

Requirements Traceability Matrix													
ID	Assoc ID	Technical Assumption(s) and/or Customer Need(s)	Functional Requirement	Status	Architectural/Design Document	Technical Specification	System Component(s)	Software Module(s)	Test Case Number	Tested In	Implemented In	Verification	Additional Comments
001	4.1.1	Customer does not want random users to be able to access the app or register an account using their Wentworth ID.	The system shall allow users to register an account using their Wentworth ID.	Completed	SDUI 4.3.1	Firebase Authentication	React/SwiftUI/Firebase Authentication	Authentication Module	1, 2	iOS & Web	iOS & Web	Passed during testing and final demo	
002	4.1.2	All university students and staff should be able to access the app.	The system shall allow all registered users access to the app's services.	Completed	SDUI 4.3.1	Firebase Authentication & Firestore validation	iOS App, Web App, Firebase, Firestore	Authentication Module & User Validation Module	N/A	iOS & Web	iOS & Web	Verified by attempting to access app	
003	4.1.3	App users need to submit reports for lost/found items.	The system shall ask if the user wants to report a found or lost item.	Completed	SDUI 4.1.2	Lost/Found selector	React/Swift UI	Lost/Found Selection Screen	N/A	iOS & Web	iOS & Web	User can choose lost or found before filling a report	
004	4.1.4	App users need to submit reports for lost/found items.	The system shall allow the user to report a lost item. The user must report the item category, description, location, and their contact information.	Completed	SDUI 4.1.2.3	Report Form	React/Swift UI/Firebase	Lost item form & Firebase	3, 4	iOS & Web	iOS & Web	Complete form submits and appears for admin	
005	4.1.4.1	Item reports should contain enough details to uniquely identify an item.	The system shall require the user to input the item's category (e.g., backpack, coat, laptop).	Completed	SDUI 4.1.2.3	Category Field	React/Swift UI/Firebase	Category specifications	N/A	iOS & Web	iOS & Web	Form cannot be submitted without a category	
006	4.1.4.2	Item reports should contain enough details to uniquely identify an item.	The system shall require the user to report a description of the item.	Completed	SDUI 4.1.2.3	Description Field	React/Swift UI/Firebase	Description text area	N/A	iOS & Web	iOS & Web	User can specify a description for the item	
007	4.1.4.2.1	Item reports should contain enough details to uniquely identify an item.	The system shall require the user to write a basic text description of the item.	Completed	SDUI 4.1.2.3	Text Field	React/Swift UI/Firebase	Description text area	N/A	iOS & Web	iOS & Web	User can specify a description for the item	
008	4.1.4.2.2	Item reports should contain enough details to uniquely identify an item.	The system shall allow users to optionally upload an image of their lost item.	Completed	SDUI 4.1.2.3	Image Upload	React/Swift UI/Firebase	Image Upload	6	iOS & Web	iOS & Web	Image is successfully uploaded and shows in the report	
009	4.1.4.3	Item reports should contain enough details to uniquely identify an item.	The system shall require the user to report the last known location of their item.	Completed	SDUI 4.1.2.3	Location Input	React/Swift UI	Location input	N/A	iOS & Web	iOS & Web	Location successfully added and shows in the report	
010	4.1.4.3.1	Reports should indicate the location where the item was lost or found.	The system shall allow users to mark the last known location of their item with a pin using their device's GPS.	Completed	SDUI 4.1.2.3	GPS Pin	SwiftUI/MapKit	GPS Pin	8	iOS & Web	iOS & Web	Pin correctly reflects location in iOS app	
011	4.1.4.3.2	Reports should indicate the location where the item was lost or found.	The system shall allow users to optionally select the building in which their lost item was last seen.	Completed	SDUI 4.1.2.3	GPS Pin/Description	React/SwiftUI	Location Specification	N/A	iOS & Web	iOS & Web	Users can correctly specify the building	
012	4.1.4.4	Reports should provide a method for the rightful owner to collect their item.	The system shall require the user's contact information.	Completed	SDUI 4.1.2.3	Contact Field	React/SwiftUI	Contact info section	N/A	iOS & Web	iOS & Web	Reports show users contact information	
013	4.1.4.4.1	Reports should provide a method for the rightful owner to collect their item.	The system shall require the user's name.	Completed	SFR 2.1.4.4.1	Contact Field	React/SwiftUI/Firebase Authentication	Name Section	N/A	iOS & Web	iOS & Web	Name is stored with the report	
014	4.1.4.4.2	Reports should provide a method for the rightful owner to collect their item.	The system shall require the user's phone number.	Completed	SFR 2.1.4.4.2	Contact Field	React/SwiftUI	Phone number section	N/A	iOS & Web	iOS & Web	Phone number is stored with the report	
015	4.1.5	App users need to search and filter items to more accurately identify their item.	The system user interface shall include a search bar, for users to search through the list of found items.	Completed	SFR 2.1.5	Search Bar	React/SwiftUI/Firebase	Searchbar	5	iOS & Web	iOS & Web	Functional search bar	
016	4.2.1	Customer does not want random users to be able to access the app that is intended solely for university students and staff.	The system shall restrict access to users with a valid Wentworth account.	Completed	SNFR 2.2.1	Domain Restriction	Firebase Authentication	Authentication Module	1, 2	iOS & Web	iOS & Web	non @wit.edu users cannot log in	
017	4.2.2	App users need to submit reports for lost/found items.	The report item shall include labels for category, description and location.	Completed	SNFR 2.2.2	Labeled Fields	React/SwiftUI	Form Labels	N/A	iOS & Web	iOS & Web	All required and optional fields are displayed	
018	4.2.3	App users should have access to current data in a timely manner.	Lost and found item reports that are approved by an admin shall be visible to users in under 1 minute.	Completed	SNFR 2.2.3	Real-time visibility	React/SwiftUI/Firebase	Admin Dashboard	3	iOS & Web	Database	Approved reports appear instantly	
019	4.2.4	Item reports should be stored securely and accessible by users on any platform.	Previously found items shall be saved into a database.	Completed	SNFR 2.2.4	Firebase Database capabilities	React/SwiftUI/Firebase	Firebase/Firebase	N/A	iOS & Web	iOS & Web	Reports remain available after app restarts	
020	4.2.5	Users want to protect their personal information and make it easy to find them by publishing their name and phone number to the entire university.	User data and contact information shall only be visible to the item reporter and system administrators.	Not Started	SNFR 2.2.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
021	4.2.6	The app should be capable of handling a large amount of item reports because it will have thousands of users.	The database shall have the capacity to store a minimum of 5000 lost and found item reports.	Completed	SNFR 2.2.6	Firebase database	Firestore	Firestore Database	N/A	N/A	Database	Ensured by firestore	
022	4.2.7	Users may want to delete reports with errors or re-report them if their item is found or returned.	The system shall allow users to view and delete their own reports.	Completed	SNFR 2.2.7	App profile	React/SwiftUI/Firebase	User Profile	N/A	iOS & Web	iOS & Web	Users can view their reports in the app profile view.	
023	4.2.8	Users should be contacted in a timely manner if another user finds their item.	The system shall send an email notification to a user when their reported lost item gets reported as found by another user.	Not Started	SNFR 2.2.8	N/A	N/A	Email Notifications	7	N/A	N/A	N/A	
024	4.3.1	Having a native mobile app is beneficial for user experience on mobile devices.	The system shall be built using Swift and Swift UI for the mobile application.	Completed	SOR 2.3.1	Swift/SwiftUI	Swift/SwiftUI	Software Architecture	N/A	N/A	iOS	iOS app successfully runs	
025	4.3.2	Having a web application allows for higher speed and productivity, especially for system moderators.	The system shall be built using Node.js/Express backend with a Firebase database for the web app.	Completed	SOR 2.3.2	Node.js/Firebase/Firebase	React/Tailwind/Node.js/Express	Software Architecture	N/A	N/A	Web	Web app successfully runs	
026	4.3.3	Users may submit inappropriate content, so all reports should be reviewed by a moderator before they are published.	The system shall have a separate system view for admins.	Completed	SOR 2.3.3	Web Integration	React/Firebase/Firebase	Admin Dashboard	N/A	Web	Web	Only admins can see admin dashboard buttons	