CASE STUDY

RUBIK

Connection security and passenger information for regional bus services

DESIGN PROCESS

1

EMPHASIZE

User Research
Competitive Analysis

2

DEFINE

Personas
Insights and Pain Points
Empathy Maps
User Journey Maps

3

IDEATE

Brainstorming
User Flow
Card Sorting
IA

4

PROTOTYPE

Lo-fi & High-fi
Wireframes & mockups

5

TEST

Usability testing
Feedback
Adaptation
Conclusion

RUBIK
PROJECT OVERVIEW

This product will be an assistant in providing real-time information on bus transit and connections focusing on the rural communities, where such systems are lacking.

The real time data will provide the actual arrival and departure times at the stops, which may differ from the timetable, due to various disruptions.

The goal of the project was the development and realization of a network-oriented, vehicle-related information system with a focus on the requirements of German regional bus transport.

PROJECT OVERVIEW

MY ROLE AND RESPONSIBILITIES

USER RESEARCH
Interviews, studies, competitor analysis

WIREFRAMING
High and low fidelity wireframing

Information architecture.

DESIGNS AND PROTOTYPES
High fidelity designs

Prototyping

UI
UI Design, visual concept, Sesign System

TESTING
Usability testing and adaptation

TOOLS

DURATION

2 months

PROJECT OVERVIEW

GOALS

✓ **SECURE CONNECTIONS**

✓ **REAL-TIME DATA**

✓ **INTUITIVE SYSTEM**

✓ **HASSLE-FREE TRIPS**

PROBLEM STATEMENT

Residents of rural areas in Germany are often dependant on the local bus service. The busses do not always run very frequently and the disruption of service often occurs. If the passengers miss the right bus, the wait time might be too long and the connections cannot be made as well.

SOLUTION

This product will address the problems and will provide the real time data on arrivals and departures, as well as interactive map. The passengers will be able to check the fare information and purchase the necessary tickets. Real time notifications and alerts will also be integrated.
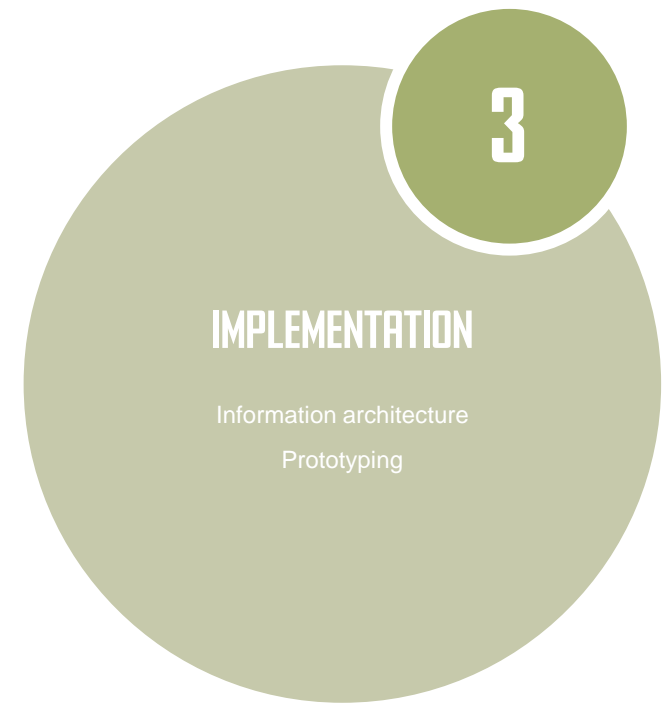
METHODOLOGY

1

INSPIRATION

User research, interviews

Hypothesis generation

Competitor research

2

IDEATION

Brainstorming

Creating insights

How Might We

3

IMPLEMENTATION

Information architecture

Prototyping

CHALLENGE

OPPORTUNITY

SOLUTION

TIMELINE

1 week	2 week	3 week	4 week	5 week	6 week	7 week	8 week

UX Research
Competitor analysis,
user research and interviews

UX Design
User Flow, Wireframes

UI Design
Design system, visual concept

**Development
and testing**

COMPETITOR ANALYSIS

COMPETITORS	Account	Find nearest stop	Live bus tracking	Ticket purchase	Reminders, alerts	Support	Bus fare	Journey planner	Accessibility info	Distance and time
VVS MOBIL	●	●	●	●	●	✖	●	●	●	●
STUTTGART TRANSIT	✖	●	●	✖	✖	✖	✖	✖	✖	●
BWEGT	✖	●	●	✖	✖	●	●	●	✖	●
GOOGLE MAPS	●	●	●	✖	●	✖	●	●	✖	●

STAKEHOLDER MAPPING

USER RESEARCH

QUALITATIVE ANALYSIS

User research helps gathering more in-depth knowledge about users, their motivations, needs, hopes, goals and pain points. I conducted interviews with several users. Here are examples of interview questions:

- How often do you travel by bus?
- What are the difficulties you face while traveling by bus?
- What are the things you like most about traveling by bus?
- Did you face any issues during your recent bus trips?
- What are the factors you consider while preparing for your trip in the airport?
- What are the issues you mostly struggle with while taking the bus?
- How would you describe you recent bus trip experience?
- Do you have any suggestions for the implementation of technologies to assists your needs?

Sometimes I need to buy a bus ticket either right at the bus stop or in the bus. I don't always have internet connection on my phone to be able to buys them online. Especially if I travel in the unknown area.

I wish there would be better updates on when the bus is arriving and whether I will be able to catch my connection at all. I would like a smoother process for that. I don't want to calculate the time myself and estimate the time for a change. I would like the app to do it for me.

USER RESEARCH

QUANTITATIVE ANALYSIS

An online survey was conducted to gather more information. Over 50 responses were received for the survey. Here are a few examples of collected data.
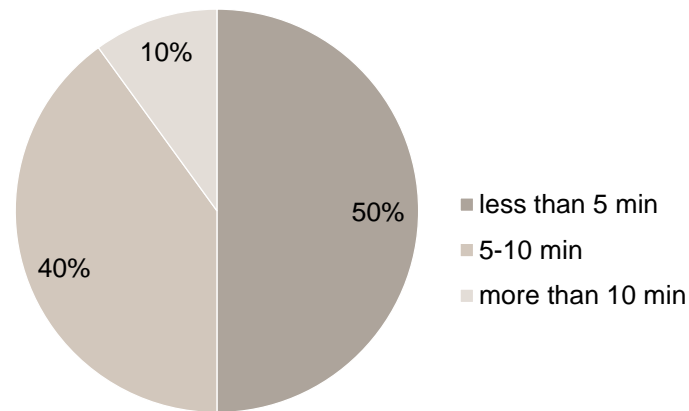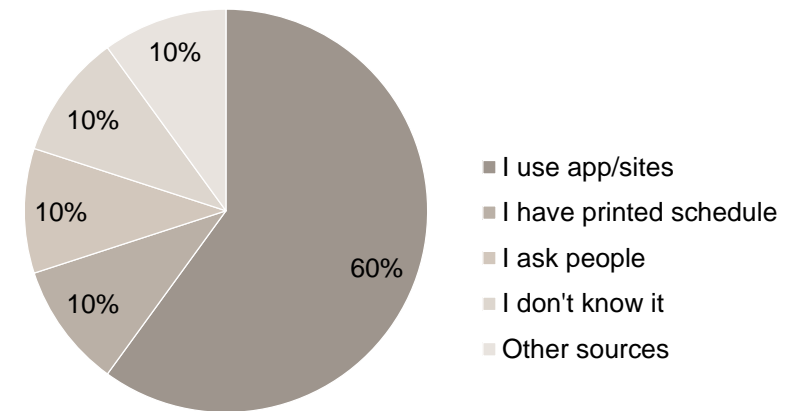
How often do you use bus service?

- everyday — 60%
- one a week — 20%
- few times a month — 10%
- rarely — 10%

How do you know the fare?

- App/Internet — 50%
- I don't know it — 30%
- I know it because I travel often — 10%
- I ask people — 10%
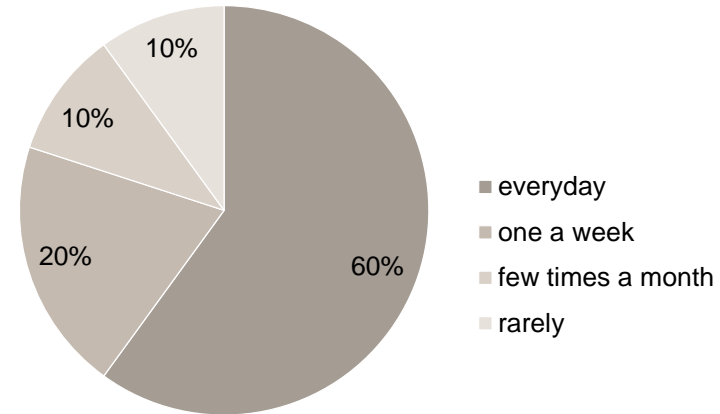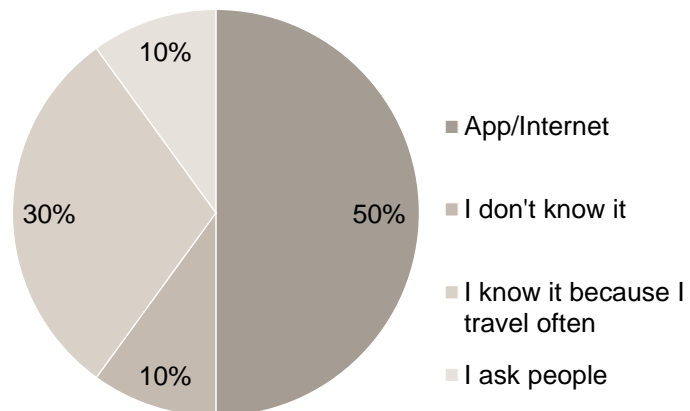
How often do you wait for the bus normally?

- less than 5 min — 50%
- 5-10 min — 40%
- more than 10 min — 10%

How do you know the arrival time?

- I use app/sites — 60%
- I have printed schedule — 10%
- I ask people — 10%
- I don't know it — 10%
- Other sources — 10%

USER PAIN POINTS

On the basis of user research and competitor analysis I have determined the most common paint points.

No real time update on arrival or departure

Can't save passenger information and details for the future use.

No sufficient information on accessibility and assistance.

Unclear fare information

The map doesn't show busses in real time.

Requirements to create account and sign in. No guest access.

The map doesn't show busses in real time.

Poor support or lack of it.

PERSONA

Johana

Age: 35
Location: Achstetten, Germany
Occupation: self-employed
Status: Single

BEHAVIOR & HABITS

Johana is an active and busy person, running her small business in interior décor consulting. She often travels around the area to meet with clients. She mostly uses public transit, as she would like to reduce her carbon footprint, and is therefore dependant on buses.

PAIN POINTS & FRUSTRATIONS

Johana is frustrated sometimes by the disturbances in bus transit and inability to catch her connection. She may be late to work or have a stressful journey because of delays and inconsistent arrival/departure data.

NEEDS & GOALS

Johana needs useful features for the bus transit app focusing on her local area, so that she won't miss her meetings, be on time and save valuable time.

I prefer using public transport, but I often get stressed because of missed connection or no real time updates on bus schedule.

EMPATHY MAP

THINKS

Will I miss my connection?
What if I will get late because the bus is delayed?
Do I have enough time to grab a coffee?
There are too many people on the bus.

SAYS

Where is this bus?!
I should buy a bus pass for this month.
Bus schedules are not matching the reality.
I feel stressed.
I need to get up earlier to catch my bus.

DOES

Checks bus schedule
Researches the possibility to take taxi instead.
Checks on time
Calls client to reschedule the meeting.

FEELS

Confused   Stressed
Irritated   Annoyed
Impatient   Calm   Energetic
Exhausted   Busy
Out of time

CARD SORTING

ONBOARDING

- Location
- User data

HOME

- Search
- Location
- User data
- Notifications
- Live data

ACTIVITY

- Remember travel details
- Save favorites

PROFILE

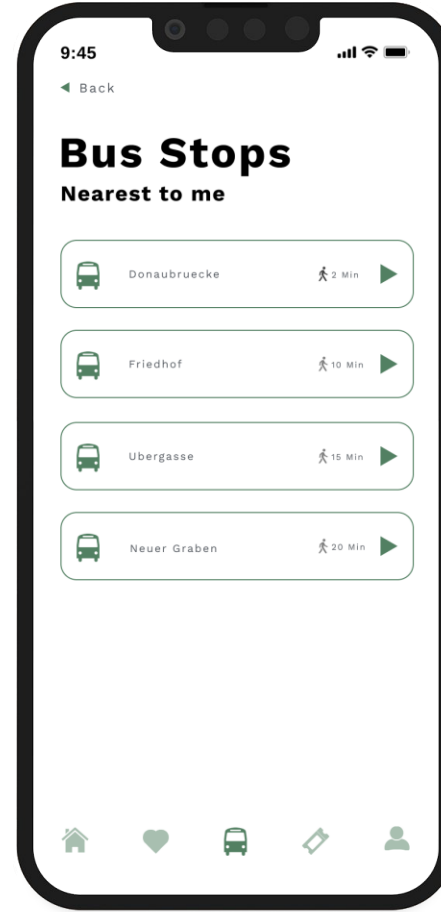- Settings
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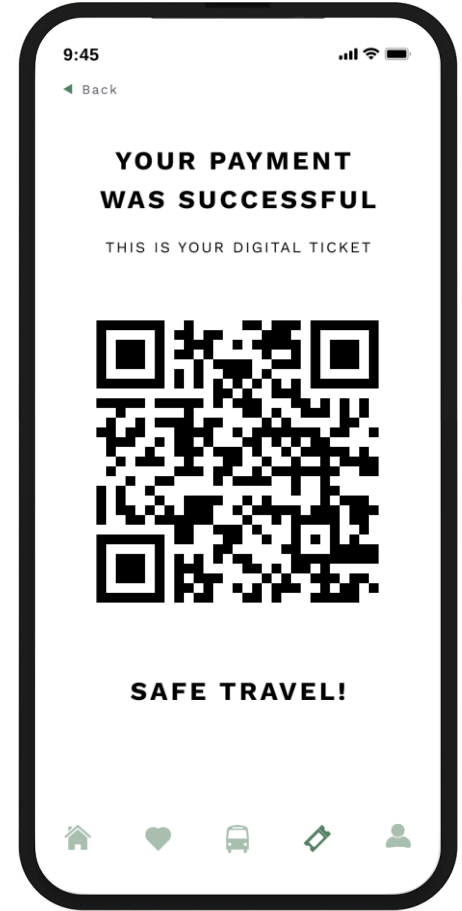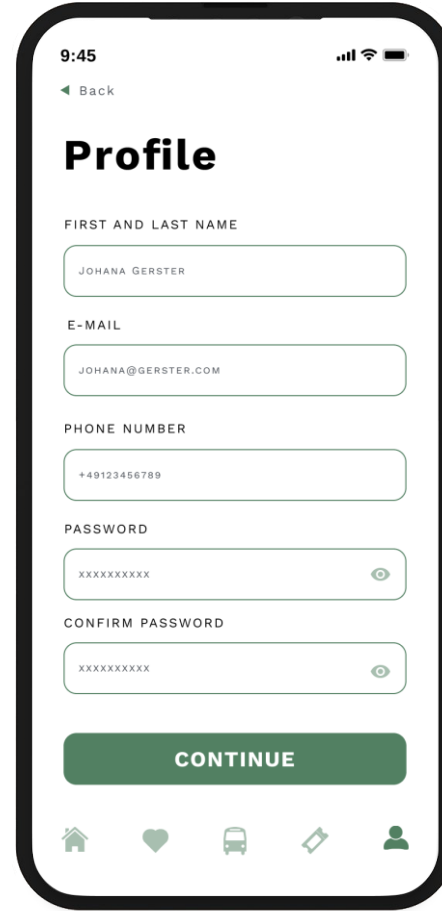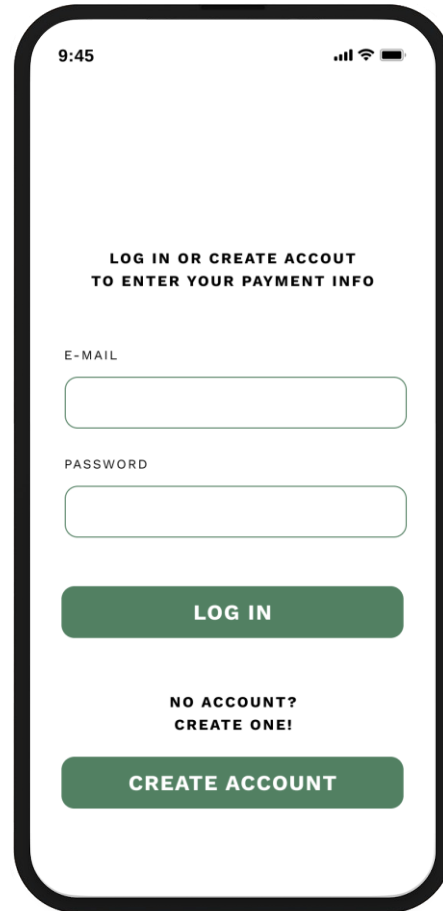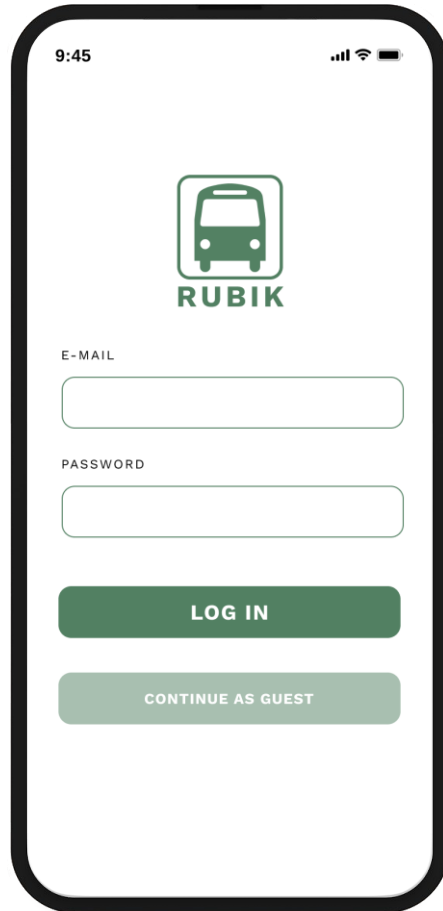- Language

USER FLOW
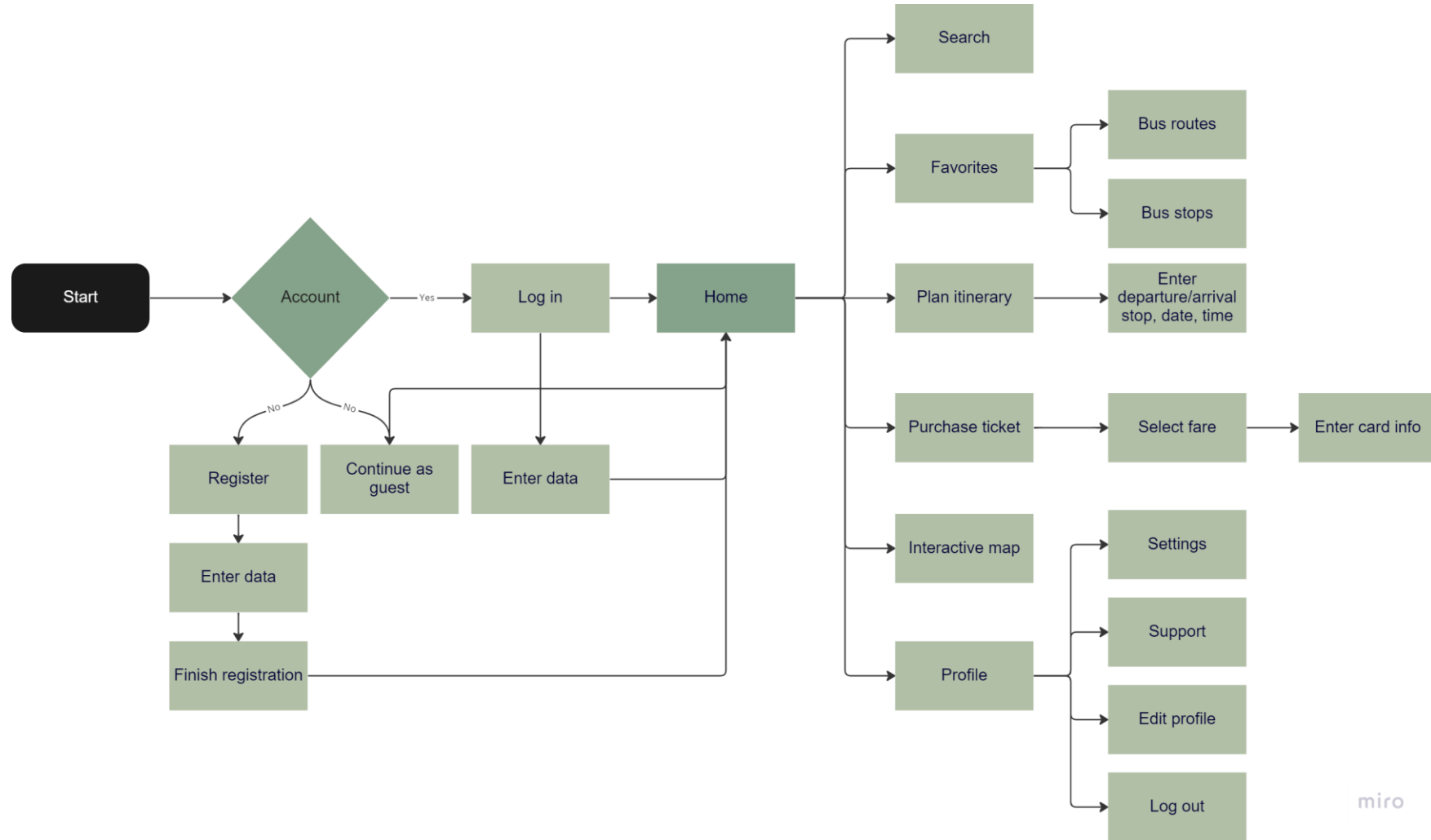
IDEATION
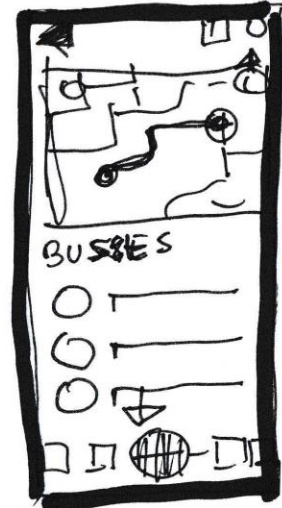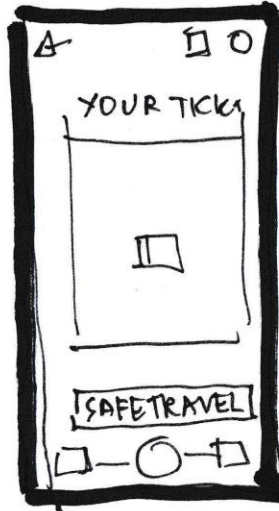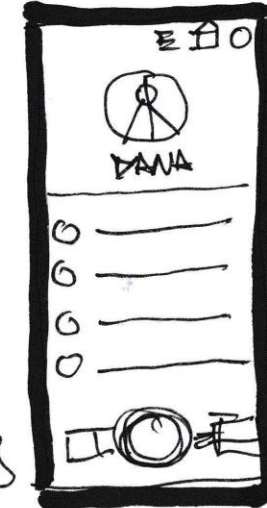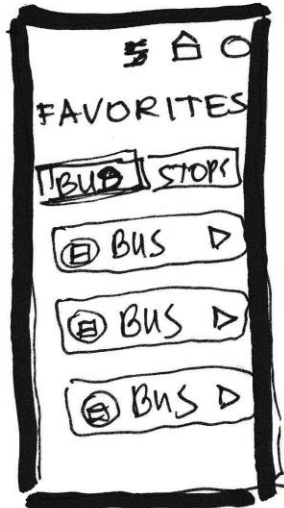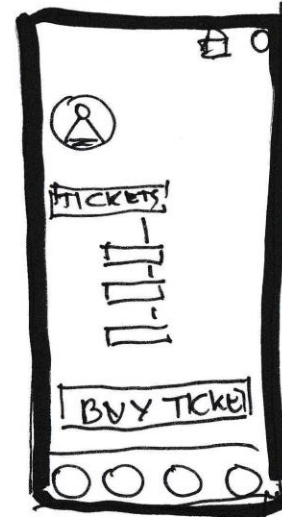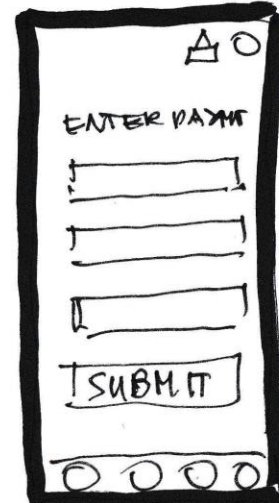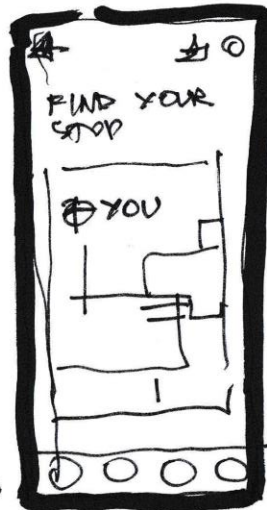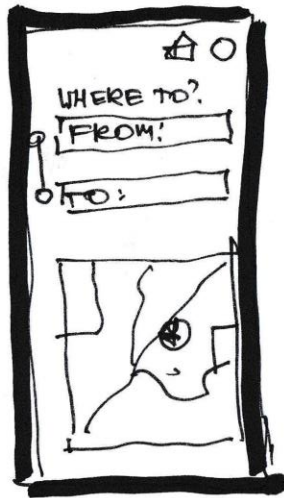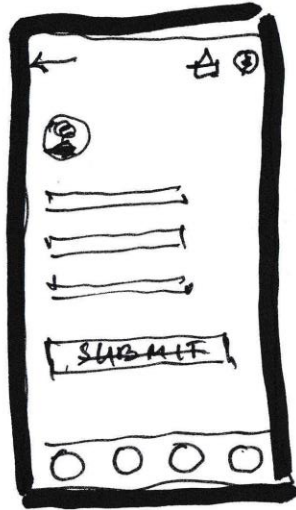
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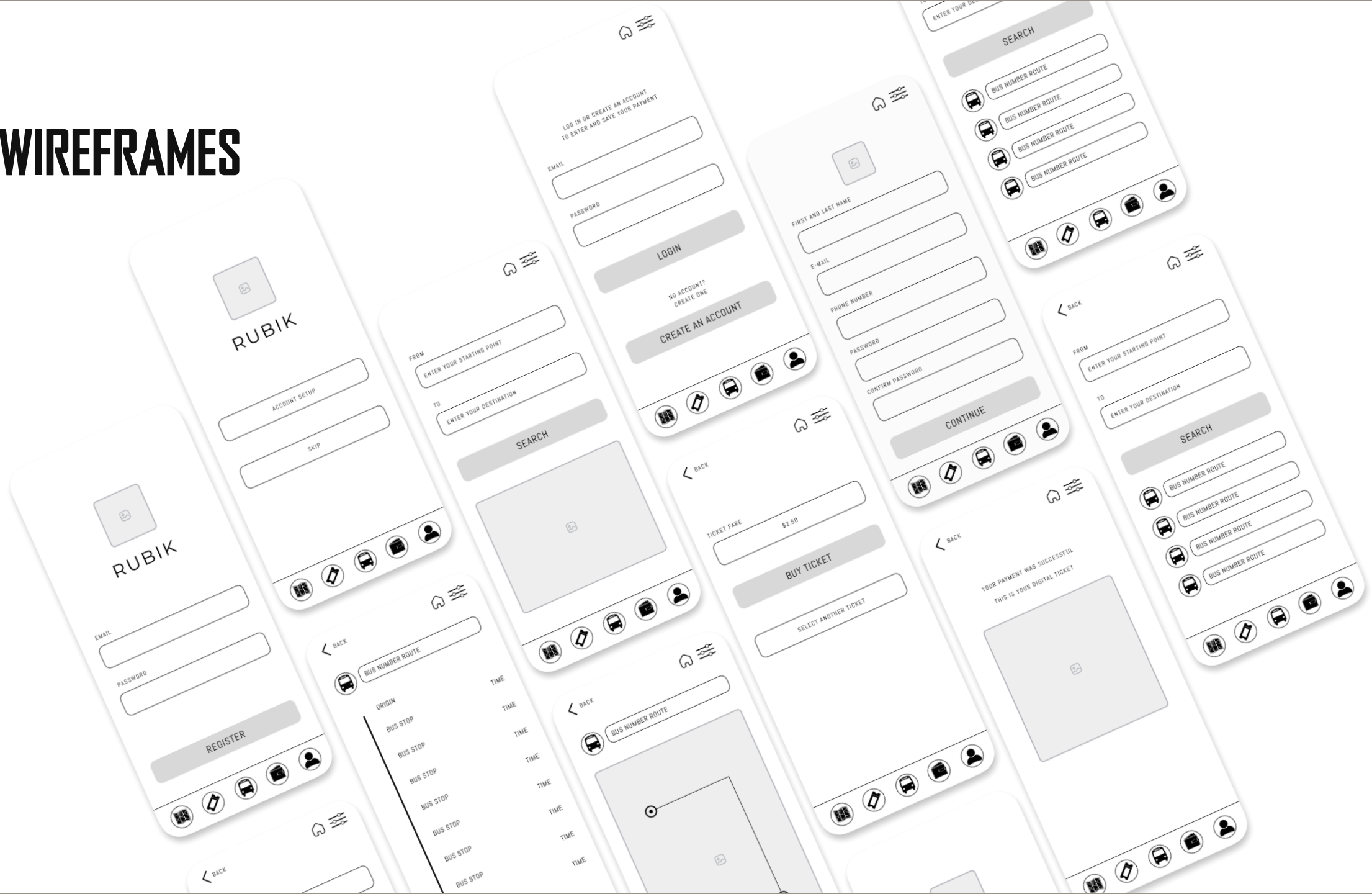
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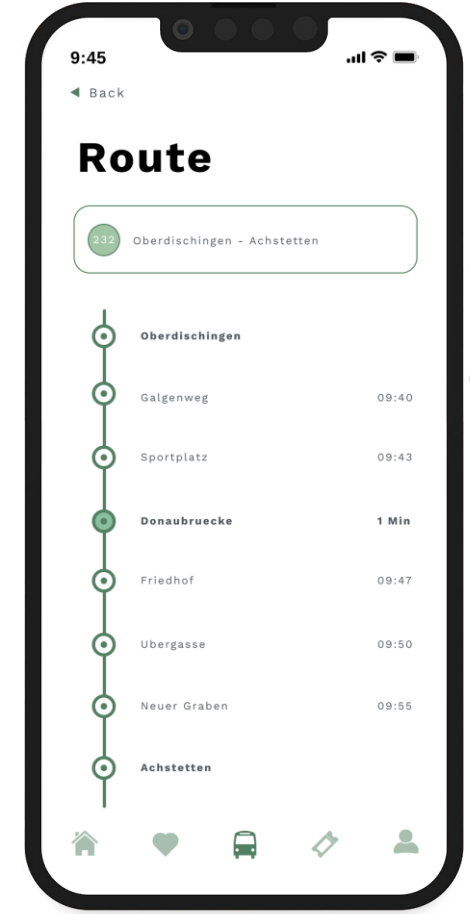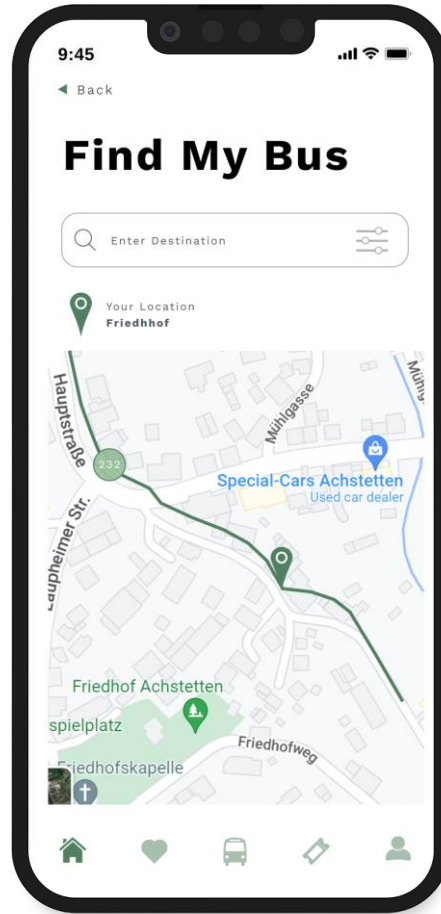
FINAL DESIGNS

FINAL DESIGNS

THANK YOU