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Title of the App - "FitPulse"

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Overview of StepFit Application

The **FitPulse App** is a lightweight Android fitness tracking application that provides step counting, daily goal tracking, live sensor monitoring, historical stats, and user profile management. Built in **Java**, FitPulse keeps credentials and settings locally with **SharedPreferences** and stores step history using **Room (SQLite)**. It integrates sensor technology via the hardware-backed **Step Counter** for accurate, power-efficient step detection, and also exposes **Accelerometer**, **Gyroscope** readouts in the Monitor screen. The app is organized into focused activities—**Login**, **Register**, **Home**, **SensorMonitorActivity**, **StatsActivity**, **SettingsActivity** (set the daily step goal, view profile, logout), and **UserProfileActivity** (name/email plus goal progress). Live progress on the Profile screen updates in real time through a local broadcast emitted by the **StepCounterManager**.

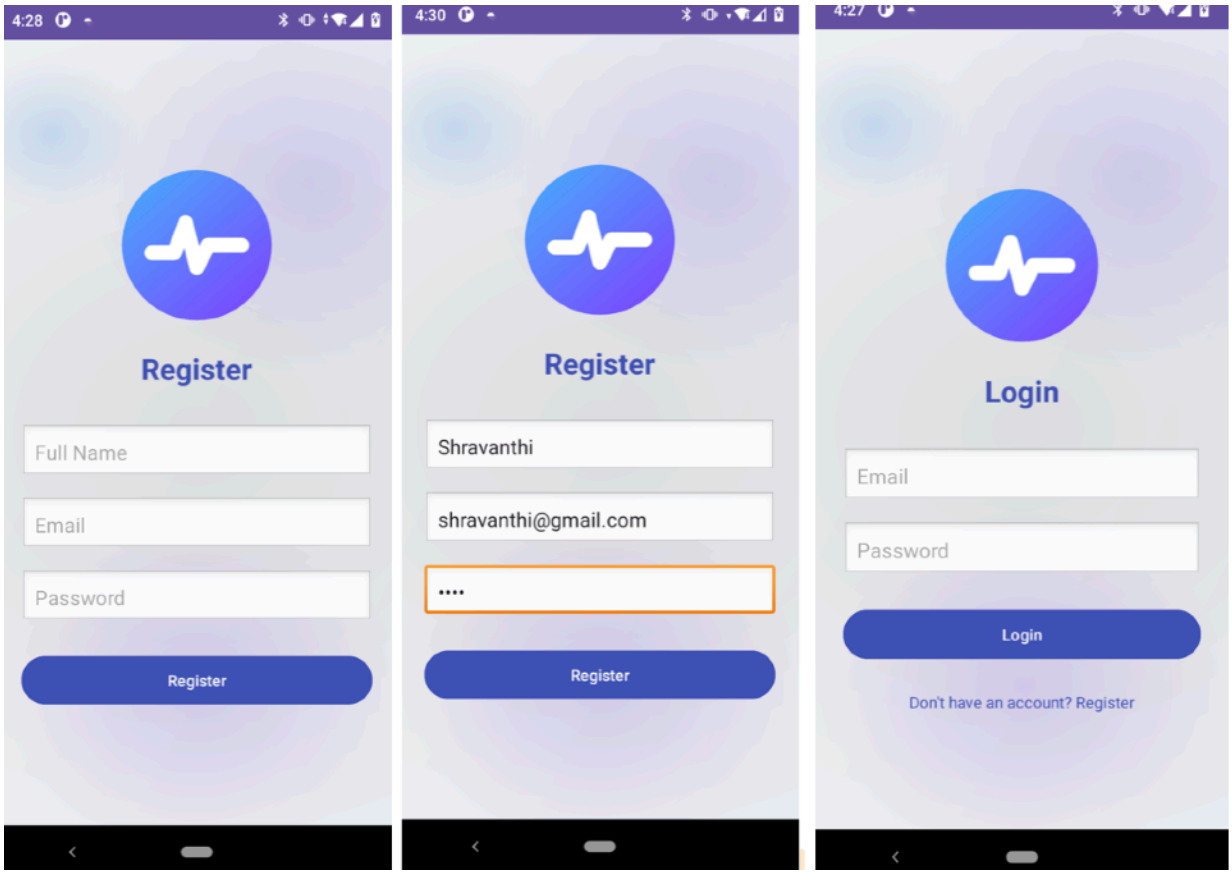
Key Activities and Features

1. **LoginActivity**:
    - This screen lets users sign in with their email and password. It checks the saved credentials in the preferences. If the details match, sends the user to **MainActivity**. If the user has logged in before, it skips this screen automatically.
2. **RegisterActivity**:
    - This screen allows new users to create an account by entering their **name**, **email**, and **password**. The data is stored locally. After successful registration, the user is redirected back to **LoginActivity** to sign in.
3. **MainActivity(Home)**:
    - This is the first page after login. It shows a **circular progress ring** for today's steps vs your **daily goal**, plus **Calories (today)** and **Time Walking (today)**. These values update in real time as steps come in. The **bottom navigation** is also here so you can jump to **Stats**, **Monitor**, or **Settings**.
4. **SensorMonitorActivity**:
    - This live screen shows your **current steps** from the phone's Step Counter and also displays **Accelerometer** and **Gyroscope** readings. It **includes a BMI calculator**—you enter your **height** and **weight**, and it shows your **BMI value** along with the category (Underweight/Normal/Overweight/Obese). The step numbers update in real time while you're on this screen.
5. **StatsActivity**:
    - This page displays your **past days step totals** as charts. The numbers come from the local database (Room/SQLite), where each day's steps are saved for history.
6. **SettingsActivity**:
    - Here you set your **daily step goal**. The goal is saved in FitPulsePrefs under the key `step_goal`. This screen also has buttons to **view your profile** and **log out.**
7. **UserProfileActivity**:
    - This page shows your name and email, plus a Daily Goals card.

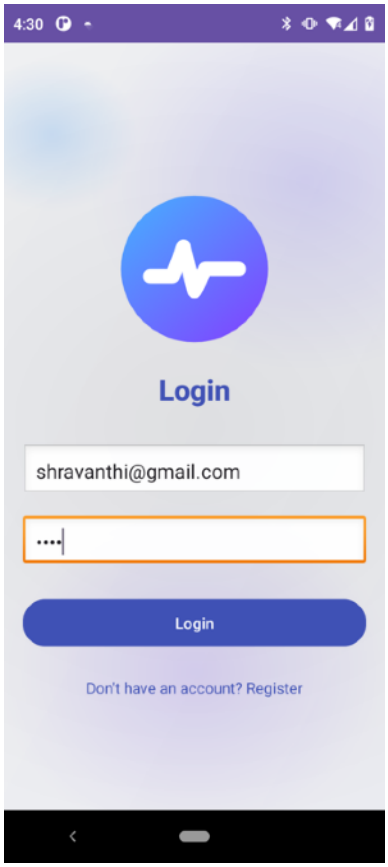
Conclusion

The **FitPulse app** is a lightweight Android tracker that covers **accurate step counting**, **daily goal progress** (ring, calories, time walked), and a built-in **BMI** tool. Built in **Java** and **offline-first**, it uses **SharedPreferences** for credentials/settings, **Room (SQLite)** for step history, and real-time updates via **StepCounterManager** broadcasts—leveraging the hardware **Step Counter** plus **Accelerometer/Gyroscope** for stability data. A clean UI across **Home, Monitor, Stats, Settings, Profile**, and **Login/Register** keeps everyday tracking simple, reliable, and power-efficient.

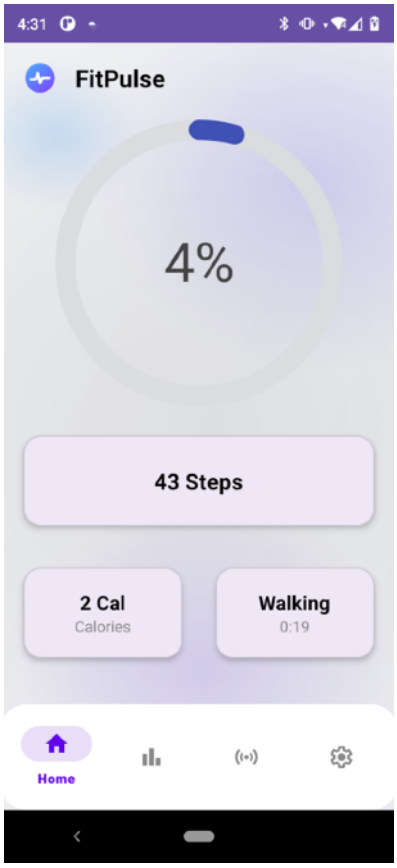
Screenshots:



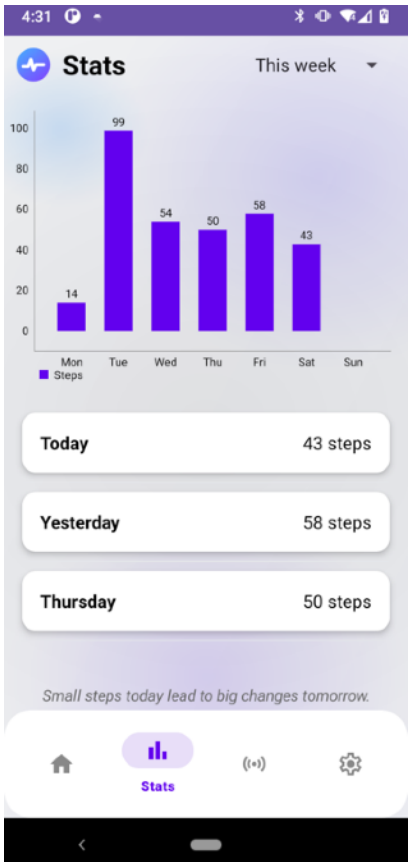
Register Screen	Filled Register Screen	Login Screen



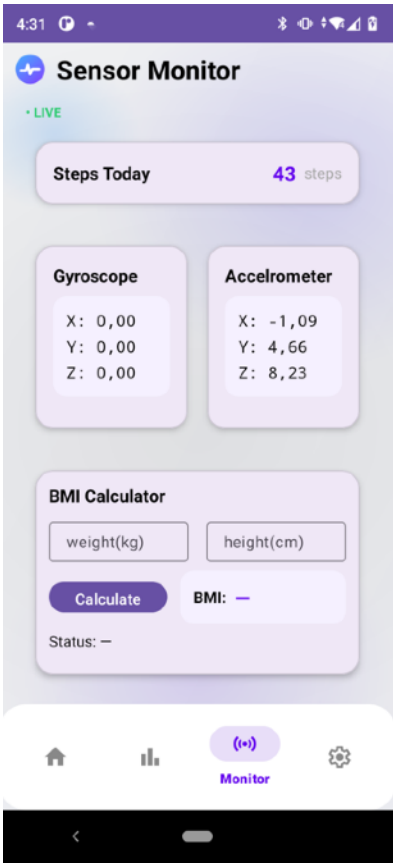
Filled Login Screen



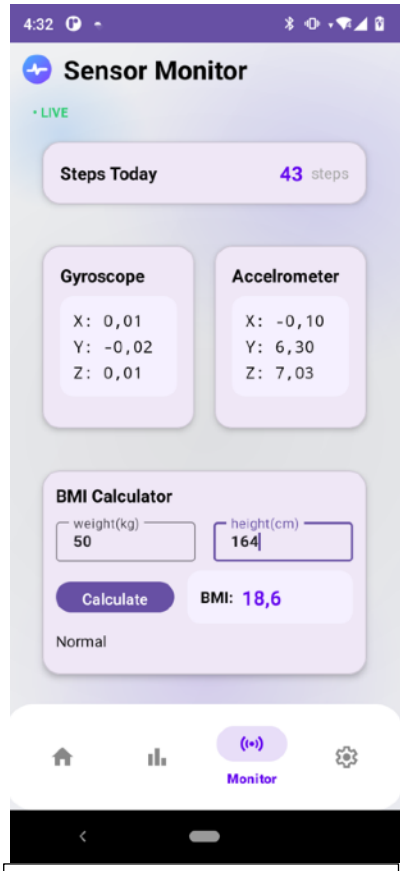
Home Screen



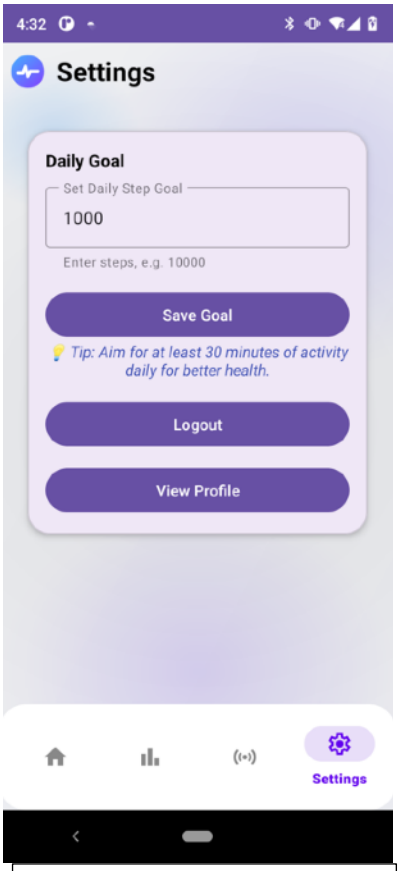
Stats Screen



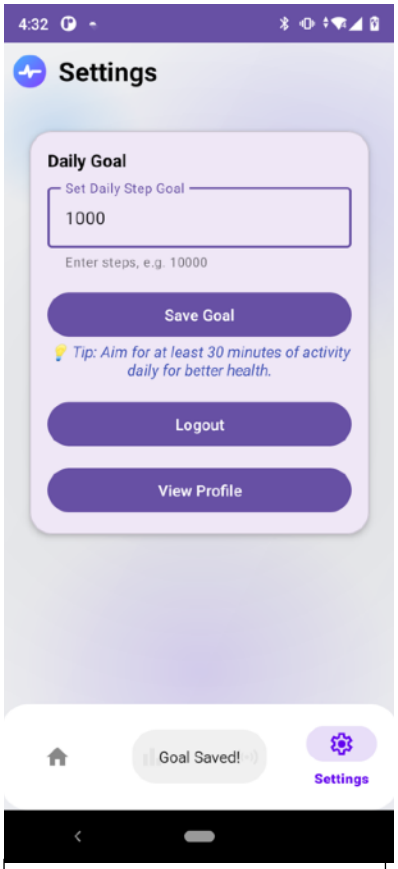
SensorMonitor Screen



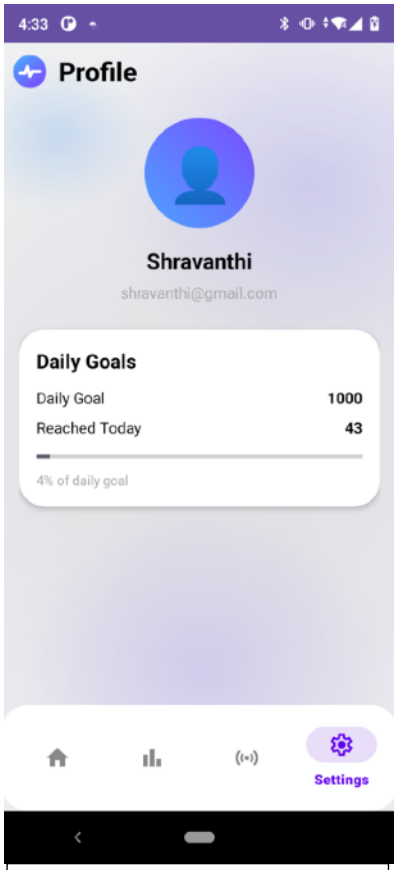
BMI Calculation



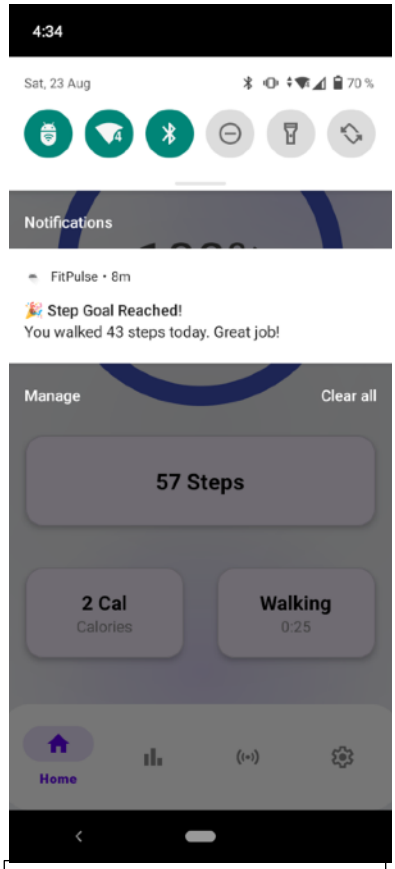
Settings Screen



Goal Saved



Profile Screen



Notification

Special Notes:

- Users will be asked to provide permission to use sensors manually if it is not auto-granted
- Calories burned are calculated using only step count -> (steps * 0.04)
- Steps are counted by the phone's **hardware step counter sensor**, which automatically detects foot movements and reports the cumulative number of steps since the device was last booted.