

TALLINN UNIVERSITY OF TECHNOLOGY
School of Information Technologies

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Lend A Hand

Project in "Web Applications with C#"

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Author's declaration of originality

I hereby certify that I am the sole author of this thesis. All the used materials, references to the literature and the work of others have been referred to. This thesis has not been presented for examination anywhere else.

Author: Alo Ansberg

19.02.2024

Abstract

This thesis is written in English and is [number of pages in main document] pages long, including [number] chapters, [number] figures and [number] tables.

List of abbreviations and terms

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1 Overview

1.1 Introduction

The main purpose of this project is to connect the people who need help and those who can provide help. It is not meant to use in case of traffic accidents or if anyone needs an urgent medical help.

Whether you find yourself stranded in the snow or mud, facing a car breakdown, or simply in need of a helping hand for some other purpose, this application serves as a digital lifeline connecting users with nearby helpers eager to lend their expertise and support. There are many people in the world who are willing to help without asking any charge for it and have desire to foster a sense of community, but often the person in need of help cannot reach the person giving the help.

For example, every year in winter when a lot of snow falls at once, there is sudden need of assistance needed by people who get stuck in the snow in a place where they didn't expect. Some might also have frozen car lock, left without fuel on the side of road or having a flat tire. The help of individuals can be very beneficial in these situations, especially when there aren't enough snow pushers and towing services available at that time.

Currently there are different Facebook groups for that purpose where people can write on the timeline and post photos about the situation but having dedicated platform for it would make the whole process much easier and comfortable. This application allows users to build a community of trusted helpers and seekers through a rating system. Facebook groups lack a built-in mechanism for evaluating and building a reliable community, making it challenging to establish trust and accountability. Also, users can post structured service requests in this application, including details such as the type of assistance needed, location, photos and additional information. This structured format provides clear communication and efficient matching, providing a more organized approach compared

to the unstructured nature of Facebook group posts. The more people join this application, the more likely someone gets help.

To motivate the helpers to use the application is to keep the scoreboard of all the helpers. Helper who has the highest score is the leader. It will provide a gamified aspect to encourage continued participation.

1.2 Initial stage

Since the application can have many great features then it is planned to be created in different stages. Since I don't have any experience in integrating google maps so that user can see other active users on the map, then currently I'm not adding it to initial stage.

- User (Help seeker) can select type of assistance needed, add description of the situation and then request help.
- If user (Helper) has accepted the request, the help seeker can send a message with photos to helper and vice versa.
- User (Help seeker) can select a rating (1-5 stars) and add feedback to the helper when finishing the request.
- User (Help seeker) can cancel and finish request.
- User (Helper) can see request made by other user (Help seeker) and is able to to accept or decline it.
- User (Helper) can set Active status on/off.
- User (Helper) can see other user's (Help seeker) problem description and type of assistance needed when request is active.
- If user (Helper) accepts other user's (Help seeker) request, then the helper can write to other user (Help seeker), add estimated arrival time and then sending this info to the other user by clicking "Confirm".
- User can see his/her location on the map and address.

- When request has been made, user (Helper, Help seeker) can see other user's location on the map, coordinates and his/her address.
- Scoreboard of all the helpers with scores, rankings, completed requests and status. Score will be calculated by summing up all the completed requests and adding rank percentage to it (rank 4 is 40%, rank 5 is 50% etc.). For example, 4 (4 completed requests) + 40% (rank 4) = score

1.3 Further development

Following features can/should be added if the initial stage is completed.

- User can set distance radius circle in kilometers where user can see other active users on the map.
- Developing mobile app for it.
- Helpers and help seekers can be seen on the map real-time.
- Helpers can have badges and there can be users with different levels.

Some ideas to make this application more profitable:

- Offer roadside assistance services, auto repair shops, or other relevant businesses this platform to connect with users who need professional service and charge a fee for it.
- Integrate non-intrusive advertisements within the app.

2 Summary

References

There are no sources in the current document.

Appendix 1 – Entity Relationship Diagram

https://lucid.app/lucidchart/e41af420-75bc-474f-9631-4b946b931e02/edit?viewport_loc=-2010%2C-1013%2C4490%2C2086%2C0_0&invitationId=inv_7d88331a-5ff1-4ccb-a634-f446dba55adf

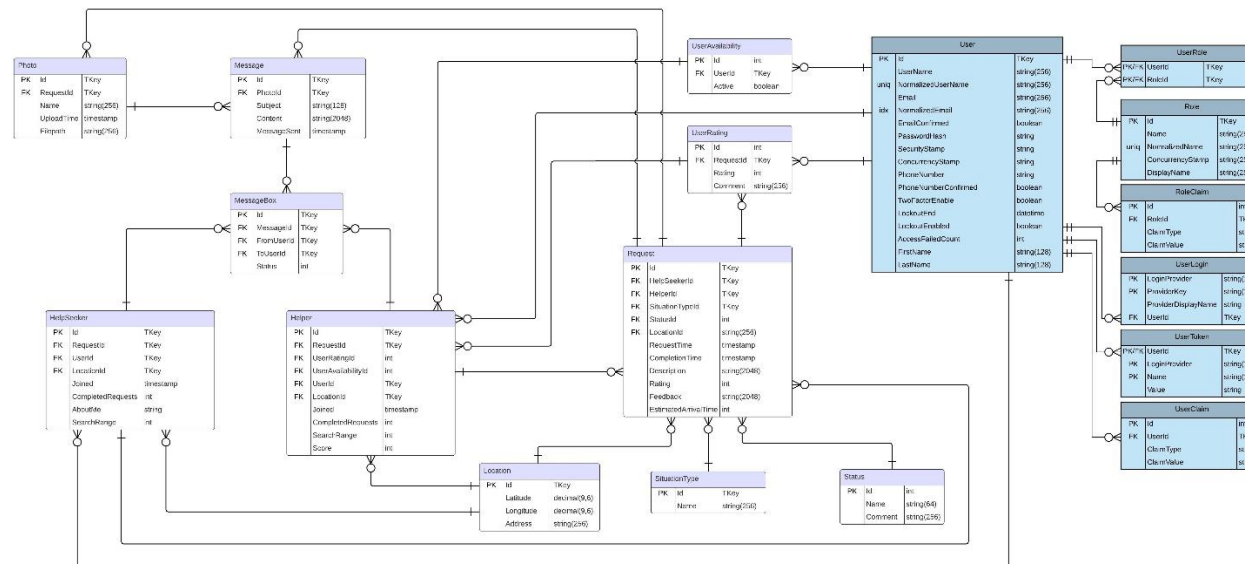


Figure 1. Entity Relationship Diagram

Appendix 2 - Positive flow screens sketches

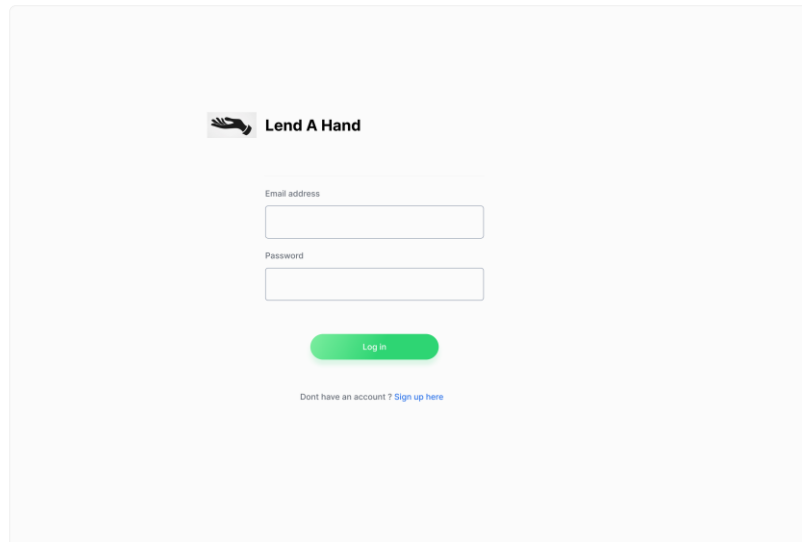


Figure 2. Landing page. Users are required to log in/sign up

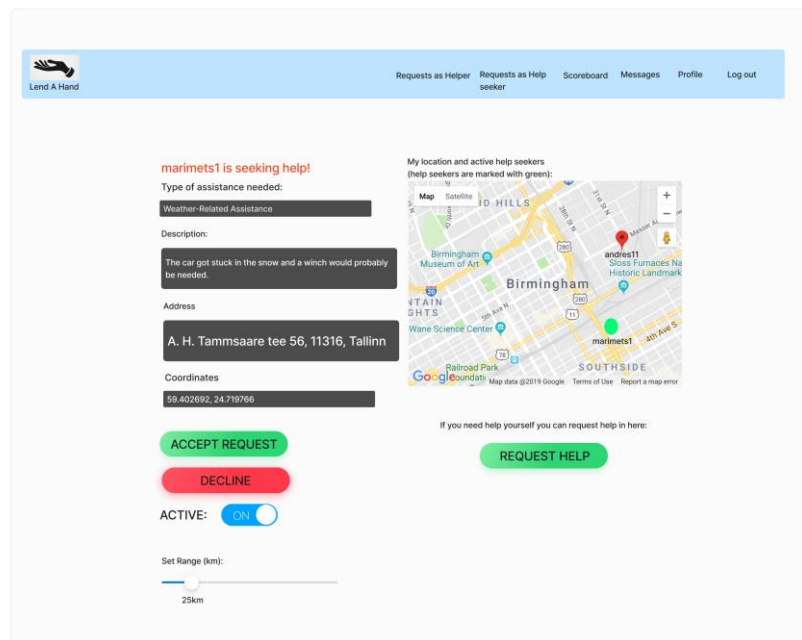



Figure 3. Helpers main page when logged in and if someone is requesting help

Lend A Hand

Requests as HelperRequests as Help seekerScoreboardMessagesProfileLog out

You have accepted marimets1 request!

Type of assistance needed:

Weather-Related Assistance

Description:

The car got stuck in the snow and a winch would probably be needed.

Address:

A. H. Tammsaare tee 56, 11316, Tallinn

Coordinates:

59.402692, 24.719766

Write to help seeker:

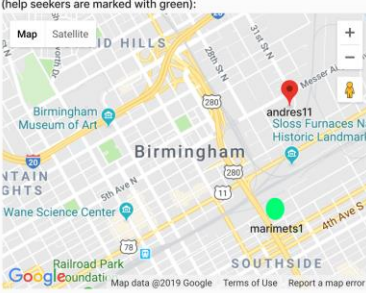
Estimated arrival time (minutes):

CONFIRM

ACTIVE: ☒

Set Range (km):25km

My location and active help seekers (help seekers are marked with green):




If you need help yourself you can request help in here:

REQUEST HELP

Figure 4. Helpers main page when accepting the request

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[Requests](#)
[Register as Helper](#)
[Scoreboard](#)
[Messages](#)
[Profile](#)
[Log out](#)

marimets1

Select type of assistance needed:

Select type

Add description:

The car got stuck in the snow and a winch would probably be needed.

REQUEST HELP

Set Range (km):

25km

Important notice: If there has been an accident or medical help is needed then always call to emergency number 112

My location and active helpers (helpers are marked with green):





Figure 5. Help seeker's main page when logged in



[Requests](#)
[Register as Helper](#)
[Scoreboard](#)
[Messages](#)
[Profile](#)
[Log out](#)


andres11 has accepted your request!

Write to helper:

ADD PHOTOS

SEND MESSAGE

My location and active helpers (helpers are marked with green):



If the problem is solved please provide feedback for the helper and end the request:

★ ★ ★ ★ ★

Feedback:

Set Range (km):

25km

CANCEL

FINISH REQUEST

Important notice: If there has been an accident or medical help is needed then always call to emergency number 112

Figure 6. Help seeker's main page when helper accepted request


<div>  <div> Requests as Helper Requests as Help seeker Scoreboard Messages Profile Log out </div> </div>					
Request reference	Help seeker	Time	Location	Coordinates	Status
2	marimets1	12:05:32 15.04.2023	A. H. Tammsaare tee 56, 11316, Tallinn	59.402692, 24.719766	accepted
1	jaan22	22:10:12 10.02.2023	Tondi, 11316 Tallinn	59.403806, 24.717856	completed

Figure 7. Helpers “Requests as Helper” view


<div>  <div> Requests Scoreboard Messages Profile Log out </div> </div>					
Request reference	Helper	Time	Location	Coordinates	Status
2	andres11	12:05:32 15.04.2023	A. H. Tammsaare tee 56, 11316, Tallinn	59.402692, 24.719766	accepted
1	martmets	22:10:12 10.02.2023	Tondi, 11316 Tallinn	59.403806, 24.717856	completed

Figure 8. Help seekers Requests view


 Scoreboard Messages Profile Log out			
			Write new
From	Time	Subject	
andres11	12:05:32 15.04.2023	Help Request 2 - extra tools needed?	Reply
martmets	22:10:12 10.02.2023	Help Request 1 - can you send some photos?	Reply

Figure 9. Messages view




 Requests Register as Helper Scoreboard Messages Profile Log out						
Place	Name	Score	Rank	Requests completed	Active	
1	andres11	5.2	★ ★ ★ ★ ★	4	yes	
2	martmets	3.3	★ ★ ★ ★ ★	1	no	

Figure 10. Scoreboard view



Lend A Hand

HelpersMessagesProfileLog out



martmets

★★★★☆

Tel : 369 258 147

Email: martmets@gmail.com

SAVE

FIRST NAME

Mart

LAST NAME

Mets

ADDRESS

Estonia pst 9, 11314 Tallinn

EMAIL

martmets@gmail.com

PHONE

369 258 147

SKILLS

Have long time experience in car repair

ABOUT ME

Friendly, helpful, eager to learn new things

FEEDBACK

Figure 11. Profile view