The University of Texas at Dallas

Final Project Plan

Theia - Indoor Navigation App for the Blind

Team Visionaries - <https://theiavisionaries.weebly.com/>

SE 4351.001

Professor Lawrence Chung

Student Name	Student ID	Student Email	Contribution %	Signature
Bakr Alkayal	BXA220023	bxa220023@utdallas.edu	25%	*Bakr Alkayal*
Ann Rogers	AER190007	aer190007@utdallas.edu	25%	*Ann Rogers*
Sebastian Deleon	SXD190101	sxd190101@utdallas.edu	25%	*Sebastian Deleon*
Kaiden Gallardo	KKG200001	kkg200001@utdallas.edu	25%	*Kaiden Gallardo*

Current (rotated) Team Leader: <mark>Ann Rogers</mark>

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Meetings

Meetings will occur on an as-needed basis and will be organized over Discord. Meeting records will be kept in the table below and updated as needed.

Date	Location	Agenda	Participants	Summary	Signatures
Date	Location	Agenda	Participants	Summary	Signatures
2/12/2024	Virtual (Discord)	PPP	Bakr Alkayal, Ann Rogers, Sebastian Deleon, Kaiden Gallardo	Discussed how the team should approach setting up the PPP.	*Bakr Alkayal* *Ann Rogers* *Sebastian Deleon* *Kaiden Gallardo*
2/13/2024	Virtual (Discord)	PPP	Bakr Alkayal, Ann Rogers, Sebastian Deleon, Kaiden Gallardo	Determine who will write the project description, who will write the schedule, who will write additional content (such as tools and team organization), and who will set up and format the PPP document.	*Bakr Alkayal* *Ann Rogers* *Sebastian Deleon* *Kaiden Gallardo*
3/21/2024	Virtual (Discord)	Project Phase 1	Bakr Alkayal, Ann Rogers, Sebastian	Divided the responsibilities necessary for Project	*Bakr Alkayal* *Ann Rogers*

			Deleon, Kaiden Gallardo	Phase 1.	*Sebastian Deleon* **Kaiden Gallardo**
3/24/2024	Virtual (Discord)	Project Phase 1	Bakr Alkayal, Ann Rogers, Sebastian Deleon, Kaiden Gallardo	Update on Project Phase 1's documentation progress. Divided responsibilities for remaining Project Phase 1 activities.	*Bakr Alkayal* *Ann Rogers* *Sebastian Deleon* **Kaiden Gallardo**
4/14/2024	Virtual (Discord)	Project Phase 2	Bakr Alkayal, Ann Rogers, Sebastian Deleon, Kaiden Gallardo	Divided the responsibilities necessary for Project Phase 2.	*Bakr Alkayal* *Ann Rogers* *Sebastian Deleon* **Kaiden Gallardo**
4/28/2024	Virtual (Discord)	Project Phase 2	Bakr Alkayal, Ann Rogers, Sebastian Deleon, Kaiden Gallardo	Update on Project Phase 2's documentation progress. Divided responsibilities for remaining Project Phase 2 activities.	*Bakr Alkayal* *Ann Rogers* *Sebastian Deleon* **Kaiden Gallardo**

Important: Anything highlighted was the updated changes made to the original PPP

1. Objective

To enhance indoor mobility for blind individuals through a user-friendly smartphone application, making use of existing technology to create a safer, more accessible indoor environment.

2. Brief Project Plan

The Theia app is designed to empower blind and visually impaired individuals with greater independence and confidence in navigating indoor environments, such as schools, offices, and public buildings. Utilizing advanced smartphone sensors, Theia provides real-time audio guidance, obstacle detection, and route optimization to assist users in reaching their destinations safely and efficiently.

3. Key Features

Destination Input and Confirmation: Users can input or select their desired destination through voice commands. The app suggests possible destinations based on the user's location and habits.

Dynamic Route Guidance: Theia offers step-by-step navigation instructions, adapting routes based on real-time obstacle detection and user preferences.

Obstacle Alert System: Leveraging the smartphone's camera and sensors, the app identifies obstacles in the user's path, providing warnings and alternative directions to avoid them.

Emergency Assistance: In case of emergency or disorientation, the app can automatically send alerts to designated contacts or emergency services, including the user's current location.
Route Learning and Customization: For frequently visited locations, users or their caretakers can pre-load routes, enabling easier and faster navigation over time.

4. Target Users

Primary users include blind and visually impaired individuals requiring assistance with indoor navigation. Secondary users involve caretakers, family members, and accessibility services who support the primary users.

5. Schedule

SE 4351 Project: Theia	
Deliverable	**Date**
Preliminary Project Plan (PPP)	**2/15/2024**
Project Q&A	**3/19/2024**
WRS Document	~~3/26/2024 - 3/28/2024~~ 3/21/2024 - 3/25/2024
Questionnaire	~~3/26/2024 - 3/28/2024~~ 3/21/2024 - 3/25/2024
PPT	~~3/26/2024 - 3/28/2024~~ 3/21/2024 - 3/25/2024
Evolving Project Plan	~~3/26/2024 - 3/28/2024~~ 3/21/2024 - 3/25/2024
Final Project Plan	~~4/30/2024 - 05/02/2024~~ 4/14/2024 - 05/02/2024

Process Specs	~~4/30/2024 - 05/02/2024~~ ==4/14/2024 - 05/02/2024==
Vision Document	~~4/30/2024 - 05/02/2024~~ ==4/14/2024 - 05/02/2024==
Final WRS Document	~~4/30/2024 - 05/02/2024~~ ==4/14/2024 - 05/02/2024==
Final Questionnaire	~~4/30/2024 - 05/02/2024~~ ==4/14/2024 - 05/02/2024==
Demo (Final PPT)	~~4/30/2024 - 05/02/2024~~ ==4/14/2024 - 05/02/2024==

6. Team Organization

Current Project Manager/Team Leader: ==Ann Rogers==
(Responsible for delegating work, overseeing progress
toward goals, keeping the team on track, and
maintaining team integrity)

Researcher/Quality Assurance: ==Bakr Alkayali==
(Responsible for collecting requirements, discovering
information about the project, and ensuring the
documentation is legible, original, and accurate)

Researcher/Quality Assurance: Sebastian Deleon
(Responsible for collecting requirements, discovering
information about the project, and ensuring the
documentation is legible, original, and accurate)

Documentation Writer: Kaiden Gallardo
(Responsible for constructing clear and accurate
documentation based on data collected from the
Researchers.

7. Tools

Discord - For communication

Weebly.com - To create and host the team website

Github - Used to store, manage, and provide access control over the project

Google Docs - Used to collaborate on documentation creation

Google Slides - Used to collaborate on PowerPoint creation

Moqups - Used to create the mockup app

==*RE-Tools* - Used to create our models in our Process Specification==