Building an Ui/Ux for utility services mobile application

BY

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Multimedia and Creative Technology

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DHAKA, BANGLADESH
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APPROVAL

This Project titled "Nagorik E-Seba", submitted by Md Sohag Hossain (183-40-534) to the Department of Multimedia and Creative Technology, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Multimedia and Creative Technology and approved as to its style and contents. The presentation has been held on October 2022.

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DECLARATION

I hereby declare that, this project has been done by us under the supervision of Mr Kazi Jahid Hasan , Lecturer, Department of Multimedia and Creative Technology, Faculty of Science and Information Technology, Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere forward of any degree or diploma.

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First, I would like to express my sincere gratitude and appreciation to Almighty God, whose blessings enabled us to successfully complete my final year project.

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Ultimately, I must acknowledge the continued support and patience of our parents with due respect.

ABSTRACT

Electricity, Gas, Water, Fire station services are the most common need in any country like ours. Any society's people need and face difficulties many times on their livings. Most of don't know where is the service centers to go for the help or they don't have the perfect information's to seek for help. There are several apps on the stores and websites for giving the necessary supports to the mass public on the country. But we cannot find all together on one same platform. Mostly those are online based apps and websites. Moreover, when we need a support then we cannot make our self-hurry for data or net connection, we just need that particular support. So, it gets easier for us if we can make it offline. By installing this app it will deliver all the data that we need.

So, I came up with an idea that assures the supports to all kind of people by only one segment. I will make an App that keeps all data related these (Electricity, Gas, Water, Fire station) difficulties. Where people will find all kind of information's from one platform. No matter what ever the location is, this application will track the location wherever he or she is. These app will be fully offline based, that means if someone install this application, he won't going to need internet connection after, they can use it afterwhile without any internet or data connection.

I decided to make a prototype of this application by Figma/Adobe XD software. The name of this project (Nagorik E-sheba) is on under development. I have choose the name which goes with these services and user can relate easily. For instance, I am thinking about a name like: Nagorik E-sheba/ E help.

Keywords – Human help, Utilities, Offline app, Basic information's, User centered Design.

Contents

Chapter 1

INTRODUCTION

1.1. Introduction

Nagorik E-seba is a user-centric digital product that came to life through my Final Project Phase: 2 at the Department of Multimedia and Creative Technology, Daffodil International University. Initially, the project started as an expert app that would enable anyone, anywhere to instantly to get any sort of information's about utilities in any field. After conducting surveys and user interviews, I learned that there's a great need for a particular expert digital product, I pivoted from building a digital product that would touch all expert categories such as any kind of people living in the country to focusing on one expert category. My survey results concluded that security ranked highest in terms of greatest expert need by users. This discovery is where Nagorik E-seba, my healthcare digital product, is born. My new content strategy, develop a competitive industry-specific expert marketplace, secure the assistant app, that delivers solutions to people problems and eliminates the time it takes to find the perfect utility services utilizing Nagorik E-seba. What sets Nagorik E-seba apart from its competition, is its primary feature, which allows users to have access to an intuitive and reliable Nagorik E-seba, a security care assistant that helps user questions and connect effortlessly with nearby service centers who are proficient and highly recommended in their fields.

1.2. Motivation

In the first instance, the security care apps have become a boon for the massive people outside in the country. Such as country like ours which faces random climate change and danger issues. This app helps the users by giving all the necessity information's which they need.

In fact, according to a stat, most of the people in our country don't have any idea about the utility services and problem-solving systems. This app will provide them that information by only one tap.

In fact we have so many websites and applications for these helping services. But those are not compact or well informed. Most of them are specific and random. So I collaborated all in one application. So that people can easily find it out.

The apps help to prepare a customized approach for treating each of the citizen because every ailing person needs a secure life.

The user experience is commonly referred to as 'user-centric products', and 'service design'. It is a user-centric digital product that guarantees when you look for a help regarding Wasa, Gas, Electricity and Fire stations this app will give you the necessity information's by clicking on the option.

1.3. Objectives

The objectives of the project are that people can get any information about utility helps at home and buy essential information's from any place at any time which will not only save their time but also save unnecessary costs and traffic jams and life. Some more objectives are given below.

i. To ensure that people can find the right service in their flexible time
ii. To ensure immediate services consultation offline.
iii. To ensure that people find all kinds of services according to the authority's consultation
iv. To ensure that all services are fully works on offline with great responses.
v. To ensure affordable services for all people

vi. To ensure that they can find help not only in one location but also in several places.

viii. To ensure security through any device such as smartphone, desktop or laptop

ix. To ensure services among all in a short time

1.4. Feature

i. Refine your search by what you're looking for, where, and when. Based on search criteria view the list provided of service center near you and select a service you might be interested in.

ii. View the location profile. Name, number, ratings, location, calendar, distances and aerial view. Tap the location for services on that particular place.

iii. The facility to make a service offline before going to the random help services. This will be a physical consultation, but the information you will see in application.

iv. If you move from one place to another it will show you the map and nearby services, so migration a problem here. You will have your services from wherever you are.

1.5. Problem Statement

Using the Double Diamond Strategy, I created a problem statement for Nagorik E -seba, brainstorm potential solutions then narrow it down to a single solution.

Users need a way to guarantee their questions will be showed by an expert in their field of information because they feel their time is valuable and do want to

waste it by creating questions that go left unanswered. We will know this to be true when we see how many users are submitting area to search button and in return the engine are able to effectively provide advice in a timely.

List of Problems

1. Choosing the most needed utility services for help.
2. Huge area for getting necessary information's.
3. Getting public survey for this project.
4. Collecting the workable information's to input.

1.6. Potential Solutions

A n application that guarantees when you submit a query you will receive an answer from a strong engine within a certain time frame. If you do not receive an answer, you have the opportunity to rate and provide feedback to the expert or reach out to the customer service team for support. The application will launch with a smaller subset of experts in demanding fields. When the area grows, we will be able to expand and bring in more locations and information's.

Chapter 2
RESEARCH METHODOLOGY

2.1 Framework

When working on a new type of content project I begin my process with the Double Diamond Design process model and gather research through empathy and a deeper understanding of user needs and desires. Afterwards, I'll combine the systems and design thinking methodology during the phases of evaluating, defining and developing the application. I'll consider the big picture first and the specific interactions later. What are the key elements in this application? How are they connected? What does the overall purpose of these elements serve? Do these elements solve peoples problems? By understanding the inter-relatedness of the collective system, I can better design for an effective flow of user behavior through the entire system.

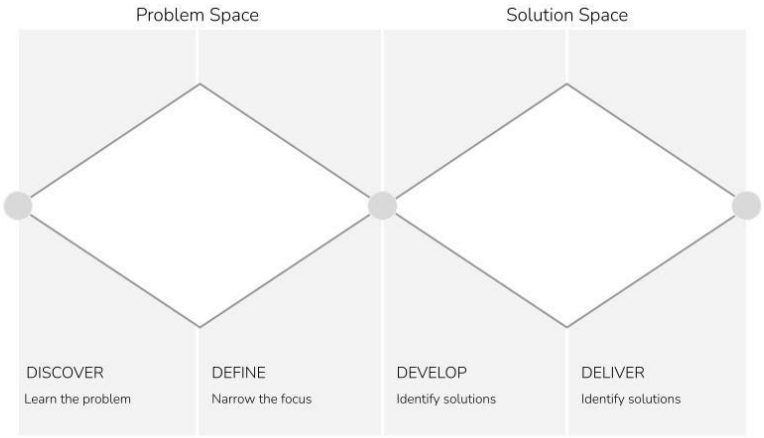


Figure 2.1: Double diamond process

2.2 Surveys

When creating my survey for all people, I had to revise it a few times. My survey was too qualitative, asking too many open-ended questions, this led to users dropping off and they were unable to complete the form. In my survey, I had more success and received some great feedback. I was really surprised with my results and this gave me great insight as to how to tailor my app to my user's interests and needs. I'll be interpreting more of this data in the next exercise. All people shared their personal opinions and shared their problems with other services.

Timeframe

The survey took 30 days to run.

Survey Questions:

1. Do you know where is your WASA (water service) station?

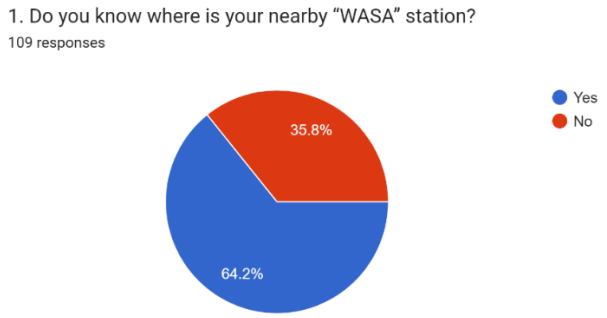


Figure 2.2.1: Ratio of the people who knows where is the wasa station.

2. Did you ever face water supply problems?

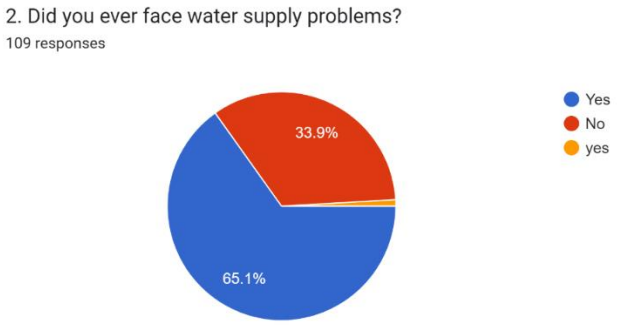


Figure 2.2.2: Ratio of the people who faces water problems.

3. Do you know where is your nearby fire station?

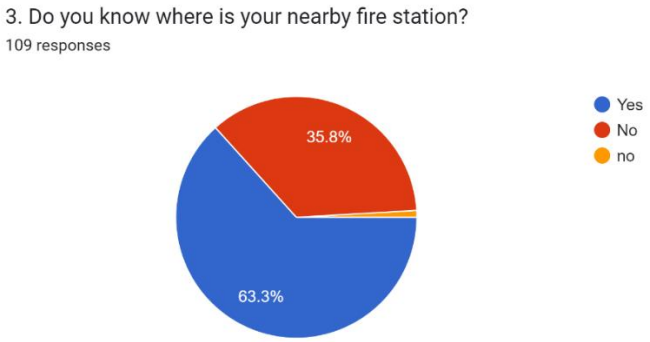


Figure 2.2.3: Ratio of the people who knows where is the Fire station.

4. Did you ever face fire explosion problems?

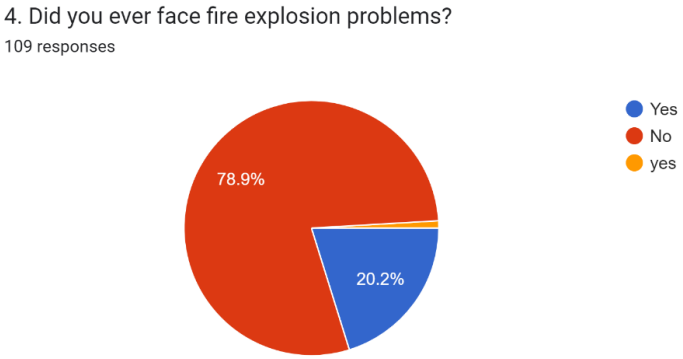


Figure 2.2.4: Ratio of the fire problem facing people

5. Do you know where is your nearby electric powerhouse/Station??

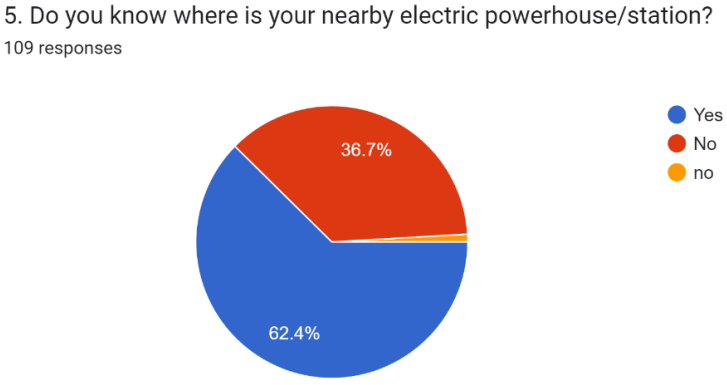


Figure 2.2.5: Ratio of the people who knows where is the electricity station.

6. Did you ever face electricity problems?

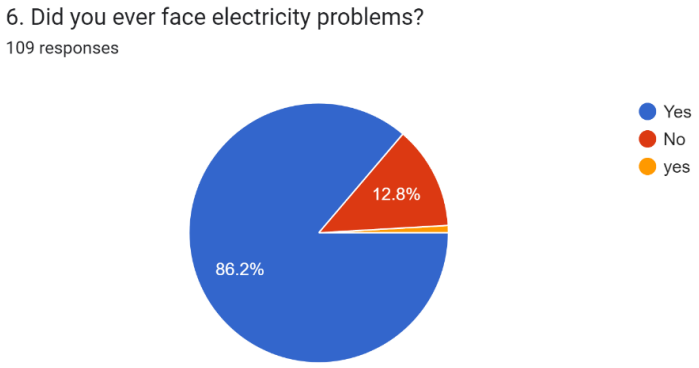


Figure 2.2.6: Ratio of the electricity problem facing people

7. Do you know where is your nearby gas station office?

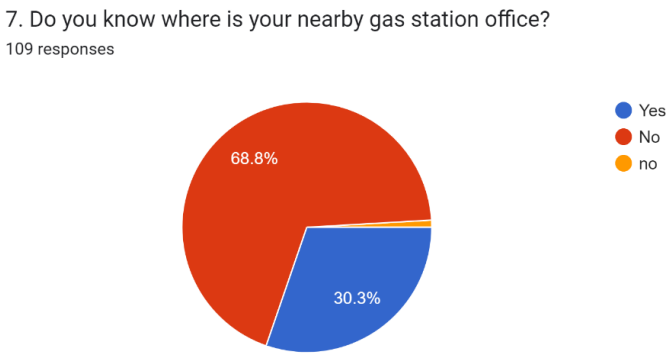


Figure 2.2.7: Ratio of the people who knows where is the Gas station.

8. Did you ever face problems with gas line supply?

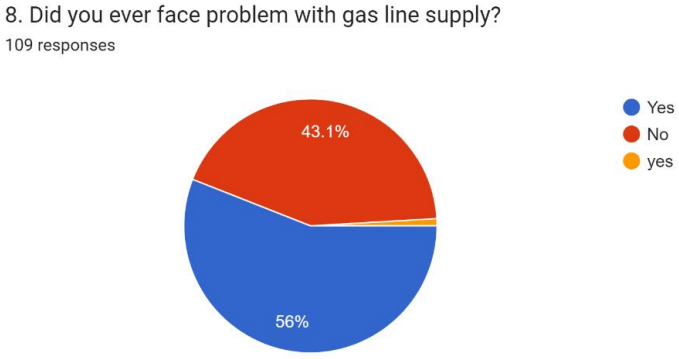


Figure 2.2.8: Ratio of the gas problem facing people

9. Do your family faces any of these utility problems?

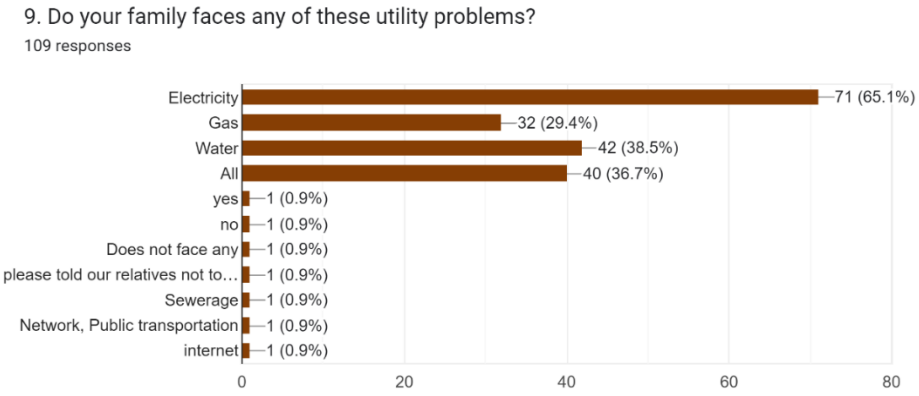


Figure 2.2.9: List of the families that faces utility problems.

10. Which problem your family suffered most?

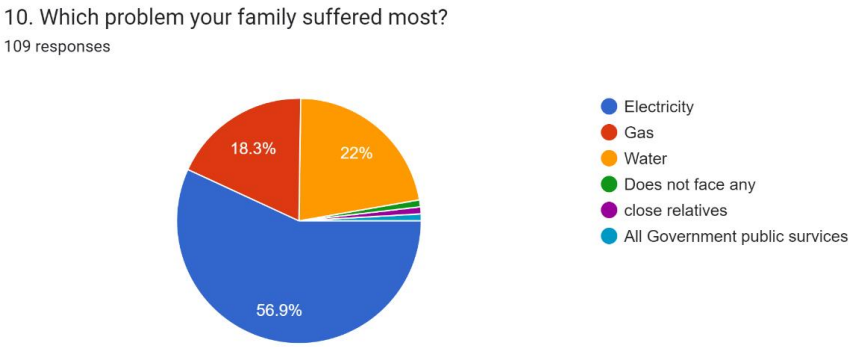


Figure 2.2.10: Ratio of the most utility facing problem.

11. Do you know any mobile application or sources for solution about these problems?

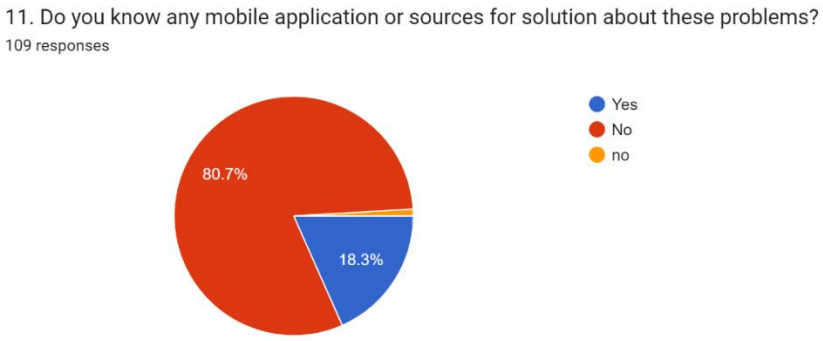


Figure 2.2.11: Ratio of the people who knows the solutions.

12. Do you prefer online based mobile application or offline based application?

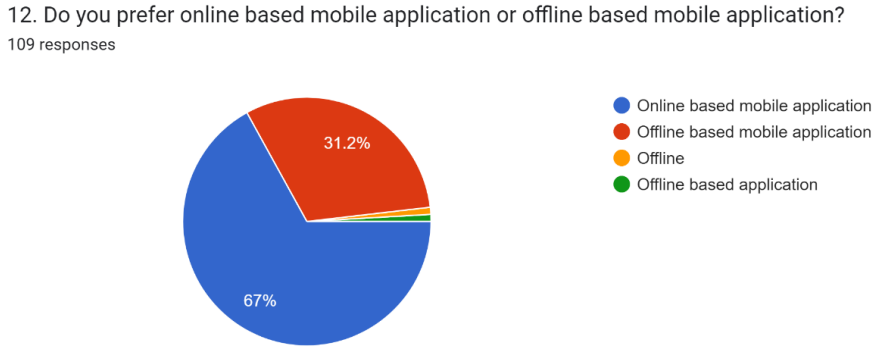


Figure 2.2.12: Ratio of the people who prefer online or offline application.

13. If "Yes/No" write a detail?

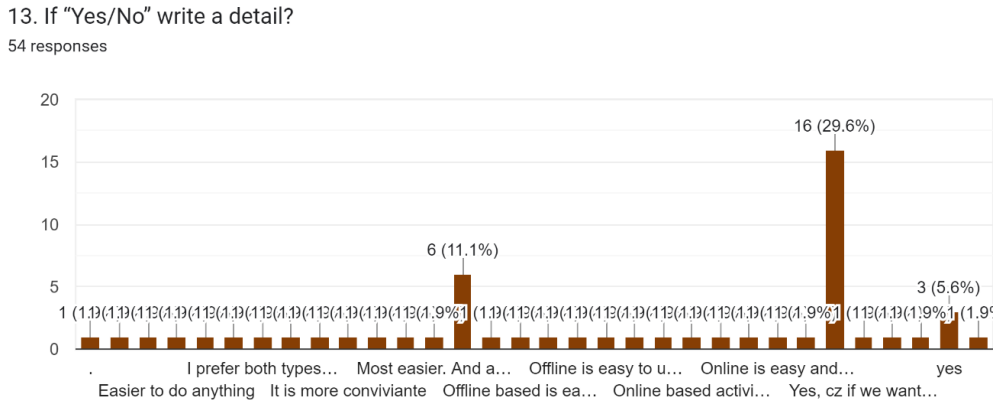


Figure 2.2.13: Ratio of the people who gave their opinions.

14. Your age?

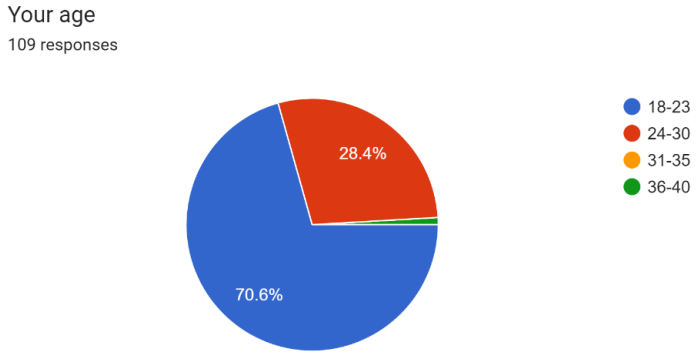


Figure 2.2.14: Ratio of these surveys people age.

Goals for Survey and Interviews

1. To understand what types of information people are seeking the most?
2. To find out what type of problems they face most
3. To understand their time and emergency
4. To find out what type of application users like most
5. To find how many people are aware or not aware about these services
6. Which type of problems they face continuously and frequently
7. What type of application they want?
8. They are willing to use this type of app or not.

2.3 Interviews

My moderated user research interviews were more challenging to organize. I needed to find the right candidates and coordinate with their schedules, this took longer than anticipated. I was able to conduct 3 interviews and the interviews went well. I kept the interviews short down to 10 minutes and gained more insight as to how I might consider building my application. Without these interviews, I would be designing my application blindly not solving the true problem of what users actually need. My assumption and the idea of what users need before my survey and interviews were the opposite of what users actually need. This changes my perspective completely and I am learning not to assume anything when it comes to design. Best to research and test always.

Timeframe

The qualitative interviews took 5 days to schedule and conduct.

Interview Script

Hi, _____. My name is “Sohag”, and I’m going to be walking you through this session today. We’re conducting interviews to better understand how people go through the process of finding utility help service problems like Gas, Water, Electricity and Fire station. This session will take 10 minutes.

The first thing I want to make clear right away is that this is not a test. You can share your opinion from your live experiences. You have the full freedom to speak about the problems and how to solve.

OK, let’s get started.

Interview Questions

1. What do you do for a living?
2. What does your typical weekday look like?
3. What products/apps/services do you use on a regular basis?
4. Have you used the web or phone apps to find necessary help services?
5. In what method do you prefer to receive information’s from the app?
6. What are the mostly faced problem issues??
7. What do you do while having Gas, Water, Electricity and Fire station problems?
8. Tell me about the last time you faced a problem and how did you get help?

2.4 Affinity Diagram

My affinity Diagram overview

1. I started collecting through the data I collected by writing down my research goals.
2. Documenting my quantitative survey results.
3. Connecting patterns between my survey results and interviews results.

4. Documenting each interview question and answer and printing results for reference.
5. Pulling out verbatim quotes.
6. Thinking of tasks which will inform my wireframes.

Findings

1. Users appreciate they faces problems with all of these issues.
2. Users want a short time solution for these problems.
3. Users want a solution which can help them when they are in emergency or rush.

Insights

1 Users will get a lite application which they can handle easily.

2 There will need no data connection for the app to look for information's.

3 All information's they will look for will be inputted while developing.

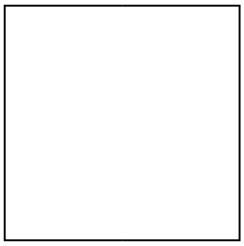
4 User can find other places services also within a short time.

2.5 User Personas

Interview 1

This is the format of persona form. Some field is required (*) for filled. We don't used real information of user to this form.

Date: 12/05/2022 Time: 4pm

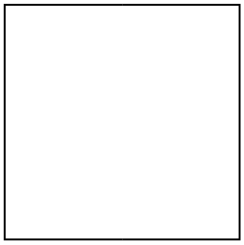


Name*:	Mehernigar Shipra
Age*:	48

Designation:	House wife
Education*:	Bachelor's degree in Business Administration
Location:	Dhanmondi Thana, Dhaka, Bangladesh
Behaviors and Attitudes:	1) Mehernigar Shipra is a housewife and she deals with these problems everyday. 2) Mehernigar Shipra don't know the solution of these issues.
Needs and Goals:	1) Looking for a help which can provide help in the assigned location of her. 2) She is seeking for help which can provide help within short time.
Motivations:	1) She believes oneday these problem will end. 2) Her children often help her in these issues so she want a solution in a easy way. 3) Mehernigar Shipra is motivated to use an application for the solution.
Frustrations:	1) Never tried to seek for help with issues. 2) She was unaware about the services.

Interview 2

This is the format of persona form. Some field is required (*) for filled. We don't used real information of user to this form.



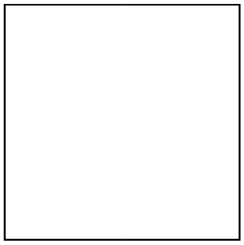
Date: 12/5/2022 Time: 5pm

Name*:	Salman Ibhrahim
Age*:	26
Designation:	Freelance Graphic Designer
Education*:	Bachelor's degree in Economics
Location:	Dhanmondi Thana, Dhaka, Bangladesh
Behaviors and Attitudes:	1) Talks with assertiveness. 2) Salman subtly laughs when he talks about his frustrations.
Needs and Goals:	1) I prefer to use a easy system for these problems. 2) I need services mostly near to my location. 3) There will be quality information's there which can help properly.
Motivations:	1) Salman believes in digital systems. 2) These problems can be fixed easily by the right information's.
Frustrations:	1) I don't have time to call multiple experts to see if they provide a particular service. 2) No need for other third-party applications for several services.

Interview 3

This is the format of persona form. Some field is required (*) for filled. We don't used real information of user to this form.

Date: 12/5/2022 Time: 6pm



Name*:	Shajnur rahman
Age*:	23
Designation:	Student
Education*:	Bachelor's degree in Computer science and Engineering
Location:	Mohammadpur Thana, Dhaka, Bangladesh
Behaviors and Attitudes:	1) Well known about the area and issues. 2) He admits that these problems can be fixed by the digital medium.
Needs and Goals:	1) Particular location services with right information's. 2) All services will be in one app which will be easy to use.
Motivations:	1) He likes keeping updated about the services. 2) He will try to help others being well known.
Frustrations:	1) I find it difficult to get the services in right time. 2) I get impatient when the information's are wrong and hard to find out.

2.6 User Stories

Onboarding: As a user, I want to briefly preview what the app can do for me and its core features, so I can familiarize myself and quickly evaluate whether this app will meet my needs. As a power user, I would like to have the option to skip the onboarding process, so that I can go ahead and start interacting with the apps core functionality.

Open: As an user, I want to be able to use an application which provides the best service and no latency while opening. So when I will open the app it will open as fast as it can. People need these services while in emergency.

Location detect: As an user, after opening the application I will first look for the location I am at. Because I will need those services on that particular location. I will need to locate the distances from my allocated place.

Options: As an user, I want to be able to set up the languages. I will change the language to my comfort site, and I will find others options like FAQ or Help in the setting segments.

Search: As an user, I want to be able to find my location and also other location services on the search option.

Setting: As an user, I want to be able to find about frequently asking questions, help from the developer's, language options and other segments.

Services: As an user, I want the ability to use the help information's by the services. I want my necessary services options to the application.

Lite app: As a user, I want to use a lite app. The app should be fast and smooth.

Offline / Online: As a user, I want to have the ability to Use the application while internet and without internet.

2.7 User Flows

Mapped out task flows for each of my 3 primary objectives. Each flow clearly illustrates my persona's process through the product and includes well-thought-out alternative paths.

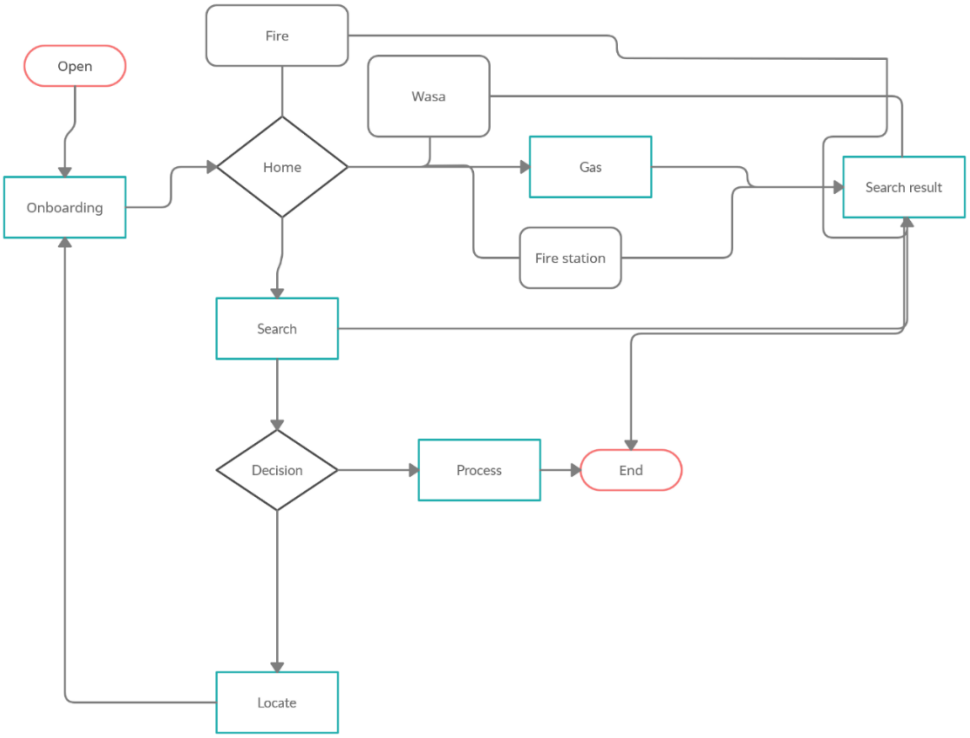


Figure 2.7.1: User flow diagram

2.8 User Journey Map

1. Nagorik E-Seba

   User Profile: Meher nigar Age 48, House wife, Dhaka

   Goals:

   i. Ask a search to the need

   ii. Receive answers and recommendations from Nagorik E-seba.

2. Nagorik E-Seba / Service Provider Location

User Profile: Saber, Age 26, Freelance Graphic Designer, Dhaka

Goals:

i. Find a needy service at a short time.

3. Service providers

User Profile: Shajnur, Age 23, Student, Dhaka

Goals:

i. Coverage the maximum area
ii. Find a the right information's
iii. Getting all in one medium

2.9 Content Audit

Nagorik E-seba is the own competitor of itself. This app will be not for fancy things or social media. This app is for human kind. This app will give the best services to its users. Here we looked for the publics security and need. So we are determined about to help the needy one mostly. There are maybe other app and websites for the help but most of them are not well decorated or organized. Here everyone will get the exact information's without letting more times and energy.

2.10 Competitive Analysis

Nagorik E-seba is the own competitor of itself. This app will be not for fancy things or social media. This app is for human kind. This app will give the best services to its users. Here we looked for the publics security and need. So we are determined about to help the needy one mostly. There are maybe other app and websites for the help but most of them are not well decorated or organized. Here everyone will

get the exact information's without letting more times and energy. I have 4 elements for this competitive analysis.

- Nagorik E -Seba
- Digital Services
- Locations
- Result

What's new on Nagorik E-seba?

1. One of the main features of my Nagorik E-seba app is "Locate" which makes it easy and more accessible for a user to find the exact location and services. This feature is not in my competitor Nagorik E-seba.
2. People can upload their profile and save it.
3. It is possible to see other places services by staying in somewhere else.

2.11 Information Architecture

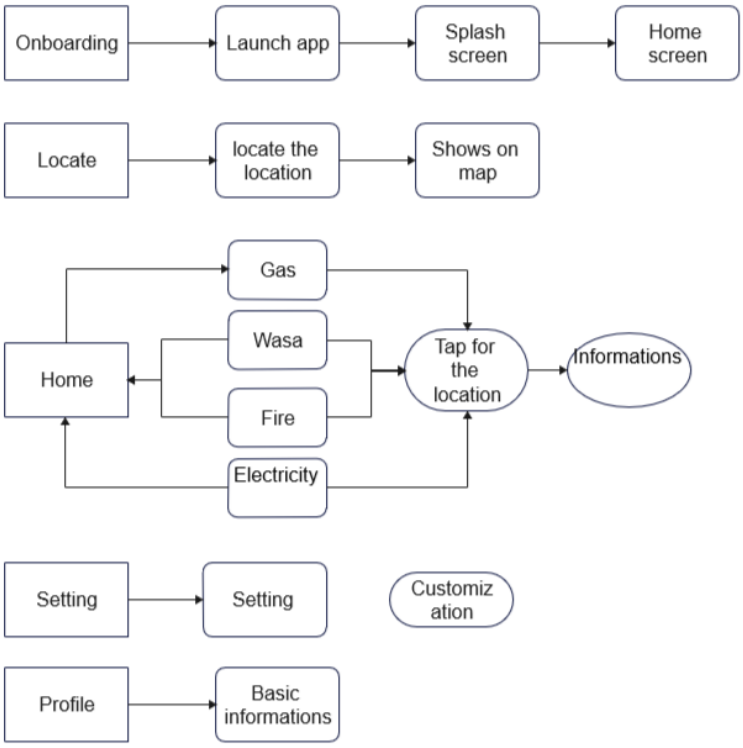


Figure 2.11: Application information architecture

Chapter 3
RESULTS

3.1 Low-fidelity Wireframing and Prototyping

Home menu:

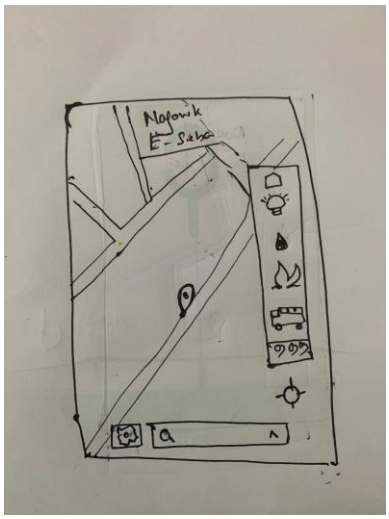


Figure 3.1.1: Hand drawing wireframe of the app (home menu)

Main navigation:

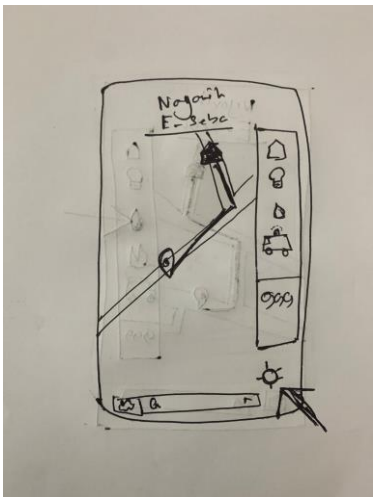


Figure 3.1.2: Hand drawing wireframe of the app (Main navigation)

Main services:

Figure 3.1.3: Hand drawing wireframe of the app (Main services)

Setting:

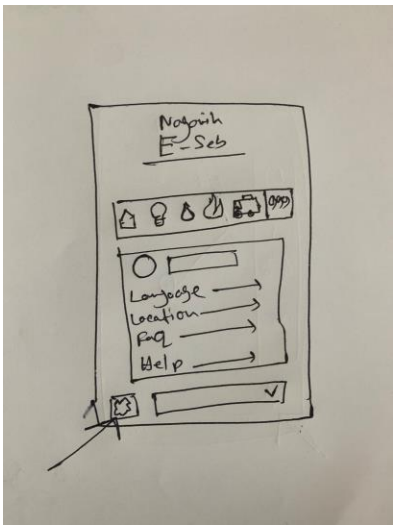


Figure 3.1.4: Hand drawing wireframe of the app (Setting)

3.2 Usability Test Methods

Nagorik E seba Moderated In-Person Usability Test by Sohag Hossain
Last updated August 12, 2022

Background: Nagorik E-seba was created to solve publics problems and eliminate the time it takes to find the perfect service.

Goals: The goal was to help massive people surrounding the country who faces problems with necessary issues and don't get any solutions. This app will give the rest of their problem.

Test objectives: To determine the participant's learnability of navigating the app and if they understand the core features. Can users successfully:

- Ask for information's in the search bar or tap on the specific service button.
- Write the location name and select the service.
- Search for and select a category which you are looking for.
- Get your information's.

3.3 Accessibility

Location to services: Whom will locate his location and tap for the specific services will get the information's within a second. If he wants to save his own location, he can do it through location option from the settings.

3.4 Design systems

Typography:

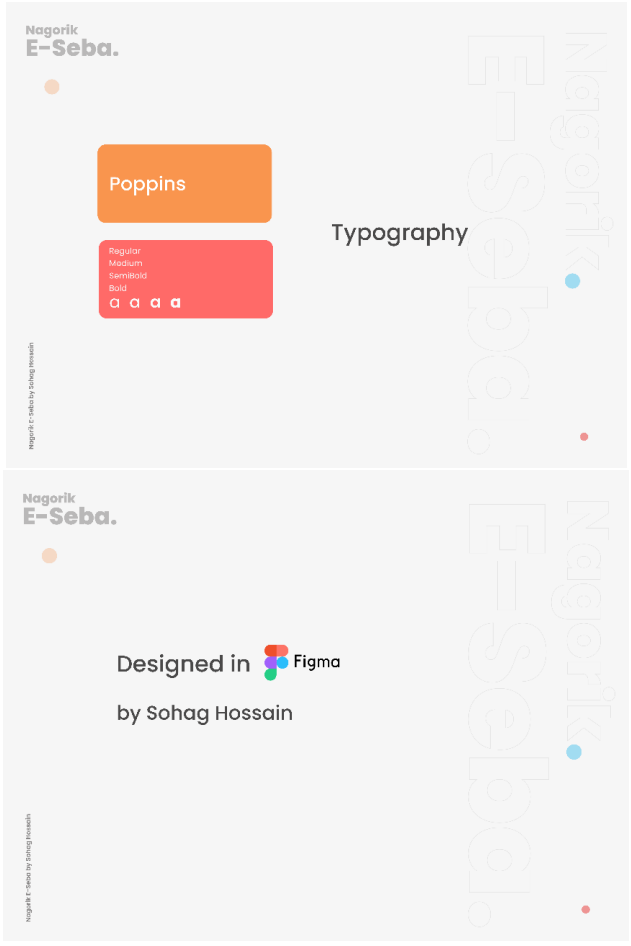


Figure 3.4.1: Typography font of the app.

Color:

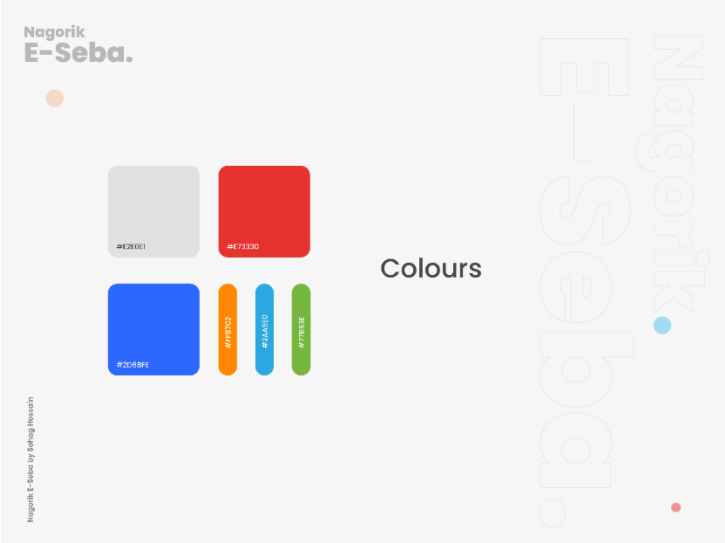


Figure 3.4.2: Colors of the app.

Search bar:

Figure 3.4.3: Search bar of the app.

Icons:

Figure 3.4.4: Icons of the app.

Logo:

Figure 3.4.5: Logo of the app.

Layout:

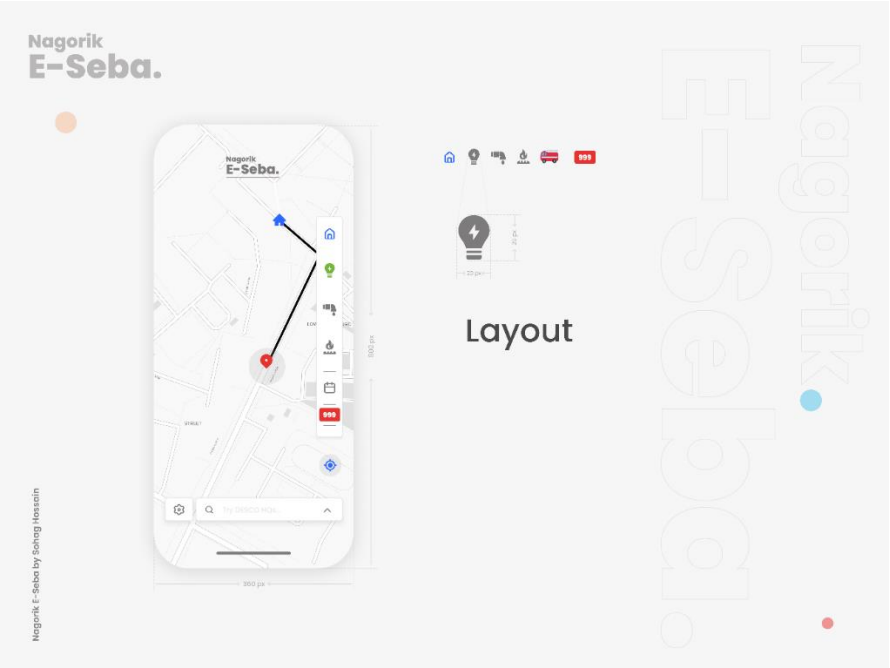


Figure 3.4.6: Layout of the app.

3.5 UI design for the app

Opening Ui and App overview

Figure 3.5.1: Opening interface of the app.

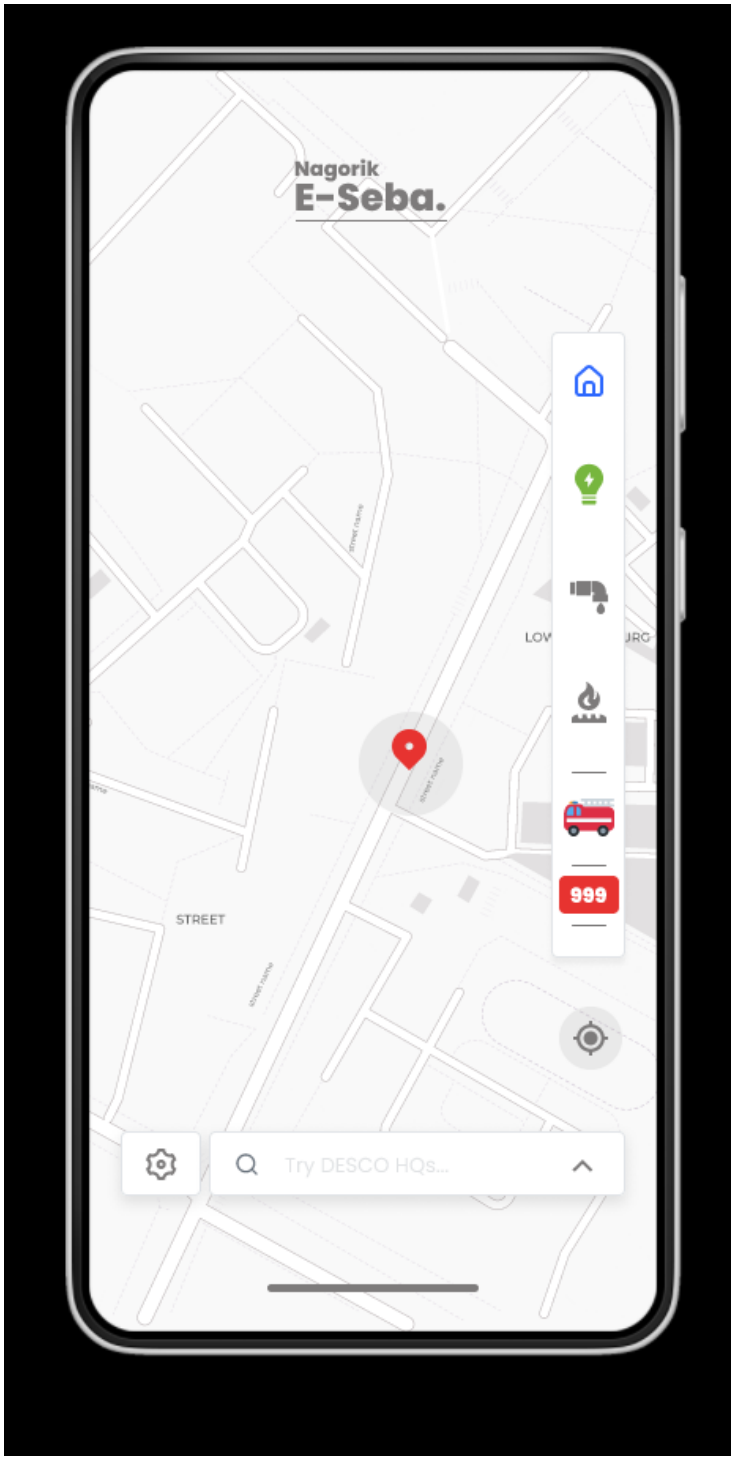


Figure 3.5.2: Opening and the main interface of the app.

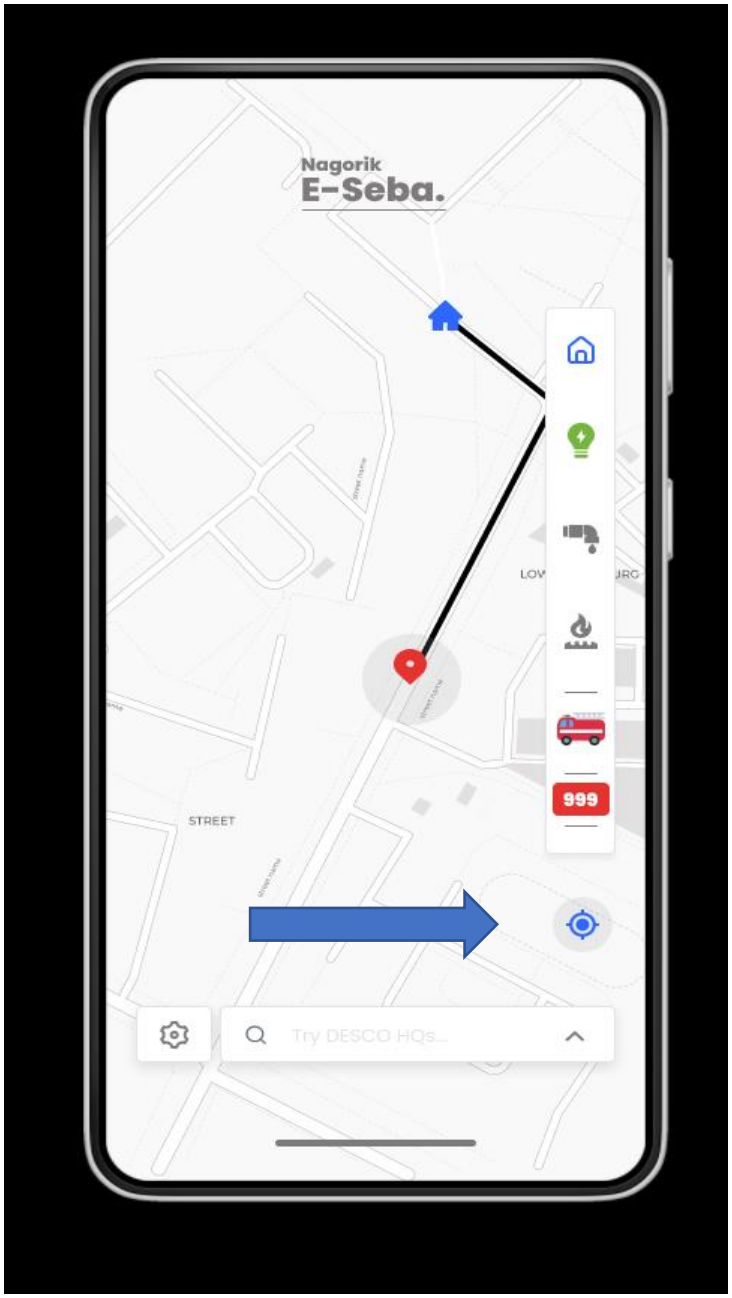


Figure 3.5.3: Selecting the “navigate” icon of the app.

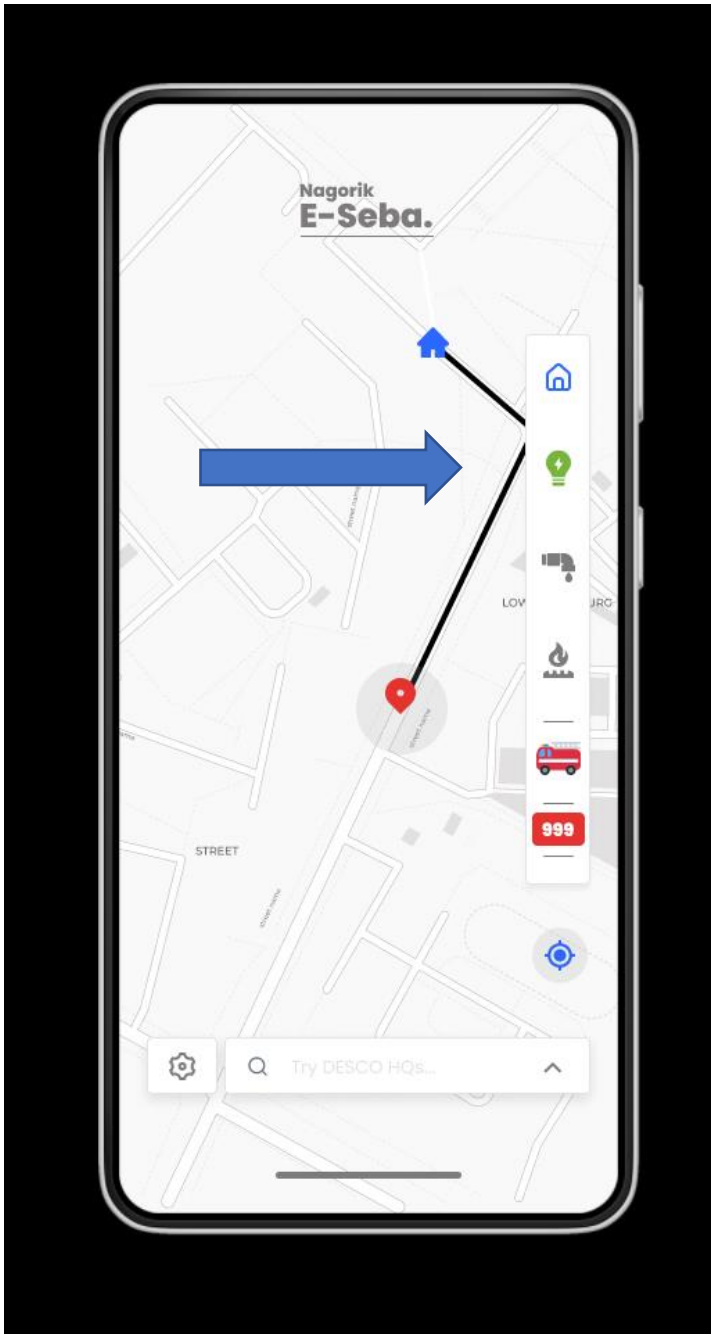


Figure 3.5.4: Tapping the services of the app. (Electricity)

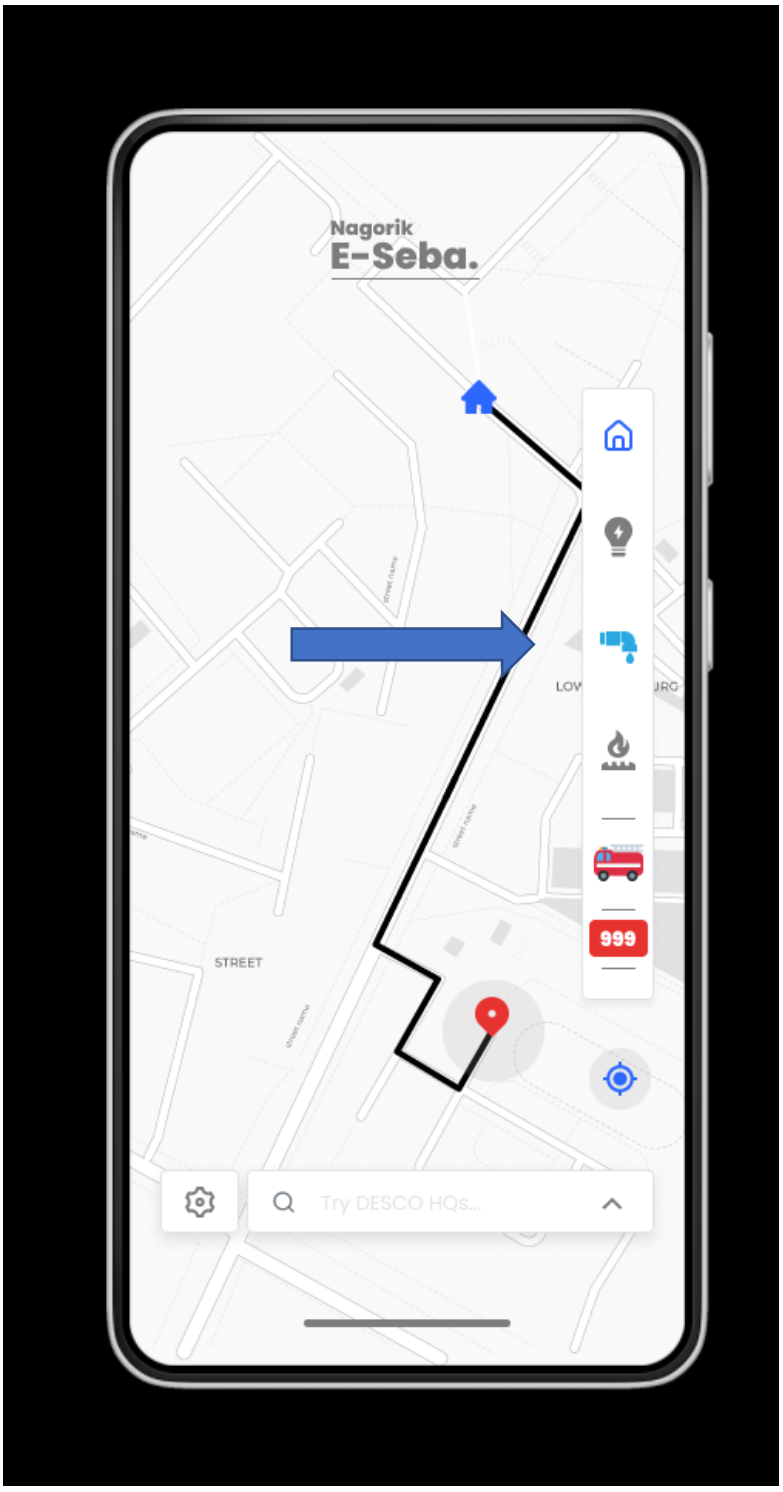


Figure 3.5.5: Tapping the services of the app. (Wasa)

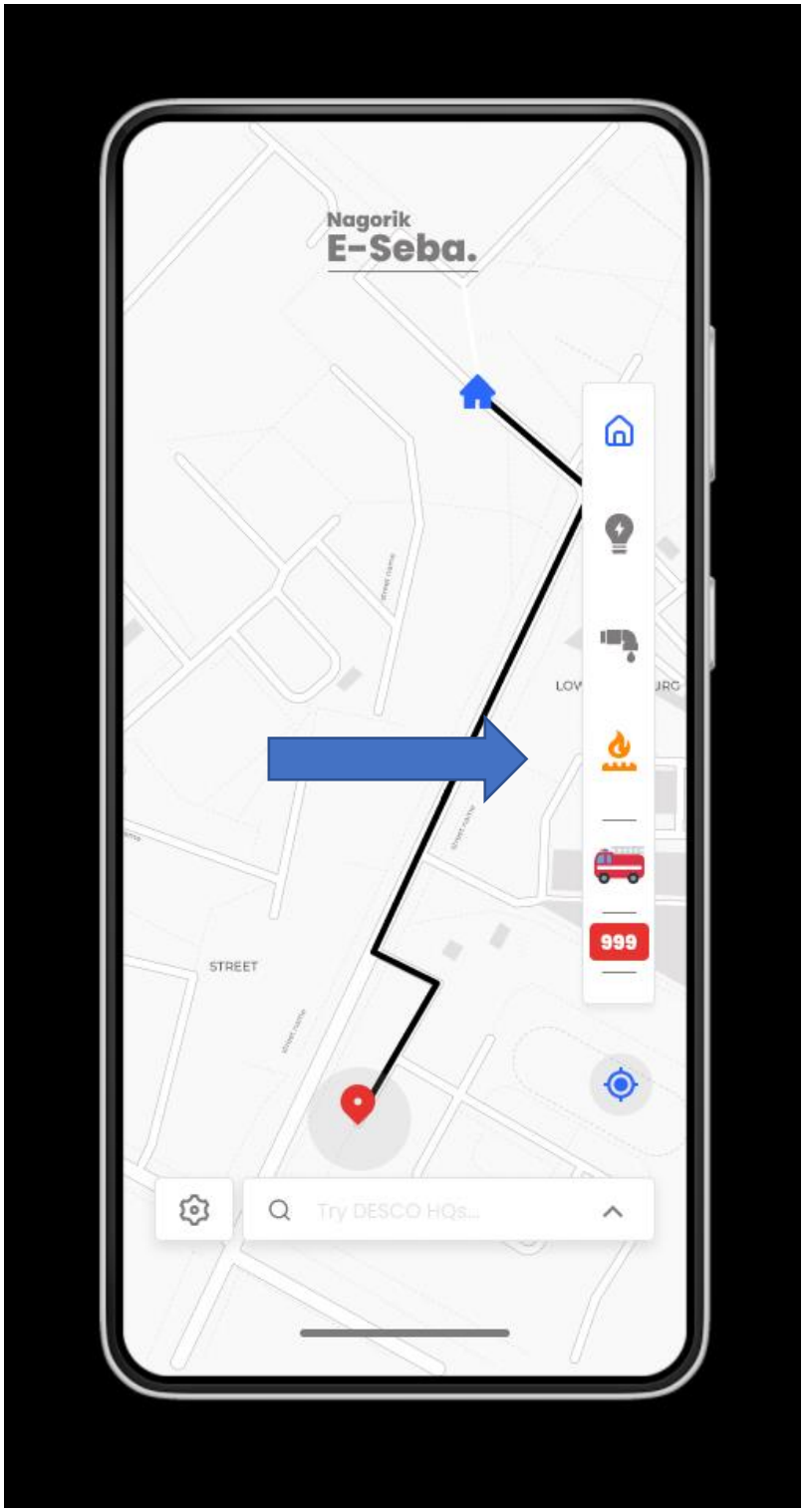


Figure 3.5.6: Tapping the services of the app. (Gas station)

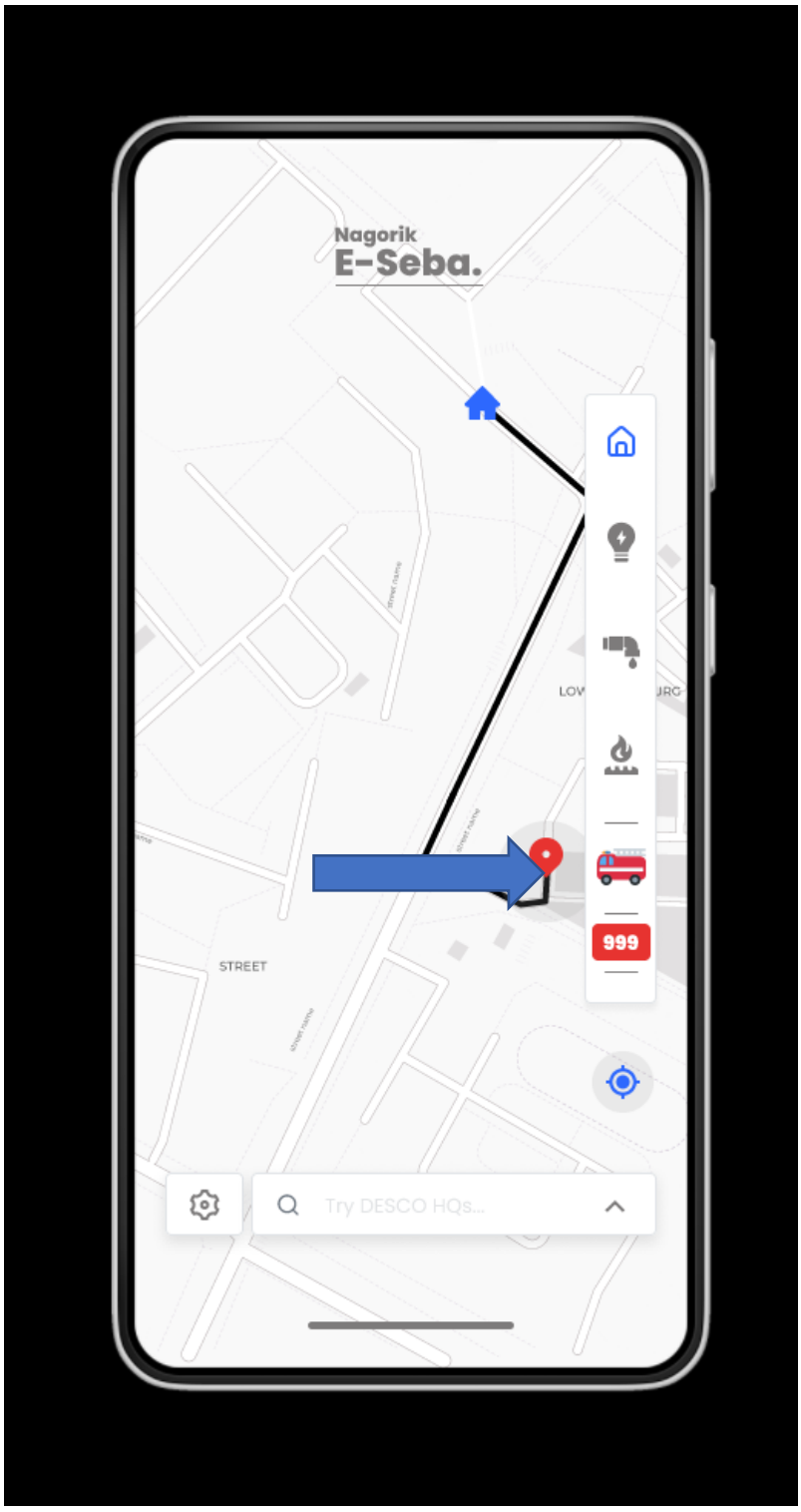


Figure 3.5.7: Tapping the services of the app. (Fire station)

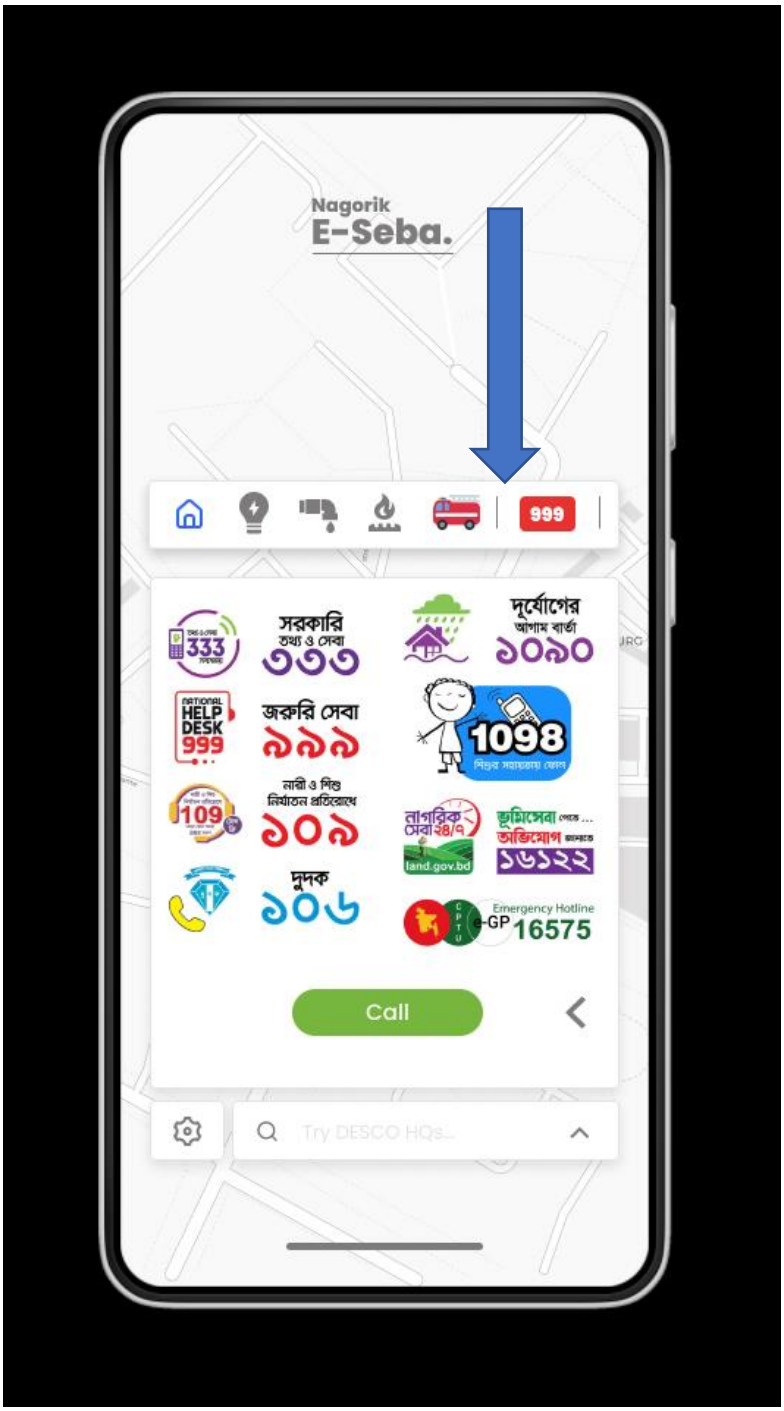


Figure 3.5.8: Tapping the services of the app. (Other provided emergency services)

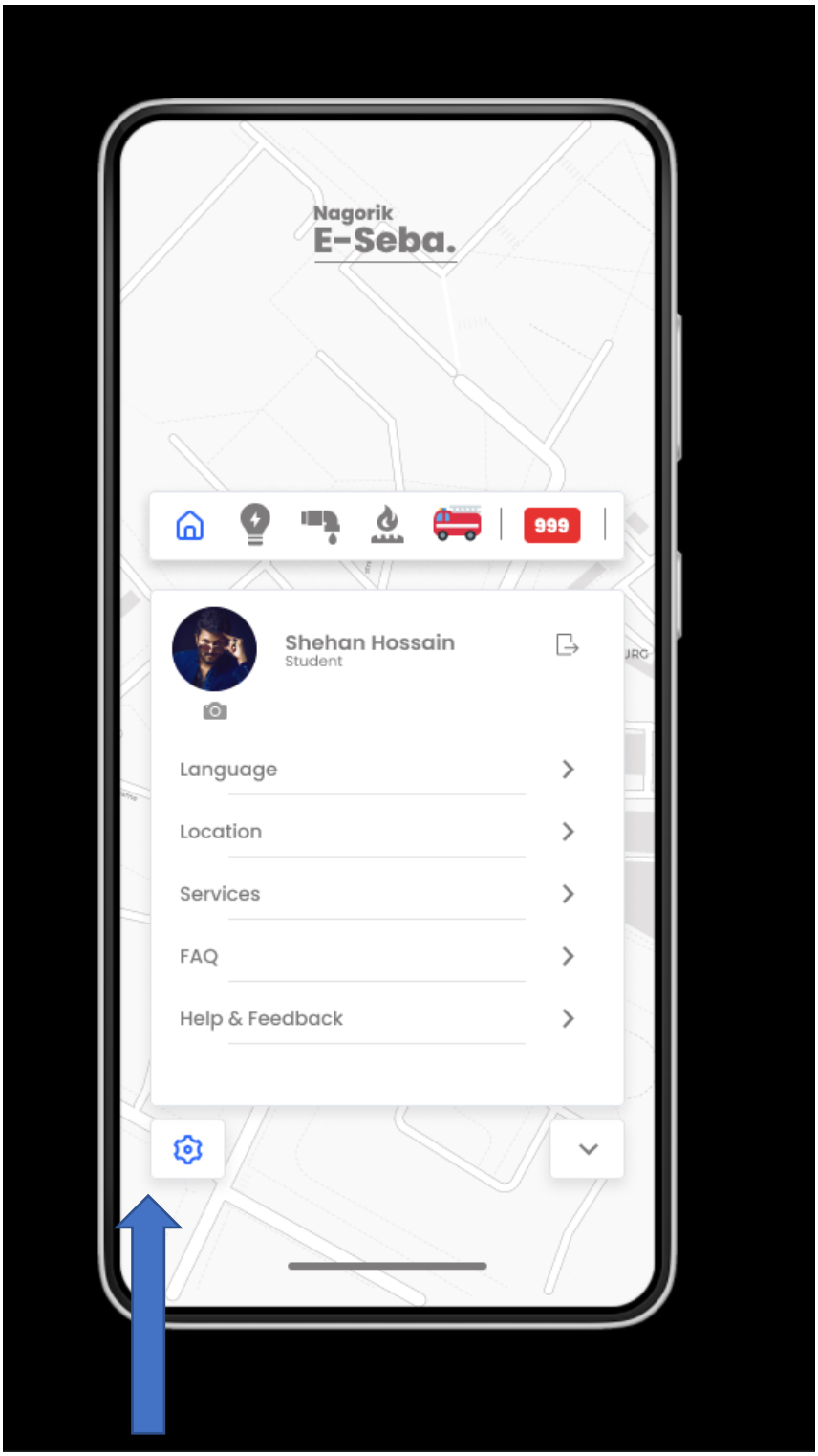


Figure 3.5.9: Tapping the setting option of the app.

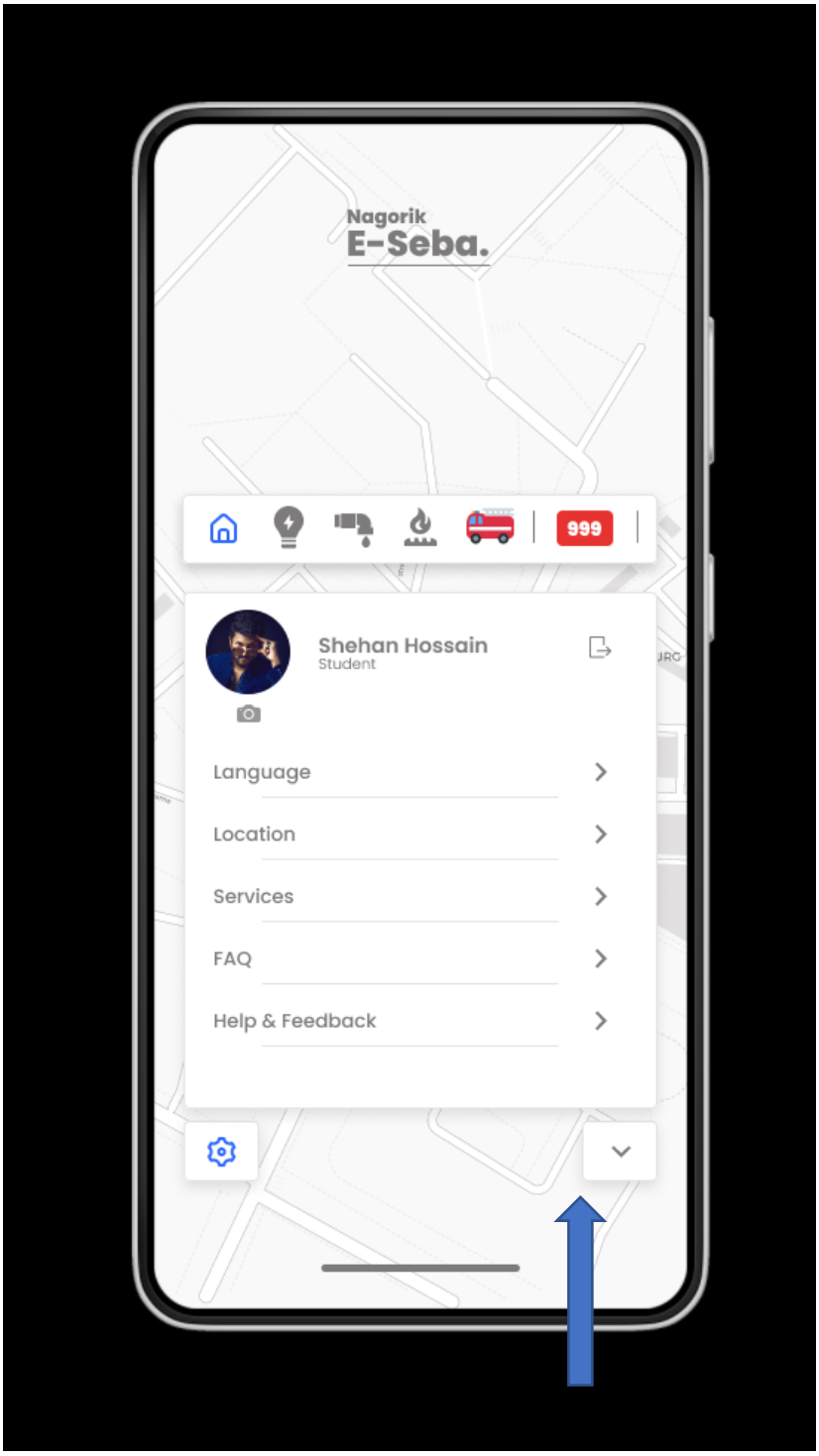


Figure 3.5.10: Tapping the down option of the app to close.

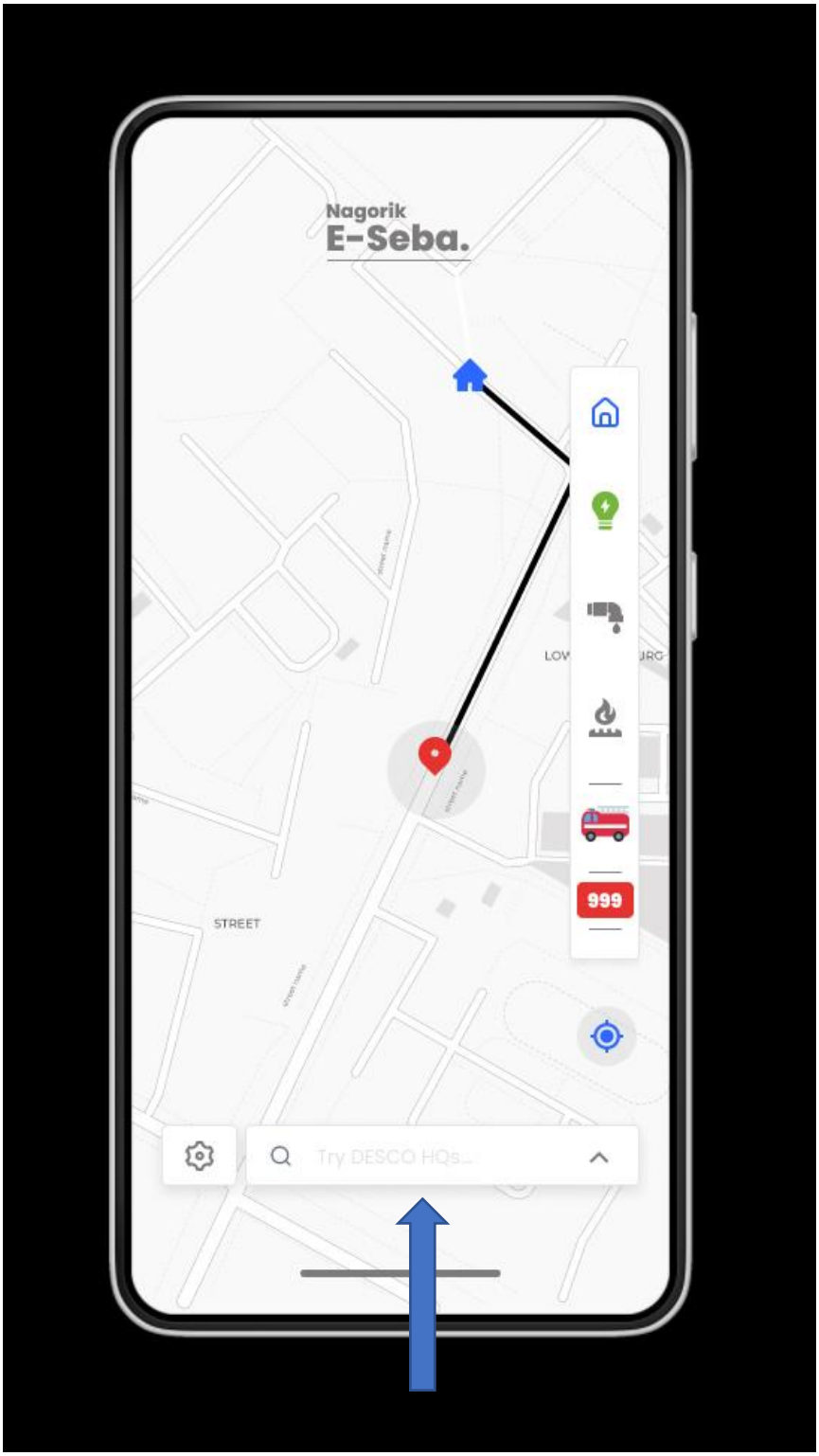


Figure 3.5.11: Tapping the search option of the app.

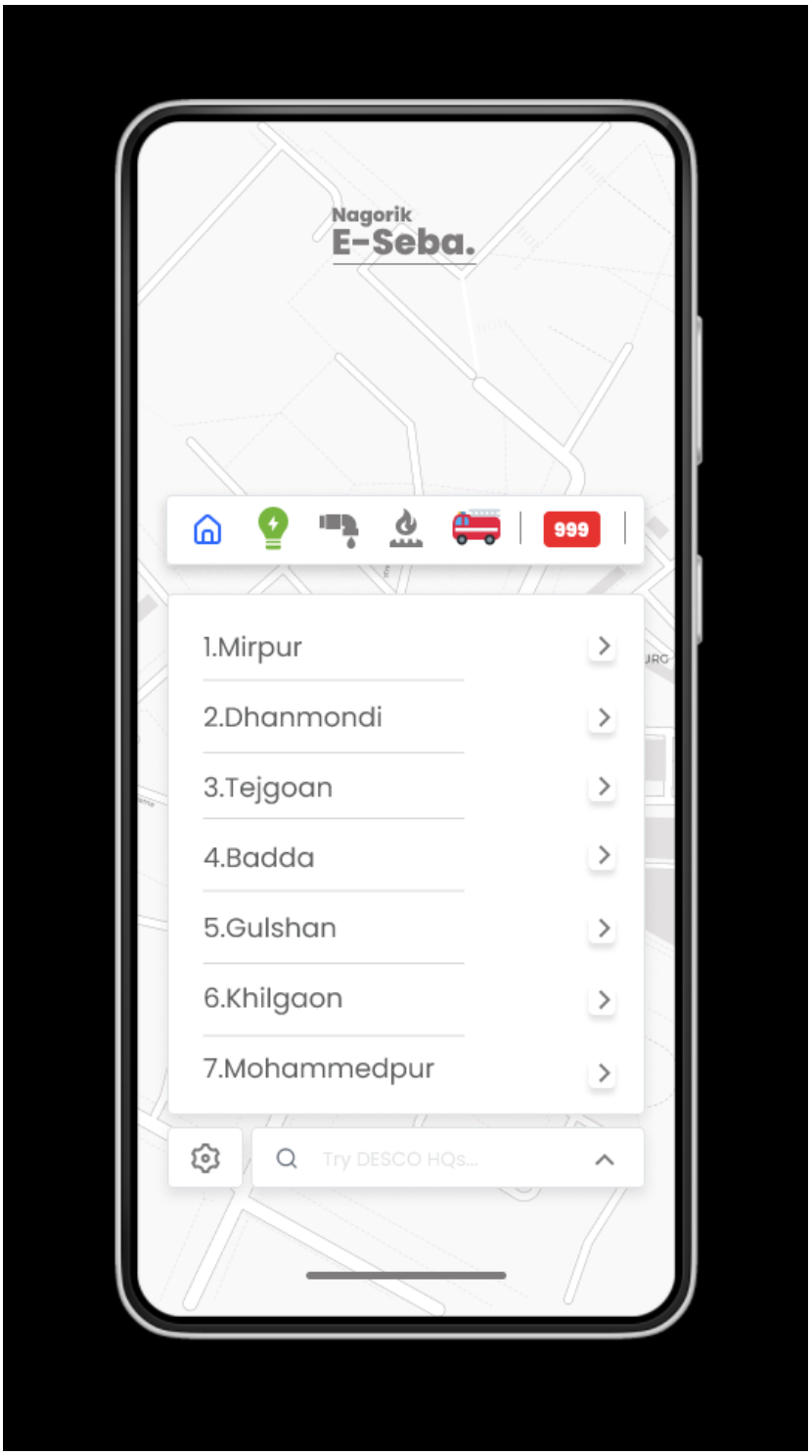


Figure 3.5.12: Locating from the search option of the app.

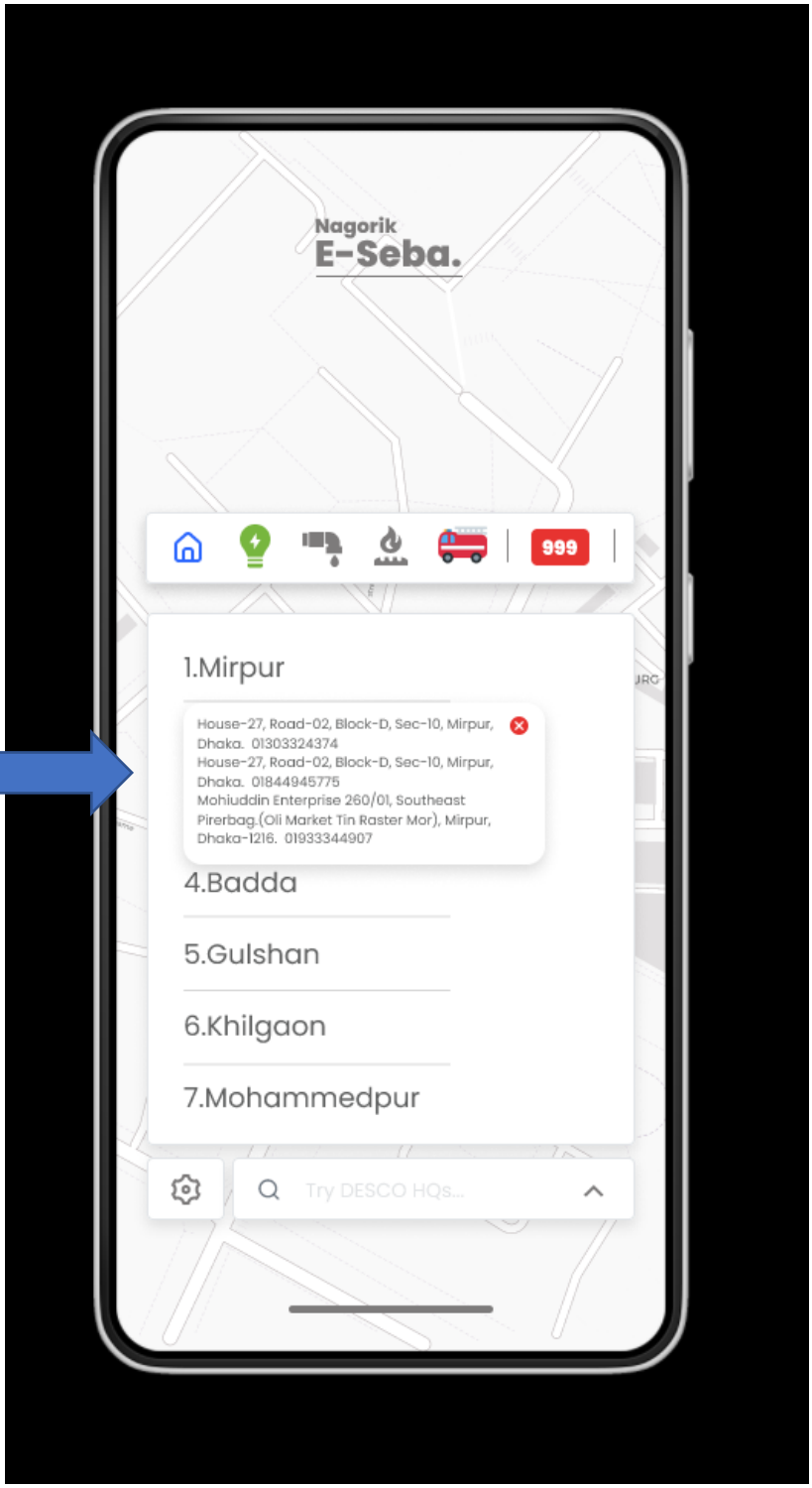


Figure 3.5.13: Select the exact location from the app.

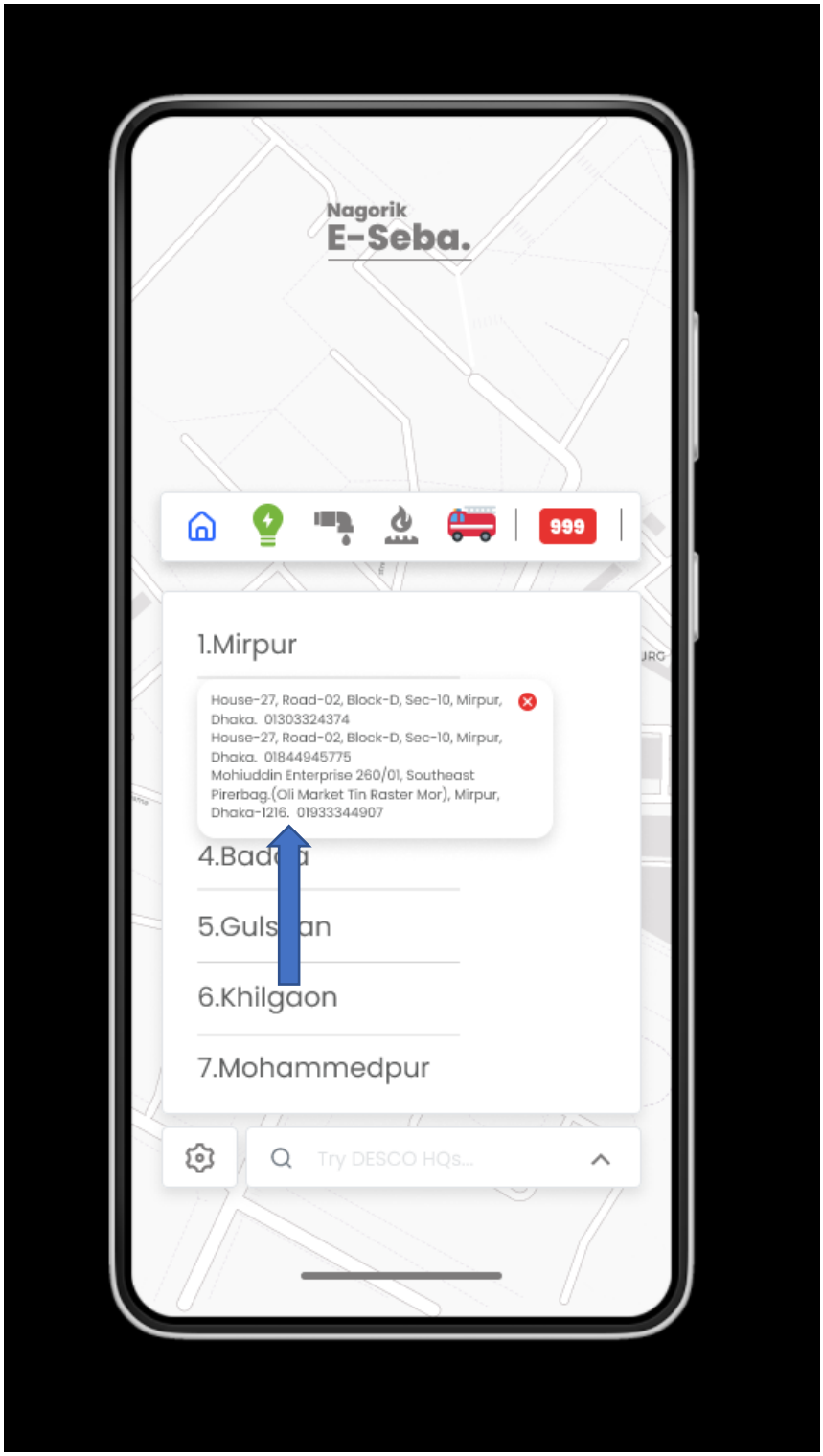


Figure 3.5.14: Select the exact location and number from the app.

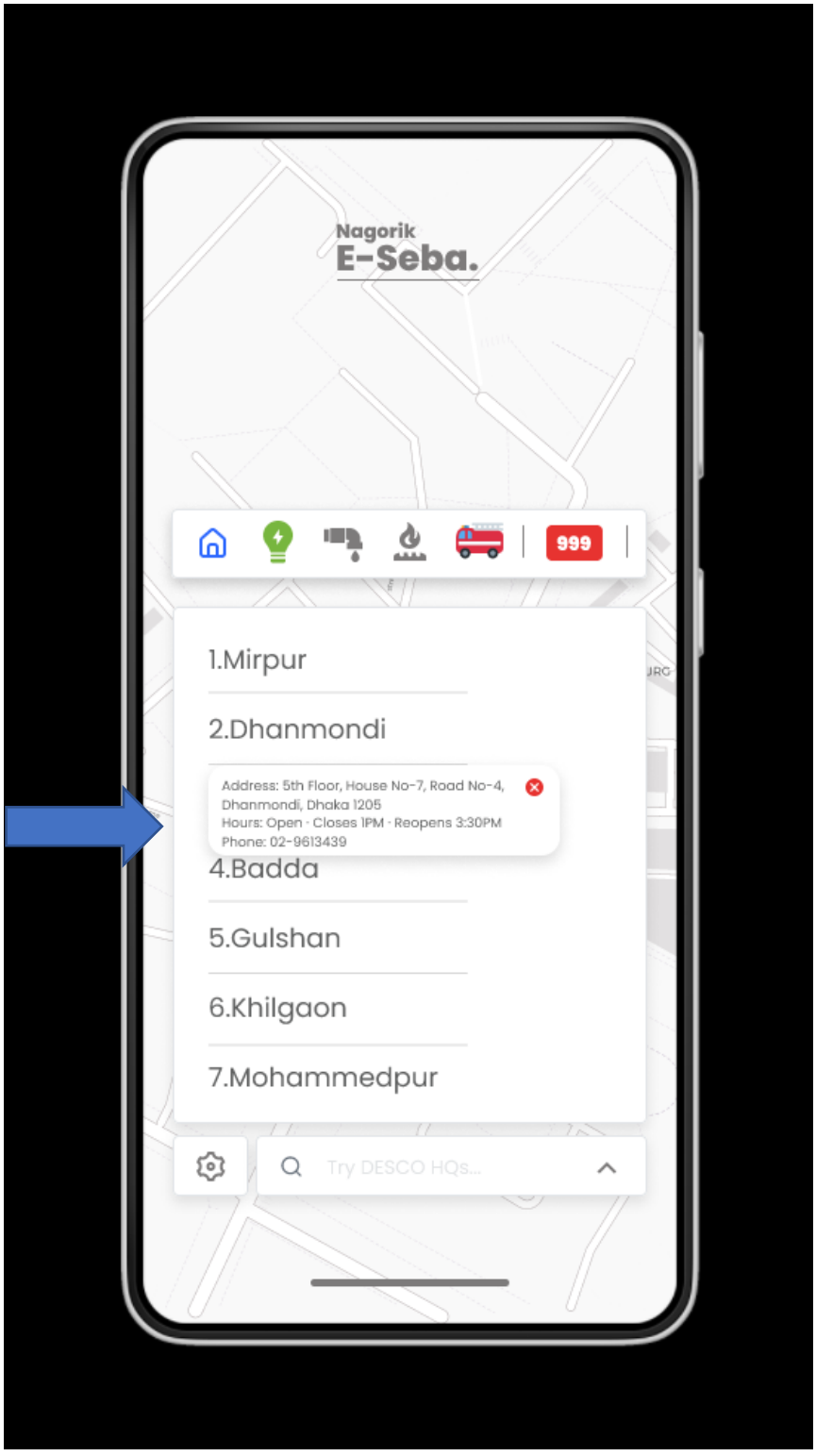


Figure 3.5.15: Select the exact location and service from the app.

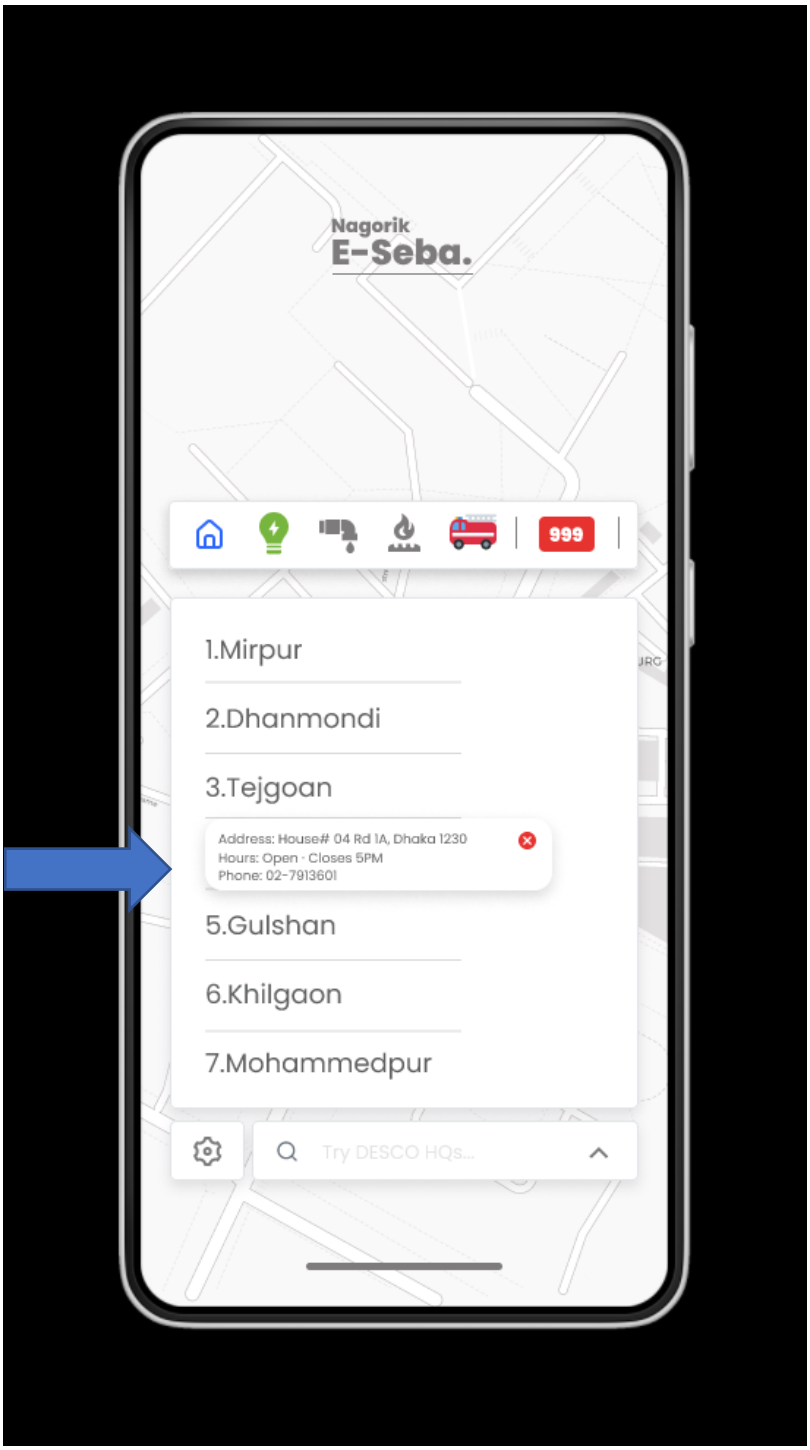


Figure 3.5.16: Select the exact location and service from the app.

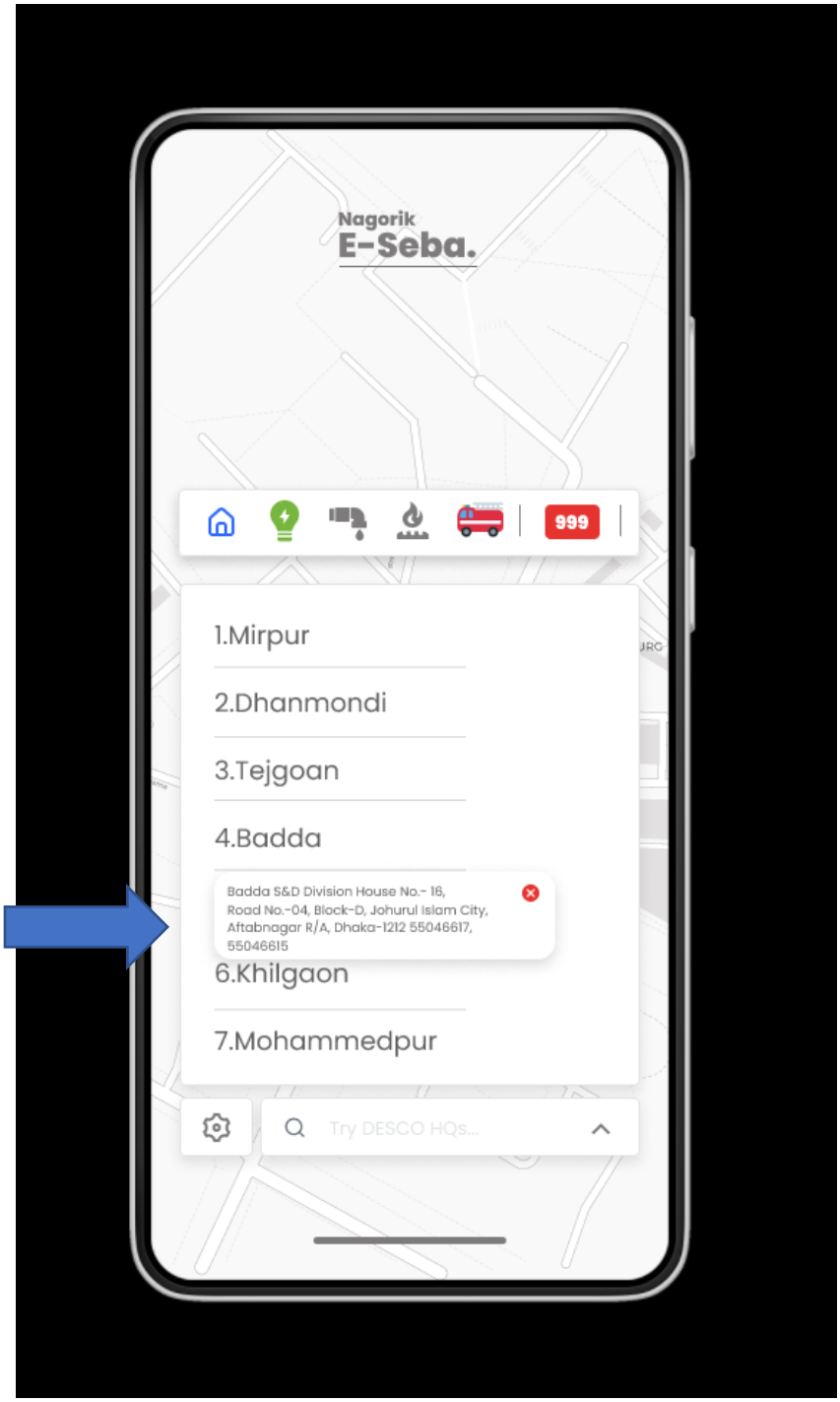


Figure 3.5.17: Select the exact location and service from the app.

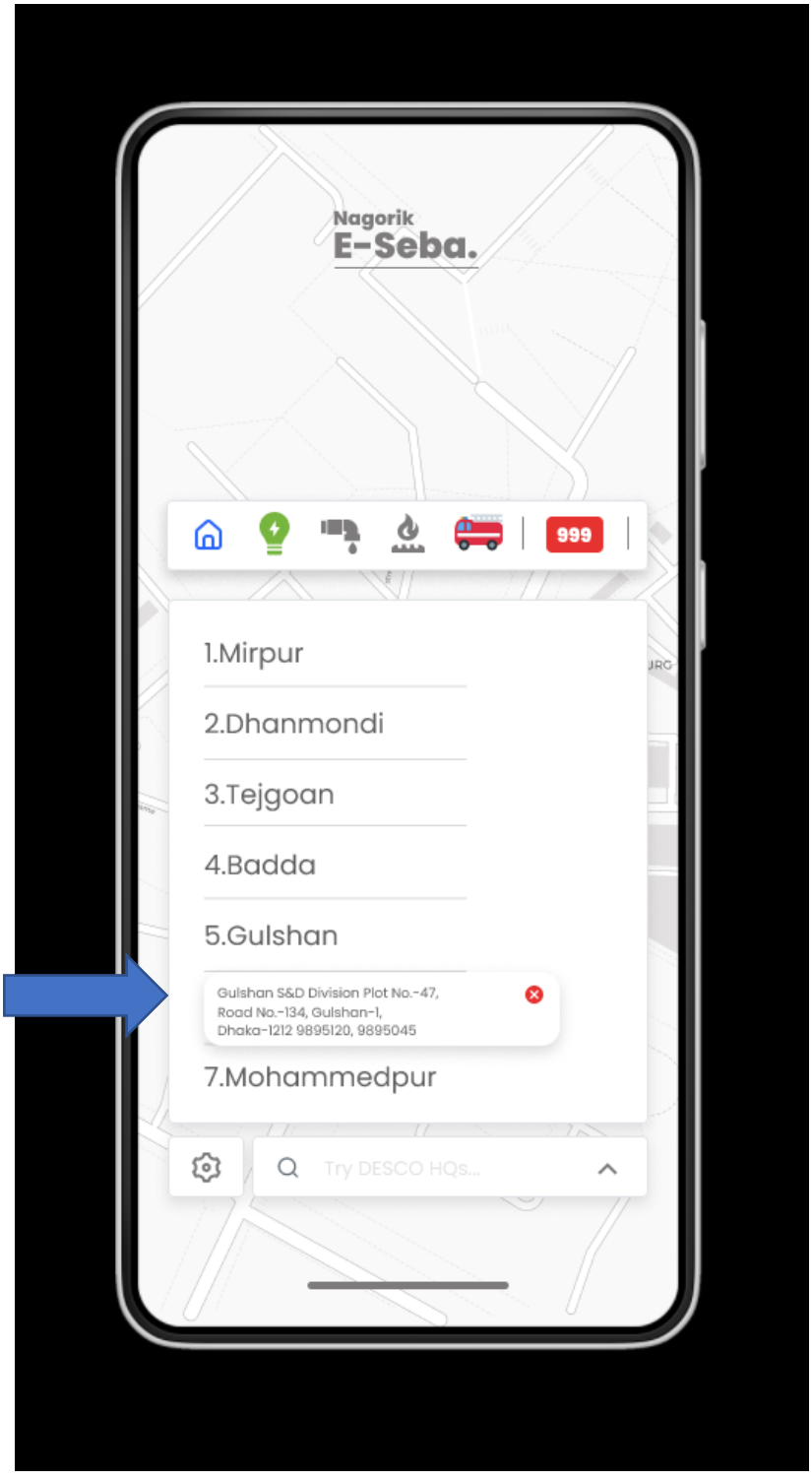


Figure 3.5.18: Select the exact location and service from the app.

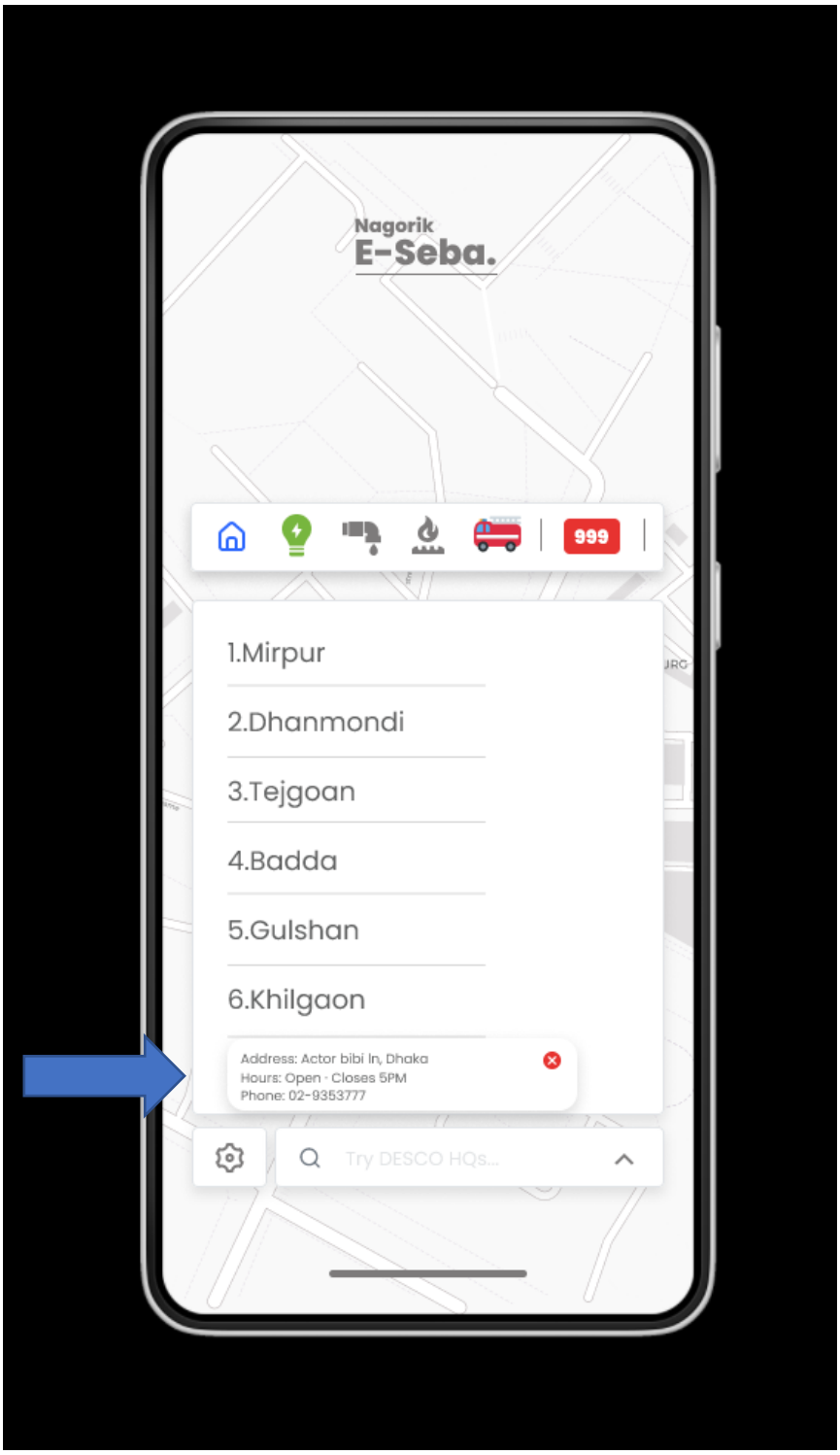


Figure 3.5.19: Select the exact location and service from the app.

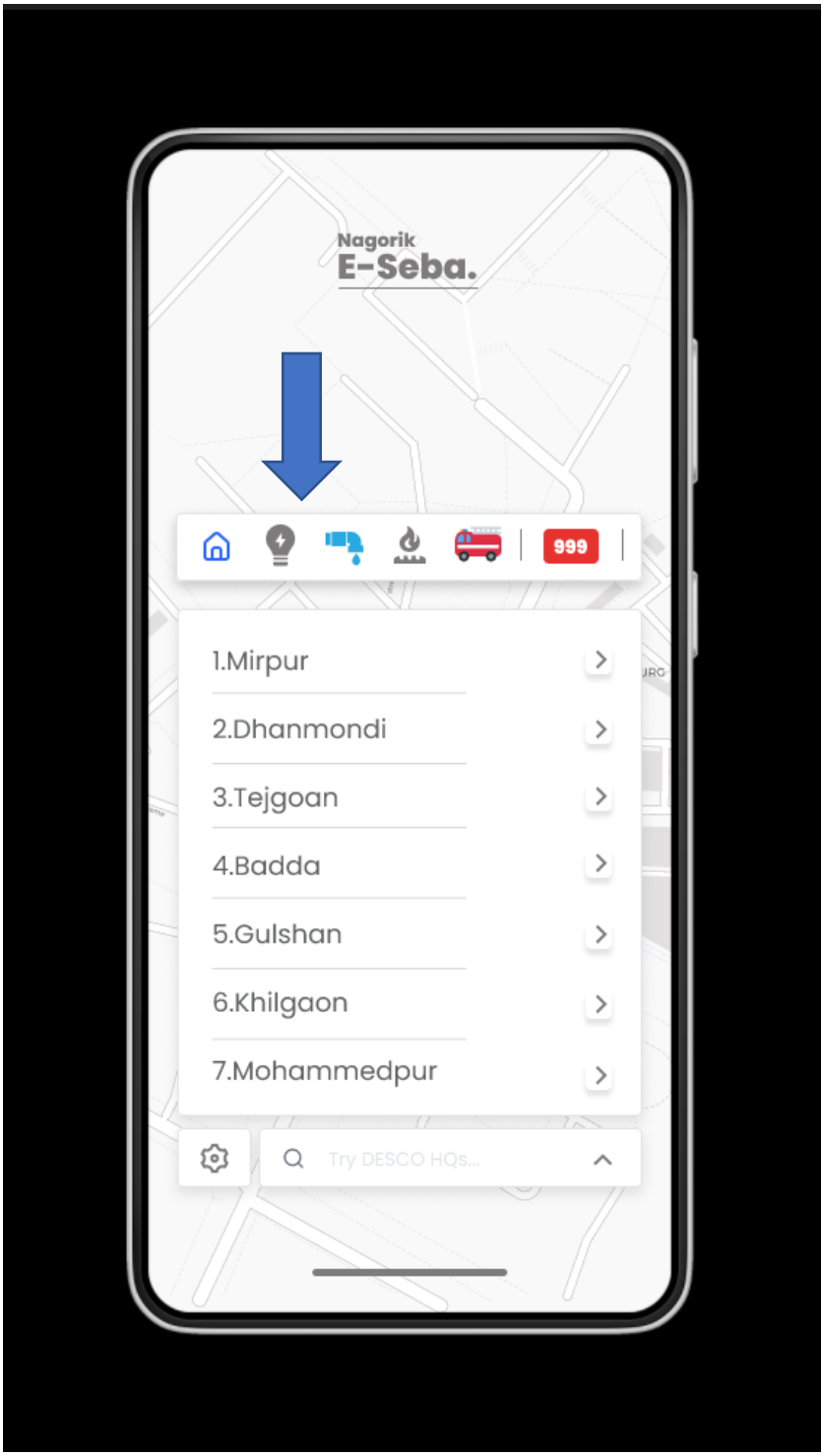


Figure 3.5.20: Select the exact location and service from the app.

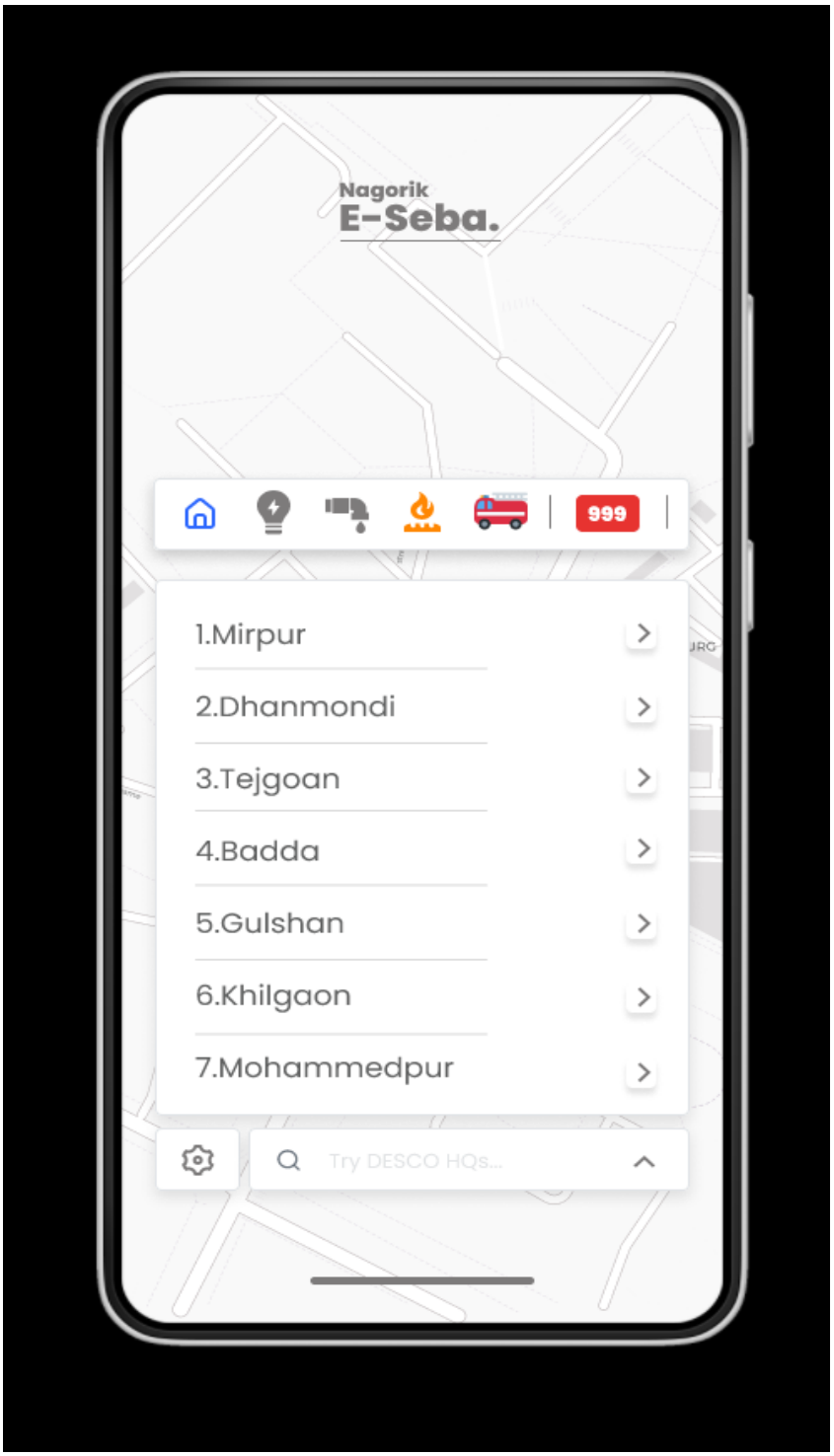


Figure 3.5.21: Select the exact location and service from the app.

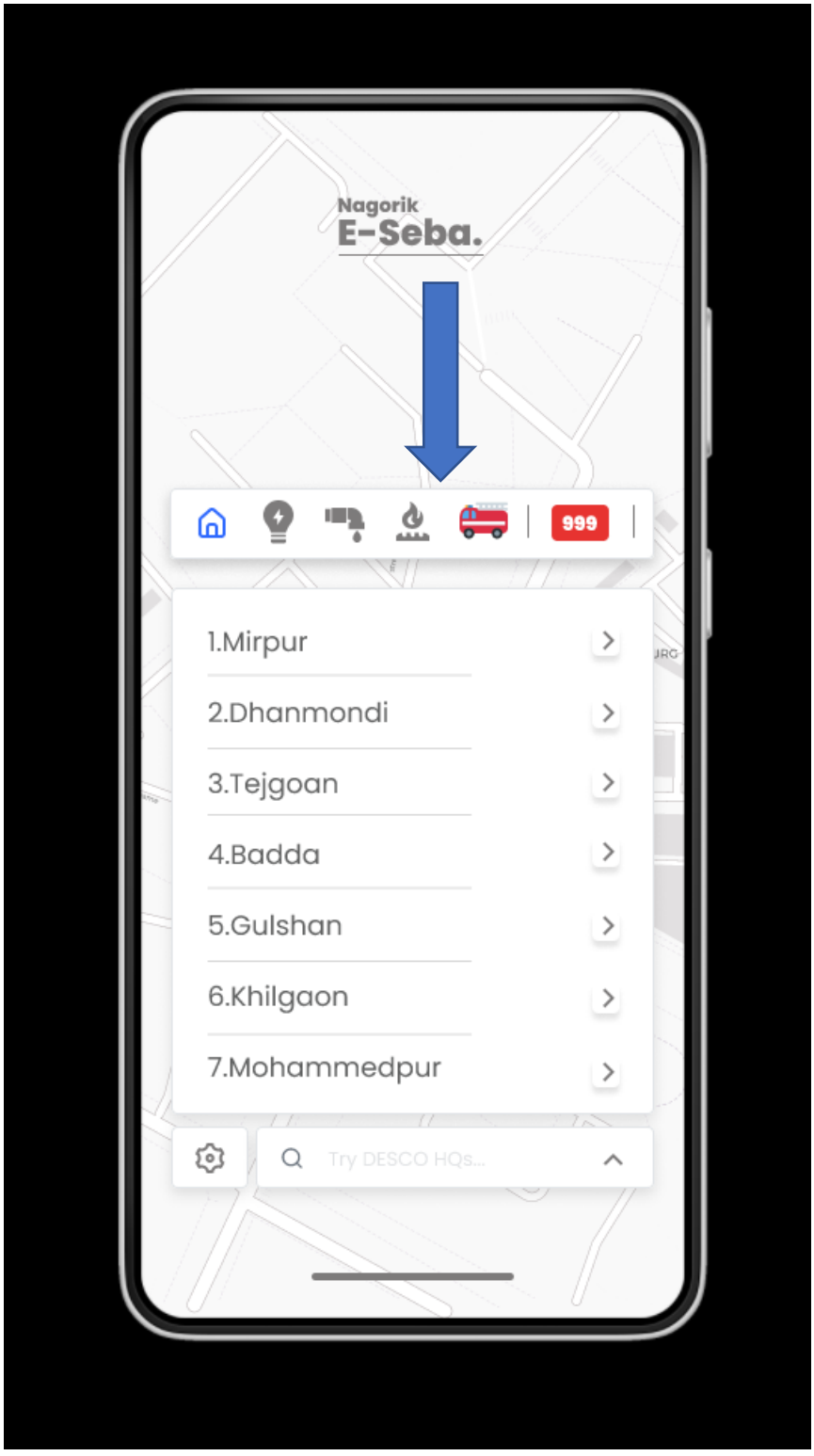


Figure 3.5.22: Select the exact location and service from the app.

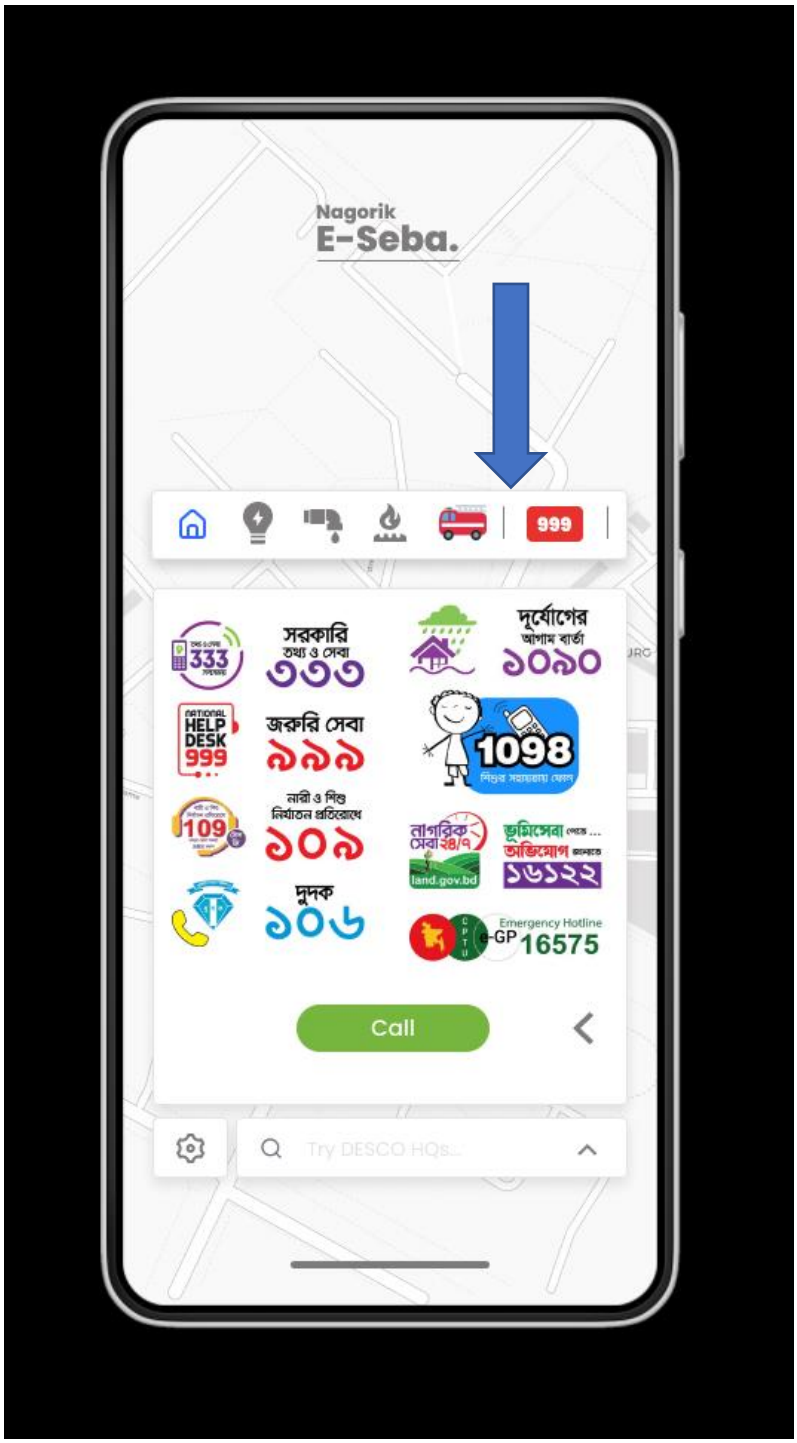


Figure 3.5.23: Select the exact location and service from the app.

Screens:

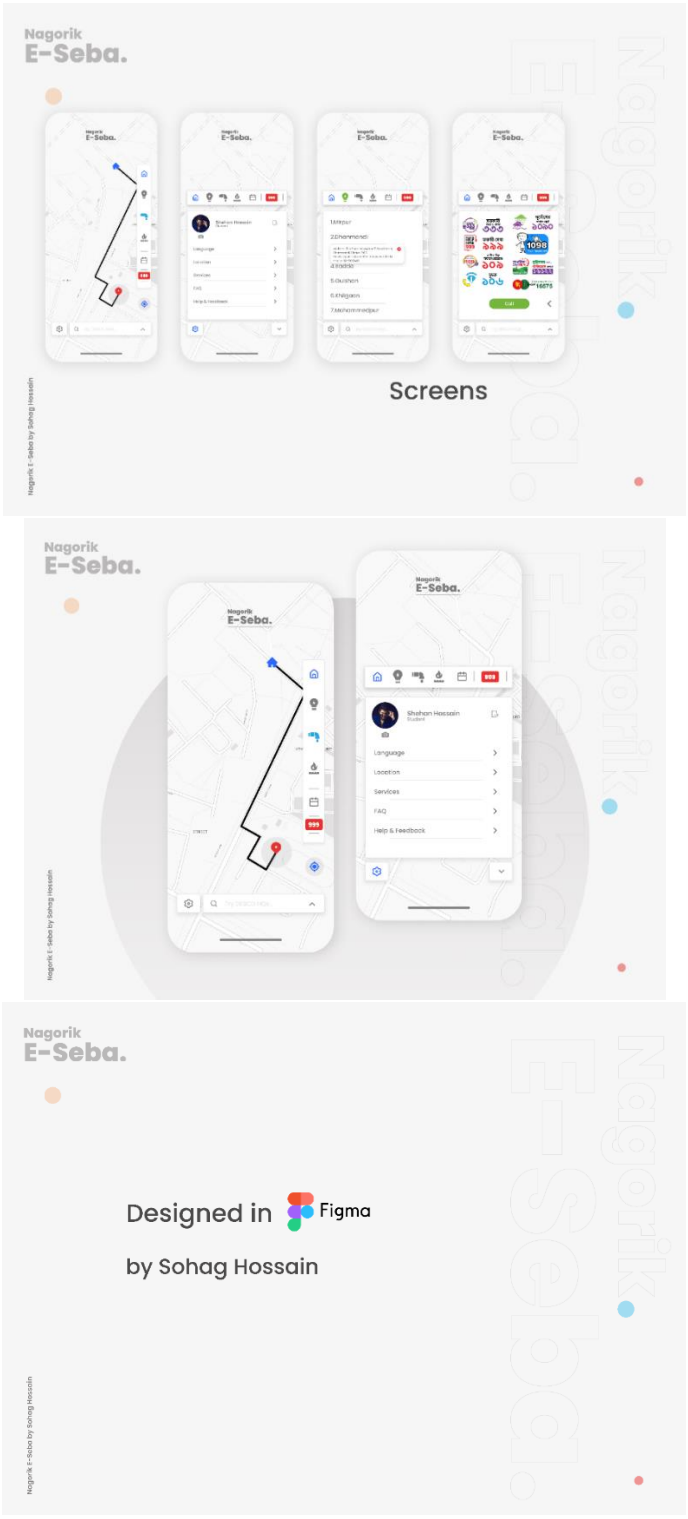


Figure 3.5.24: Screens of the application

Software workflow:

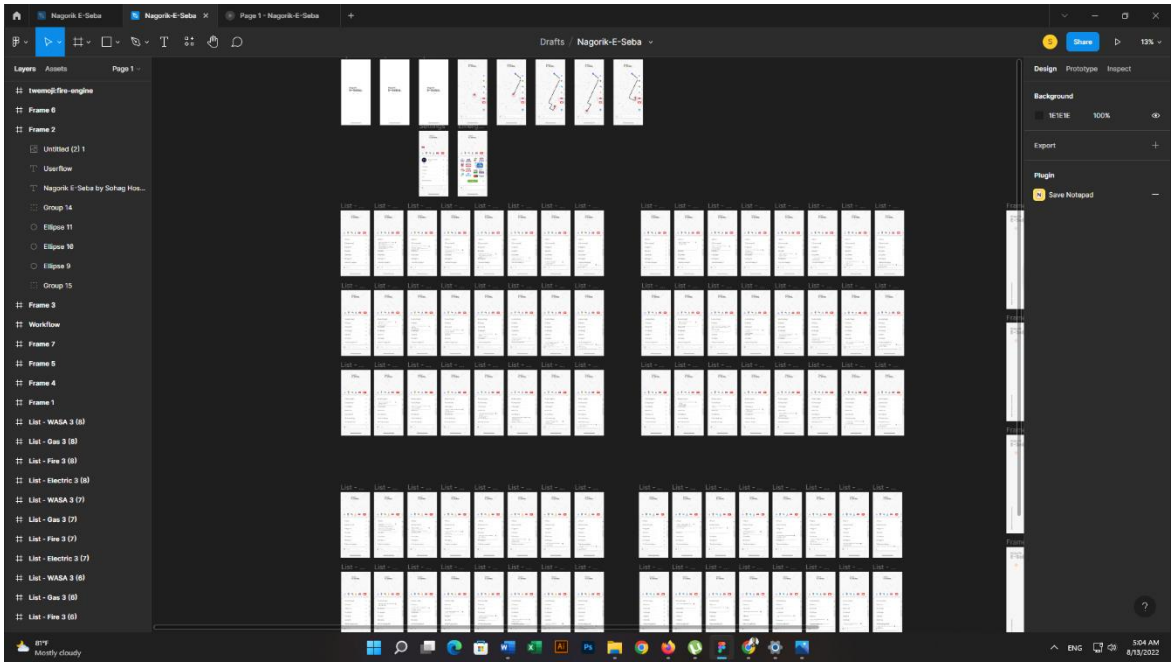


Figure 3.5.24: Software workflow of the application

Chapter 4
RESEARCH SCHEDULE

Week 1 UX: Research. Understand and observe. Conduct 3 users interviews and 110+ surveys.

Week 2 UX: Ideate. Synthesize data collected and create a primary user persona, problem statement, and hypothesis statement. Design the information architecture. Create user flows. Identify main entry points for mobile.

Week 3 UX: Prototype. Build a physical and interactive system for mobile and web with rapid sketching and wire-framing. Build out main features.

Week 4 UX: Iterate. Create a test plan. Document direct tasks the users will take. Recruit participants. Test features and user flows. Summarize findings in a usability test report. Document learnings that need to be made. Update wires.

Week 5 UI: Implementation of UI and copy for the App.

Week 6 UX: Conduct second user testing with UI comps. Iterate UI comps if needed.

Chapter 5
CONCLUSION

Electricity, Gas, Fire, Water, 999 services are the most common need in any country like ours. Any society's people need and face difficulties many times on their livings. There are several apps on the stores and websites for giving the necessary supports to the mass public on the country. But we cannot find all together on one same platform. Mostly those are online based apps and websites. Moreover, when we need a support then we cannot make our self-hurry for data or net connection, we just need that particular support. So, it gets easier for us if we can make it offline.

So, I came up with an idea that assures the supports to all kind of people by only one segment. I will make an App that keeps all data related these (Electricity, Gas, Fire, Water, 999) difficulties. Where people will find all kind of information's from one platform. No matter what ever the location is, this application will track the location wherever he or she is. These app will be fully offline based, that means if someone install this application, he won't going to need internet connection after, they can use it afterwhile without any internet or data connection.

Reference

[1] About Ux design [Date: 28/09/2022, Time: 2:50pm]
Available at: https://careerfoundry.com/en/blog/ux-design/

[2] About Ui design [Date: 28/9/2022, Time: 2:50pm]
Available at: https://careerfoundry.com/en/blog/ui-design/

[3] Picture download [Date: 28/9/2022, Time: 2:50pm]
Available at: https://www.centercode.com/glossary/double-diamond-design-process

[4] Figma software [Date: 28/9/2022, Time: 2:56pm]
Available at: https://www.figma.com/ux-design-tool/

[5] Google form link (Survey) [Date: 28/9/2022, Time: 2:58pm]
Available at: https://forms.gle/Bk7i8h5DEMnkuv8p6

[6] Research on Ui/Ux [Date: 28/9/2022, Time: 2:59pm]
Available at: https://www.interaction-design.org/literature/topics/ux-research

[7] App design article [Date: 28/9/2022, Time: 3:00pm]
Available at: https://99designs.com/blog/web-digital/how-to-design-an-app/

[8] App icons [Date: 28/9/2022, Time: 3:05pm]
Available at: https://www.flaticon.com/free-icons/ui-design

[9] Utility services [Date: 28/9/2022, Time: 3:10pm]
Available at: https://bidaquickserv.org/articles/utility-service-provider

[10] Dhaka North And South city corporation map [Date: 28/9/2022, Time: 3:12pm]
Available at: https://www.mediabangladesh.net/dhaka-city-map-south-and-north-city-corporation/

[11] Reference website provided by Govt [Date: 28/9/2022, Time: 3:15pm]
Available at: https://www.mygov.bd/?fbclid=IwAR3mr2wQwL06N0d7CiVLwLM27zRADMnq-qU4vy178Fgx5hXyswURmkRT3rY

[12] Figma plugins [Date: 28/9/2022, Time: 3:20pm]
Available at: https://www.figma.com/community/plugins

[13] Reference Application [Date: 28/9/2022, Time: 3:25pm]
Available at: https://dribbble.com/shots/7221607-Mobile-utility-payment-application

[14] Utility problems in Bangladesh article [Date: 28/9/2022, Time: 3:28pm]
Available at: https://dailyasianage.com/news/291108/power-crisis-problems-and-solutions-in-bangladesh

[15] All files google drive link [Date: 28/9/2022, Time: 3:32pm]
Available at: https://drive.google.com/drive/folders/14UtUMeuk5yXeYeKWv_w9ycxwOxhpacXV?usp=sharing