

CSE3310 Fundamentals of Software Engineering Fall 2024

Test Plan

Personal Health and Fitness Tracker

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1. Introduction and Plan of Approach

Project Overview

The purpose of this document is to provide a record of all test cases used to ensure the quality and functionality of our mobile fitness application. Our personal fitness and health tracker is designed to assist users to record and monitor the user's fitness activities and provide a platform to audit their workouts and goals.

The application will be specific to Android devices and will provide a user-friendly interface. It will also provide fitness activities, workouts, and challenges that the user can participate in, while also tracking the user's progress and providing social sharing features so that the user can showcase their progress.

Components to be Tested

The following components will be tested to ensure the quality and functionality of our application:

- Registration
- Login
- Tracking
- Activity categories
- Goal setting
- Progress monitoring
- Exercise plans
- Review of trainer
- Subscription
- Payment integration
- Social media sharing
- Communication
- Advertisement

Assumptions and Anomalies

The following includes a list of assumptions that are made when performing test cases for each component:

- All users are over the age of 18
- International shipping is ignored
- Cross-platform compatibility issues for wearable devices are ignored
- Legal issues are ignored
- All personal trainers are presumed to have passed their background check
- Debit/credit card validation is assumed

The following includes a list of anomalies in our test plan:

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2. Test Cases: “Login and Registration”

Project Name: Personal Fitness and Health Tracker
Test Case Name: Registration
Test Case ID: CSE 3310/Team3/Registration

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	Enter the login screen and press “Register new user”	The system should display and collect the information below and establish a new user ID and password: <ul style="list-style-type: none">- First and last name- Email address- Phone number- User ID (at least 8 characters, may not include any special characters)- Password (at least 8 characters, must include a number and a special character)- Answer to security question for password reset	pass
TC2	Check for duplicate registration	If a user is already registered, the system should prevent the user from registering and bring them to the login screen.	pass
TC3	Give subscription options	After registering, offer the user to subscribe for more features or to choose no subscription.	pass
TC4	Display option to register	Guest Users should be taken to a registering screen after trying to select options that require being logged into for or that require a subscription.	pass
TC5	Give option to log out of account	Users should have an option to log out of the account that is currently logged in.	pass

Project Name: Personal Fitness and Health Tracker
Test Case Name: Login
Test Case ID: CSE 3310/Team3/Login

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	Enter the login screen and successfully login with correct user ID and password	The system should bring the user to the application's home screen.	pass
TC2	Enter the login screen and unsuccessfully login with incorrect user ID and/or password	The system should display the message "Incorrect login, please try again." to the user and allow them to re enter their login.	pass
TC3	Forgot ID or Password	The system should bring the user to a screen that asks them to select which part of their login they forgot. The system should also collect the user's email and the answer to the security question so that a temporary password can be sent to allow the user to reset their login.	pass
TC4	Create account	When at the login screen the system should allow the option to create an account and upload their credentials to be stored as a new account that can be logged into.	pass
TC5	Guest User	When at the login screen allow the user the option to continue as guest where they will be restricted to guest material or activities and no data will be stored for them.	pass

3. Test Cases: “Tracking”

Project Name: Personal Fitness and Health Tracker
Test Case Name: Tracking
Test Case ID: CSE 3310/Team3/Tracking

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	Import data from wearable device	Data from a user’s wearable device, such as an Apple watch or a Samsung Galaxy watch must be reflected in the user’s fitness metrics.	TBD
TC2	Data update in database	Whenever a user completes a workout or imports data from a wearable device, the data for the related metrics must be updated automatically in the database.	TBD
TC3	Display what devices are compatible	Display all devices that are implemented into the system to track and store data.	TBD
TC4	Add new device	Allow the user to add devices that will be tracked and to also manage them.	TBD
TC5	Delete device	When a user needs to stop updating the database off their device, allow the option to stop tracking the device and remove it from the database.	TBD

4. Test Cases: “Activity Categories”

Project Name: Personal Fitness and Health Tracker
Test Case Name: Activity Categories
Test Case ID: CSE 3310/Team3/ActivityCategories

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	Select an activity category	When the user selects an activity category, the system should display a list of activities that fall under that category for the user to participate in	TBD
TC2	Start an activity	When the user selects the activity they would like to participate in, the system should display the activity page, along with instructions and a timer to record how long the user is doing this activity.	TBD
TC3	Log activity completion	If the user wants to log their activity, the system should update the data in the database with the related metrics and display this information to the user. This information can also be displayed in relation to the user’s goals.	TBD
TC4	View history	The system should display a list of activities the user has logged in the past, along with the metrics the user had at the time of the activity.	TBD
TC5	Subscription restrictions	System should recognize whether the user is subscribed to access Activities or not.	TBD

5. Test Cases: “Goal Setting”

Project Name: Personal Fitness and Health Tracker
Test Case Name: Goal Setting
Test Case ID: CSE 3310/Team3/GoalSetting

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	Create a new goal	The system should bring the user to a screen that will allow the user to set goals in the following: <ul style="list-style-type: none">- # of steps- # of pounds lost/gained- # of miles- PR lifted (pounds)- # of minutes doing yoga- # of intervals doing HIIT	TBD
TC2	View a goal	The system should bring the user to a screen that shows an existing goal the user has created. If there are no goals created, the system should display a message that says “You have no goals yet. Go and create one!”	TBD
TC3	Edit a goal	The system should allow the user to change the metric of the goal (the number of steps, the number of miles, etc.) and/or the type of goal (steps instead of miles, etc.).	TBD
TC4	Goal has been reached	The system should mark the goal complete and prompt the user if they would like to start a new goal. If the user is not in the app, the system should also send a notification to the user that their goal has been completed.	TBD
TC5	Checking subscription	The system should check whether the user is allowed to access Goal setting based on their subscription or if they are a general user or guest user.	TBD

6. Test Cases: “Progress Monitoring”

Project Name: Personal Fitness and Health Tracker
Test Case Name: Progress Monitoring
Test Case ID: CSE 3310/Team3/Progress Monitoring

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	Display progress toward goals	The system should display a screen that shows a graph or chart measuring the user’s progress toward the goal(s) they’ve set in the application.	TBD
TC2	A goal remains incomplete	The system should send a notification to the user showing that their goal is incomplete. The system should allow the user to set a new reminder time to receive another notification, dismiss the reminder, or snooze the reminder.	TBD
TC3	Request a reminder	The system should send a notification at the time specified by the user.	TBD
TC4	No goals have been set	The system should display a message that says “You have no goals yet. Go and create one!”	TBD
TC5	Option to delete a goal	Give the user the option to delete a goal when the user desires to and update the database when chosen.	TBD

7. Test Cases: “Exercise Plans”

Project Name: Personal Fitness and Health Tracker
Test Case Name: Exercise Plans
Test Case ID: CSE 3310/Team3/ExercisePlans

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	View workout plans available	The system should display a screen that shows a list of workout plans that the user can choose from.	pass
TC2	Select a workout plan	The system should bring the user to a screen that allows them to view each exercise within the workout plan. The user should also be able to select a button that allows them to start the plan.	pass
TC3	Create a workout plan	The system should bring the user to a screen that prompts the following information: <ul style="list-style-type: none">- Number of exercises- Type of exercises- # of reps, miles, intervals, etc. for each exercise- Name for workout plan	TBD
TC4	Start plan	The system should bring the user to the first exercise in the plan with instructions on how to complete the exercise. The user will be able to mark the exercise as complete once done and the system should update its database accordingly with the user’s metrics to enable progress monitoring.	TBD
TC5	User does not have a subscription	The system should display a message that says “This is a subscription feature. You must have a subscription plan to access this feature.”	TBD
TC6	Edit a plan	The system should bring the user to a screen that allows them to change the following information: <ul style="list-style-type: none">- Number of exercises- Type of exercises- # of reps, miles, intervals, etc. for each exercise- Name of workout plan	TBD
TC7	User starts a plan, does not complete	The system should send a notification reminding the user that their plan remains incomplete.	TBD

TC8	Share a plan	The system will display a screen that allows the user to directly post to Instagram, X, Facebook, or copy a link to send to friends/family via messaging.	pass
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8. Test Cases: “Subscriptions”

Project Name: Personal Fitness and Health Tracker
Test Case Name: Subscriptions
Test Case ID: CSE 3310/Team3/Subscriptions

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	Display the subscription details(or multiple subscription details)	The system should bring the user to a screen that will allow the user to view each of the subscription options or just one that displays the prices and benefits.	pass
TC2	Choosing a subscription	After the user has chosen the subscription they want, the system should take them to a screen to enter their payment information to be stored and charged when the subscription is renewed.	pass
TC3	Charging for the subscription	The system should find which subscription was chosen by the user and when the subscription will be renewed or if the subscription has been canceled. Then charge the amount needed to the card when renewed or singed up.	TBD
TC4	Canceling subscription	There should be an option within account setting to manage your subscription displaying your current subscription and when it will be renewed. There will also be an option to cancel to subscription on the screen when selected will ask if the user is sure they wanna cancel. After a subscription is canceled the data stored should state that there is no subscription and no more charges will be made to the card for the subscription.	TBD
TC5	Changing payment method	The system should have an option for the user to change the payment type and once entered will update the stored payment type to the new card.	TBD

9. Test Cases: “Review of Trainer”

Project Name: Personal Fitness and Health Tracker
Test Case Name: Review of Trainer
Test Case ID: CSE 3310/Team3/Subscriptions

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	Users submit a rating and comment for a trainer	The system should save the review with the specified rating (e.g., 1-5 stars) and user comment in the trainer's profile section. The new review should be immediately visible to all users viewing that trainer's profile and any cached versions of the trainer's reviews are updated.	Pass
TC2	Users update their previous review	The system should allow the user to retrieve and edit their existing review details (rating and comment). Upon resubmission, the previous review is replaced with the updated version in the database, and all visible instances of the review reflect the changes. The system should confirm successful updating, and the edit should be recorded in the user's activity log.	TBD
TC3	Users deleted their submitted review	The review should be permanently removed from the trainer's profile and from any user-generated content section. The system should display a confirmation prompt before deletion and a success message once the review is deleted.	TBD
TC4	Users view all reviews for a specific trainer	The app should retrieve and display a list of all reviews associated with the selected trainer. Reviews should load in order of most recent first, and each review should display the rating, comment, and username. The display should allow for sorting by rating and filtering by date or type of review, providing a user-friendly view of the trainer's feedback.	TBD
TC5	Users submit a rating without comments	The system should accept and store the rating in the trainer's profile without requiring a text comment. The rating should immediately contribute to the trainer's overall average rating, and the trainer's profile should refresh to reflect the new rating. The system should confirm the rating submission was successful.	Pass

10. Test Cases: “Social Media Sharing”

Project Name: Personal Fitness and Health Tracker

Test Case Name: Social Media Sharing

Test Case ID: CSE 3310/Team3/Subscriptions

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	Users share a fitness achievement on social media	The system provides sharing options for various social media platforms. After the user selects a platform, the app automatically formats the achievement data, including text and image content. Upon completion, the app confirms the successful share and returns to the app’s main screen	TBD
TC2	Users share their workout plans with friends via social media	The app allows the user to select from their workout plans and prepares a formatted link or image. The system transfers this data to the chosen social media platform, including an optional message. If successfully posted, the app confirms and logs the sharing event in the user’s history	TBD
TC3	Users view shared achievements by friends	The app displays a social feed of friends' recent achievements. Achievements include details such as activity type, duration, and goals met. The user can like, comment, or share these posts within the app or on external platforms.	TBD
TC4	The user previews an achievement or workout plan post before sharing on social media.	The system generates a preview of the post, showing text, images, and any links or tags. The preview allows the user to make adjustments before posting. After confirming, the user can share directly on the selected platform, with the post appearing exactly as previewed. The app confirms a successful share or allows the user to return and edit.	TBD
TC5	The user disconnects their social media accounts from the app.	The app removes all social media connections, revoking permissions. A success message confirms disconnection, and social media sharing buttons are removed from the app. All previous posts shared on social media remain unaffected.	TBD

11. Test Cases: “Communication”

Project Name: Personal Fitness and Health Tracker

Test Case Name: Social Media Sharing

Test Case ID: CSE 3310/Team3/Subscriptions

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	System sends a reminder for the user's scheduled activity	The user receives a notification based on their chosen method (email/SMS/app alert) at the designated time. The notification displays a friendly message reminding the user to complete their activity. If tapped, the notification opens the app's activity section for immediate tracking	TBD
TC2	System sends a weekly progress summary	At the end of the week, a notification or email provides a breakdown of the user's progress, highlighting key metrics like calories burned, steps taken, and goals achieved. This summary includes a link to view more details within the app, giving users an overall progress snapshot.	TBD
TC3	User enables or disables notifications in settings	Changes are saved immediately, and the user receives a confirmation prompt. If notifications are enabled, reminders and progress updates are sent as scheduled. If disabled, the user receives no further alerts until they choose to re-enable notifications.	Pass
TC4	System sends notifications about friend activities	The user receives notifications for friends' milestones or shared activities. Each notification provides quick access to view or comment on the achievement within the app.	TBD
TC5	User sets a custom reminder for a specific goal	The system allows the user to specify the day and time for reminders. At the chosen time, the app sends a notification, helping the user stay on track with their goal. The reminder is logged, and the user can update or delete it as needed.	TBD

12. Test Cases: “Advertisement”

Project Name: Personal Fitness and Health Tracker
Test Case Name: Social Media Sharing
Test Case ID: CSE 3310/Team3/Subscriptions

Test Case	Test Case Description	Expected Results	Outcome (Pass/Fail)
TC1	Ad is shown to users without an active subscription	The ad appears in a designated area, such as between workout sessions or on the home screen. Ads are relevant to health and fitness products, and users can dismiss or click the ad to learn more. Premium users do not see these ads.	TBD
TC2	User clicks on an ad leading to an external product	The ad opens a browser window with the external product’s webpage. Users are shown an alert before exiting the app. The ad interaction is recorded for analytics, and the user can return seamlessly to the app.	TBD
TC3	Ad for a premium workout plan is displayed	The ad appears in the app, showcasing premium workout options. If the user clicks, they’re directed to the in-app purchase page. If uninterested, the user can dismiss the ad and continue using the app.	TBD
TC4	App tracks user interaction with ads	Each interaction (click, dismiss) is recorded in the analytics database, providing insights on ad effectiveness. Summary data is displayed in the admin section for review, supporting targeted advertising.	TBD
TC5	User closes an ad without interacting	The ad disappears without affecting the user’s activity flow. The system registers the dismissal action, tracking engagement without disrupting the user experience.	TBD