**REQUIREMENTS DOCUMENT  
Fall 2024**

**Walking/Fitness Trail App**

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**VERSION:** 1.0  
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**PROJECT DESCRIPTION**

The Walking Trails App is a mobile application designed to enhance the walking experience on Georgia Gwinnett College (GGC) trails through interactive and educational content focused on fitness, health, and wellness. The app is accessible via QR codes placed on signs along the trails. By scanning a QR code, users are directed to the app, where they can access instructional videos, trail maps, exercise guides, and nutrition information, among other features.

This project is a collaborative effort between ITEC students, who are responsible for app development, and EXSC students, who create the content. The goal is to combine technology with practical health education, encouraging the GGC community to engage in physical activities while learning about exercise techniques, nutrition, hydration, and related topics.

**PROJECT SCOPE**

The app will incorporate QR codes that provide direct access, ensuring convenience for users. It will include detailed information on three GGC walking trails and offer videos and written content covering various fitness topics. A database will track user interactions, such as login frequency, viewed videos, and user reactions to each video. The database will analyze video feedback, both overall and by demographic segments (age, gender).

The app will implement security measures to protect user data and ensure the privacy of personal information. The project is expected to be completed and the app launched within four months, with a target date of October 31, 2024.

**FUNCTIONAL REQUIREMENTS**

**FR1:** Create a QR code functionality that links to the application.  
**Priority:** High  
**Justification:** Essential for users to access the app easily while on the trails.

**FR2:** Develop a homepage that explains the collaboration between ITEC and EXSC students, and includes information on exercises, walking mechanics, nutrition, hydration, and details of the GGC walking trails.  
**Priority:** Medium  
**Justification:** Provides context and enhances user engagement by highlighting the app’s educational value.

**FR3:** Enable user registration with a unique username and password.  
**Priority:** High  
**Justification:** Necessary for tracking user interactions and personalizing the user experience.

**FR4:** Collect user information, including gender, age, ethnicity, and GGC community affiliation.  
**Priority:** Medium  
**Justification:** Helps in personalizing content and analyzing user engagement based on demographics.

**FR5:** Track the number of times each unique username and password logs in.  
**Priority:** High  
**Justification:** Important for understanding user engagement and usage patterns.

**FR6:** Record which videos are viewed and track the likes/dislikes of each video.  
**Priority:** Medium  
**Justification:** Allows for content improvement based on user feedback.

**FR7:** Store overall likes/dislikes for each video, and categorize likes/dislikes by age and gender in the database.  
**Priority:** Medium  
**Justification:** Provides insights into content preferences across different demographic groups.

**FR8:** Provide a dropdown menu for each trail with links to pictures of trail maps, including "pins" for bench locations. The "pins" should link to videos of exercises that can be performed at those benches.  
**Priority:** High  
**Justification:** Enhances the app’s interactivity and relevance to the specific locations on the trails.

**FR9:** Include a dropdown menu for fitness topics with links to videos categorized by content, such as strengthening exercises, stretching exercises, nutrition, walking mechanics, hydration, and preparation for hot/cold climates.  
**Priority:** High  
**Justification:** Ensures easy access to categorized content, improving the user experience.

**FR10:** Allow users to view videos related to various fitness concepts.  
**Priority:** High  
**Justification:** Core functionality for delivering educational content to users.

**FR11:** Implement thumbs up/down buttons for liking/disliking each video.  
**Priority:** Medium  
**Justification:** Facilitates user feedback on content quality and relevance.

**NON-FUNCTIONAL REQUIREMENTS**

**NFR1:** The app should have an intuitive and user-friendly interface.  
**Priority:** High  
**Justification:** Ensures ease of use, which is critical for user adoption and satisfaction.

**NFR2:** The app should load quickly and respond promptly to user actions.  
**Priority:** High  
**Justification:** Enhances the user experience, especially important when accessing the app in an outdoor environment.

**NFR3:** The app should support an increasing number of users and videos without significant performance degradation.  
**Priority:** Medium  
**Justification:** Important for scalability as the app’s user base grows.

**NFR4:** The app should guarantee limited interruptions and steady performance.  
**Priority:** Medium  
**Justification:** Maintains a consistent user experience, which is crucial for user retention.

**NFR5:** Personal information and login credentials should be stored securely.  
**Priority:** High  
**Justification:** Critical for maintaining user trust and complying with data protection regulations.

**NFR6:** The app should be fully functional by 10/31/2024.  
**Priority:** High  
**Justification:** Ensures the project meets its deadline and delivers the app on time.

**DOMAIN REQUIREMENTS**

**DR1:** The app should support the collection of demographic data (gender, age, ethnicity, GGC community association) to monitor user interactions and video preferences.  
**Priority:** High  
**Justification:** Critical for analyzing user engagement and tailoring content to specific user groups.

**DR2:** The app should deliver location-based content through QR code scanning.  
**Priority:** High  
**Justification:** Enhances user engagement by providing relevant content based on their current location on the trail.

**DR3:** The app should provide educational content on fitness, nutrition, and hydration, validated by experts.  
**Priority:** Medium  
**Justification:** Ensures the accuracy and reliability of the information provided to users.

**DR4:** The app should facilitate collaboration between ITEC and EXSC students, ensuring the content aligns with both technical and educational goals.  
**Priority:** Medium  
**Justification:** Strengthens the interdisciplinary nature of the project and improves content quality.

**DR5:** The app should include health and safety guidelines to ensure users perform exercises safely.  
**Priority:** High  
**Justification:** Reduces the risk of injury and increases user trust in the app.