Release # 1 Documentation

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SOEN390

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1. Introduction

Overview of the Project

Repository: https://github.com/vibqetowi/Minicap/tree/main

The Concordia Campus Guide is a mobile application designed to provide seamless indoor and outdoor navigation across Concordia University campuses. Leveraging React Native and modern development tools, this app aims to enhance the campus experience with features like real-time directions and intuitive navigation for students, faculty, and visitors.

Purpose and Motivation

This project addresses the challenge of navigating large university campuses, where current solutions often lack real-time updates and user-friendly interfaces. By incorporating robust technologies and responsive design, the Concordia Campus Guide ensures accessibility and convenience for its users.

Targeted Users

The application is tailored for:

- **Students and Faculty:** Seeking quick and accurate navigation to classes, offices, and amenities.
- **Visitors:** Requiring easy-to-follow directions for events, tours, and appointments.

The Concordia Campus Guide aspires to be a reliable, efficient, and indispensable tool for all Concordia community members.

2. Requirements

Sprint 1 Backlog

All IDs will have a link to the corresponding user story in ZehHub/GitHub or JIRA. You can also group user stories into EPICs in the table below. This table should be consistent with your Backlog in ZenHub or JIRA at any time during the project. To indicate that a user story has been deleted you can use strikethrough. To indicate a change in the user story points strikethrough the old value and add the new value next to it. Newly added user stories will be highlighted in green color font. **Please link the ID with the corresponding JIRA or ZenHub issue.**

ID	Name	USP	Priority
20	US 1.1 - Support both SGW and Loyola Campus Maps	4	1
22	US 1.2 - Distinguish Campus Buildings from City Buildings	5	1

ID	Name	USP	Priority
23	US 1.3 - Toggle Between SGW and Loyola Maps	3	1
25	US 1.4 - Show Current Location Building	5	2
24	US 1.5 - Show Additional Building Information	3	2
Total		20	

Sprint 2 Backlog

All IDs will have a link to the corresponding user story in ZehHub/GitHub or JIRA. You can also group user stories into EPICs in the table below. This table should be consistent with your Backlog in ZenHub or JIRA at any time during the project. To indicate that a user story has been deleted you can use strikethrough. To indicate a change in the user story points strikethrough the old value and add the new value next to it. Newly added user stories will be highlighted in green color font. **Please link the ID with the corresponding JIRA or ZenHub issue.**

ID	Name	USP	Priority
45*	US 2.1 - Select Start and Destination Building for Outdoor Directions	3	1
46*	US 2.2 - Use Current Location as Start for Outdoor Directions	2	1
47*	US 2.3 - Show Outdoor Directions on Map	3	1
48*	US 2.4 - Directions from SGW to Loyola and Vice Versa	5	2
49*	US 2.5 - Support Multiple Transportation Modes	3	2
50*	US 2.6 - Support for the Concordia Shuttle Service	3	3
Total		19	

3. Release Planning

This will be repeated 3 times for the 3 Sprints of each Release. So, after each release there should be 3 Sprint summaries in the document.

Sprint 1 Summary

Sprint 1 primarily focused on setting up the basic app structure and defining team workflows. However, the team faced challenges with the late addition of new members and establishing intial processes, which delayed the actual development work. As a result, the first sprint was not representative of the project's expected progress. While the MVP 0: Basic App Setup and Structure was initiated, most planned user stories, including campus mapping features, were pushed to Sprint 2.

Story ID		Planned USP	Status
13	MVP 0: Basic App Setup and Structure	3	STARTED IN SPRINT 1 WILL CONTINUE IN SPRINT 2
20*	US 1.1 - Support both SGW and Loyola Campus Maps	4	PLANNED FOR SPRINT 2
22*	US 1.2 - Distinguish Campus Buildings from City Buildings	5	PLANNED FOR SPRINT 2
23*	US 1.3 - Toggle Between SGW and Loyola Maps	3	PLANNED FOR SPRINT 2
25*	US 1.4 - Show Current Location Building	5	PLANNED FOR SPRINT 2
24*	US 1.5 - Show Additional Building Information	3	PLANNED FOR SPRINT 2
45*	US 2.1 - Select Start and Destination Building for Outdoor Directions		

Story ID		Planned USP	Status
46*	US 2.2 - Use Current Location as Start for Outdoor Directions		
47*	US 2.3 - Show Outdoor Directions on Map		
48*	US 2.4 - Directions from SGW to Loyola and Vice Versa		
49*	US 2.5 - Support Multiple Transportation Modes		
50*	US 2.6 - Support for the Concordia Shuttle Service		
51*	US 3.1 - View Class Schedule and Classroom Locations		
52*	US 3.2 - Generate Directions to Next Class		
53*	US 4.1 - Locate Rooms on a Specific Floor		
54*	US 4.2 - Show Shortest Indoor Path Directions		
55*	US 4.3 - Show Indoor Directions for Users with Disabilities		

Story ID		Planned USP	Status
56*	US 4.4 - Highlight Indoor Points of Interest		
57*	US 4.5 - Show Directions Between Rooms on Different Floors		
58*	US 4.6 - Indoor Directions from SGW to Loyola and Vice Versa		
59*	US 5.1 - Show Nearest Outdoor Points of Interest		
60*	US 5.2 - Show Directions to a Selected Outdoor Point of Interest		
61*	US 6.1 - Create an Optimized Task Plan		
62*	US 6.2 - Directions for Optimized Plan		
Total		**23**	**X**

An * would be a good way to show stories added during the sprint. And a strikethrough would be good to denote a deleted story. Use anything you want, just make sure this information is clear.

Project velocity after 1 sprint: X

Sprint 2 Summary

Sprint 2 marked significant progress, with the team successfully implementing key mapping functionalities. The app now supports navigation for both SGW and Loyola campuses (**US 1.1**), differentiates campus buildings from city structures (**US 1.2**), and allows users to toggle between maps (**US 1.3**). Additionally, work began on showing the user's current location (**US 1.4**) and providing additional building information (**US 1.5**), though both features require further refinement in Sprint 3. With the campus mapping foundation in place, the team is now preparing to implement outdoor navigation and routing features in the next sprint.

Story ID		Planned USP	Status
13	MVP 0: Basic App Setup and Structure	3	**STARTED IN SPRINT 1** **WILL CONTINUE IN SPRINT 3**
20*	US 1.1 - Support both SGW and Loyola Campus Maps	4	**FINISHED IN SPRINT 2**
22*	US 1.2 - Distinguish Campus Buildings from City Buildings	5	**FINISHED IN SPRINT 2**
23*	US 1.3 - Toggle Between SGW and Loyola Maps	3	**FINISHED IN SPRINT 2**
25*	US 1.4 - Show Current Location Building	5	**STARTED IN SPRINT 2** **WILL CONTINUE IN SPRINT 3** (2 tasks remaining)
24*	US 1.5 - Show Additional Building Information	3	**STARTED IN SPRINT 2** **WILL CONTINUE IN SPRINT 3** (1 task remaining)

Story ID		Planned USP	Status
45*	US 2.1 - Select Start and Destination Building for Outdoor Directions	3	**PLANNED FOR SPRINT 3**
46*	US 2.2 - Use Current Location as Start for Outdoor Directions	2	**PLANNED FOR SPRINT 3**
47*	US 2.3 - Show Outdoor Directions on Map	3	**PLANNED FOR SPRINT 3**
48*	US 2.4 - Directions from SGW to Loyola and Vice Versa	5	**PLANNED FOR SPRINT 3**
49*	US 2.5 - Support Multiple Transportation Modes	3	**PLANNED FOR SPRINT 3**
50*	US 2.6 - Support for the Concordia Shuttle Service	3	**PLANNED FOR SPRINT 3**
51*	US 3.1 - View Class Schedule and Classroom Locations		
52*	US 3.2 - Generate Directions to Next Class		
53*	US 4.1 - Locate Rooms on a Specific Floor		

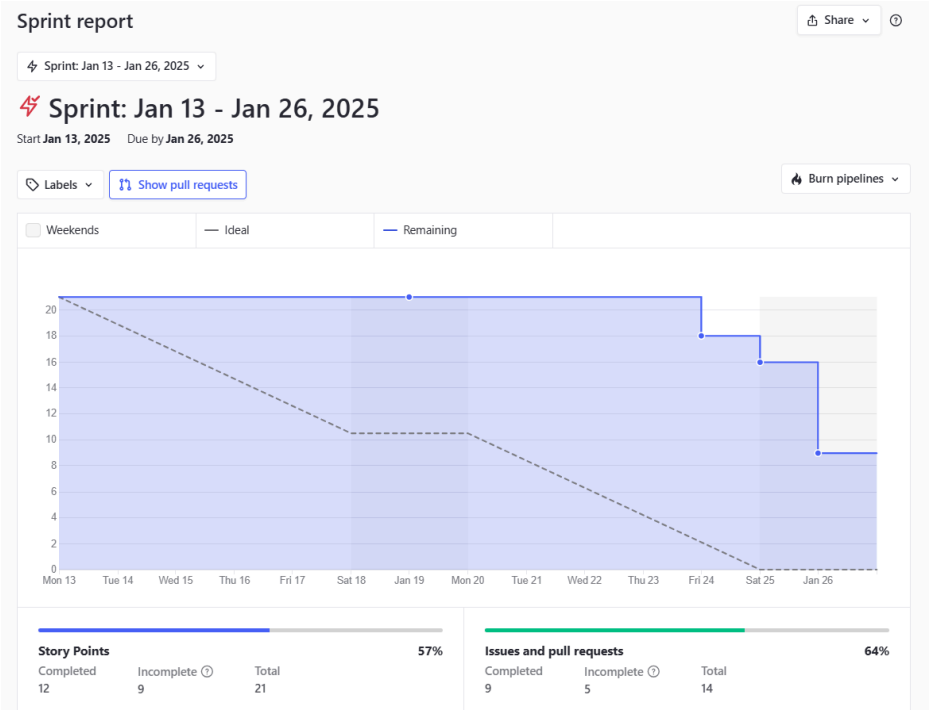
Story ID		Planned USP	Status
54*	US 4.2 - Show Shortest Indoor Path Directions		
55*	US 4.3 - Show Indoor Directions for Users with Disabilities		
56*	US 4.4 - Highlight Indoor Points of Interest		
57*	US 4.5 - Show Directions Between Rooms on Different Floors		
58*	US 4.6 - Indoor Directions from SGW to Loyola and Vice Versa		
59*	US 5.1 - Show Nearest Outdoor Points of Interest		
60*	US 5.2 - Show Directions to a Selected Outdoor Point of Interest		
61*	US 6.1 - Create an Optimized Task Plan		
62*	US 6.2 - Directions for Optimized Plan		
Total		**42**	**X**

An * would be a good way to show stories added during the sprint. And a strikethrough would be good to denote a deleted story. Use anything you want, just make sure this information is clear.
Project velocity after 1 sprint: X

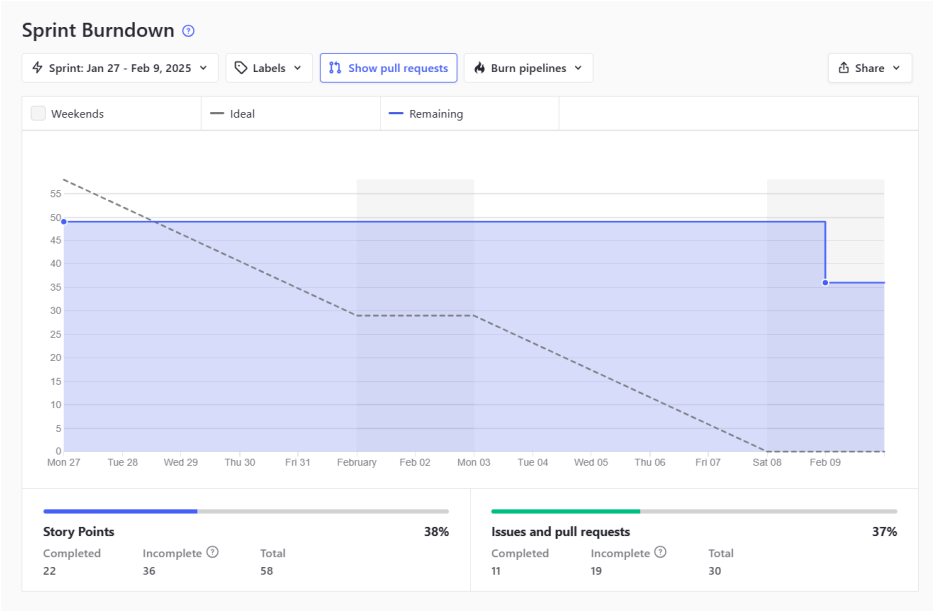
Burndown Chart

Due to problems with Zenhub, burndown charts are not accurate

https://app.zenhub.com/workspaces/soen-390-678d66b2d0a94300315d4867/reports/burndown?milestoneId=Z2lkOi8vcmFwdG9yL1NwcmludC8yOTM3MzM2



https://app.zenhub.com/workspaces/soen-390-678d66b2d0a94300315d4867/reports/burndown?milestoneId=Z2lkOi8vcmFwdG9yL1NwcmludC8yOTM3MzM3



Sprint 1 Retrospective

https://github.com/AsifAliKhan2001/Minicap/blob/main/Meeting-Notes/release-1/2025-01-27%20-%20Biweekly.md

The chaos of setting up and recruiting new members was a significant issue as well as figuring out our processes. Due to course complications work started one week late, the first sprint should not be representative

Sprint 2 Retrospective

https://github.com/vibqetowi/Minicap/blob/main/Meeting-Notes/release-1/2025-02-12%20Sprint%20Retrospective.md

Zenhub being down created issues with task tracking, this has now been fixed, we should be set for sprint 3

4. Architecture

4.1 Overview of the architecture

- For all diagrams please refer to the wiki https://github.com/AsifAliKhan2001/Minicap/wiki/System-Diagrams they change often so no images here
- Conventions for diagrams are to capture cardinalities with relationships, being tech agnostic means we also don't define lists nor FKs directly. Some inheritances are omitted (like to audit) for visual clarity but a note was provided

4.6 Design Patterns

We use MVVM architectural pattern for separation of concerns and maintainability, see our detailed writeup on our wiki https://github.com/AsifAliKhan2001/Minicap/wiki/MVVM-guide

4.7 External libraries

Technology Stack

Please refer to our README https://github.com/vibqetowi/Minicap/blob/dev/README.md

5. User Interface Design

5.1 Personas

https://github.com/AsifAliKhan2001/Minicap/wiki/UI-UX-Documentation#personas

5.3 Mockups

https://github.com/AsifAliKhan2001/Minicap/wiki/UI-UX-Documentation#wireframes-

6. Testing Plan and Report

6.1 Unit Testing

https://github.com/vibqetowi/Minicap/wiki/QA-Test-Results#61-unit-testing

6.2 Test code coverage

https://github.com/vibqetowi/Minicap/wiki/QA-Test-Results#62-test-code-coverage

6.3 Acceptance Testing

https://github.com/vibqetowi/Minicap/wiki/QA-Test-Results#63-acceptance-testing

Link to Acceptance Testing with TA approval.

https://docs.google.com/spreadsheets/d/18Wtc-ROJasvmf_37tXjRKmPG577I3O61qfTMKf7J0ac/edit?gid=0#gid=0

6.4 System Tests

https://github.com/vibqetowi/Minicap/wiki/QA-Test-Results#64-system-tests

6.5 SonarQube Report

https://github.com/vibqetowi/Minicap/wiki/QA-Test-Results#66-sonarqube-report

7. Defect Tracking Report

For each release you will include 3 links with the bug reports for each Sprint.
In GitHub you can simply add the following suffix to your project url
issues?q=**label**%3Abug+**is**%3Aclosed+**milestone**%3A"Sprint+3"

where **label** indicates the label you use for bug-related issues (typically bug)
is indicates the status of the bug (open or closed)
milestone indicates the Sprint

8. Code review report

1) https://github.com/vibqetowi/Minicap/pull/119

Where refactoring to MVVM was discussed and good feedback was given. We also caught an api key lying around in the code which was promptly refactored to properly used .env (the key was changed of course)

2) https://github.com/vibqetowi/Minicap/pull/64

This PR is our CI/CD integration, an important step

3) https://github.com/vibqetowi/Minicap/pull/112

This PR was a major overhaul of the initial system design, it addresses reservations we had from the previous diagrams

4) https://github.com/vibqetowi/Minicap/pull/113

This PR set up location services, it wasn't working properly on emulator though so fixes were made

5) https://github.com/vibqetowi/Minicap/pull/78

This PR is our first example of breaking down an issue we realized was too complex for a single developer. Originally it demanded frontend and backend but we reduced the scope to frontend and created other tasks for backend

9. Refactoring report

https://github.com/vibqetowi/Minicap/wiki/Refactoring-Tracker

10. Quality Measurements

At the end of each Sprint record the value for each of the following metrics:
size, duplication, documentation, complexity, coupling, cohesion, technical debt, security vulnerabilities, and code convention violations.

You should take actions in each Sprint to improve these metrics. List the commits and pull requests in which technical debt, security vulnerabilities, and code convention violations have been addressed. Link to your Refactoring report actions taken to improve complexity, duplication, coupling, cohesion, readability and other design/code quality metrics.

Finally, create a chart showing the evolution of each metric over the Sprints.

11. Professional ethics and accountability

There may be accessibility concerns which we address in our persona section of our wiki, linked above

Appendix

So far, ai is not being used