Software Implementation and Testing Document

For

Group 4

Version 1.0

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1. Programming Languages (5 points)
Programming Languages Used
1. **C# (with .NET MAUI)**
   - **Where Used**: Front-end and back-end development for the mobile app (iOS and Android).
   - **Reason**: .NET MAUI is a cross-platform framework that allows for seamless development of mobile apps for both iOS and Android using a single codebase. C# is a robust, object-oriented language with extensive support for mobile app development.
2. **SQL**
   - **Where Used:** Database queries and management for storing user data (e.g., workout logs, nutrition data, photos).
   - **Reason:** SQL is the standard language for relational database management, ensuring efficient data storage and retrieval.

2. Platforms, APIs, Databases, and other technologies used (5 points)
Platforms that we are currently using are .NET MAUI

For APIs we are going to use some Nutrition Dtabase API which will fetch accurate calorie and macronutrients

For Databases we will most likely be using SQL

3. Execution-based Functional Testing (10 points)
Currently we have not yet started testing our project, but when we do we will start by doing manual tests where we simulate user interactions with the app

4. Execution-based Non-Functional Testing (10 points)
Currently we have not yet started testing our project, to do this we will check performance in terms of low connectivity, test encrypted user data, and see if the app meets a 99.9% uptime

5. Non-Execution-based Testing (10 points)
To test the code, we will be doing code reviews to understand how the code works and quality of code wrote. We will also do walkthroughs of the codebase to understand what each group member has done and if there are any developments we can add