# BlindVision

## Preliminary Project Plan

## Phase 1

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## Revision History

| Date | Version | Changes | Editor |
|---|---|---|---|
| February 13th, 2024 | 1.0 | Starting of the Preliminary Project | Tommy |
| February 13th, 2024 | 1.0 | Introduction | Tommy |
| February 13th, 2024 | 1.0 | Technical Process | Tommy |
| February 13th, 2024 | 1.0 | Work Elements, Schedule, Budget | Tommy |
| February 13th, 2024 | 1.0 | Project Organization | Joshua |
| February 13th, 2024 | 1.0 | Managerial Process | Joshua |
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| March 25th, 2024 | 1.1 | Process Model | Tommy |
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| April 30th, 2024 | 1.3 | Definitions, acronyms, and abbreviations | Tommy |
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# Table of Contents

# 1. Introduction

## 1.1 Project overview

The goal of this project is to develop an app that allows blind students or a blind visitor to go from one location to another location either in the same building or a different building. The app will mainly focus on the safety of the user as it is important to be able to detect obstacles and avoid any collision. It will also need to be able to cover a wide range of different places, for example, cafeteria, lounges room, offices, labs, etc. Lastly the app must be able to approximate the time to reach the destination using the Dijkstra algorithm.

Phase one is the preliminary project plan (which is what we are currently working on as of speaking). Our focal point for Phase two would be focusing on the WRS-document, creating Questionnaire and a PPT for the presentation, and how we can take the Project Plan to the next step.

## 1.2 Project Deliverables

The following are the deliverables for this project:

- Preliminary Project Plan ---------- Deliverable 1
- Final Project 1 ---------- Deliverable 2
- Final Project 2 ---------- Deliverable 3

Deliverable descriptions:

- Preliminary Project Plan – Preliminary Project Plan (Brief Project Description with your own team's smartphone app name, Team Name,

Team organization, Schedule, Team web site URL, Team leaders/deliverable, Tools, etc.

- Final Project 1 – Project I presentation & submission - WRS-document, Questionnaire, PPT, evolving Project Plan
- Final Project 2 – Final Project II submission, presentation and demo - Project I (if any change has been made), Project II (Product: Vision document + WRS document; Process Spec --- use notations for both the product and process specs; Final Questionnaire), Any dependency/traceability between Project I and Project II

## 1.3 Evolution of this Document

This is a preliminary document with the scope of the project. This is a living document that will see considerable changes made to it as the project progresses. Current aspects of this document are likely to change due to this.

## 1.4 References (Referenced documents, documentation, etc.)

Prof. Chung Website:

- https://personal.utdallas.edu/~chung/SE4351/syllabus.htm
- https://personal.utdallas.edu/~chung/SE4351/Project1.pdf
- https://personal.utdallas.edu/~chung/SE4351/Project2.pdf
- https://personal.utdallas.edu/~chung/SP/SoftwareProjectManagementPlanTemplate.htm
- https://personal.utdallas.edu/~chung/SE4351/WRS-template.pdf

## 1.5 Definitions, acronyms, and abbreviations

Theia - AS-IS (Current Problem) and TO-BE(Solution or Least Problem)

HOPE - Helping Our People Easily

REtools - Requirement Engineering Tools

PIG (Problem interdependency graph) - visually maps the relationships and interactions between different problems in a project or system.

SIG (softgoal interdependency graph) - visually maps the relationships and impacts between non-functional requirements in software projects.

IDEF0 (Integration Definition for Function Modeling) - a method used to model the functions of a system and their relationships to each other.

# 2. Project organization

## 2.1 Process Model

We have decided to use the spiral process as our primary model. In the initial phase of the project, each team member will plan and work on each different requirement.

During the development phase, the team members will have different tasks to work on. This would include requirement elicitation, validation, documentation, analysis and negotiation. Some members will work together in groups of two to make the task easier.

## 2.2 Organizational Structure

The members involved in developing this project are:

- Aditya Sajeev
- Celio F. Kelly
- Ismael Retana
- Joshua Brown
- Rishi Meka
- Tommy Wright

Project Leader (Currently): Tommy Wright

## 2.3 Organizational boundaries and interfaces

Deliverable 1 is a project plan which outlines important parts of the project, the deliverables, the due dates, etc. For further deliverables the expectation is to have an updated project plan, a project powerpoint, a project questionnaire, as well as a WRS for

deliverable 2. For deliverable 3  all design and system documentation will be finalized as well as have the system completed to the point where it is able to function fully.

## 2.4 Project responsibilities

All team members are responsible for participation in all phases of the project's life cycle. i.e., planning, program development, etc. to ensure that all members are on the same page. Level of participation varies depending on their roles in the system's development.

# 3. Managerial process

## 3.1 Management Objectives and Priorities

The primary task for the managerial position is to schedule meeting timing, lead said meetings, and keep meetings on track. As well as staying on top of project due dates.

## 3.2 Assumptions, Dependencies, and Constraints

This relates primarily to time constraints for deliverables related to the project. Section 5 lists the due dates for each deliverable.

## 3.3 Risk management

Risk management is handled by the team lead for each expected deliverable. The team will communicate with one another some time before the expected due to ensure that all requirements are completed on time and correctly.

## 3.4 Monitoring and Controlling Mechanisms

The team's monitoring and control mechanisms are primarily achieved through communication through discord, both through voice chat and text chat. Also, the version control provided by the team's GitHub repository further facilitates this as it shows what team members have added or made changes to documents, what time they did so, and so on.

# 4. Technical process

## 4.1 Methods, tools, and techniques:

Primarily because that is the language that all members of the team are familiar with and would be able to complete the project using most effectively. All team communications will be done through Discord in a server created by one of the team members. All project deliverables will be posted on our team's website GitHub.

## 4.2 Software Documentation

Additional documentation is created as needed and can be found on the team website/GitHub repository. Current documentation includes:

Documentation includes:

- BlindVision Preliminary Project Plan – This document.

## 4.3 Project support functions

All documentation, design diagrams, and other related documents can be found at our team's website: https://github.com/ishre27/Blind-Vision-.git

## 5. Work Elements, Schedule, and Budget

This project is scheduled to be completed by May 2nd, 2024, for the final demo. Below is the outline of the timeline of the deliverables:

- Deliverable 1 due by 02/15/2024
- Deliverable 2 due by 03/28/2024
- Deliverable 3 due by 05/02/2024