Personal Health Tracker - Angular App

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Problem Statement

Develop a Personal Health Tracker application using Angular that allows users to log their health data, view insights, and track progress. The application must be built as a Single Page Application (SPA) with various Angular features.

Project Overview

The Personal Health Tracker helps users log health-related data such as weight, calories, steps, and exercise. Users can view their history, trends, and insights. Key features include authentication, data visualization, and API integrations.

Features Implemented

- User Authentication
- Health Data Logging (Weight, Calories, Steps, etc.)
- Dashboard with Data Visualization
- API Integration for Health Data
- Responsive UI and Theming
- Local Storage for User Preferences
- Routing & Navigation
- Form Handling with Validation

Technologies Used

- Angular
- TypeScript
- HTML5, CSS3, SCSS
- Bootstrap for UI Styling
- RxJS (Reactive Extensions for JavaScript)
- Firebase for Authentication & Storage
- RESTful APIs
- Chart.js for Data Visualization

Project Structure

1. **app** - Main Application Folder

2. **components** - UI Components (Dashboard, Health Logs, Charts)

3. **services-** API & Data Handling Services

4. **models** - Data Models for Health Tracking

5. **guards** - Route Guards for Authentication

6. **pipes** - Custom & Built-in Pipes

7. **assets** - Static Resources (Icons, Images, JSON)
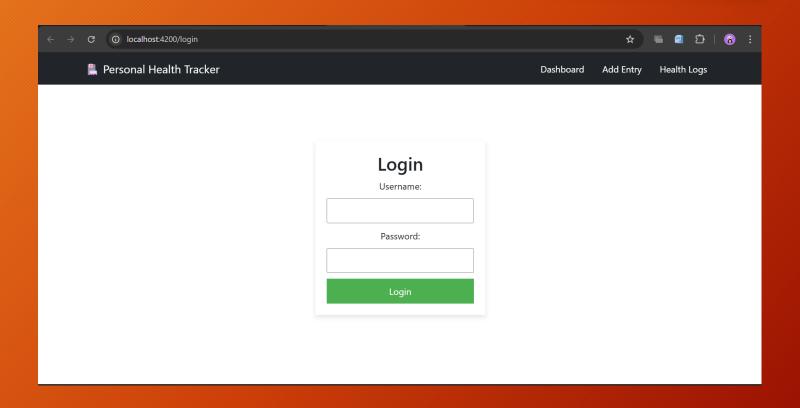
Angular Concepts Used

- Components
- Parent-Child Communication
- Directives
- Routing & Route Guards
- Local Storage
- Services & Observables
- HTTP Client
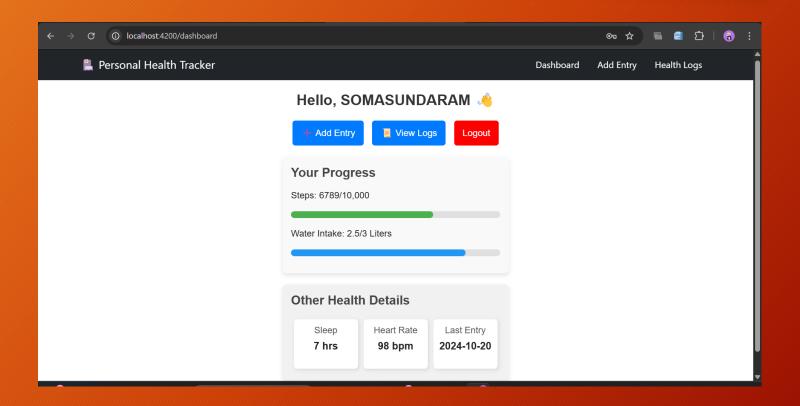- Template-Driven & Reactive Forms
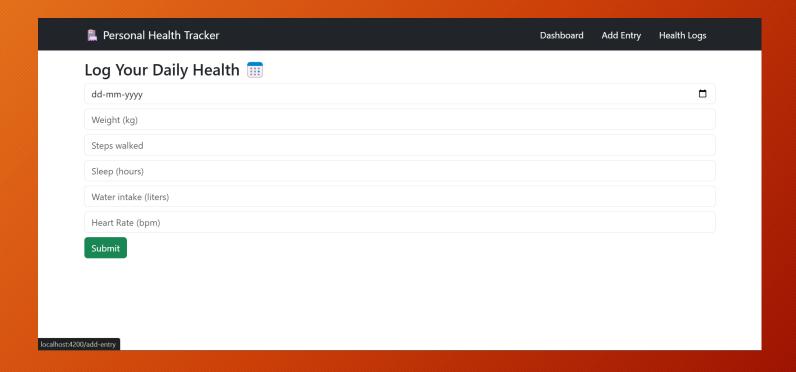- Built-in & Custom Pipes

API Integration

The application fetches real-time health data using API calls. It integrates with third-party services for retrieving exercise data, caloric information, and user activity logs.
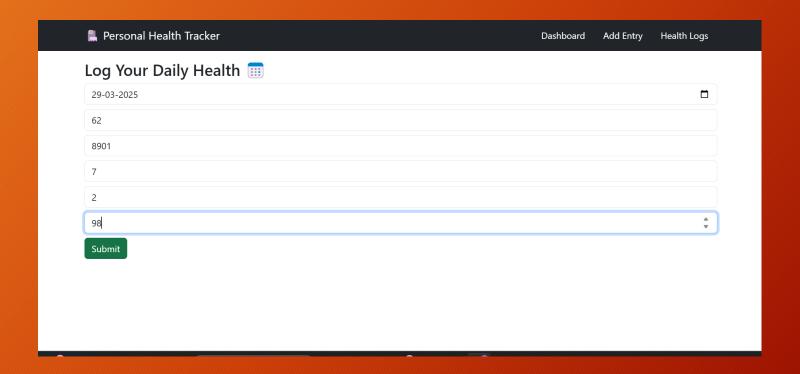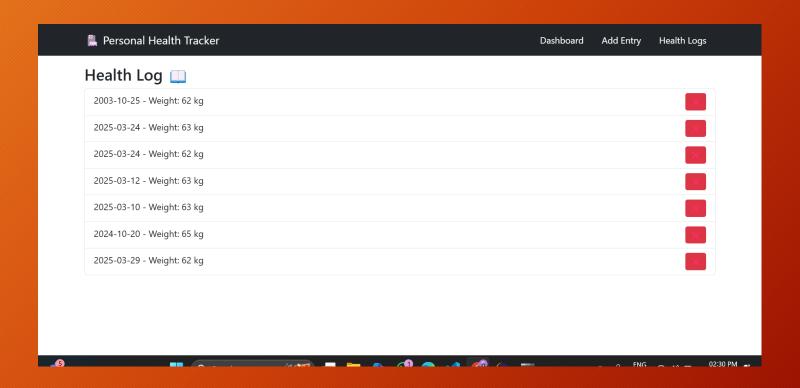
Firebase Integration

- User Authentication using Firebase Auth
- Cloud Firestore for Storing Health Data
- Firebase Hosting for Deployment

Screenshots

Screenshots

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Conclusion & Future Enhancements

- The Personal Health Tracker is a feature-rich Angular application that enables users to monitor their health data effectively. Future enhancements include:

- AI-based Health Recommendations

- Integration with Wearable Devices

- More Data Visualization Features