

FINAL YEAR PROJECT PROPOSAL



Smart AI Gym Coach – “no Trainer”

(Gym trainer replacement with Wizard UI interface and AI features)

Project Advisor:

Sir Taib Ali

Submitted By

Ahmed Jahenzaib B-26802

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University of South Asia

Department of Computer Science

Project Title

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(Gym trainer replacement with Wizard UI interface and AI features)

Student ID

Name: Ahmed Jahenzaib B-26802
Reg Id: FYP25S-22S-26802
Session: 2021-2025
Phone: +923324641368
Email: ahmed.jahenzaib123@gmail.com

Project Background

Women often face barriers to joining a gym, including limited schedules that don't accommodate their needs. Most people also lack interactive workout guidance, and hiring a trainer can be too expensive. As a result, many end up doing the wrong exercises or using poor form, leading to frustration and risk of injury.

People often don't know:

- Which exercises target specific muscles?
- Don't have the right equipment
- Or just get lost in random fitness videos

Problem Statement / Project Source

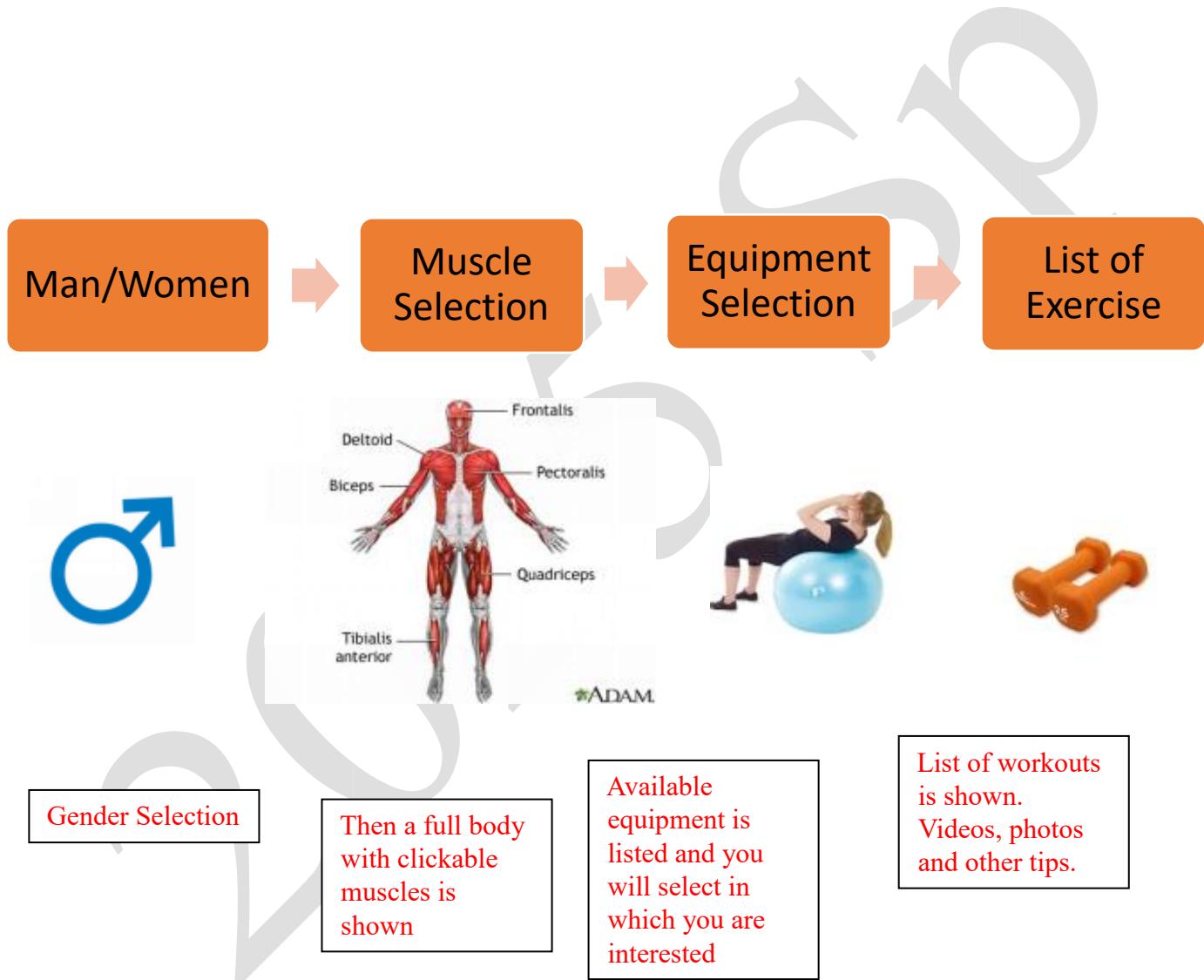
noTrainer fixes this by automatically giving you exercises based on the muscle group you pick and the equipment you have. This saves time, reduces confusion, and helps prevent injuries by showing proper form. Even if you know the right exercise for the right muscle, there are high chances that your pose will not be the correct one, wasting all the efforts. Our app provides all the angles for the workouts, making sure you stress the right muscles at the right spot. Other apps available are either too complex or their UI is dull, so we will use a wizard to collect information and then suggest workouts according to the taste of the user.

Project Description

noTrainer will be a web app that will help people work out without needing a personal trainer. You simply pick which muscle group you want to train, choose the equipment you have (or no equipment at all), and then get a list of exercises. Each exercise comes with demo images and written instructions. The main goal is to make exercising easy, accessible, and effective for everyone. The app also offers health calculators.

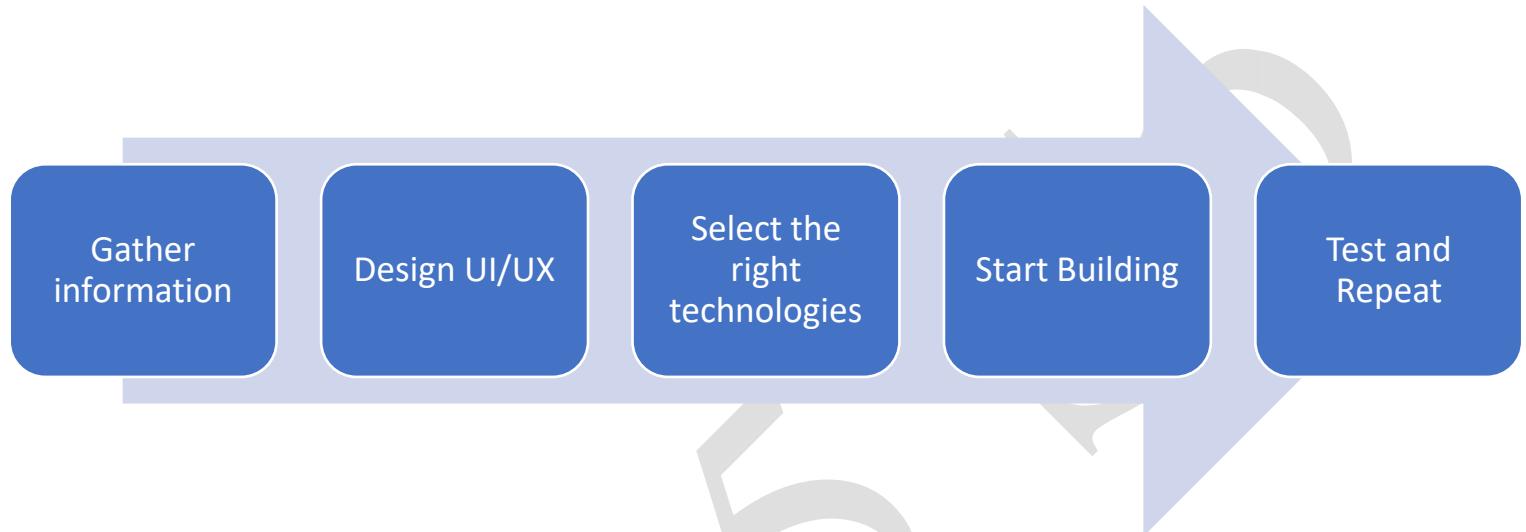
Wizard UI (Key Highlight)

A main highlight of noTrainer is its step-by-step wizard. First, you pick the muscle you want to focus on. Then, you select the equipment you have (dumbbells, belts, balls, or no equipment for bodyweight exercises). Finally, you get a list of exercises with short tutorial videos and clear instructions. This wizard makes it easy for anyone to find the right workouts



Project Methodology:

We will use an Agile development approach. We will build the app in small parts, get feedback, and quickly make improvements. We will build a feature and see if it works. Once it is set, we will move on to the next. Our approach would be dynamic

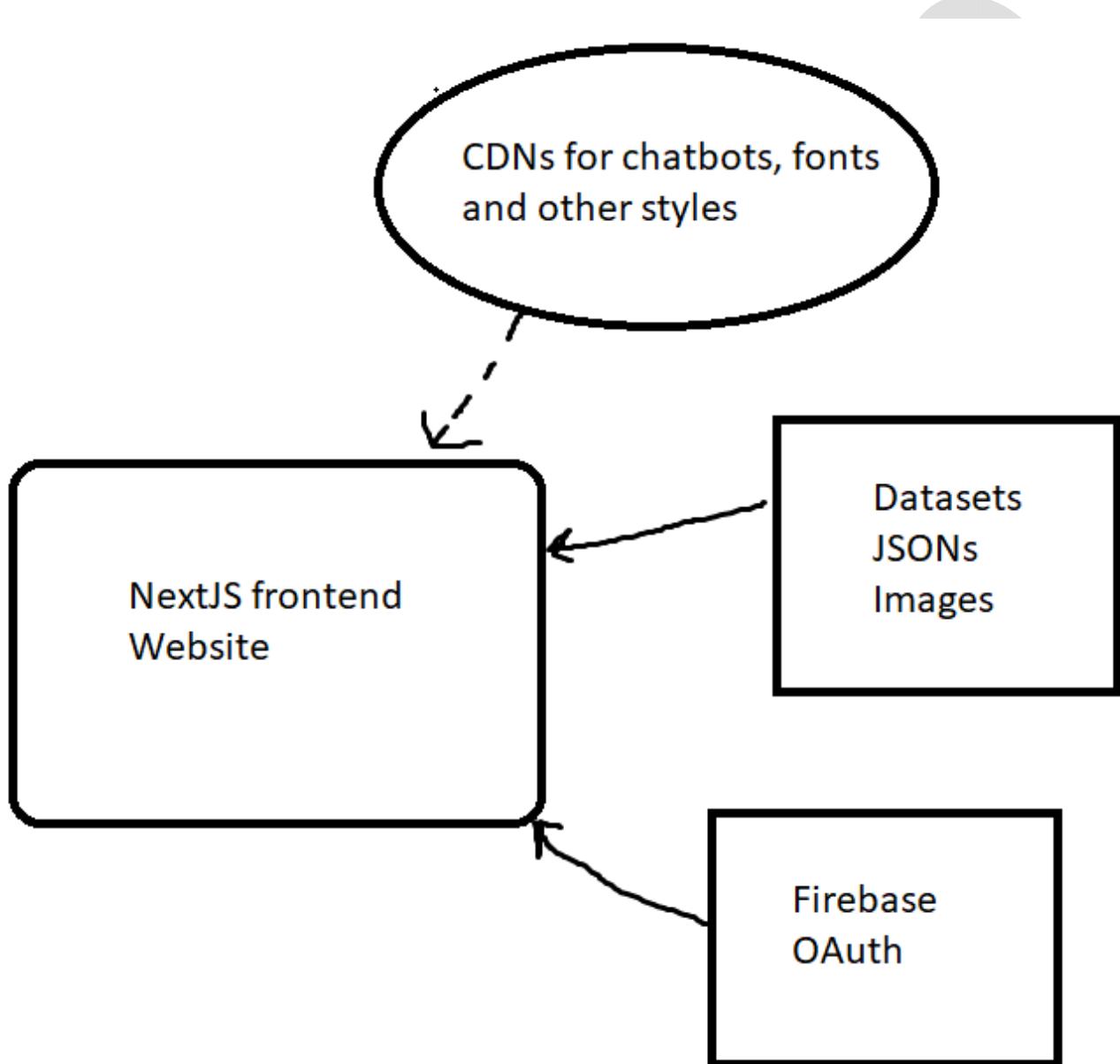


Product Scope:

- Muscle Selection: Click or tap a muscle on a digital body diagram.
- AI chatbot: To answer your queries
- Equipment Filtering: Choose which equipment you have (or select bodyweight only).
- Correct Guidance: Proper posture and sequence of workouts
- Demo Images: Images showing the correct way to do each exercise.
- Daily motivational quotes: To keep you pumped
- Written Instructions: Clear text for key steps and safety tips.
- BMI Calculator: Quick tool to estimate body mass index.
- Other Health Calculators: Calorie count and other useful stats.
- Custom Plans: Create or get suggested workout routines.

System Architecture Diagram

The architecture of the Smart AI Gym Coach is simple. The user opens the website and selects workout using an easy step-by-step interface. The website filters the workouts from the JSON dataset. If the user asks a question, the chatbot made using Botpress responds with help. The chatbot works through the CDN, which connects everything together.



Platform & Technologies

Front-End:

- React for Web App
- Next.JS
- 21st.dev Components

Data:

- Exercise DB dataset (JSON files + Images)

Chatbot:

- Botpress CDN

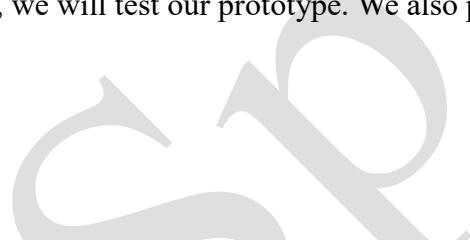
Tools/Tech:

- VS Code as IDE
- Online AI dev tools
- YouTube for workout reference
- Neobrutalism CSS
- Photopea Editor
- SVGs

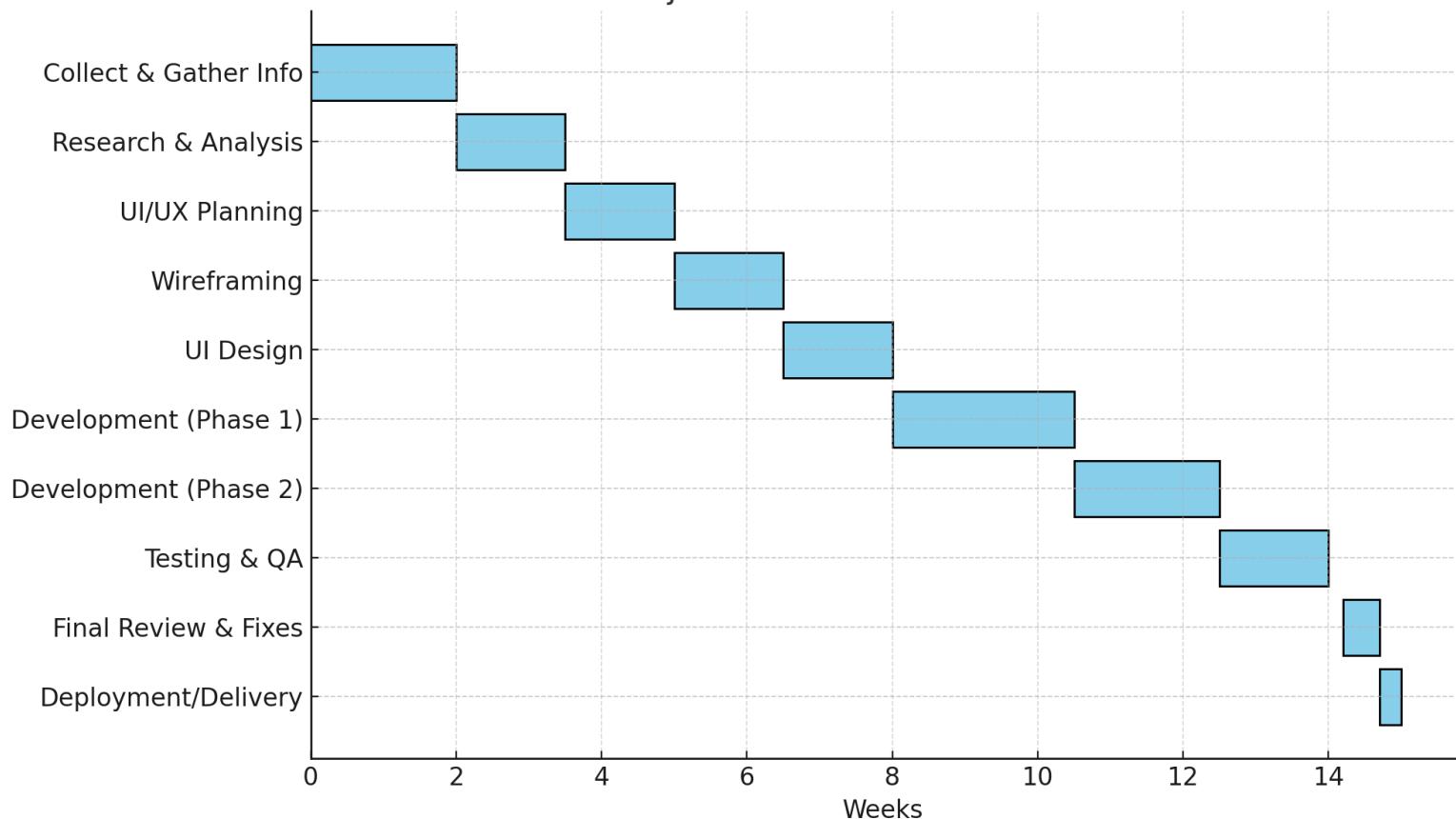
*We will be adding more tools and features along the way. Continuously improving over the revisions, as we keep on exploring.

Gantt Chart:

We will primarily focus more on information gathering in the start. We need to visit gyms and people who are experienced in this gym and body fitness field. We will make notes and then organize the data collected. Then we will work on creating the flow of our website. We will design different screens and take special care about the ease of use and make sure we create a beautiful design. We will then start to work on the development phase. This will be the most time taking and challenging. We will be working on react and other backend technologies for the first time and it will be a difficult learning curve for us. Finally, we will test our prototype. We also plan to keep coming back to review and add new features.



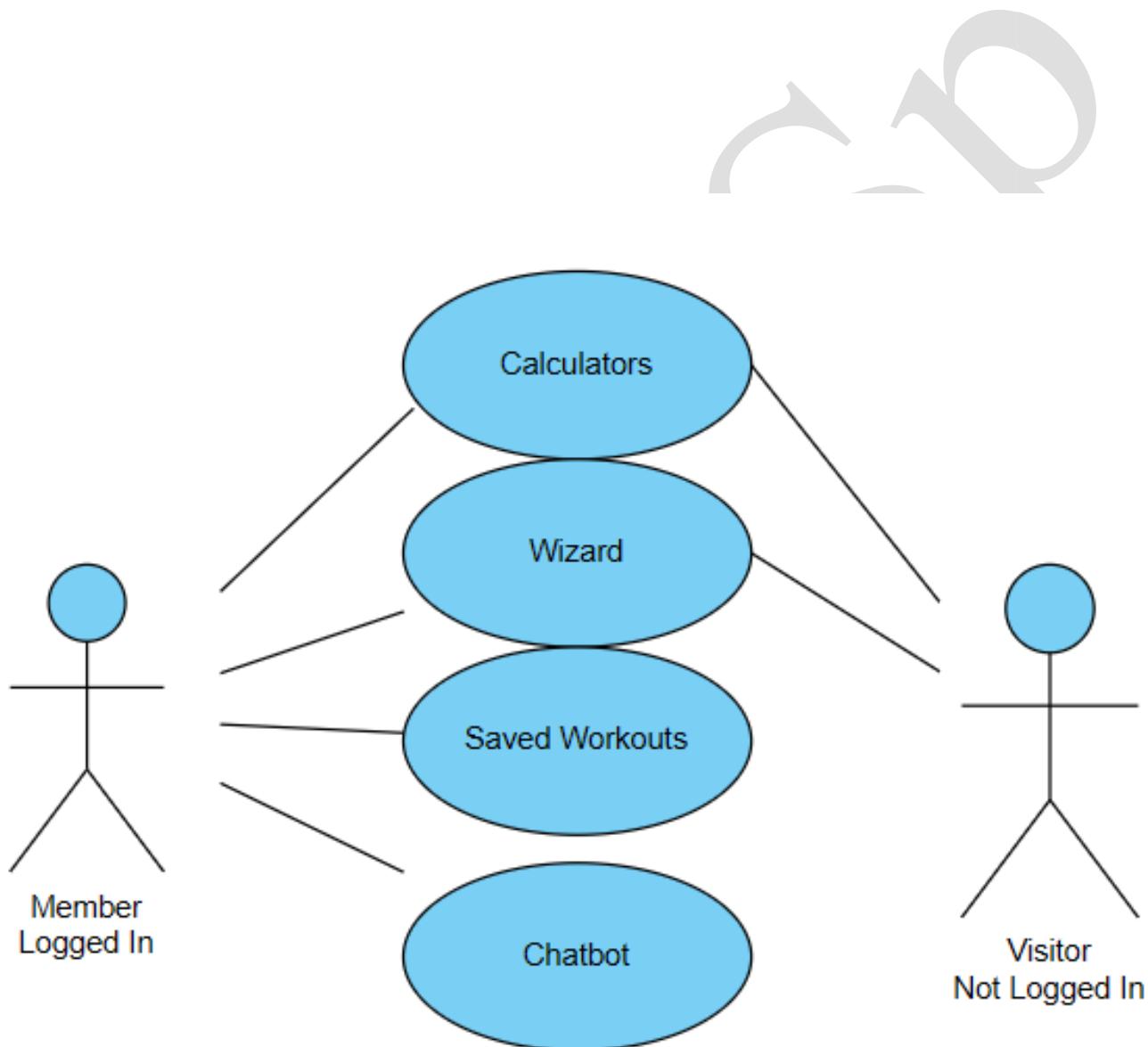
Project Gantt Chart



Use Case Diagram

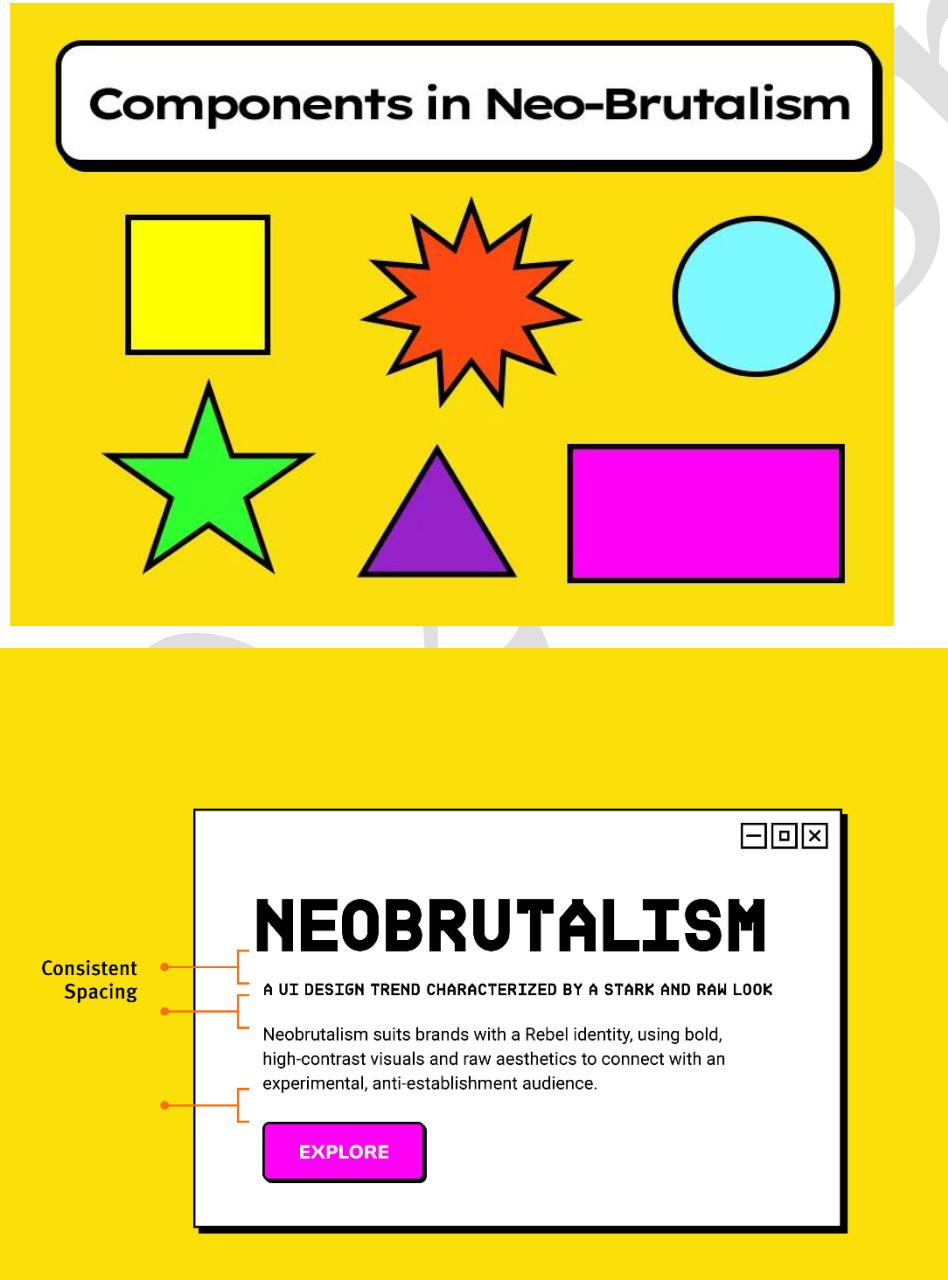
The diagram shows how Members (logged-in users) and Visitors (not logged-in users) interact with system features.

Members can access all features, while Visitors have limited access. The main features are Calculators, Wizard, Saved Workouts, and Chatbot. Calculators and Wizard are available to both user types. Saved Workouts and Chatbot are only available to Members.



Design Aesthetics – NeoBrutalism Core

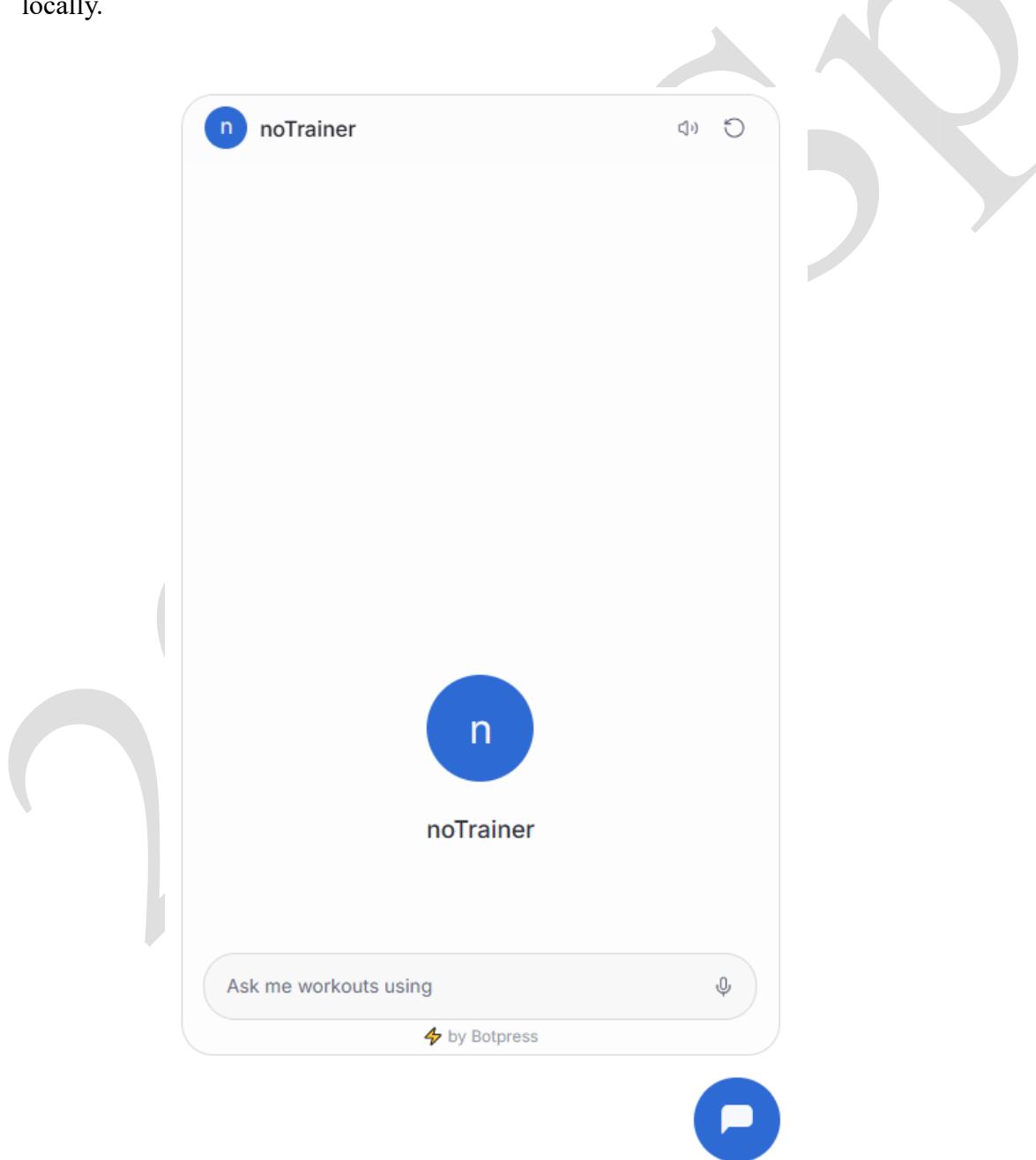
We spent a lot of time thinking on how we can make the website visually appealing. We observed different styles and design cores that existed. Out of many we selected Neobrutalism design. Neobrutalism is a design style that focuses on bold, raw, and unapologetic visuals. It uses simple, harsh shapes, bright colors, and unpolished, rough textures. It's like brutalism in architecture applied to digital design, where functionality and a bit of "ugliness" are embraced over polished aesthetics. It's minimalist, unrefined, and edgy, with a focus on raw, honest design. Here are some examples:



Chatbot Via CDN - Botpress

We are using a third-party service called Botpress for our chatbot. We trained the agent by uploading our dataset and added some custom instructions to tell it how to behave. We can embed this bot in our website by simply just putting a CDN link in our head tag. The bot will appear as a flying widget on each of our page. The bot can also be linked to WhatsApp, Facebook messenger and other supported chat services.

CDNs are content delivery networks and allow us to use the chatbot without setting up anything locally.



This is how our knowledge base looks like. We uploaded the json file to act as a lookup reference for the chatbot. The table contains names, force, level and other relavent fields required to function properly.

#	Created At	Updated At	name	force	level	mechanic	equipment	primaryMuscles	secondaryMuscles	instructions
1	10/26/2025, 4:11PM	10/26/2025, 4:11PM	3/4 Sit-Up	pull	beginner	compound	body only	["abdominals"]	[]	["Lie down on the machine"]
2	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Ab Crunch Machine	pull	intermediate	isolation	machine	["abdominals"]	[]	["Select a light weight"]
3	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Ab Roller	pull	intermediate	compound	other	["abdominals"]	["shoulders"]	["Hold the Ab Roller"]
4	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Adductor	static	intermediate	isolation	foam oil	["adductors"]	[]	["Lie face down with legs bent at the knees"]
5	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Advanced Kettlebell ...	push	intermediate	isolation	kettlebells	["abdominals"]	["glutes", "hamstrings"]	["Clean and press"]
6	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Air Bike	pull	beginner	compound	body only	["abdominals"]	[]	["Lie flat on the floor"]
7	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Alternate Hammer Curl	pull	beginner	isolation	dumbbell	["biceps"]	["forearms"]	["Stand up with your feet shoulder-width apart"]
8	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Alternate Heel Touch...	pull	beginner	isolation	body only	["abdominals"]	[]	["Lie on the floor"]
9	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Alternate Incline Dum...	pull	beginner	isolation	dumbbell	["biceps"]	["forearms"]	["Sit down on an incline bench"]
10	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Alternating Cable Sh...	push	beginner	compound	cable	["shoulders"]	["triceps"]	["Move the cables back and forth"]
11	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Alternating Deltoid R...	push	beginner	isolation	dumbbell	["shoulders"]	[]	["In a standing position"]
12	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Alternating Front Press	push	beginner	compound	kettlebells	["chest"]	["abdominals", "shoulders"]	["Lie on the floor and hold a kettlebell in each hand"]
13	10/26/2025, 4:11PM	10/26/2025, 4:11PM	Alternating Hang Clean	pull	intermediate	compound	kettlebells	["hamstrings"]	["biceps", "calves"]	["Place two kettlebells on the floor and lie on your back holding one in each hand"]

< 1 of 15 >

Dataset Schema

Column	Possible Values
id	Any string: ^[0-9a-zA-Z_-]+\$
name	Any string (e.g., "Push-Up", "Squat")
force	null, "static", "pull", "push"
level	"beginner", "intermediate", "expert"
mechanic	null, "isolation", "compound"
equipment	null, "medicine ball", "dumbbell", "body only", "bands", "kettlebells", "foam roll", "cable", "machine", "barbell", "exercise ball", "e-z curl bar", "other"
primaryMuscles	"abdominals", "abductors", "adductors", "biceps", "calves", "chest", "forearms", "glutes", "hamstrings", "lats", "lower back", "middle back", "neck", "quadriceps", "shoulders", "traps", "triceps"
secondaryMuscles	Same as primaryMuscles
instructions	Array of strings (e.g., "Keep your back straight")
category	"powerlifting", "strength", "stretching", "cardio", "olympic weightlifting", "strongman", "plyometrics"
images	Array of strings (URLs for images)