



GoWhere

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PROJECT REQUIREMENT

Sprint 1: Product Backlog, Test Plan

Presented to

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Project Summary

GoWhere



GoWhere is a mobile application designed to help students navigate their university campus. Users are able to select rooms on campus that they need to get to, searching by room number or course code. Through a combination of typing, voice input, camera integration, and GPS information.

GoWhere should be able to discern the student’s current location and provide a visual guide along with a list of instructions to reach their destination using the simplest route.

GoWhere should have various student security features, allowing students to report incidents to university security. University administrators should be able to send notifications to the app to let students know about any incident that may affect their travel, and address any reports that students submit.

Organization and Management



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User Stories

Here we outline the user stories breaking down the requirements for this project with initial priorities, tasks, and deadlines.

Requirement	Story	Initial Priority (Essential /Desirable /Optional)	Task	Estimate (days)
Multi-Input Functionality (Student/General User)	Need to allow location input through text, voice, photo and GPS.	Essential	Create a user interface that includes text input, voice input, image upload, and GPS tracking.	4~5
Classroom Selection (Student/General User)	Needs to be able to easily select classrooms by building, floor, and room number.	Essential	Create a database of classrooms in each building with floor, location and details.	3
		Essential	Update classroom database with current class schedules for selection by course code.	4
		Essential	Create options to select the classroom based on building, floor number, and classroom number for easier navigation and filtering.	3
Directions and Accessibility (Student/General User)	Needs to provide optimal directions with accessibility options (text, voice, visual).	Essential	Create step-by-step navigation instructions via text, visuals and voice transcription.	5
		Essential	Create options to input movement disability restrictions, displaying and calculating routing options.	2
Real-Time Re-Routing (Student/General User)	Needs to reroute users if they deviate from the suggested path.	Essential	Implement a real-time rerouting algorithm to calculate the best route to destination and update the current displaying route.	5

Interactive Campus Map (Student/General User)	Needs to display a live-updating map of the user’s location and the campus.	Essential	Create a map interface with live GPS updates and highlighted routes.	4
		Desirable	Provide estimated time of arrival based on distance, traffic lights, and floor level.	3
Classroom Information (Student/General User)	Needs to list the features of each classroom.	Desirable	Create a description area listing seats, tech features (projector, outlets, desks).	3
Photo Upload and Sharing (Student/General User)	Needs to allow users to upload and share images of the classrooms.	Optional	Create an upload feature which stores images under their respective classrooms in the database.	3
			Create an interface to display the images under a selected classroom.	
Error Reporting (Student/General User)	Needs to allow users to report incorrect locations or information.	Desirable	Create a report function for submitting corrections or suggestions.	2
Class Saving and History (Student/General User)	Needs to allow users to save classes for future reference and view previous searches.	Desirable	Create a login system and database to manage user data.	5
			Create an interface for users to add, save, and manage classes.	
Campus Security Contact (Student/General User)	Needs to provide users a way to quickly contact campus security.	Desirable	Create a button which will automatically begin to call security via phone.	1
		Desirable	Create a button which will automatically share your location with security.	3
		Desirable	Create a form which can report an emergency and its urgency.	3

News and Alerts (Student/General User)	Needs to provide users with notifications on weather and other factors that could affect travel.	Optional	Create a headlines/news section and send app notifications.	3
Location Management (Admin)	Needs to allow admin users to update classroom details (building, floor, room changes).	Essential	Create an admin panel for adding, editing, or removing classroom locations.	4
		Desirable	Allow bulk uploads or imports of class locations.	3
Navigation and Path Updates (Admin)	Needs to allow admin users to update navigation routes due to campus changes.	Essential	Provide an interface for admins to update paths, re-route directions, and adjust navigation restrictions.	4
Security Alerts Management (Admin)	Needs to allow admin to create and send emergency alerts for lock downs, evacuations, or other crises.	Essential	Implement an admin feature for sending emergency push notifications.	4
Reporting Management (Admin)	Needs to allow admins to review and act on user reports (error and incident reports).	Desirable	Create an admin dashboard for reviewing and responding to reports.	3
Notification Creation (Admin)	Needs to allow admins to create and push news and alerts campus-wide to the users.	Desirable	Implement a form for admins to create and send announcements.	3
User Access and Permissions	Allows for admin to be able to control	Optional	Create an admin dashboard.	3

Management (Admin)	user roles, such as allowing certain staff to edit locations.			
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Test Plan for GoWhere

This document provides a detailed outline on the various test cases that will be used to test the GoWhere app. App functions are divided into three categories, based on which type of account can access them.

Shared Functionality Functions common to both Student and Admin Accounts

Student Functionality Functions that Student Accounts have access to

Administrator Functionality Functions that Admin Accounts have access to

Shared Functionality

Test Case ID	Purpose	Steps	Expected Result
1.1	Create new account	<div>1. From app homepage, click on “New User”</div> <div>2. Select ‘Student’ or ‘Administrator’ account</div> <div>3. Input a username, password, phone number, and email address</div> <div>4. Click ‘Create Account’</div>	The user will be prompted to check their email to verify their email address, then to login with their account details.
1.2	Valid login	<div>1. From app homepage, click on “Existing User”</div> <div>2. Input Username or Email</div> <div>3. Input matching password</div> <div>4. Click ‘Login”</div>	If the username/email and password combination exists in the database, the system will show a confirmation message to the user then show their account homepage.
1.3	Invalid login	<div>1. From app homepage, click on “Existing User”</div> <div>2. Input invalid Username or Email</div> <div>3. Input invalid password</div> <div>4. Click ‘Login”</div>	<div>If the username/email and password combination does not exist in the database, the system will show an error message indicating that login details are incorrect and prompt the user to login again.</div> <div>Multiple failed attempts should block successive login attempts via IP address.</div>

			After the same login attempt for a unique username has been tried 10 times, the account should be locked to prevent unauthorized
1.4	Logout	1. Click “Logout” from account down menu	The system should show a confirmation message and return to the login page.
1.5	Updating user information.	1. Click “Account Settings” from account drop-down menu 2. Click “Change Account Information” tab 3. Input password 4. Input “Confirm” 5. Input updated email address, phone number, or password 6. Press “Apply Changes”	If the password matches the currently logged in account, the system will update the database with the new information. As a security measure, an email will be sent to the current and old (if the email associated with the account was changed) email address notifying the owners of the respective emails of the change.
1.6	Report an Incident	1. From account homepage, click on “Report an Incident” 2. Select Incident type <ul style="list-style-type: none">○ Security○ Structural 3. Input incident details	The system should save incident to a separate database and notify all administrator accounts that an incident was reported.
1.7	Contact Campus Security	1. From the account homepage click on “Contact Campus Security” 2. Click on “Call Security” button	<p>The user should be informed that if the situation is not urgent, they should use the incident report system instead.</p> <p>Upon clicking the “Call Security” button, it should put the user on a call with campus security</p>
1.8	Share Location With Campus Security	1. From the account homepage click on “Contact Campus Security” 2. Click on the “Share Location” button. 3. Alternatively provide location through text, audio or photo.	The system should automatically alert campus security and provide the user’s location.

			Should the user’s GPS not be enabled, they should be prompted to enable it or provide their location through other options.
1.9	Suggest a Feature or Report a Bug	<ol style="list-style-type: none"> From account homepage, click on “Feedback” Select type of feedback <ul style="list-style-type: none"> Suggesting a feature Reporting a Bug Input feedback details 	The system should save feedback to a separate database, and silently notify administrator accounts that new feedback was received. Account details should be saved along with the feedback.

Student Functionality

Test Case ID	Purpose	Steps	Expected Result
2.1	Selecting a destination classroom	<ol style="list-style-type: none"> From account homepage, click on “Search for Rooms” Enter Room Number or Course Code in Search Select desired destination 	Once the user has selected a room, the system should determine the simplest route to the destination, if it has a “fine” enough location for the student.
2.2	View map	<ol style="list-style-type: none"> From account homepage, click on “View Map” 	If location data is turned on, centre the map on the user’s current location. Otherwise, the map will be centred on a default location on campus.
2.3	Save a classroom location	<ol style="list-style-type: none"> Enter Room Number or Course Code in Search Click the (star or pin icon) 	The system will display an in-app notification that confirms the addition of the classroom location to the “favourites” list.
2.4	View saved classroom locations	<ol style="list-style-type: none"> From account homepage, click on “View Saved Locations” 	The system should access database to bring up a list of the user’s saved classroom locations.

2.5	View classroom search history	1. From the account homepage, click on “View Classroom History”	The system should provide a list of the classrooms the user previously searched for.
2.6	View active notifications	1. From account homepage, click on notification banner 2. Alternatively, from account homepage, click on “Notifications”	The system should display a page with a list of all current active notifications, both sticky and non-sticky.
2.7	Provide User’s Location	1. Following instructions for 2.1, if a student determines their location isn't accurate enough they can click “find me”. 2. Click the “GPS” button for the system to automatically update your current location 3. Alternatively, provide the location in the textbox. 4. Alternatively, click the “Microphone Icon” to provide a location through audio 5. Alternatively, click the “Camera Icon” to provide a location using camera	<p>If the user allows the app to update their location through GPS, pressing the button should update their location.</p> <p>For all the other alternative ways, the system should ensure the address and zip code provided are valid.</p> <p>Additionally, for the voice and photo options: the user should explicitly give permission for the system to access their microphone or camera.</p>
2.8	Rerouting feature	1. Follow the same instructions in 2.1. 2. Once the desired location is selected, go to the homepage and click on “View Map”. 3. Lastly follow the route that is shown and try to deviate from it. 4. If an alternative route is given, try to deviate from that one as well.	<p>The system should provide the user with an alternative route in real time.</p> <p>Should the user constantly deviate from the routes provided, the system should keep recalculating the next best route and displaying it to the user.</p>

Administrator Functionality			
Test Case ID	Purpose	Steps	Expected Result
3.1	Edit room information	<ol style="list-style-type: none">From account homepage, click on “Edit Rooms”Input desired room number in the search barSelect the desired roomClick the wrench iconSelect which details to change<ul style="list-style-type: none">Class ScheduleRoom RestrictionsRoom CommentsClick “Review”Click “Confirm”	The system should provide a preview of new details when “Review” is clicked, then update room details with the newly provided information when “Confirm” is clicked.
3.2	Create a notification about weather or security events	<ol style="list-style-type: none">From account homepage, click on “Create Notification”Select “Event Notification”Input notification titleInput notification detailsClick “Review”Click “Confirm”	The system should provide a preview of notification details when “Review” is clicked, then send a push notification, and/or text message to all subscribed accounts, and an email to all accounts registered.
3.3	Create a sticky notification about long-term hallway or room closures	<ol style="list-style-type: none">From account or homepage, click on “Create Notification”Select “Sticky Notification (theres prolly a better name for this)”Input notification titleInput notification detailsClick “Review”Click “Confirm”	The system should provide a preview of notification details when “Review” is clicked, then apply a notification banner to the top of the homepage of all accounts with the Title visible in addition to sending push notifications, text messages, or registered emails.
3.4	Clear a Notification	<ol style="list-style-type: none">From account homepage, click on “Edit Notifications”Select the notification that should be clearedClick on “Remove”Click on “Confirm”	The system should provide a “Confirm” prompt when “Remove” is clicked, to reduce notification deletions made in error.
3.5	Accessing User Database	<ol style="list-style-type: none">Log in to the system using an admin accountFrom the homepage, click on the “Admin Dashboard”Click on “Manage Users”Use the search bar to search for a user	<p>The system should try to match the name provided with a user on the database</p> <p>Upon clicking on a</p>

		5. Click on a user from the drop-down menu	user, it should provide a page with information provided by the user when they made the account
3.6	Adding User Role	<ol style="list-style-type: none">1. Follow the instructions from 3.5.2. Press on the “Add Role” button3. Select the applicable role4. Press the “Add” button	<p>The system should show a list of all the possible roles that can be given when a user is selected.</p> <p>The admin can then select from available roles and assign it to the user.</p>
3.7	Removing User Role	<ol style="list-style-type: none">1. Follow the instructions from 3.5.2. Press on the “Remove Role” button3. Select the applicable role4. Press the “Remove” button	<p>The system should show a list of all the roles that the user was given when a user is selected.</p> <p>The admin can select from the roles that the user has and remove them.</p>
3.8	Access User Reports Database	<ol style="list-style-type: none">1. Log in to the system using an admin account.2. From the homepage, click on the “Admin Dashboard”.3. Click on the “Access User Reports” button4. Click on the type of report you want to access<ul style="list-style-type: none">○ “Bug Reports” button○ “Incident Reports” button	The system should provide a list of matching reports in the database.
3.9	Resolve User Report	<ol style="list-style-type: none">1. Follow the instructions from 3.82. From the applicable list, select a report from the list that has been resolved3. Press the “Resolve Button”4. Provide a description for how the report has been resolved in the text box	<p>Upon pressing the resolve button and providing a description, the report should be archived and marked as “Resolved”</p> <p>Resolved reports should not appear in the user reports database.</p>
3.10	Dismiss User Report	<ol style="list-style-type: none">1. Follow the instructions from 3.82. From the applicable list, select a report from the list that you	Upon pressing the dismissed button and providing a

		want dismissed 3. Press the “Dismiss” button 4. Provide a reason for dismissal in the text box	reason for dismissal, the report should be archived and marked as “Dismissed” Dismissed reports should not appear in the user reports database.
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Future Sprints

- Sprint 2:** Development, Unit Tests
- Sprint 3:** Development, System and Integration Tests



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