

## 2.2.3 Domain Requirements

### Principles

- Fitness as a Journey of Personal Progress
  - Improvement in strength, endurance, and consistency is a core driver of motivation. The system shall provide a mechanism with clear, quantifiable metrics and visual representations of a user's progress over time.
  - A balanced approach targeting all major muscle groups is essential for preventing injury and achieving a well-rounded physique. The system shall provide a mechanism that facilitate and encourage awareness of training distribution across the body.
- Engagement with Fitness Training
  - Long-term consistency requires more than initial novelty. The system shall implement a layered reward structure (e.g., XP, achievements, ranks) that provides continuous feedback and celebrates milestones of varying difficulty.
  - Fitness journeys can be reinforced through community. The system shall provide a mechanism for positive social comparison and mutual support that focuses on shared effort and consistency.

### Functional Requirements

- Workout Logging \*\*The system shall provide an interface for the user to log an exercise by specifying the exercise name, weight lifted, number of sets, and number of repetitions per set.
- Progress Tracking
  - The system shall calculate and display a historical graph of the total training volume (weight × sets × reps) for each muscle group over a user-selectable time period.
  - The system shall provide a mechanism that tracks and highlights new Personal Records (PRs) when a user logs a set with a higher weight for a given exercise than any previous set.
  - The system shall provide a mechanism that suggest alternative exercises during the logging process if the user's current selection disproportionately targets an already dominant muscle group based on the "Muscle Balance Score".
  - The system shall provide a mechanism for the users to input goals based on specific timeframes and automatically generate a structured, periodized workout plan toward that goal.
  - The system shall provide a mechanism for users to publicly share "milestone posts" when achieving significant achievements to facilitate positive social reinforcement.
  - The system shall provide a mechanism that detects a performance plateau, the system shall provide automated suggestion to changes in repetition ranges.
- Gamification System
  - The system shall provide a mechanism that assigns a user a rank (Bronze, Silver, Gold, etc.) for each muscle group, calculated based on the total historical training volume and PRs for that muscle group.
  - The system shall provide a mechanism that awards users experience points (XP) for

completing workouts and achieving milestones.