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ADSE-I

FITNESS-TRACKING

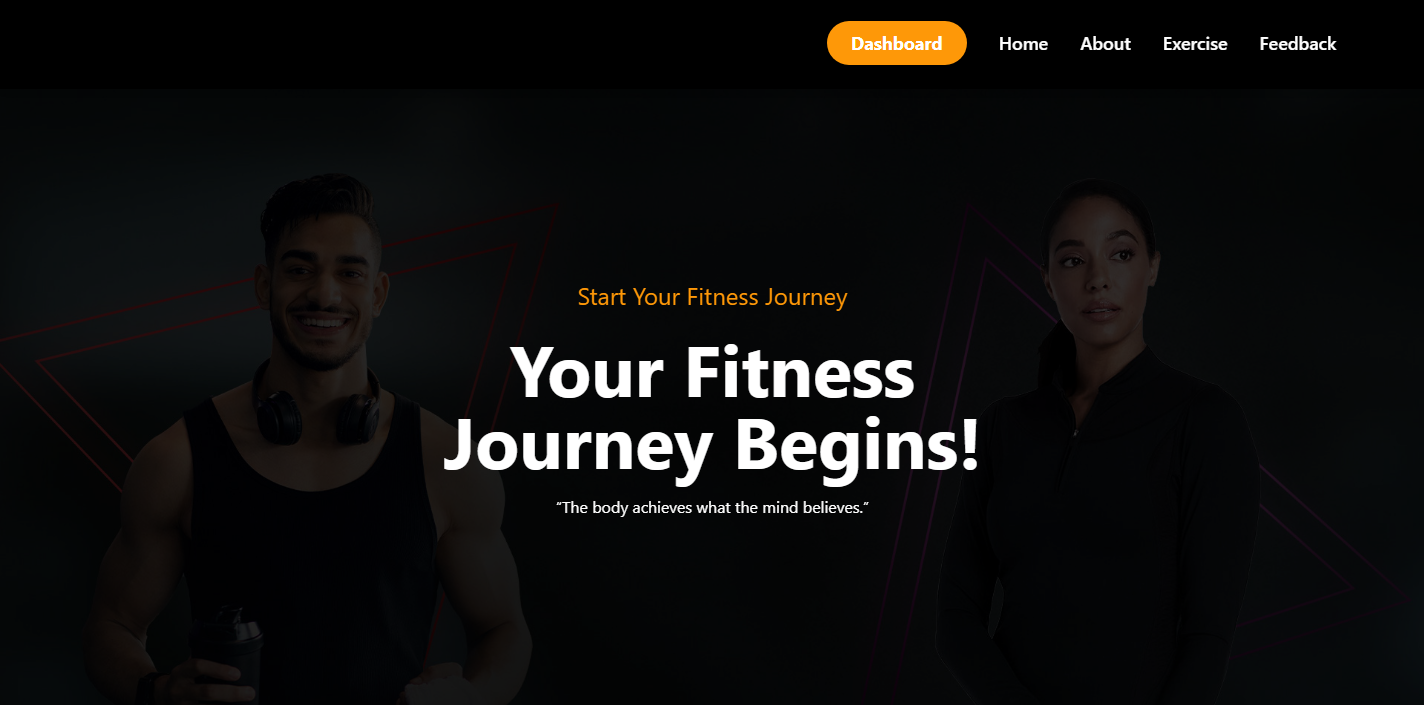
**GROUP MEMBERS NAMES**

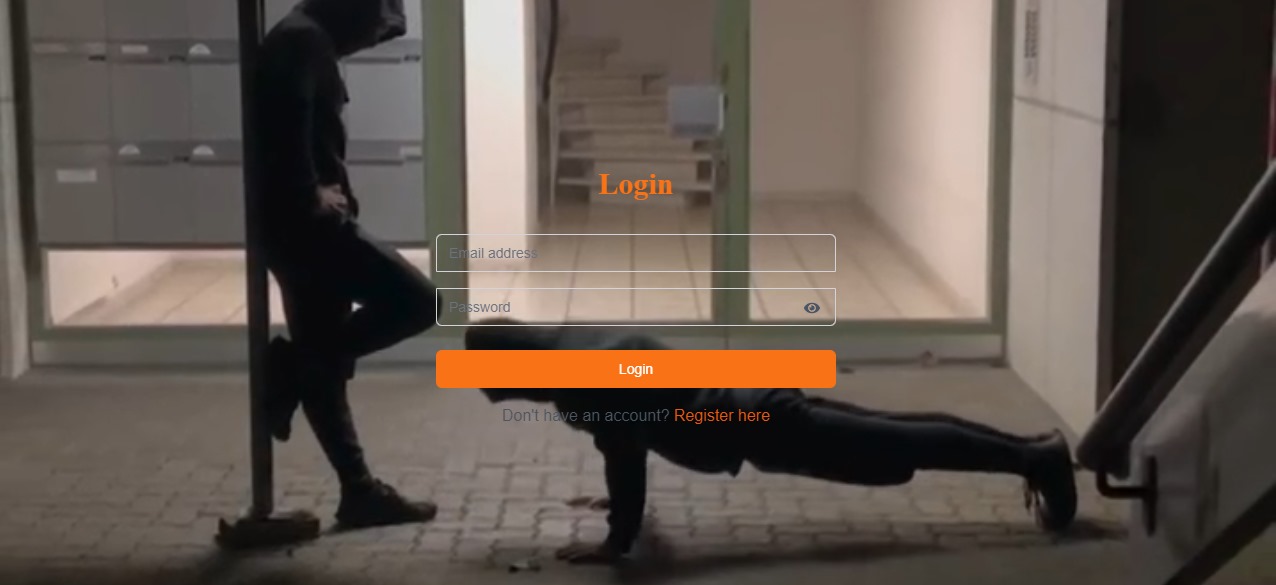
* + - SHAIKH MINHAJ UDDIN (1398610)
    - RABIA KANWAL (1421223)
    - TOOBA TARIQ (1398417)
    - FILZA (1393490)
* **What is Fitness Tracking?**

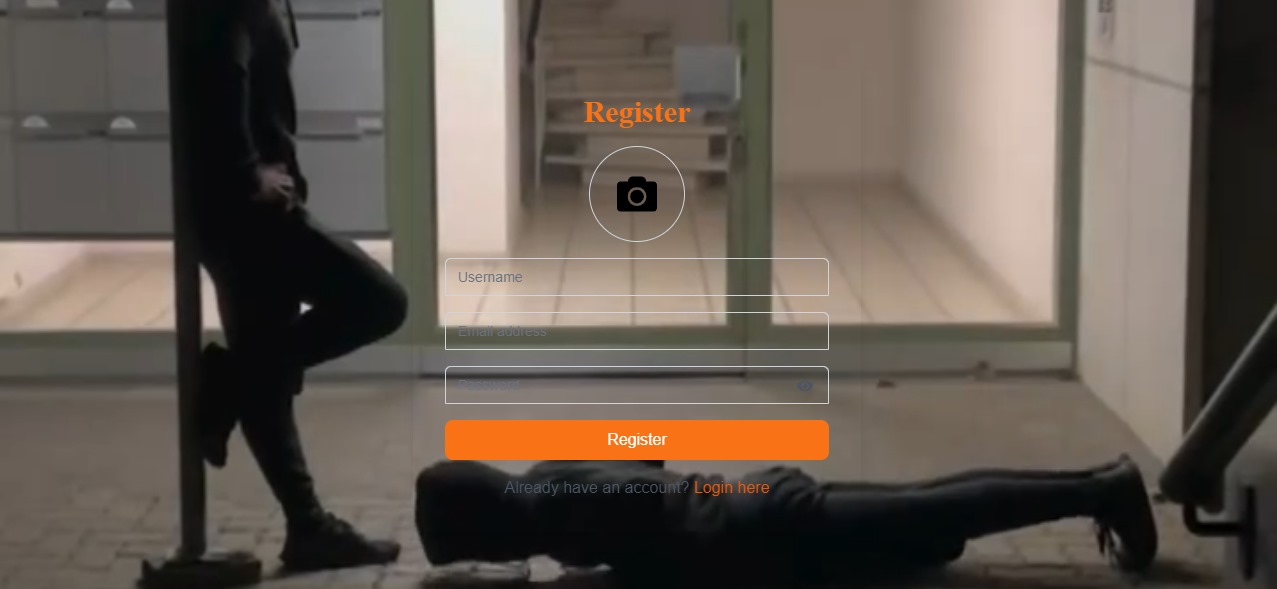
A **fitness tracking** is a wearable device designed to monitor and record various physical activities and health-related metrics. These devices typically include sensors and features that help users track their exercise, sleep, heart rate, and overall wellness. Fitness trackers are often worn on the wrist, like a smartwatch, but they can also come in other forms, such as clip-on devices or even in clothing.

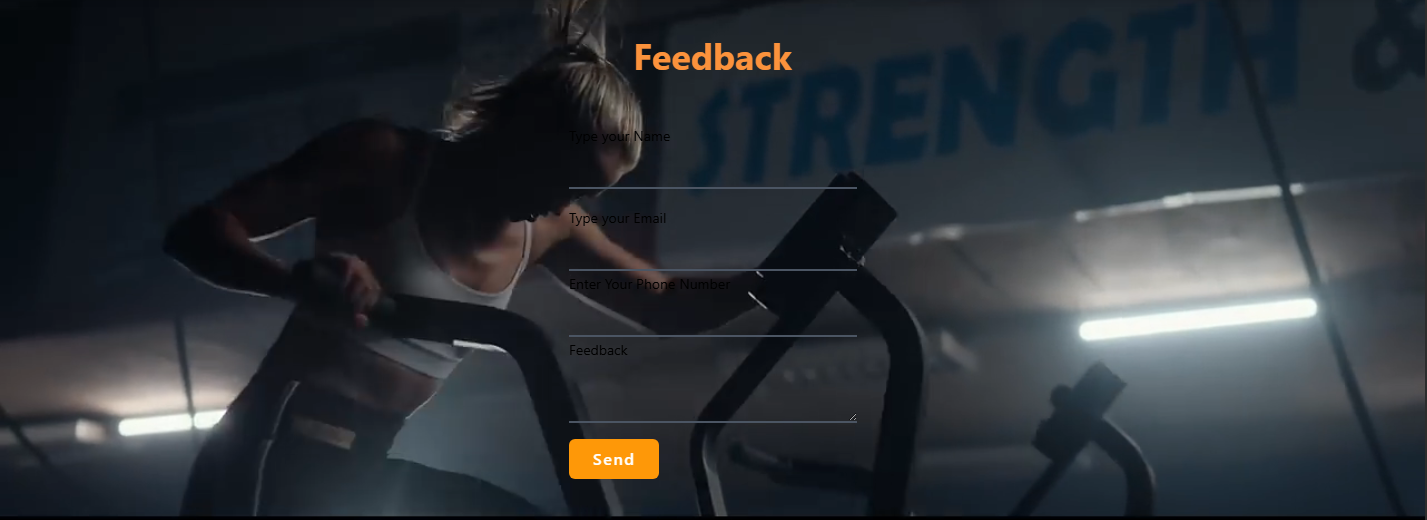
* **Functional Requirements:**
* **User Management:**
* **User Registration:**
* Users can create an account with a unique username and password.
* Registration should include basic profile information (e.g., name, email, profile picture).
* **User Login:**
* Registered users can log in with their credentials securely.
* **User Profiles:**
* Users have personalized profiles displaying their profile picture, name, and basic information.
* Users can update their profile information.
* **Fitness Tracking:**
* **Workout Tracking:**
* Users can create, edit, and delete workout routines.
* Each workout routine can include exercise name, sets, reps, weights, and notes.
* Workouts can be categorized (e.g., strength, cardio) and tagged for easy organization.
* **Nutrition Tracking:**
* Users can log their daily food intake, specifying meal types (e.g., breakfast, lunch, dinner, snacks).
* Each entry includes food items, quantities, and nutritional details (calories, macros).
* **Progress Tracking:**
* Users can record their fitness progress, including weight, body measurements, and performance metrics (e.g., run times, lifting weights).
* The application should generate graphs and visual representations of users' progress over time.
* **Dashboard:**
* **User Dashboard:**
* A personalized dashboard provides an overview of the user's fitness journey.
* The dashboard displays recent workouts, nutrition logs, and fitness progress.
* **Data Visualization:**
* **Workout Analytics:**
* Users can view charts and graphs of their workout data, including progress in lifting weights, workout frequency, and exercise history.
* **Nutrition Analytics:**
* Users can see nutritional insights, such as calorie intake, macronutrient distribution, and daily consumption trends.
* **Activity Notifications:**
* Users receive notifications for actions like workout completion, goal achievement, new followers, or forum responses.
* **Search and Filtering:**
* **Search and Filter:**
* Users can search for specific workouts, nutrition entries, or other users.
* Filters are available to sort and narrow down search results.
* **Mobile Compatibility:**
* **Mobile Responsiveness:**
* The application is responsive and functional on various devices, including smartphones and tablets.
* **Reporting and Export:**
* Users can generate reports for their fitness progress and nutrition data, including the option to export data in various formats (e.g., PDF, CSV).
* **Notifications and Alerts:**
* **Alerts and Reminders:**
* Users can set reminders and alerts for workouts, meal times, and fitness goals.
* **Settings and Preferences:**
* **User Preferences:**
* Users can customize their application settings, including notification preferences, units of measurement, and theme preferences.
* **Feedback and Support:**
* **User Support:**
* A support system for users to contact for assistance, report issues, and provide feedback.
* **Non-Functional Requirements**
* **Performance:**
* **Response Time:** The application should respond to user interactions within 1-2 seconds for most operations.
* **Scalability:** The system should be able to handle a growing number of users and data without significant performance degradation.
* **Concurrent Users:** The application should support hundreds of concurrent users without performance bottlenecks.
* **Security:**
* **Data Encryption:** All sensitive user data, including passwords and personal information, must be securely encrypted during storage and transmission.
* **Authentication:** User authentication should be secure and use industry-standard practices to prevent unauthorized access.
* **Authorization:** Access control must be implemented to ensure users can only access their own data or public data, as per their settings.
* **Privacy:**
* **Data Privacy:** The application must comply with data privacy regulations such as GDPR, ensuring user data is handled and stored with care.
* **User Consent:** Users should have control over the data they share and provide informed consent for data processing and sharing.
* **Reliability:**
* **Uptime:** The application should aim for a minimum of 99% uptime, with scheduled maintenance communicated in advance.
* **Data Backup:** Regular automated data backups must be performed to prevent data loss in case of system failures.
* **Usability:**
* **User Interface Design:** The application should have an intuitive, user-friendly interface with consistent navigation and a responsive design that works on various devices.
* **Accessibility:** The application must adhere to accessibility standards (e.g., WCAG) to ensure it is usable by individuals with disabilities.
* **Compatibility:**
* **Cross-Browser Compatibility:** The application should function correctly on popular web browsers, including Chrome, Firefox, Safari, and Edge.

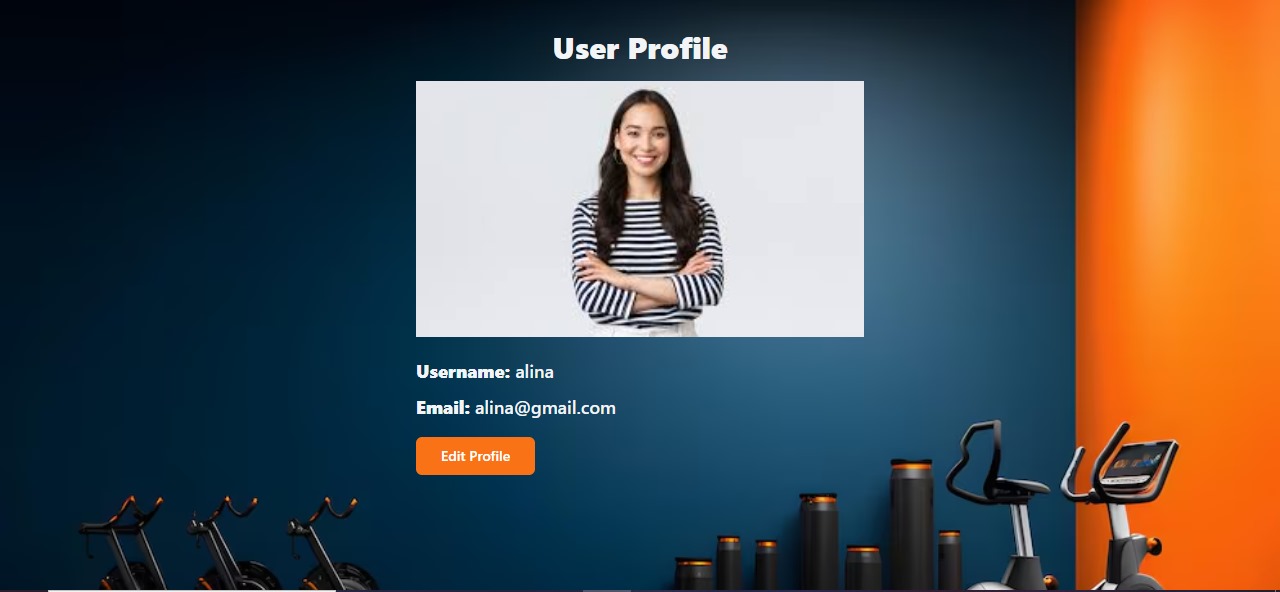
**OUR PROJECT IMAGES**

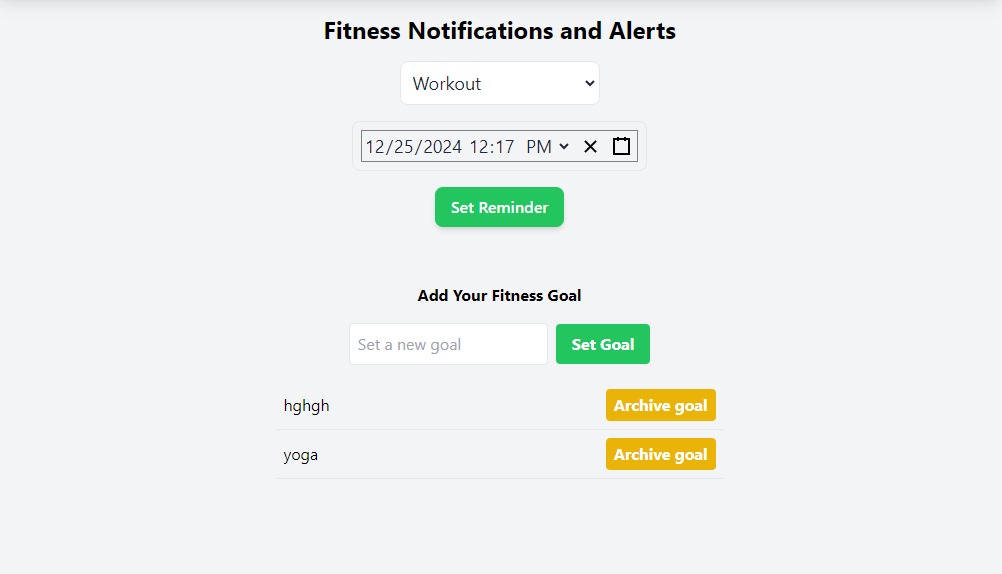
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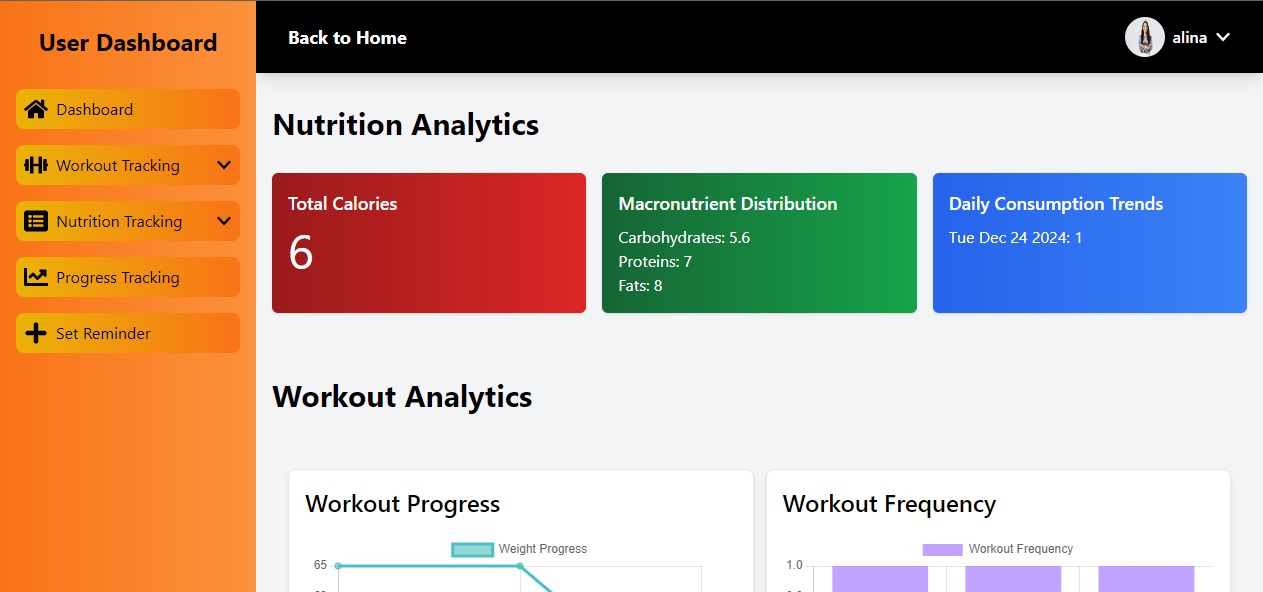


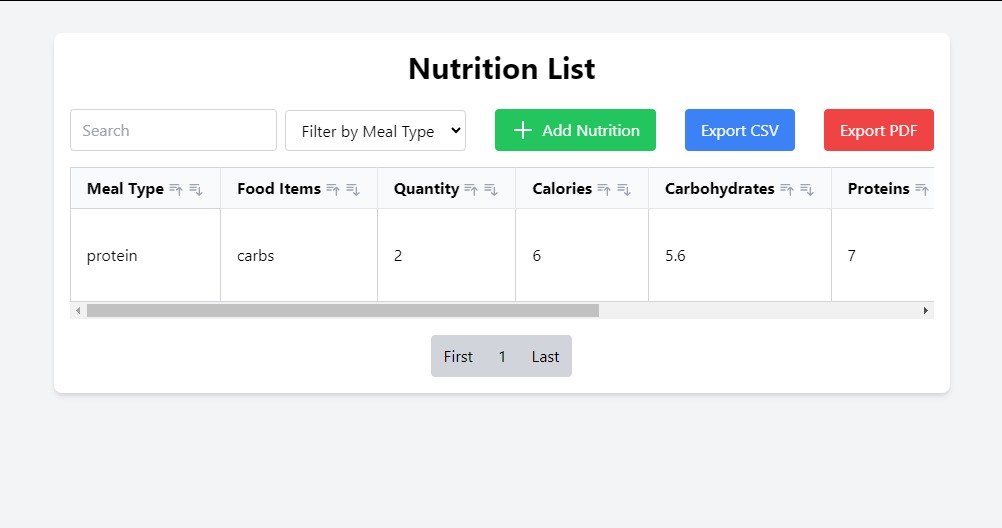
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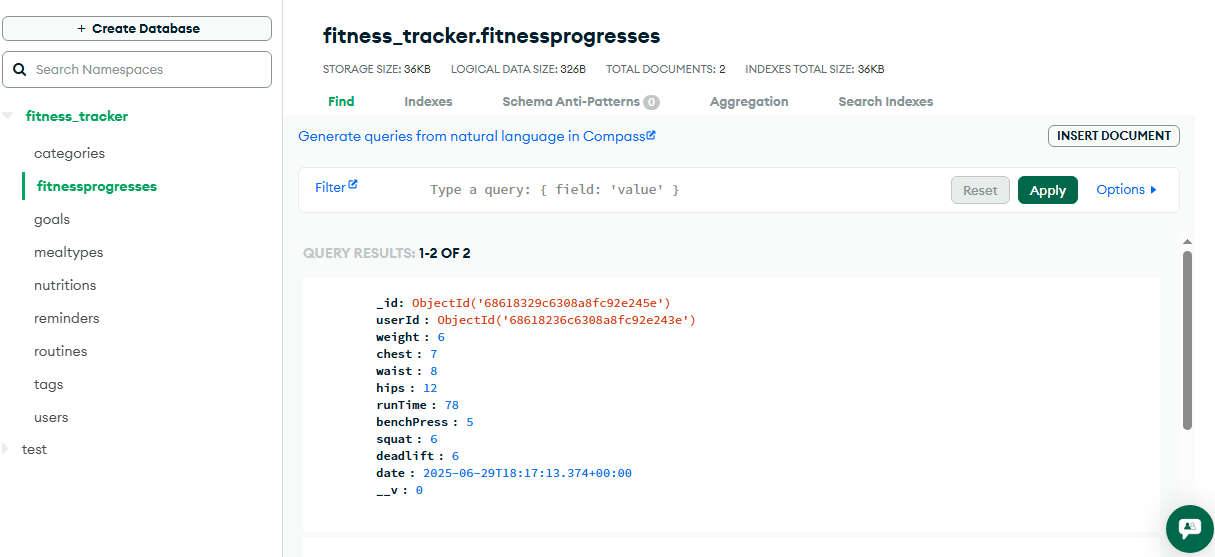
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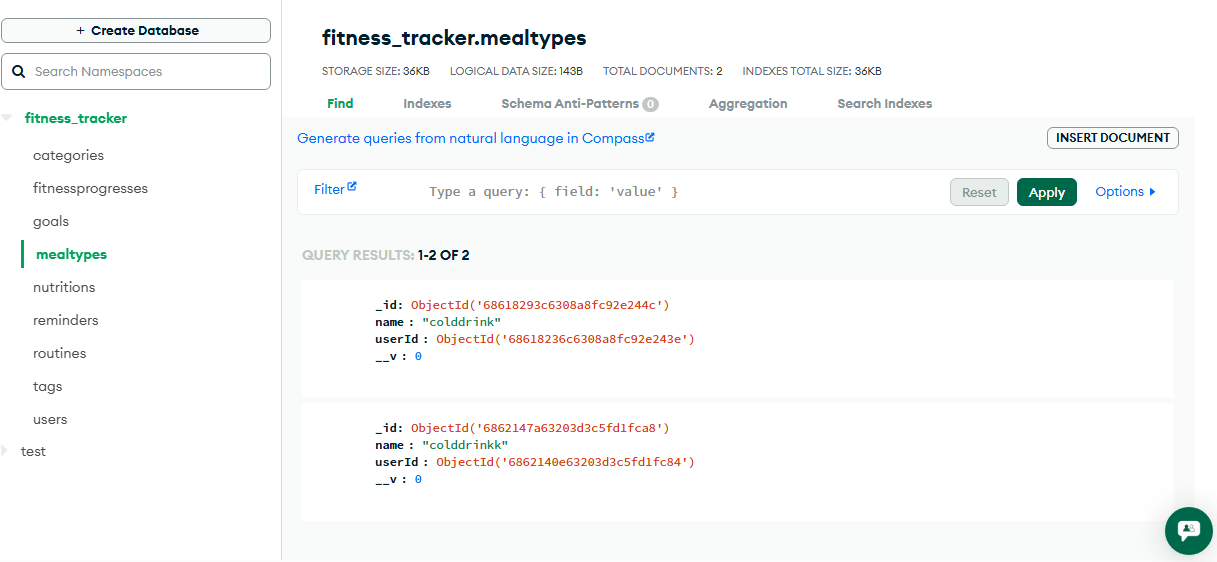
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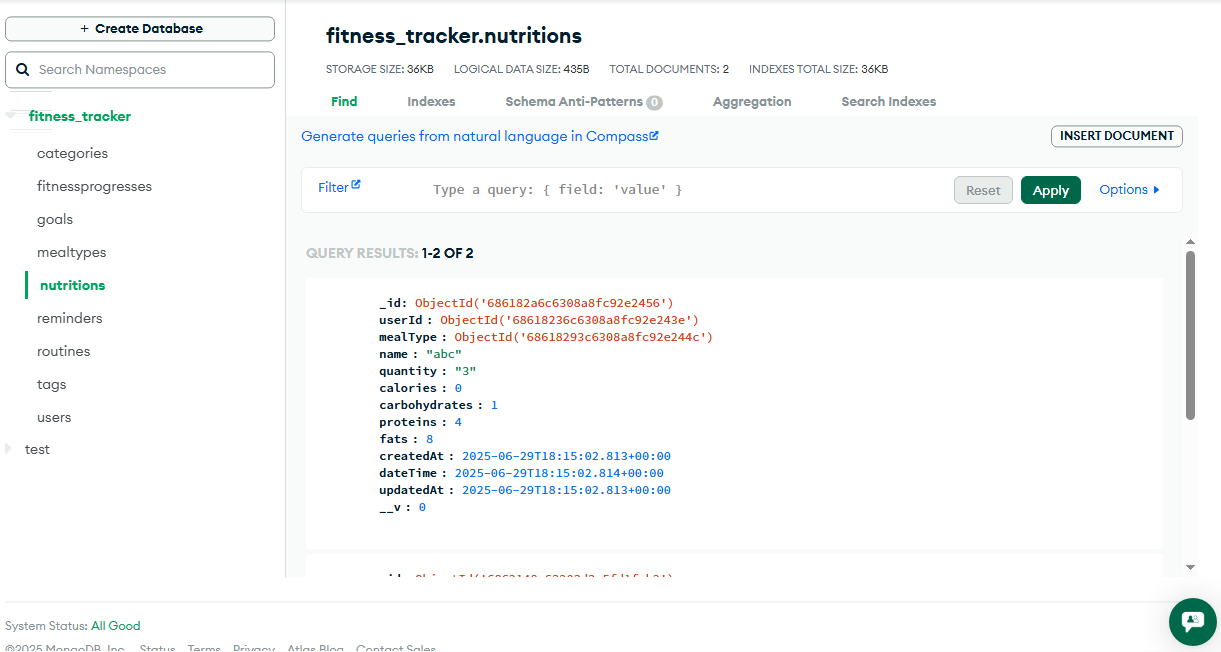
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