**Software Implementation and Testing Document**

**For**

**Group 5**

Version 1.0

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# **1.** **Programming Languages (5 points)**

We will be using Java for backend development/object-oriented programming and XML for frontend/UI development, as these are the native languages used by Android Studio.

# **2.** **Platforms, APIs, Databases, and other technologies used (5 points)**

* Android Studio as the IDE
* Java for object-oriented class design and rest timer creation
* Android API for account creation and data storage
* MPAndroidChart for creating a graphic representation of the user's progression in different exercises
* Adobe Creative Studio for UI design
* Google Drive for persistent cloud-based user data storage, if applicable

# **3.** **Execution-based Functional Testing (10 points)**

* Tested adding and removing exercises from a workout. We discovered that we need to add limits for the minimum and maximum number of exercises in a workout.
* Tested storing workouts and user data. We performed range checking on user data input to ensure a certain value doesn’t crash the program.
* Tested MPAndroidChart library functionality.

# **4.** **Execution-based Non-Functional Testing (10 points)**

# **5.** **Non-execution-based Testing (10 points)**

We reviewed each other's code to find faults and made suggestions on areas needing improvement.