Fitly

A cross-platform fitness application that assists people in achieving their fitness goals through personalized recommendations and create a well-rounded fitness plan for their body type.

Project Abstract / Concept

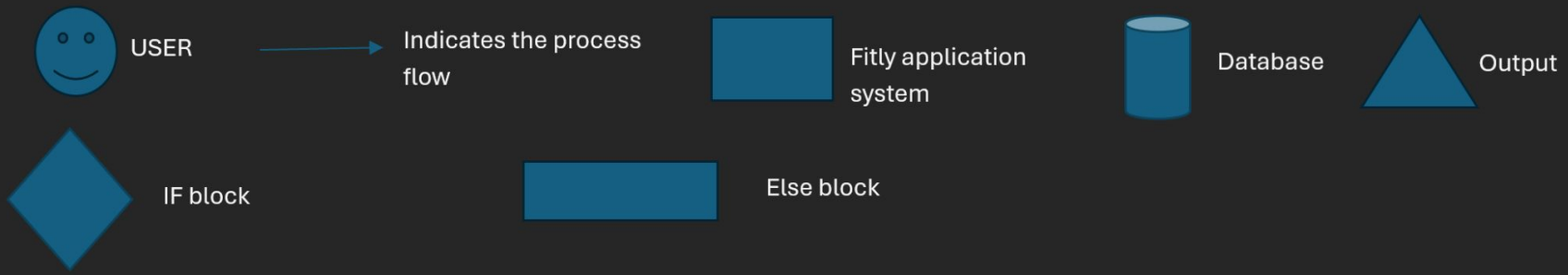
Fitly is an interactive application for personalized fitness and nutrition management. The application integrates key features like a BMI body visualization tool, a curated exercise tutorial library categorized by muscle groups, and a food database with nutritional values. Users can browse through a library of tutorials per muscle group, track their daily calorie intake through a macro tracking tool and log their exercises for the day. The main goal of this application is to ensure a seamless, intuitive experience that supports and motivates users in achieving their health and fitness goals by combining exercise guidance, nutritional insights, and progress tracking into one cohesive system.

User Stories

1. As a user, I can use the app to track my nutrition and macro breakdown accurately instead of doing it mentally.
2. As a user I don’t want to go through a dozen different videos to help me navigate the best tutorials to follow.
3. As a user, I want my data safe and protected.
4. As a user, it would be nice to visualize my body and see which exercises target certain body areas.

Design Diagrams

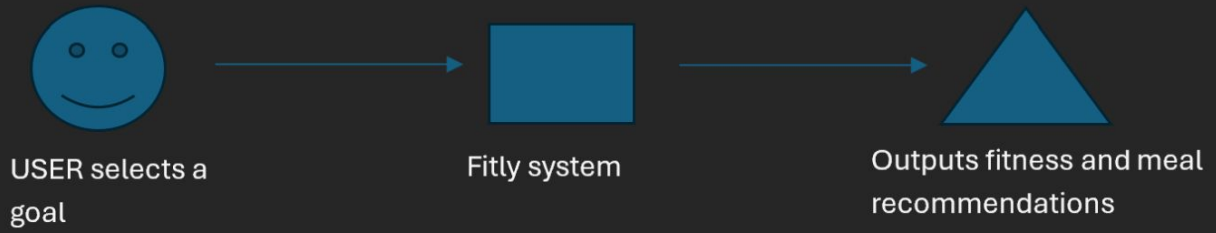
Symbols Overview:



High Level Design Diagram

Design D0: Highest-level view of project

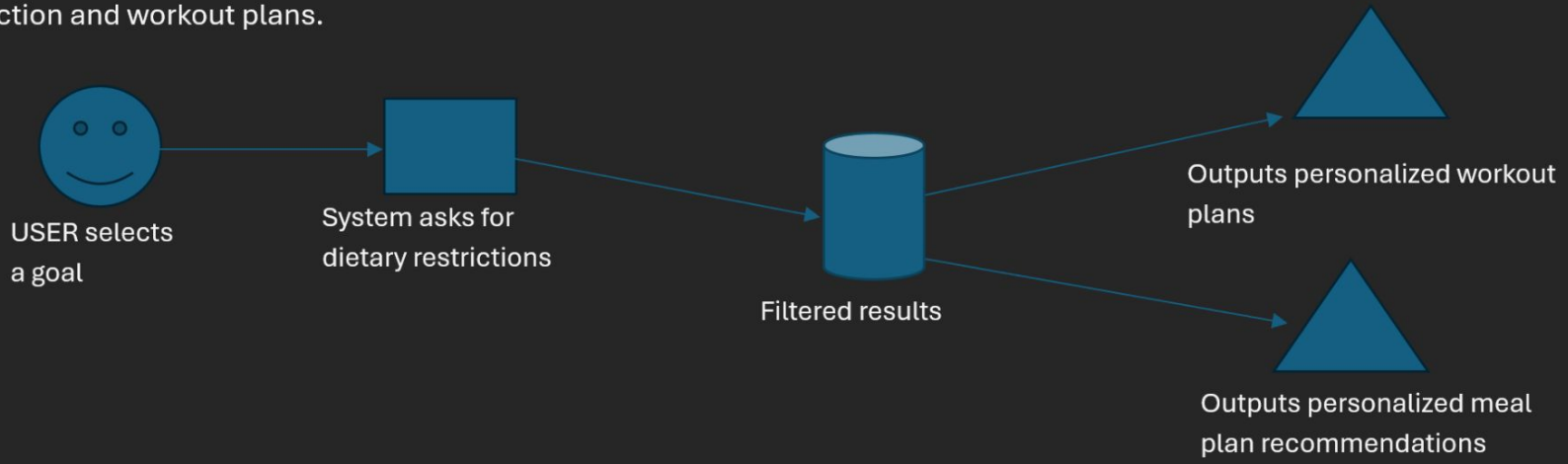
User would pick their body goals (lean build, lose fat, build muscle, etc.) from the home page and the system will give them workout and meal plan recommendations.



Mid-Level Design Diagram

Design D1

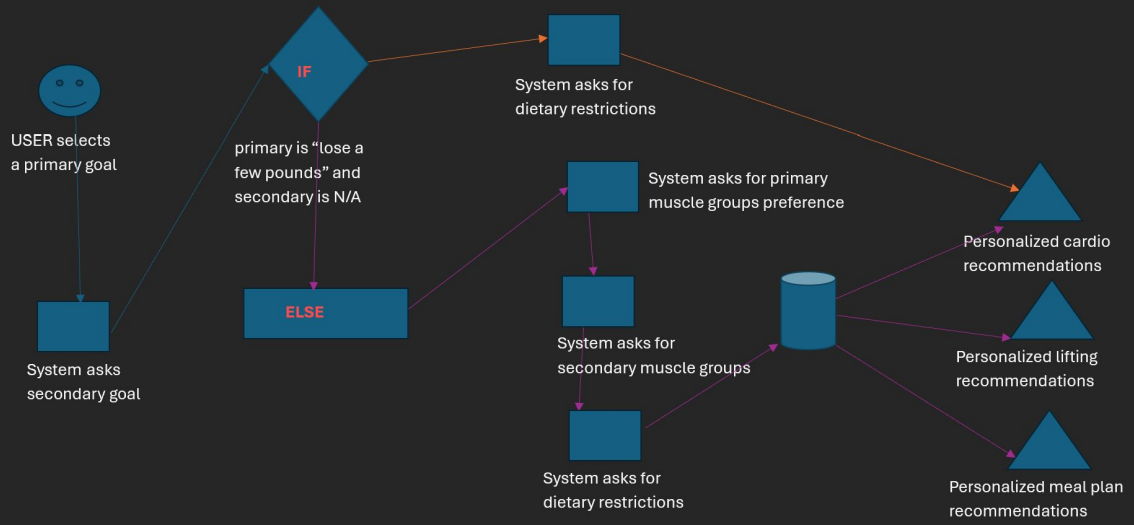
User would pick their body goals (lean build, lose fat, build muscle, etc.) from the home page and the system will ask for dietary restrictions (gluten free, etc) and then it'll output filtered results for meal plans catered to their dietary restriction and workout plans.



Low-Level Design Diagram

Design D2:

User would pick their body goals (lean build, lose fat, build muscle, etc.) from the home page and the system will ask them for secondary goals because most users would want to lose fat and build muscle so the dietary plans and workout plans would need to cater for both. Then the system takes in dietary restrictions (gluten free, etc), primary and secondary muscle groups the workouts should target the most and then it'll output filtered results for meal plans catered to their dietary restriction and workout plans based on their goals and muscle groups they chose to be targeted as well as cardio recommendations too. If the user's primary goal was to lose a few pounds, then it'll output cardio recommendations only.



Project Constraints

- Economic – Budgets to host a fully functioning application
- Legal – The content I have in my application, copyright
- Security – Possible bugs, spyware and hacks in my code

Project Progress

Timeline

Task	Start Date	End Date	Actual Start	Actual End	Associated Milestone
Conduct interviews to understand user needs	9/1/25	10/10/25	9/15/25	10/15/25	**M1**
Find relevant content for exercises and curate it	10/12/25	10/12/25	10/20/25	11/10/25	**M3**
Find databases with food and its macros	10/15/25	10/25/25	11/12/25	11/30/25	**M4**
Document user personas and requirements	10/27/25	11/12/25	12/1/25	12/12/25	**M1**
Sketch a rough outline of the web app	11/13/25	11/20/25	12/15/25	12/30/25	**M2**
Create a style guide	11/20/25	11/24/25	12/19/25	12/30/25	**M2**
Create a database for the curated content	11/26/25	12/15/25	1/10/26	1/12/26	**M3**
Installation / Web App Setup	12/17/25	1/10/26	1/14/26	1/20/26	**M2**
Implement the nav bar components	1/12/26	1/26/26	1/21/26	2/10/26	**M2**
Get the API for the BMI body outline component	1/28/26	2/20/26	2/15/26	4/20/26	**M2**
Build home page layout with the BMI outline and navbar	2/23/26	3/18/26	2/15/26	4/30/26	**M2**
Build macro tracker	3/18/26	3/30/26	3/1/26	4/30/26	**M5**
Enable seamless calculations	4/13/26	4/23/26	3/1/26	4/30/26	**M5**

Currently, I'm at task 2. I am going through and manually creating a list of tutorials for exercises in each muscle group.Hopefully by the end of November, I will have a complete list of content I want to include in my application and a functioning database.

Expected Accomplishments

Timeline

Task	Start Date	End Date	Actual Start	Actual End	Associated Milestone
Conduct interviews to understand user needs	9/1/25	10/10/25	9/15/25	10/15/25	**M1**
Find relevant content for exercises and curate it	10/12/25	10/12/25	10/20/25	11/10/25	**M3**
Find databases with food and its macros	10/15/25	10/25/25	11/12/25	11/30/25	**M4**
Document user personas and requirements	10/27/25	11/12/25	12/1/25	12/12/25	**M1**
Sketch a rough outline of the web app	11/13/25	11/20/25	12/15/25	12/30/25	**M2**
Create a style guide	11/20/25	11/24/25	12/19/25	12/30/25	**M2**
Create a database for the curated content	11/26/25	12/15/25	1/10/26	1/12/26	**M3**
Installation / Web App Setup	12/17/25	1/10/26	1/14/26	1/20/26	**M2**
Implement the nav bar components	1/12/26	1/26/26	1/21/26	2/10/26	**M2**
Get the API for the BMI body outline component	1/28/26	2/20/26	2/15/26	4/20/26	**M2**
Build home page layout with the BMI outline and navbar	2/23/26	3/18/26	2/15/26	4/30/26	**M2**
Build macro tracker	3/18/26	3/30/26	3/1/26	4/30/26	**M5**
Enable seamless calculations	4/13/26	4/23/26	3/1/26	4/30/26	**M5**

By the end of the year, web setup should be done. Complete application by the time CEAS Expo comes around.

Division of Work

Effort Matrix

Task	Effort	Team member
Conduct interviews to understand user needs	100%	Maanya
Find relevant content for exercises and curate it	100%	Maanya
Find databases with food and its macros	100%	Maanya
Document user personas and requirements	100%	Maanya
Sketch a rough outline of the web app	100%	Maanya
Create a style guide	100%	Maanya
Create a database for the curated content	100%	Maanya
Installation / Web App Setup	100%	Maanya
Implement the nav bar components	100%	Maanya
Get the API for the BMI body outline component	100%	Maanya
Build home page layout with the BMI outline and navbar	100%	Maanya
Build macro tracker	100%	Maanya
Connect front end components to backend database	100%	Maanya
Enable seamless calculations	100%	Maanya

Expected Demo

The final product should be a functional, interactive application that users at the expo can interact with. Users can input their body metrics to generate a personalized body silhouette and find exercises targeting the specific body area. They should be able to browse exercise tutorials categorized by muscle group and log exercises to track and monitor which muscle groups have been targeted. Users can also search for food items (at least common ones like bread, cheese, milk) and view macros for it through a built-in database.

Contact Info

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Advisor

Jillian Aurisano

Presentation Video

https://www.loom.com/share/107e6c143f7644b19e7e01a356e2da47