

## Milestone 4: Activity Diagram Description

### Swimlanes:

- User, Fitness Tracker, and Data Manager.

### Start of Session:

- The process starts when the User opens the Fitness Tracker app. The Fitness Tracker responds by displaying the home screen. The user is then prompted to choose an action from three main options:
  - Log Workout
  - Record Weight
  - View Progress

### Log Workout Path:

- If the user chooses to log a workout, the system prompts for workout details (type, duration, calories burned, etc). After the user enters the details, the Fitness Tracker saves the workout and displays a motivational encouragement message. The Data Manager then stores the workout data for future use.

### Record Weight Path:

- When the user selects the weight recording option, the Fitness Tracker prompts for the current weight. After the user inputs their weight, the system saves the data and the Data Manager securely stores it. This feature supports long-term tracking of physical changes.

## View Progress Path:

- If the user chooses to view progress, the Fitness Tracker compiles data. It then generates a progress summary and displays metrics like total calories burned, weight trends, and goal completion status.

## Repetition and End:

After completing tasks, the user may either:

- Loop back to choose another action. (Weight, Progress, etc.)
- Or proceed to end the session, which is visually represented by a terminating node. (Workout)

## UML Notation and Flow:

The diagram uses proper UML activity diagram notation, including:

- A start node to initiate the flow
- Rounded rectangles for actions
- A diamond for the decision point (“Choose Action”)
- A double-circle end node to mark the session termination
- Directional arrows to show logical transitions between steps
- Swimlane divisions to separate user and system responsibilities