between the scenes could be improved in a way to make the process smoother. In both evaluations everyone was satisfied and happy with the results, and there are no major modifications in the prototype to apply further.

#### → Discussion

The experts found the navigation structure and user interface to be well-designed and intuitive, as well as allowing for easy exploration and discovery of the various travel destinations and activities available. The use of high-quality images and engaging content was also well-received, as it enhanced the overall experience and encouraged users to spend more time on the site. Based on their expert opinions, it was concluded that the website has the potential to attract and retain users. However, there were no major suggestions for improvement or changes in the prototype.

#### → Conclusion

In conclusion, the high fidelity prototype of GetTourism has been created and tested several times to meet the requirements of the users from previous project milestones. As it is discussed above, we have conducted five interviews with users and three expert testings with group number five. The two evaluations provided us majorly with positive feedback and small tips to follow in case a big improvement is required. Some of the interviews were conducted online and others were conducted in person when the users were available. The feedbacks from project milestone two were beneficial to improve and give us a great idea about what the user needs. Therefore, the edit display, searching for activities and contact us features were implemented successfully in this project milestone. As a result, both evaluations gave us positive feedbacks and stated that the prototype did not violate any usability, utility, desirability or other guidelines.

### References

- Enjoy Saudi (Anonymous, 2021, n.p.):  
[https://enjoy.sa/ar/?fbclid=PAAaZBsQDli46GL7MxpKgCaRTgrBQBV5E6\\_0afA-JMQFACBz6IG8s6xqJeoCA](https://enjoy.sa/ar/?fbclid=PAAaZBsQDli46GL7MxpKgCaRTgrBQBV5E6_0afA-JMQFACBz6IG8s6xqJeoCA)
- Saudi eVisa | The Official website for Tourist Visa to Saudi Arabia. (n.d.-d).  
<https://visa.visitsaudi.com/>
- ProtoPie. (n.d.). ProtoPie | High-Fidelity Prototyping for Mobile, Desktop, Web & IoT. <https://www.protopie.io/>

## Appendices

### → Individual Contribution

Table 1: Describes the individual contributions of each group member in this project.

Name	Individual Contribution
Rahaf Daas	High-fidelity prototype, Heuristic Evaluations, Appendices, High-Fidelity prototype Snapshots, findings, main findings for both user and experts, conclusion, Audio/Video of the evaluation session(s), Transcript of the evaluation and interview, Consent Forms and User Heuristic Evaluation tables, improvements in PM1 and PM2.
Sarah Aljurbua	High Fidelity prototype, introduction, methods user evaluation, method expert evaluation, user and expert findings, discussion, references, appendices, changes on hi0fi prototype description, consent forms (2), transcript of interview, HE tables, audio/video recordings.
Sara Alojayan	High-fidelity prototype, Heuristic Evaluations, main findings for both user and experts, conclusion, Audio/Video of the evaluation session(s), Transcript of the evaluation and interview, Consent Forms and User Heuristic Evaluation tables
Nour Mohammed	High-fidelity prototype, user evaluation video and interview recording, User finding.
Hafsa AlSiddiky	High-fidelity prototype, consent form, user evaluation, user HE table, audio/video of the user evaluation, checked on spelling mistakes.

### → Audio/Video of the evaluation session(s)

All video/ audio recordings are attached in the google drive folder.

### → Consent Forms and User Heuristic Evaluation tables

All the documents and tables are attached in the google drive folder.

### → Transcript of the evaluation and interview

#### ◆ Participant 1 (Interviewer Rahaf):

- Question 1: Were you able to log in? Was it difficult?

- Answer: Yes, I was able to log in smoothly with no difficulties.
- Question 2: Were you able to add and delete an activity?
  - Answer: Yes, the process of deleting and adding activities was clear, easy, and smooth.
- Question 3: Were you able to continue as a guest?
  - Answer: Yes.
- Question 4: Were you able to access the history of activities easily?
  - Answer: Yes, it was very easy.
- Question 5: Were you able to reset your password from the list of functionalities page?
  - Answer: Yes.
- Question 6: Were you able to log out easily?
  - Answer: Yes, it was straight forward.
- Question 7: Were you able to view the location of the activity on the map?
  - Answer: Yes and it took me to the google maps link of the activity.
- Question 8: Were you able to change the display mode from the list of functionalities page?
  - Answer: Yes, I was able to choose between light or dark modes which i loved!
- Question 9: Was the chosen color palette suitable?
  - Answer: Yes.
- Question 10: Do you have additional notes and feedbacks?
  - Answer: no it was very nice and it had everything a user or customer would ask for in this prototype.

◆ Participant 2 (Interviewer Sarah Aljurbua):

- Question 1: Were you able to log in? Was it difficult?
  - Answer: Yes, I was able to log in easily as everything was clear on the home page.
- Question 2: Were you able to add and delete an activity?
  - Answer: I was, i added a couple of activities.
- Question 3: Were you able to continue as a guest?
  - Answer: Yes, from the home page.
- Question 4: Were you able to access the history of activities easily?
  - Answer: I was able to access it with ease from the list of functionalities page.
- Question 5: Were you able to reset your password from the list of functionalities page?
  - Answer: Yes, I was able to.
- Question 6: Were you able to log out easily?
  - Answer: Also yes, from the list of functionalities page.

- Question 7: Were you able to view the location of the activity on the map?
  - Answer: I was, when I pressed on an activity of my choice.
- Question 8: Were you able to change the display mode from the list of functionalities page?
  - Answer: Yes, from the list of functionalities as well as after logging in.
- Question 9: Was the chosen color palette suitable?
  - Answer: I think the chosen color palette was a perfect fit as the purple color for the main theme suits the idea of the application.
- Question 10: Do you have additional notes and feedbacks?
  - Answer: Not really, everything seems to be working great and implemented functionalities are enough.

◆ Participant 3 (Interviewer Sara Alojayan):

- Question 1: Were you able to log in? Was it difficult?
  - Answer: no i faced no troubles logging in
- Question 2: Were you able to add and delete an activity?
  - Answer: i was able to add and delete, yes
- Question 3: Were you able to continue as a guest?
  - Answer: yes, i was able to
- Question 4: Were you able to access the history of activities easily?
  - Answer: yes i did not find any trouble
- Question 5: Were you able to reset your password from the list of functionalities page?
  - Answer: yes i also did not face any troubles with that
- Question 6: Were you able to log out easily?
  - Answer: no i did not face any issues with that it was normal protocol
- Question 7: Were you able to view the location of the activity on the map?
  - Answer: yes it was available each time
- Question 8: Were you able to change the display mode from the list of the functionalities page?
  - Answer: yes i was given two options and was able to choose one
- Question 9: Was the chosen color palette suitable?
  - Answer: yes it was
- Question 10: Do you have additional notes and feedbacks?
  - Answer: I feel like it's pretty convenient and simple to use, if there anything i would add is to have a little bit more personalization in the profile

◆ Participant 4 (Interviewer Nour):

- Question 1: Were you able to log in? Was it difficult?
  - Answer: Yes, I was able to login easily. I clicked on the login button, and it got me to a page to type username and password.
- Question 2: Were you able to add and delete an activity?
  - Answer: Yes, I was. I added some activities, and there was an option to delete them.
- Question 3: Were you able to continue as a guest?
  - Answer: Yes, in the homepage there was a continue as guest button, it directly got me to the main page.
- Question 4: Were you able to access the history of activities easily?
  - Answer: Yes, from the list. There was an option to access your own history activities and to delete them, by double clicking the activity.
- Question 5: Were you able to reset your password from the list of functionalities page?
  - Answer: Yes, I was able to reset my password. I typed my email linked with my account, and a verification code was sent to my email, then I reset my password.
- Question 6: Were you able to log out easily?
  - Answer: Yes log out button was easy to allocate from the list, it was at the end and it is red color-coded
- Question 7: Were you able to view the location of the activity on the map?
  - Answer: Yes, and I liked this feature. Since it takes less time to view the activities location from the same page.
- Question 8: Were you able to change the display mode from the list of functionalities page?
  - Answer: Yes, It showed me options to change language, city, and brightness mode.
- Question 9: Was the chosen color palette suitable?
  - Answer: Yes, I really liked the colors of the prototype. Color palette seems attractive and suitable for me, it made me enjoy going through the prototype.
- Question 10: Do you have additional notes and feedback?
  - Answer: No, there isn't. I really liked the high fidelity prototype of get tourism. Everything seems organized and well structured. features are great, and easy to use.

◆ Participant 5 (Interviewer Hafsa):

- Question 1: Were you able to log in? Was it difficult?
  - Answer: I was able to log in, and it was simple and easy
- Question 2: Were you able to add and delete an activity?

- Answer: Yes i was able to add an activity and view the list of activities that I've added and deleted them
- Question 3: Were you able to continue as a guest?
  - Answer: Yes, i had the option
- Question 4: Were you able to access the history of activities easily?
  - Answer: yes
- Question 5: Were you able to reset your password from the list of functionalities page?
  - Answer: yes it was easy
- Question 6: Were you able to log out easily?
  - Answer: yes
- Question 7: Were you able to view the location of the activity on the map?
  - Answer: Yes it was accessible and easy to view
- Question 8: Were you able to change the display mode from the list of functionalities page?
  - Answer: Yes, and i preferred the light mode
- Question 9: Was the chosen color palette suitable?
  - Answer: Yes the colors matched together very well and easy on the eyes
- Question 10: Do you have additional notes and feedback?
  - Answer: Maybe add a wallet for easier payment