

Milestone 3 Document

Relationship:

- **User – FitnessTracker:**
 - A User monitors their fitness journey through the FitnessTracker system.
 - The FitnessTracker is operated by one User.
- **User – Workout:**
 - A User logs one or more Workout entries.
 - Each Workout is created by a User.
- **FitnessTracker – Workout:**
 - The FitnessTracker tracks and manages all Workout sessions.
 - Each Workout is handled by the FitnessTracker system during user interaction.
- **FitnessTracker – WeightRecord:**
 - The FitnessTracker tracks and manages entries from the WeightRecord class to monitor physical changes.
 - Each WeightRecord is logged through the FitnessTracker based on user input.
- **Fitness Tracker – FitnessGoal:**
 - The FitnessTracker sets and manages one active FitnessGoal for the user.
 - Each FitnessGoal is tracked by the FitnessTracker and linked to progress monitoring.
- **FitnessTracker – ProgressSummary:**
 - The FitnessTracker generates a ProgressSummary to show the user's overall fitness status.
 - Each ProgressSummary is compiled by the FitnessTracker using the user's recorded data.
- **FitnessTracker – EncouragementMessage:**
 - The FitnessTracker provides motivational EncouragementMessages during workout logging.
 - Each EncouragementMessage is triggered and displayed by the FitnessTracker to support the user's motivation.
- **FitnessTracker – DataManager:**
 - The FitnessTracker uses the DataManager to handle all data-related tasks such as saving and loading.
 - The DataManager is accessed by the FitnessTracker to manage persistent data in the background.
- **DataManager – Workout:**
 - The DataManager stores and retrieves multiple Workout entries.

- Each Workout is saved and retrieved by the DataManager to maintain workout history.
- **DataManager – WeightRecord:**
 - The DataManager stores and retrieves multiple WeightRecord entries to preserve user weight data.
 - Each WeightRecord is managed by the DataManager for long-term access and analysis.
- **DataManager – FitnessGoal:**
 - The DataManager stores and retrieves multiple FitnessGoal entries across user sessions.
 - Each FitnessGoal is saved or loaded by the DataManager to support consistent goal tracking.

Class Descriptions:

- **User:** Represents a user using the app and stores personal information such as login credentials.
- **FitnessTracker:** Acts as the central system controller responsible for managing user interactions, workout logging, goal setting, weight tracking, and progress summaries.
- **Workout:** Represents individual workout sessions, including type, duration, and calories burned.
- **EncouragementMessage:** Delivers motivational feedback to the user during active workouts.
- **WeightRecord:** Stores the user's weight on specific dates for trend tracking.
- **FitnessGoal:** Represents fitness goals like target weight or exercise duration, and provides progress checks.
- **ProgressSummary:** Compiles and displays the user's overall fitness data, including weight trends, calories burned, and goal progress.
- **DataManager:** Handles all saving and loading of data for workouts, weight entries, and fitness goals. Supports data persistence and recovery.