GPS Based Campus Room Finder

Sprint 1
2025-09-02

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CS 360
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Project Technical Documentation

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1 Introduction

1.1 Project Overview

The GPS Based Campus Room Finder is a mobile application designed to simplify navigation for WKU students and faculty. The primary purpose of this project is to create a consistent and easy-to-use tool that addresses the common problem of navigating a large and unfamiliar campus environment. Using GPS technology, the application will help users quickly determine their current location and find the most efficient route to any building and room number on campus. This tool will eliminate the need for paper maps and provide an important resource for new and current members of WKU.

The final product will be a user-friendly mobile application that gives real-time guidance and an estimation of travel times. This software will be a valuable tool for the university with potential for expansion to include additional features that continue to enhance the campus experience.

1.2 Project Scope

The project scope defines the boundaries, commitments, and outputs required to deliver the GPS-Based Campus Room Finder. This scope covers all activities necessary to design, implement, test, and document a mobile application that meets the client's expectations while remaining usable and maintainable beyond the project timeline.

Deliverables & Outcomes:

- **Written Reports:** Detailed organizational and technical documents submitted at the conclusion of each of the four sprints.
- **Presentations:** A presentation delivered at the end of each sprint to summarize progress and demonstrate results.
- **Evaluations:** Peer evaluation forms submitted individually by team members after each sprint.
- **Final Product:** A fully tested, documented, and maintainable Android mobile application that provides GPS-based navigation to campus buildings and rooms.

Work Required:

- **Tasks:** All development tasks including source code creation, user interface design, system integration, testing, and documentation. Additional requirements will be integrated as identified throughout the project.
- **Team:**
  - Kaden Hunt — Project Manager, Task Manager
  - Aaron Downing — Documentation Draft
  - Ryerson Brower — Research Coordinator
- **Time Commitment:** Work will be divided across four sprints. Each team member will contribute 8–10 hours per week to development, meetings, and documentation.
- **Resources:** GitHub will serve as the version control system and task management platform. The documentation will be written collaboratively in Texmaker. The development will take place on personal laptops running Windows 10 or later which will meet the requirements of Android Studio. of Android Studio.
- **Schedule:** Deliverables align with the four milestone deadlines outlined on Blackboard. Weekly client meetings occur on Tuesdays at 12:35 p.m. in Snell Hall B104. Internal team meetings will take place on Thursdays at 2:00 p.m.

Altogether, this scope establishes what will be delivered, the benefits it provides, and the foundation for successful implementation

1.3 Technical Requirements

1.3.1 Functional Requirements

Mandatory Functional Requirements
Req 1
Req 2
Req 3
Extended Functional Requirements
Ext. Req 1
Ext. Req 2
Ext. Req 3

Text goes here.

1.3.2 Non-Functional Requirements

Mandatory Non-Functional Requirements
Req 1
Req 2
Req 3
Extended Non-Functional Requirements
Ext. Req 1
Ext. Req 2
Ext. Req 3

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4.1 Software Testing Plan Template

Test Plan Identifier:
Introduction:
Test item:
Features to test/not to test:
Approach:
Test deliverables:
Item pass/fail criteria:
Environmental needs:
Responsibilities:
Staffing and training needs:
Schedule:
Risks and Mitigation:
Approvals:

4.2 Unit Testing

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4.2.1 Source Code Coverage Tests

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4.3.1 Integration Tests and Results

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4.4.1 System Tests and Results

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4.5.1 Acceptance Tests and Results

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5 Conclusion

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6.2 Software Product User Guide

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