



CSC 431

UFit

Software Requirements Specification (SRS)

Team 2

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Version History

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1. System Requirements

1.1 Functional Requirements

1.1.1 Registering an Account

Title	Register an account
Description	User can register an account to store their information
Priority	Mandatory: 0
Precondition(s)	None
Basic Flow	<ul style="list-style-type: none">• User opens application• User clicks create account• User enters personal information• User exits application to verify account
Postconditions(s)	User is sent a verification email
Use Case Diagram	

1.1.2 Logging into an account

Title	Logging into an account
Description	User can log into existing accounts using account registration information
Priority	Mandatory: 0
Precondition(s)	User account exists in the account database
Basic Flow	<ul style="list-style-type: none">• User opens application• User enters email and password associated with account• User presses login button
Postconditions(s)	User is taken to homepage
Use Case Diagram	

1.1.3 Update Personal Information

Title	Update Personal Information
Description	Existing users can manually update their personal information
Priority	Mandatory: 0
Precondition(s)	User is logged into an existing account and has internet access
Basic Flow	<ul style="list-style-type: none">• User presses account button on homepage• User presses account information button• User enters changed account information• Application records updated information• Application presents confirm button• User presses confirm button and is left on account information page
Postconditions(s)	User's personal information is updated
Use Case Diagram	

1.1.4 Input Workout Preferences

Title	Input Workout Preferences
Description	Existing users can input their workout preferences so personalized workouts can be created for the user
Priority	Mandatory: 0
Precondition(s)	User is logged into an existing account and has internet access
Basic Flow	<ul style="list-style-type: none">• User presses workouts tab on homepage• User presses preferences button• User selects 1 of 3 workout intensity preferences• User enters injuries and locations of pain on body if any• User selects one or more muscle groups they wish to target• User selects "Equipment" or "No Equipment"• User selects "Save Changes"
Postconditions(s)	User's workout preferences are updated is taken back to the workouts tab
Use Case Diagram	

1.1.5 View and Select Workout Plans

Title	View and Select Workout Plans
Description	User can view personalized workouts after entering workout preferences
Priority	Mandatory: 0
Precondition(s)	User is logged into an account with internet access and has entered workout preferences
Basic Flow	<ul style="list-style-type: none">• User presses workout tab on homepage• User is presented with short list of different, personalized workouts• User selects one workout

Postconditions(s)	User is taken to specified workout page to view the workout details
Use Case Diagram	

1.1.6 View Fitness Progress

Title	View Fitness Progress
Description	User can view graph of weight change over a time period and daily calories burned
Priority	Mandatory: 0
Precondition(s)	User is logged in with internet access
Basic Flow	<ul style="list-style-type: none"> • User presses progress tab • User presses wight tab or calories burned tab
Postconditions(s)	User remains on progress tab
Use Case Diagram	

1.1.7 Locate Local Gyms

Title	Locate Local Gyms
Description	User can find gyms near them by the maximum radius to search
Priority	2
Precondition(s)	User is logged in with internet access and has allowed location services
Basic Flow	<ul style="list-style-type: none"> • User selects Gyms tab • User enters desired radius • User presses "Locate"
Postconditions(s)	User is presented with list of gyms in the specified radius
Use Case Diagram	

1.1.8 Connect Users

Title	Connect Users
Description	User can find and communicate with other users with similar workout preferences
Priority	Mandatory: 0
Precondition(s)	User is logged in with internet access and has allowed location services
Basic Flow	<ul style="list-style-type: none">• User presses Gym Buddies tab• User selects from a provided list of other users• User is taken to their profile page• User presses "Request Gym Buddy" button• User presses chat button• User can type a message or press exit chat
Postconditions(s)	User is taken back to the Gym Buddies tab
Use Case Diagram	

1.1.9 Logout of an Account

Title	Logout of an Account
Description	Users can log out of their existing account on the application
Priority	Mandatory: 0
Precondition(s)	User is logged into an existing account and has internet access
Basic Flow	<ul style="list-style-type: none">• User presses account tab• User presses logout button• User is prompted with a confirm message• User presses confirm
Postconditions(s)	User is taken to the login page
Use Case Diagram	

1.1.10 Guide User through Workout

Title	Guide User through Workout
Description	Users can log out of their existing account on the application
Priority	Mandatory: 0
Precondition(s)	User is logged in with internet access and is on the workout tab
Basic Flow	<ul style="list-style-type: none">• User selects a workout from a personalized list• User is presented with list of all exercises in the workout• User selects "begin workout" button• Application times each exercise and moves to the next exercise• User presses end workout
Postconditions(s)	User is taken back to workout page and calories burned in fitness progress is updated
Use Case Diagram	

1.2 Non-Functional Requirements

1.2.1 Secure User's Information

Title	Secure User's Information
Description	Personal information of users should be encrypted due to sensitivity of the data
Priority	Mandatory: 0
Applicable FR(s)	<ul style="list-style-type: none">• Registering/Logging in account• Update personal information• Locate local gyms• Connect users

1.2.2 Reminder Notification

Title	Reminder Notification
Description	Reminder on the day of the planned workout, motivational reminder to keep up with user's goals, or connection with other users
Priority	4
Applicable FR(s)	<ul style="list-style-type: none">• Input workout preferences• View and select workout plans• View fitness progress• Connect users

2. System Constraints

2.1 Tool Constraints

2.1.1 Mobile Application Framework Constraint

Title	Mobile Application Framework Constraint
Description	We will be using Node.js as the framework for the application. This tool allows us to build hybrid web applications for mobile devices using HTML/CSS/JavaScript
Priority	Mandatory: 0

2.2 Language Constraints

2.2.1 Backend Framework

Title	Backend Framework
Description	Our backend framework will be written in JavaScript
Priority	Mandatory: 0

2.2.2 Frontend Framework

Title	Frontend Framework
Description	We will be using React Native Js as the frontend framework, which uses JavaScript.
Priority	Mandatory: 0

2.3 Platform Constraints

2.3.1 Mobile Application Platform

Title	Mobile Application Platform
Description	Node.js and React Native combined is an independent platform and allows cross-platform mobile application creation
Priority	5

2.4 Hardware Constraints

2.4.1 Storage Constraints

Title	Storage Constraints
Description	Will be set by Amazon Lightsail, but user information will be saved in the database, so this is of minimal importance.
Priority	5

2.4.2 Hardware Constraints

Title	Hardware Constraints
Description	In order to access UFIT, a mobile device must be used. However, internet connection is needed for locating local gyms and connecting users.
Priority	0

2.5 Network Constraints

2.5.1 Network Connection

Title	Network Connection
Description	Internet connection is needed for locating local gyms and connecting users. However, users can still access workout plans and instructions offline.
Priority	2

2.5.2 Access Database

Title	Access Database
Description	Must have access to and query the MySQL database in order to get user's information and account
Priority	2

2.5.3 Messaging

Title	Messaging
Description	Must be able to transmit and receive messages in order to allow for communication between users looking for workout "buddies".
Priority	2

2.6 Deployment Constraints

2.6.1 Amazon Lightsail Deployment

Title	Amazon Lightsail Deployment
Description	Lightsail will be used to deploy this mobile application, as the free month trial usage offered will be sufficient to achieve the objective of the project
Priority	3

2.7 Transition & Support Constraints

2.7.1 End of Life

Title	End of Life
Description	The project will terminate on May 5th, 2022 at the ending of this course; therefore development will be passed on to another team to continue development
Priority	0

2.8 Budget & Schedule Constraints

2.8.1 Budget

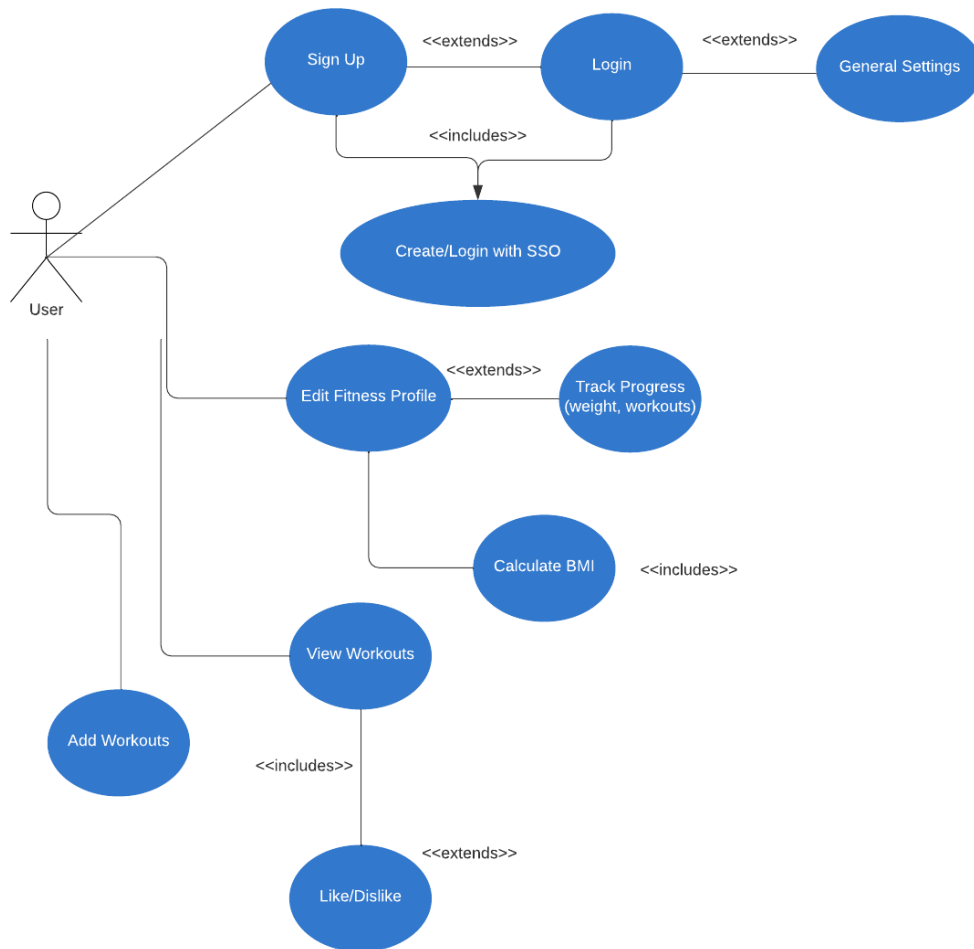
Title	Budget
Description	Due to our position as students, there are no funds available for this project and thus there is no budget.
Priority	5

2.8.2 Due Date

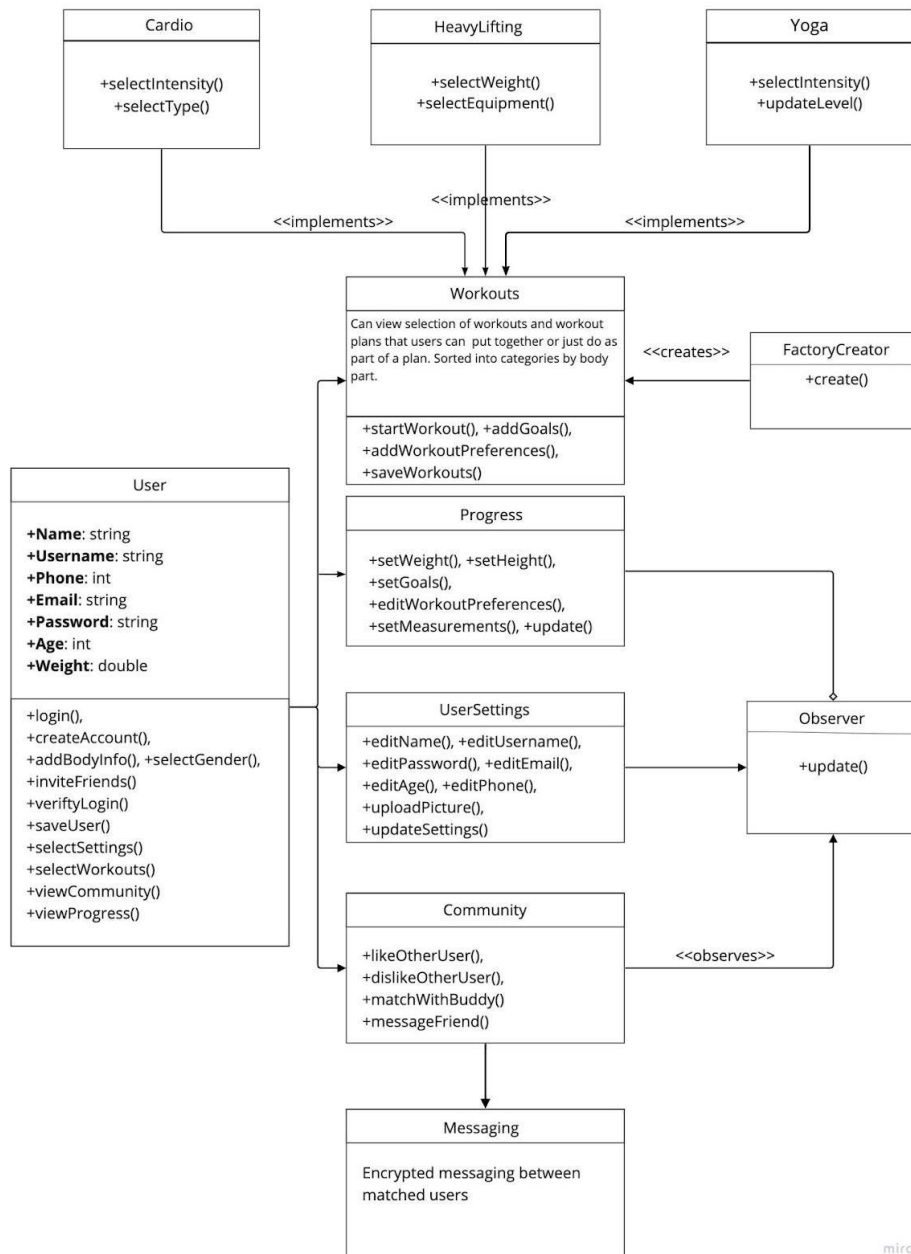
Title	Due Date
Description	Application design must be completed by May 2, 2022 and a final project packet consisting of a Requirements Document and Design Document must be submitted at tat date.
Priority	0

3. Requirements Modeling

3.1.1 Use Case Diagram



3.2.1 Class Diagram



4. Evolutionary Requirements

4.1 Functional Requirements

4.1.1 Suggested Diet Plan

Title	Suggested Diet Plan
Description	Taking into account the user's physical activity for the day, weight/fitness goals and calculated Base Metabolic Rate, the mobile application will create a suggested diet plan for the user to follow.
Priority	5
Precondition(s)	The app must calculate the Base Metabolic Rate, and a database of appropriate foods and their nutrition information must be linked to the application.
Postconditions(s)	A menu will be generated by the app and presented to the user, and they will be able to enter their daily food and beverage intake.

4.2 Non-Functional Requirements

4.2.1 Message Encryption

Title	Message Encryption
Description	Content of user's in-app messaging is encrypted for security purposes
Priority	3
Applicable FR(s)	1.1.8