DESIGN OF AN ACTIVITY RECOGNITION SYSTEM FOR A WEIGHT TRAINING PERFORMANCE ASSESSMENT USING DEEP LEARNING

The project and its background represent the fundamental features explaining the initiative. It includes details that should be done in the project, the conditions of the project, and the way to provide the predicted quantity of effort. Furthermore, it covers such elements as the discussion with the clients and their demands, project goals, and the engineering design process which involves stages for the project's advancement.

Subject : CPE 025 - SOFTWARE DESIGN | Submit by : TEAM 29

APPLICATION FEATURES

UI/UX

- A visually appealing, minimalist design with intuitive navigation and personalized dashboards to enhance user experience.

Performance Tracking

- Tracks key fitness metrics, provides progress graphs, and offers goal-setting features to monitor and improve workout performance.

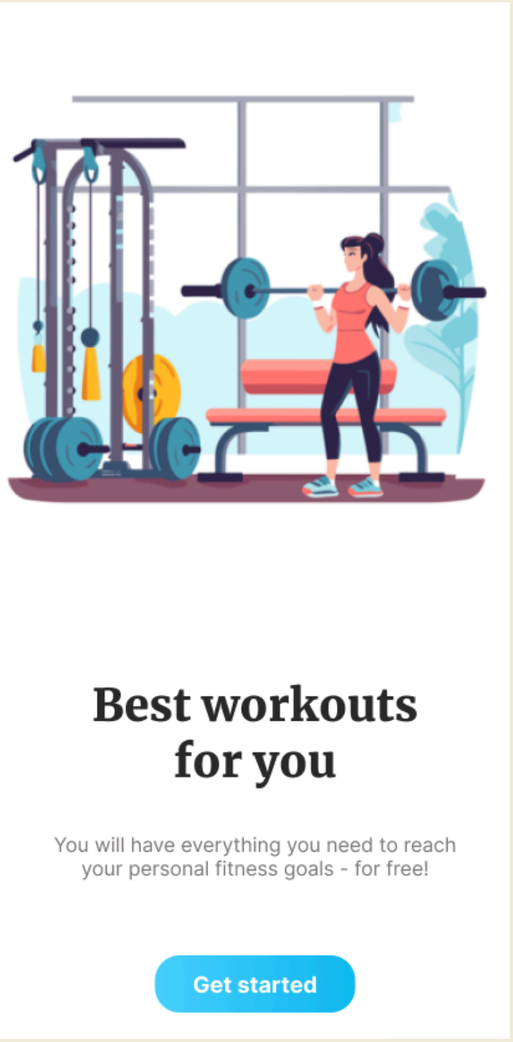
Workout Planner by Body Type

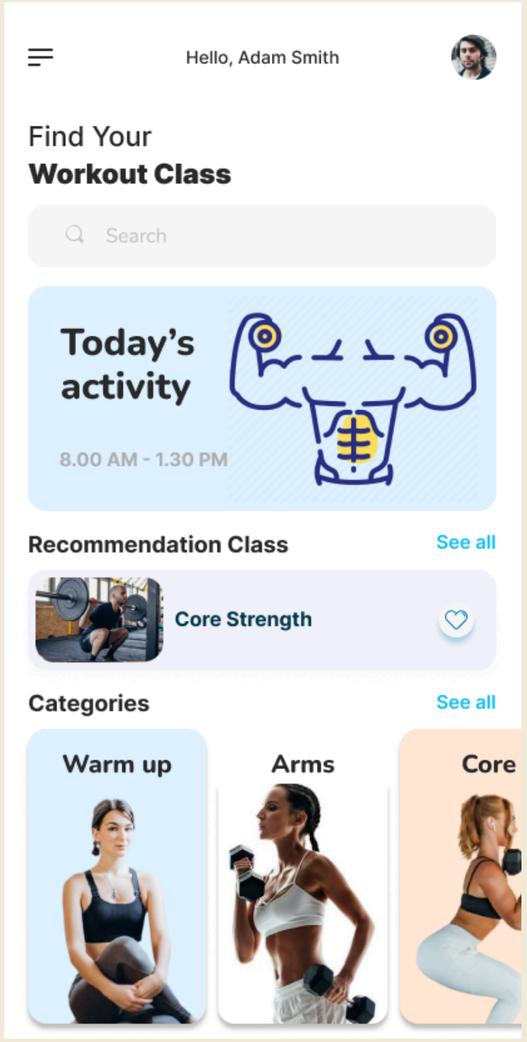
- Customizes workout plans based on body type and fitness goals, adapting over time to ensure continuous progress.

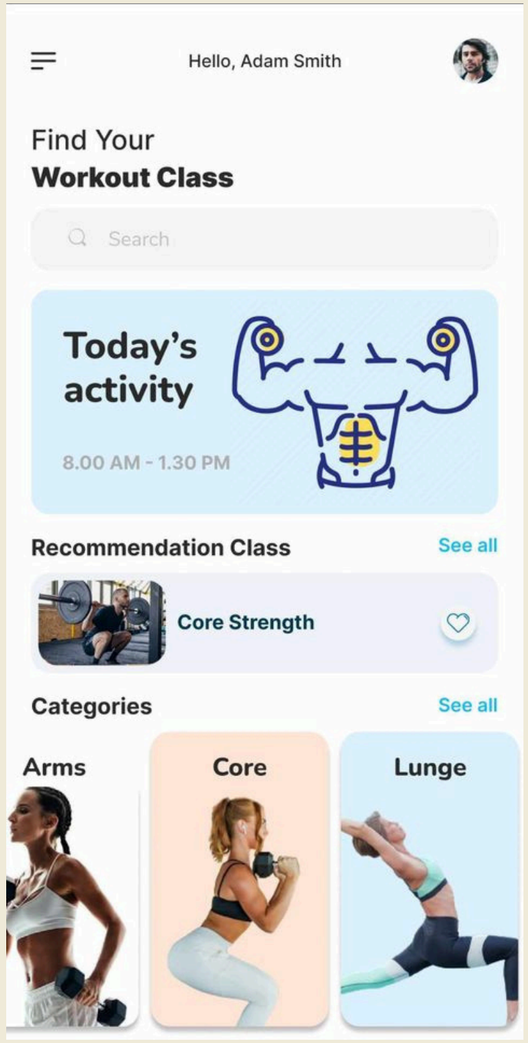
Connectivity to Hardware via QR Code

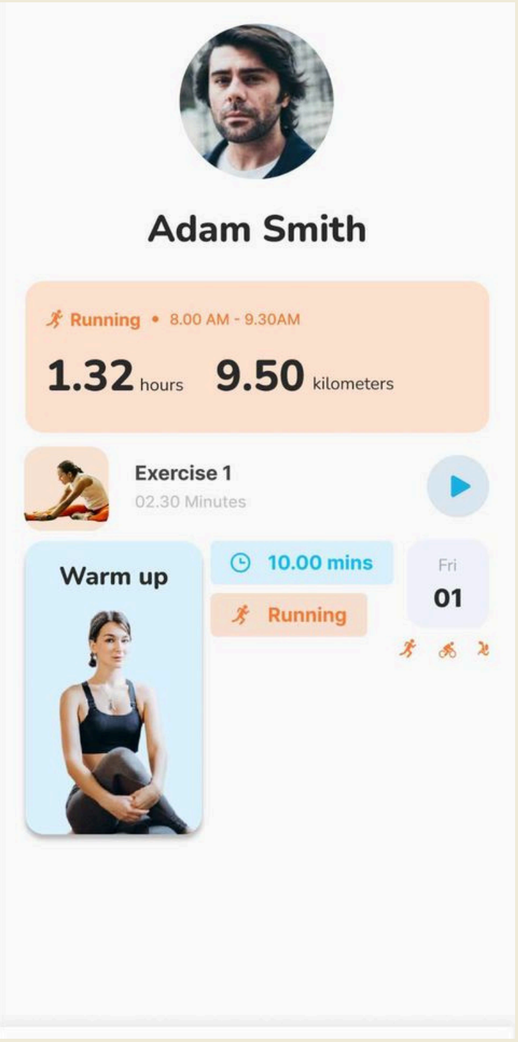
- Seamlessly integrates with fitness devices through QR code scanning, syncing real-time data for a more interactive workout experience.

DEMONSTRATION OF THE APPLICATION









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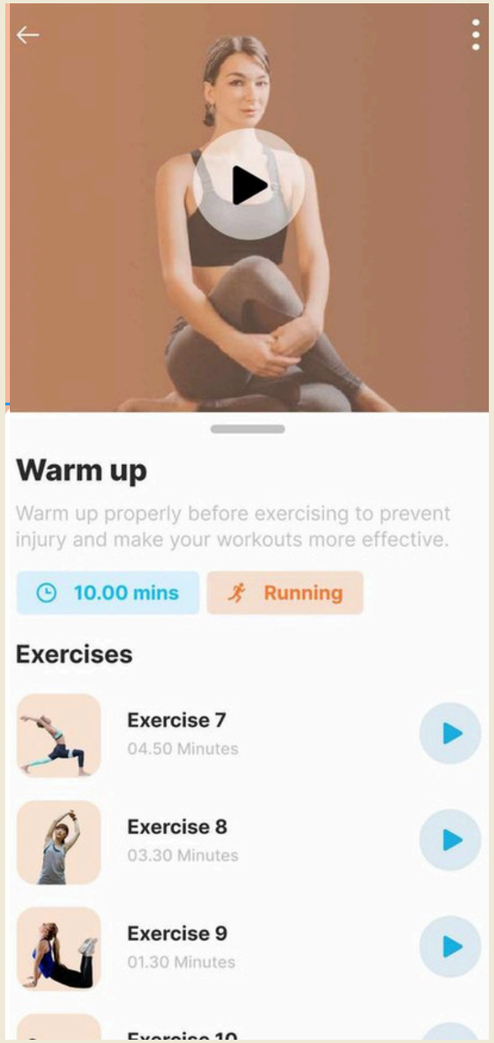

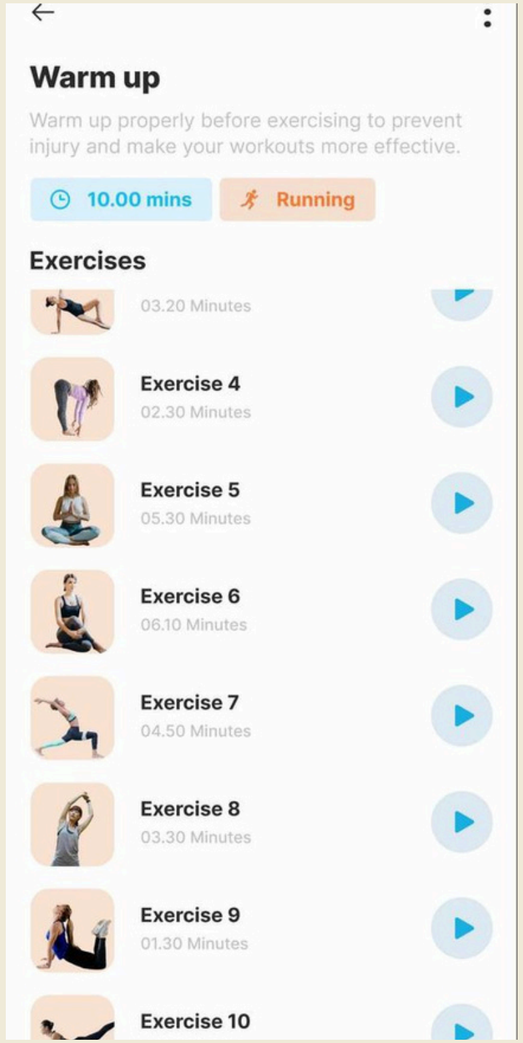

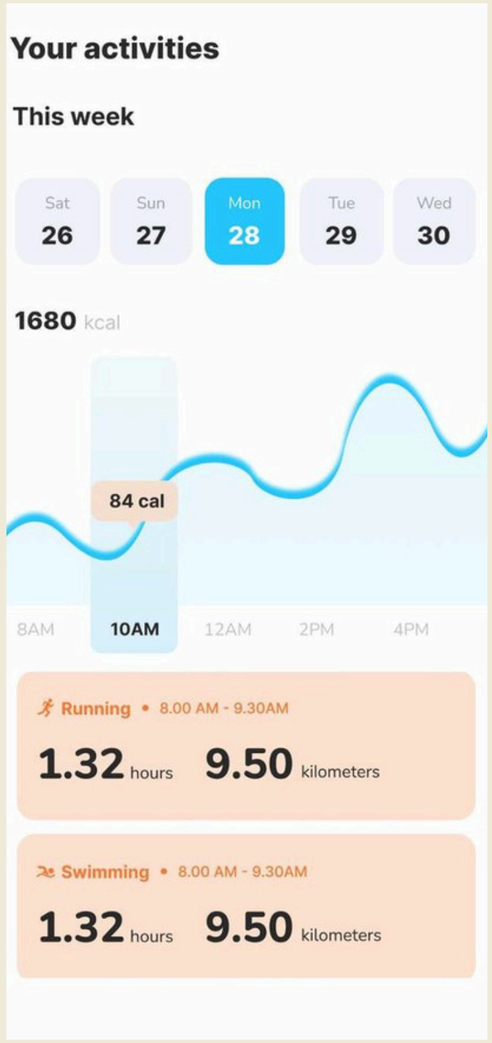

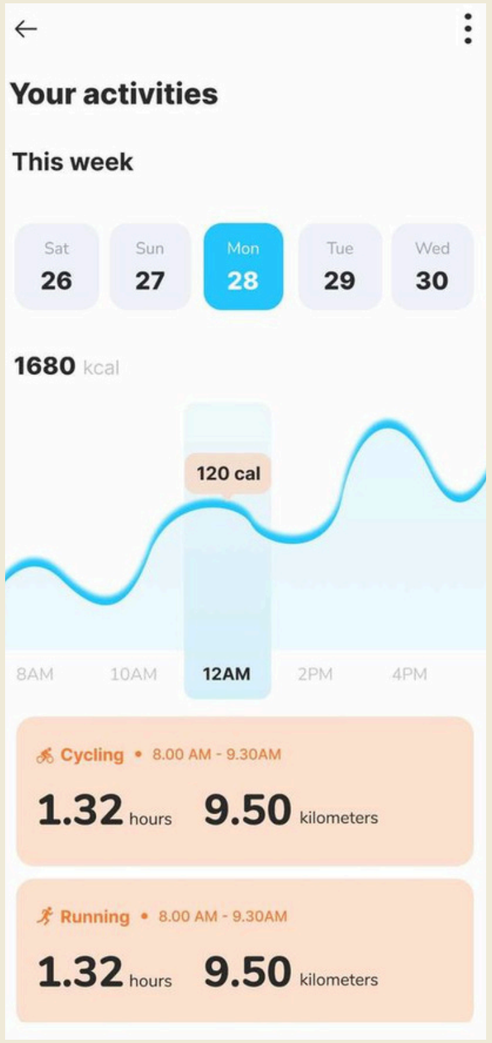

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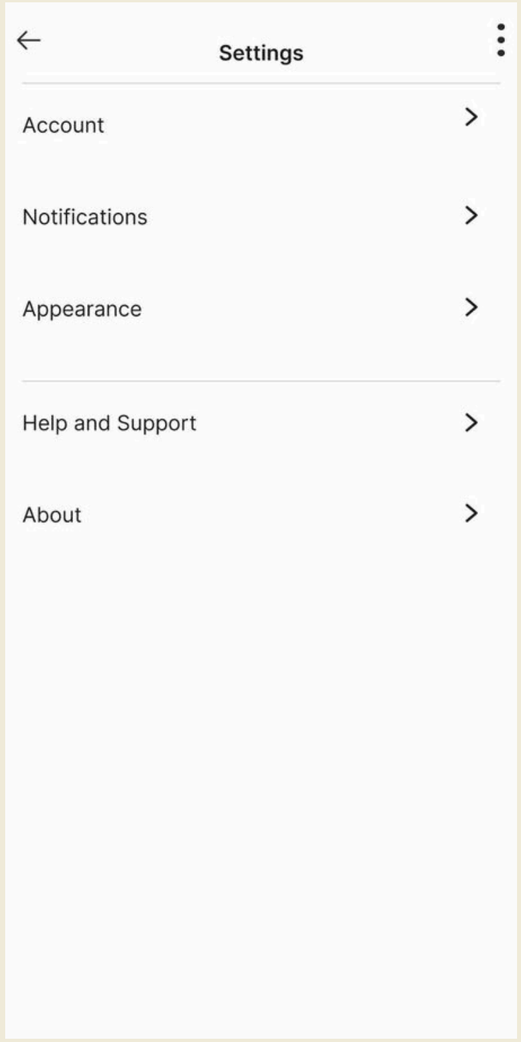

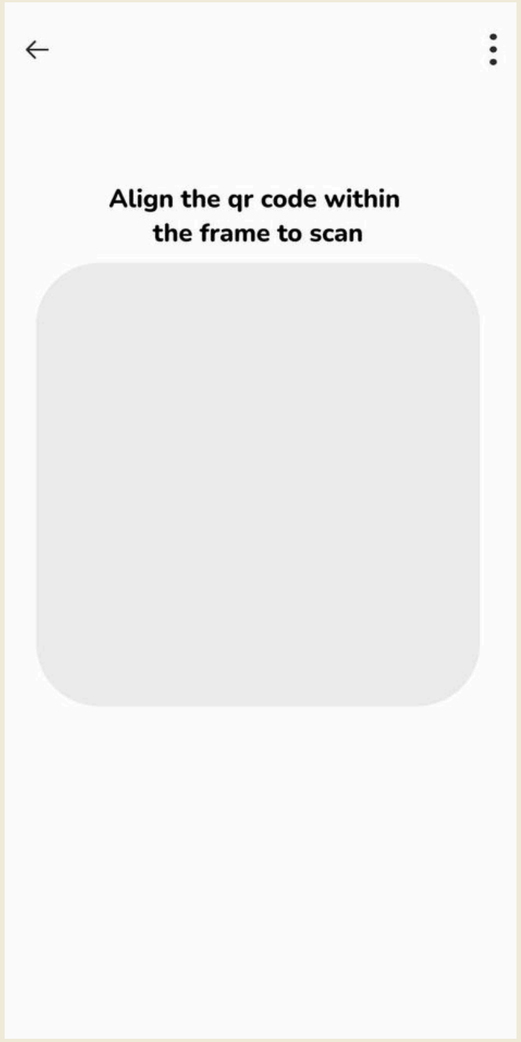

LIST OF FUTURE ENHANCEMENTS

Enhanced Personalization

- Allow users to tailor their workout plans not only by body type but also by specific goals

Login and Signup

- For personal usage.

REFLECTION POINTS

The issues we've faced are connecting different nodes to each function that represents an event in the application. The application is having a hard time computing resources as it records the user's mistakes. If the user makes a lot of errors during the execution of weight training the application begins to lag when showing the errors made as it generates a summary of errors. As for the solution, we are trying to reduce the data size of the inputs.