

FINAL YEAR PROJECT PROPOSAL



Smart AI Gym Coach – “noTrainer”
(Gym trainer replacement with Wizard UI interface and AI features)

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Project Title

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

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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

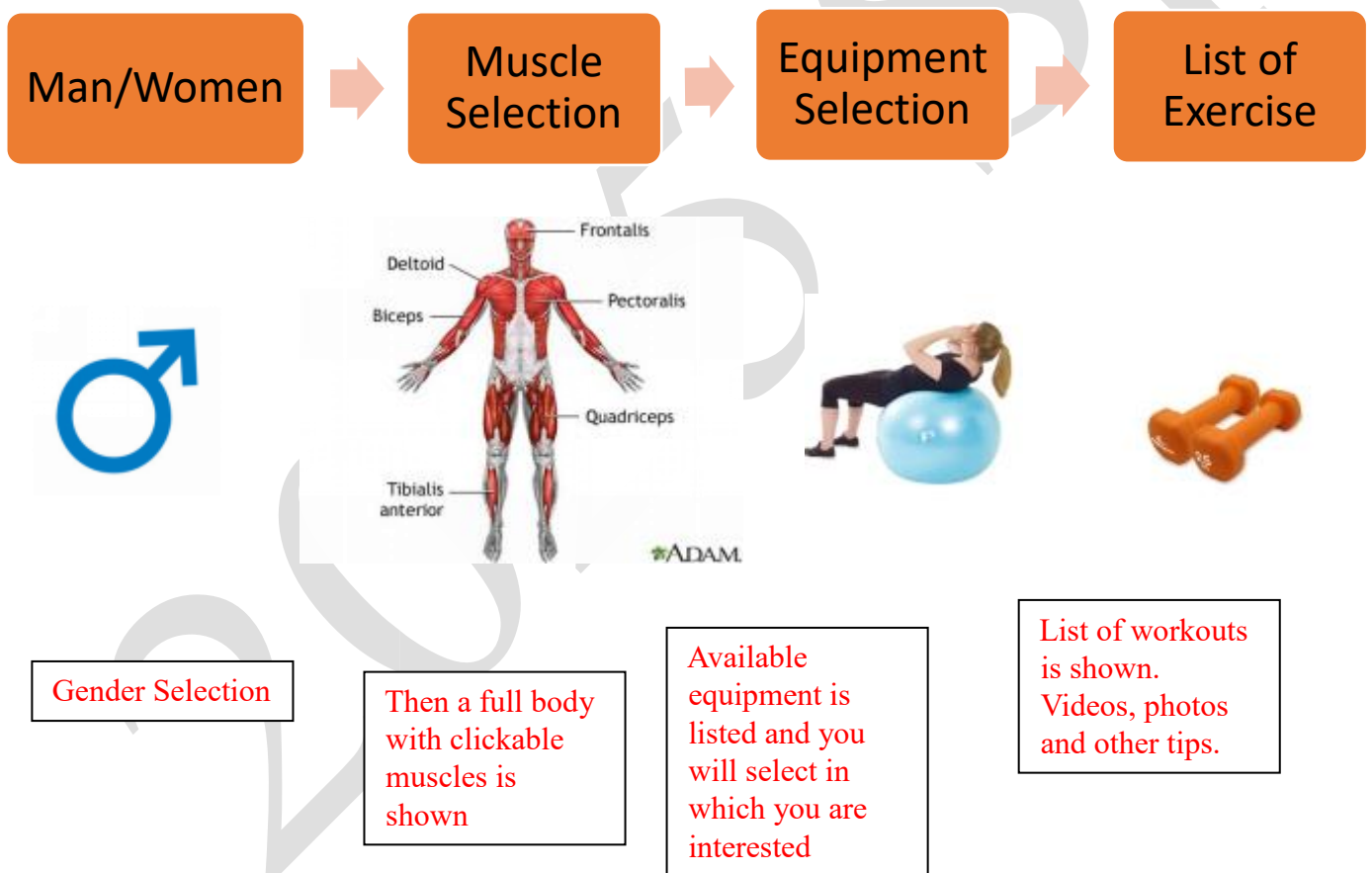
noTrainer fixes this by automatically giving you exercises based on the muscle group you pick and the equipment you have. This saves time, reduces confusion, and helps prevent injuries by showing proper form. Even if you know the right exercise for the right muscle, there are high chances that your pose 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.

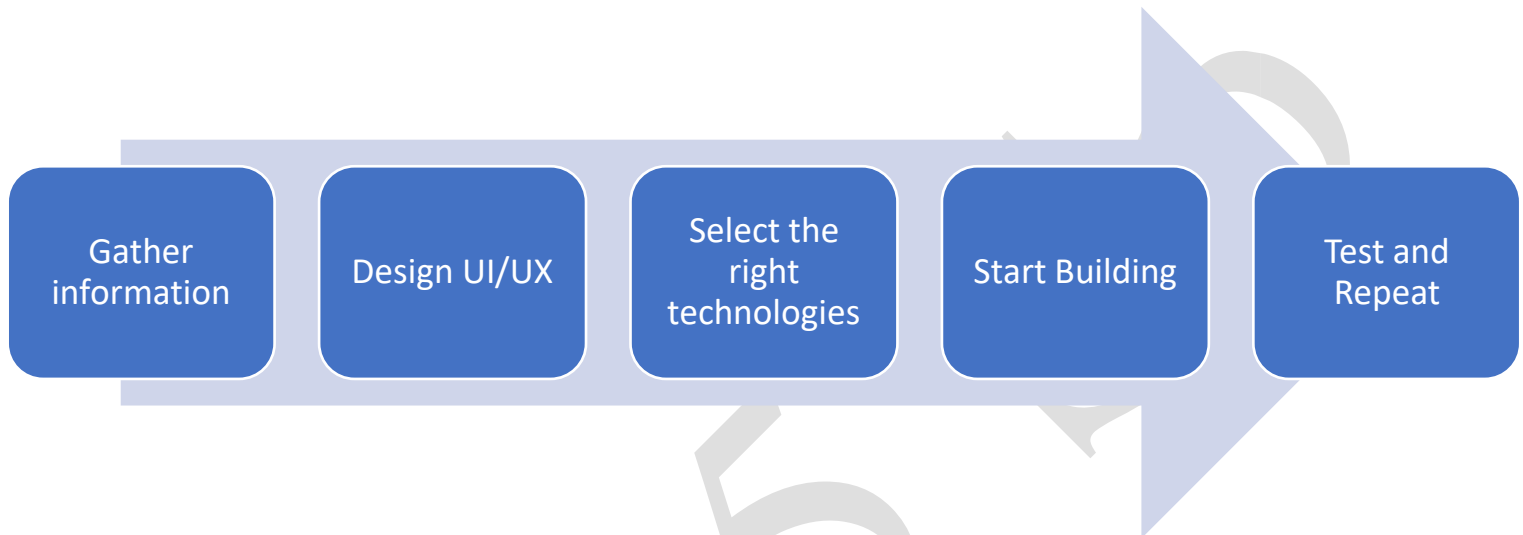
Wizard UI (Key Highlight)

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

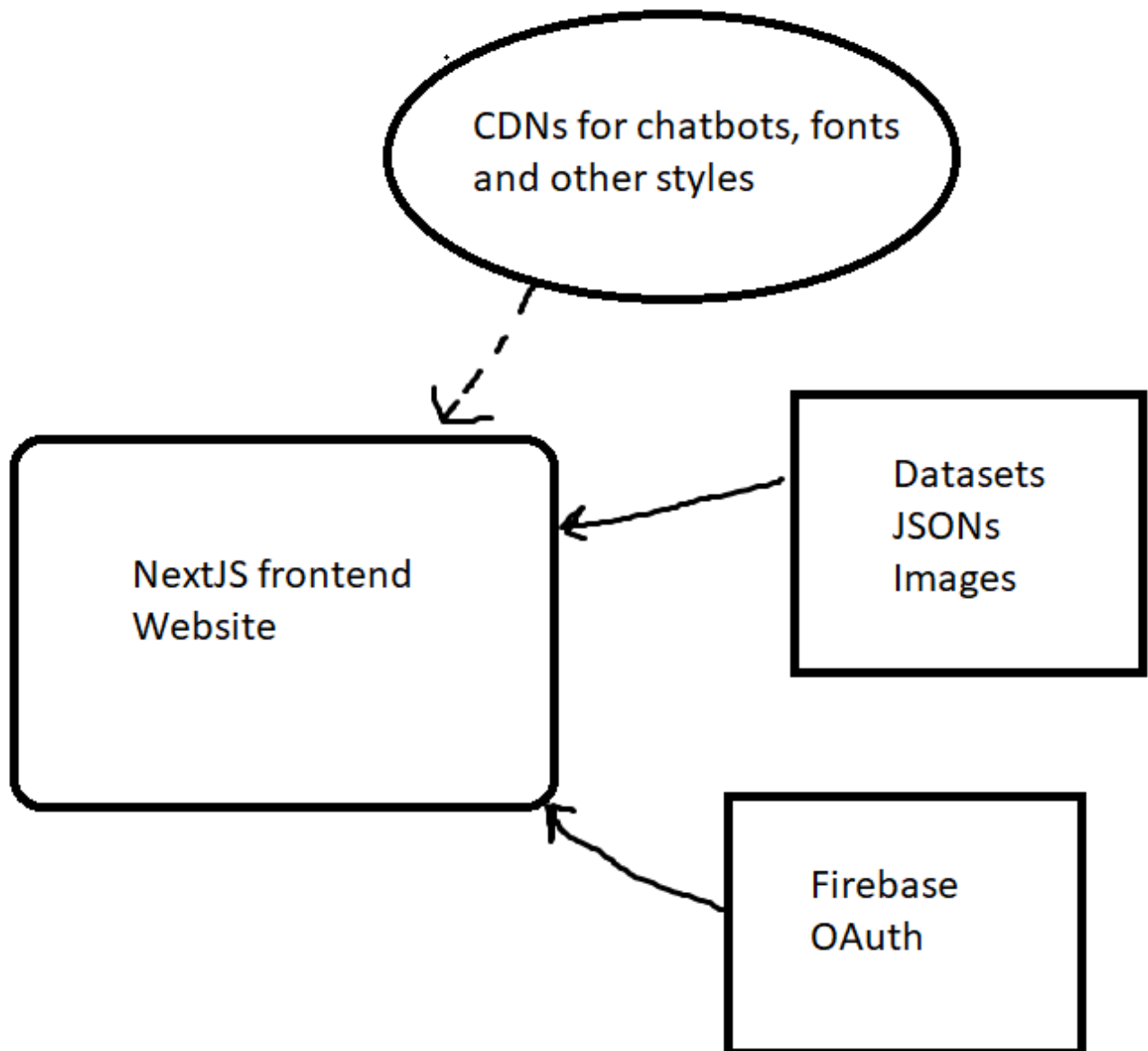


Product Scope:

- 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

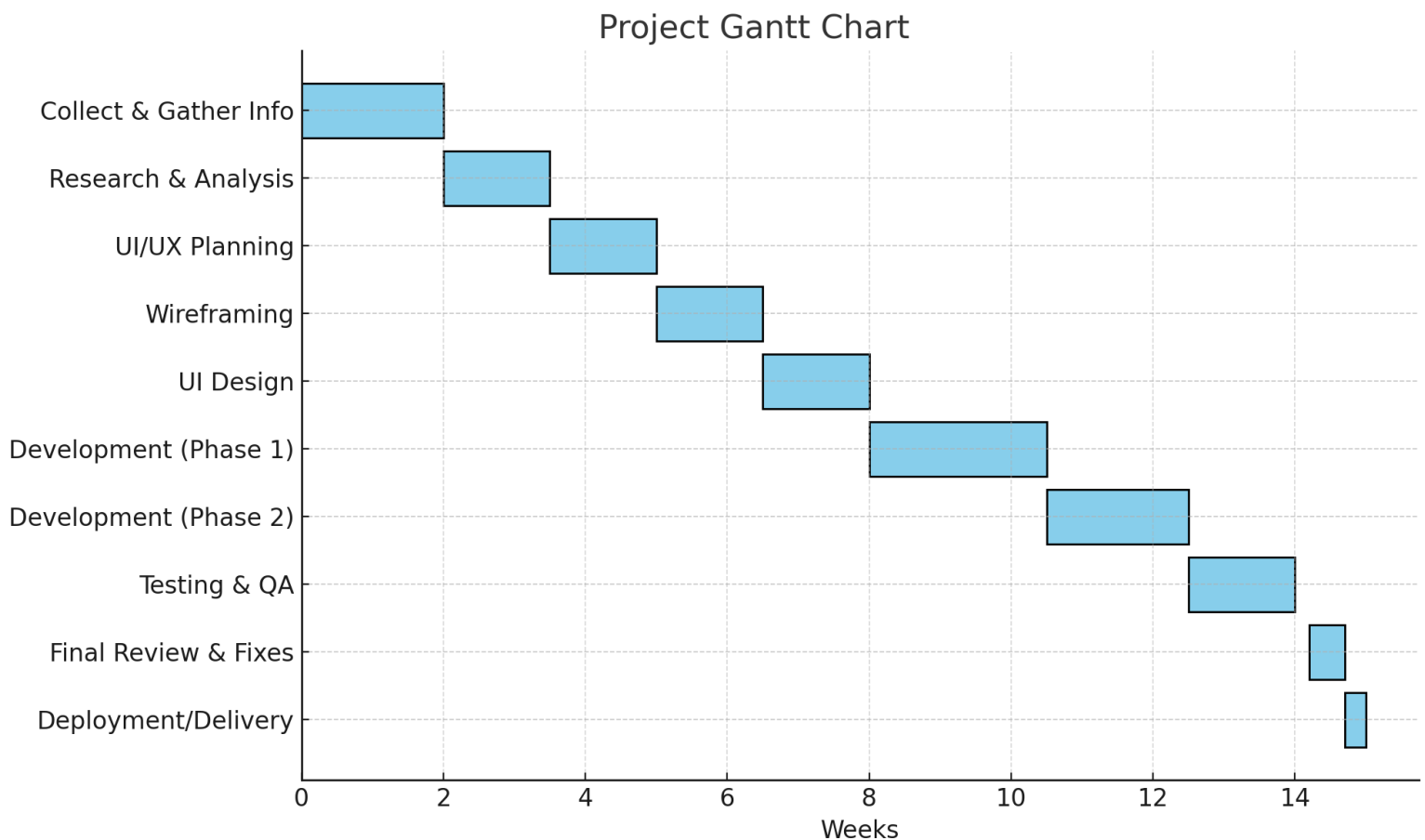
Tools/Tech:

- 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:

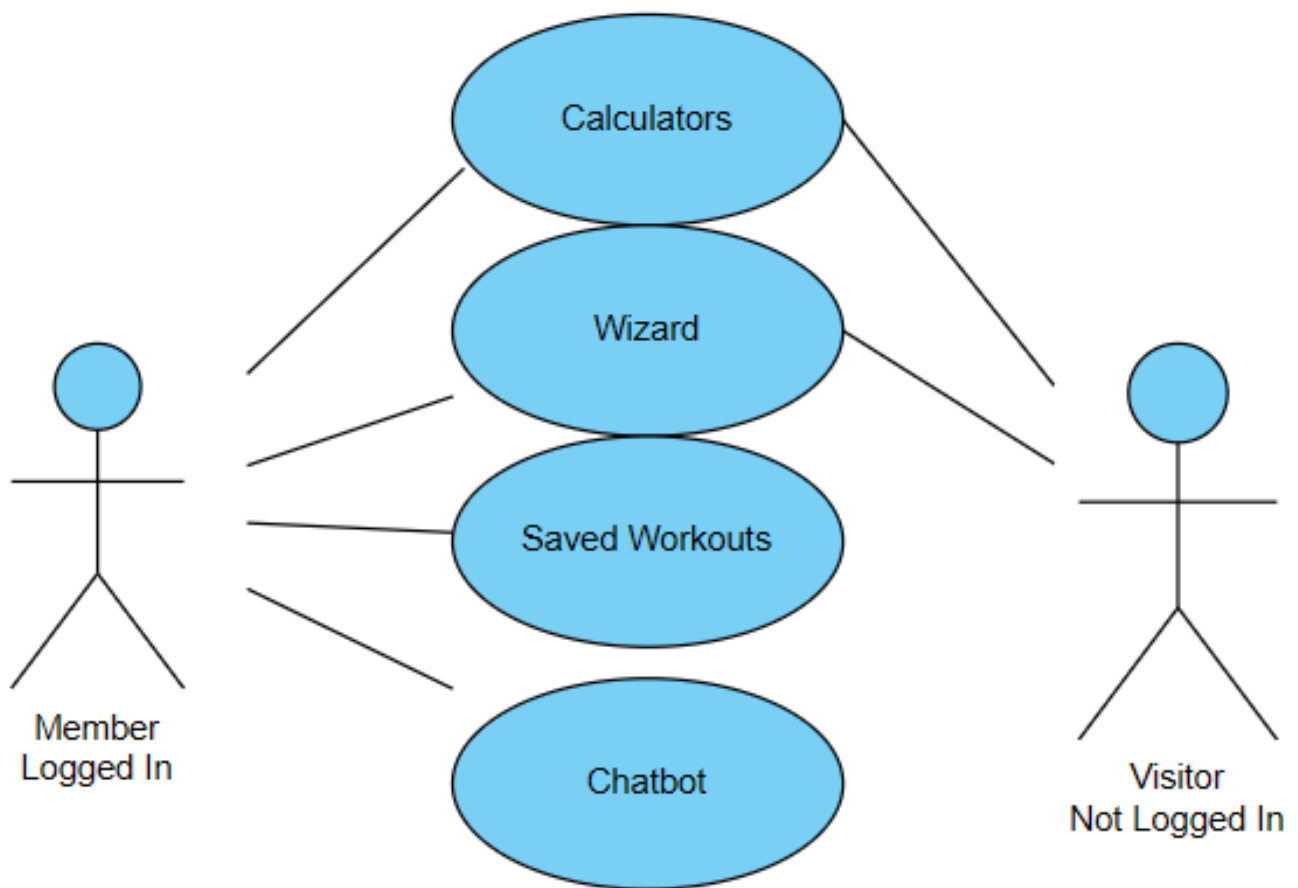
We will primarily focus more on information gathering in the start. We need to visit gyms and people who are experienced in this gym and body fitness field. We will make notes and then organize the data collected. Then we will work on creating the flow of our website. We will design different screens 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.



Use Case Diagram

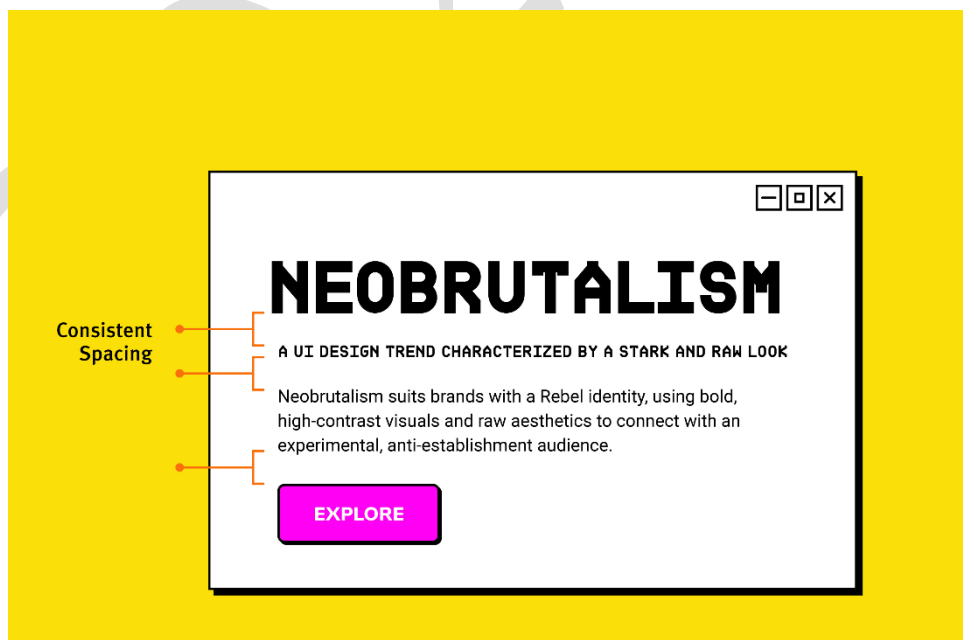
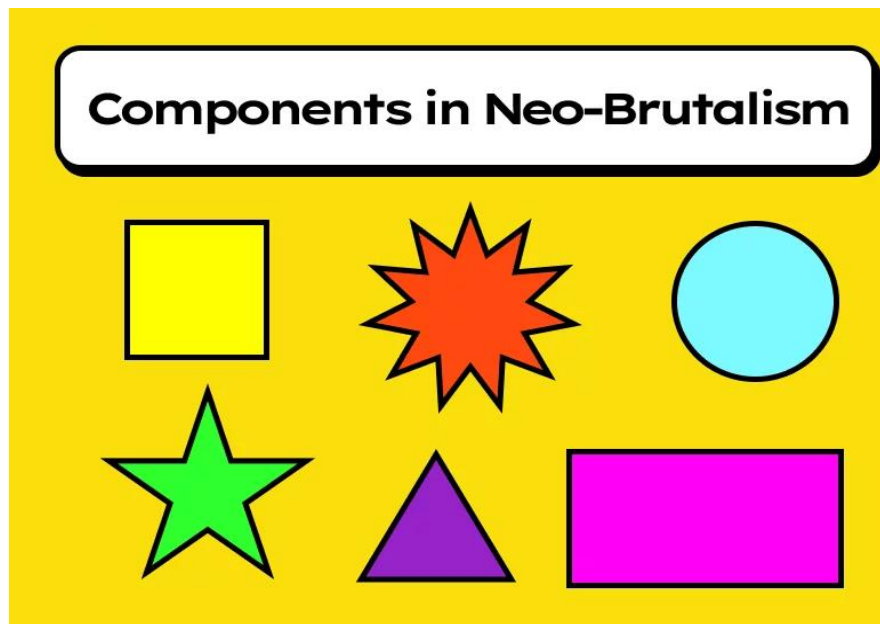
The diagram shows how Members (logged-in users) and Visitors (not logged-in users) interact with system features.

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

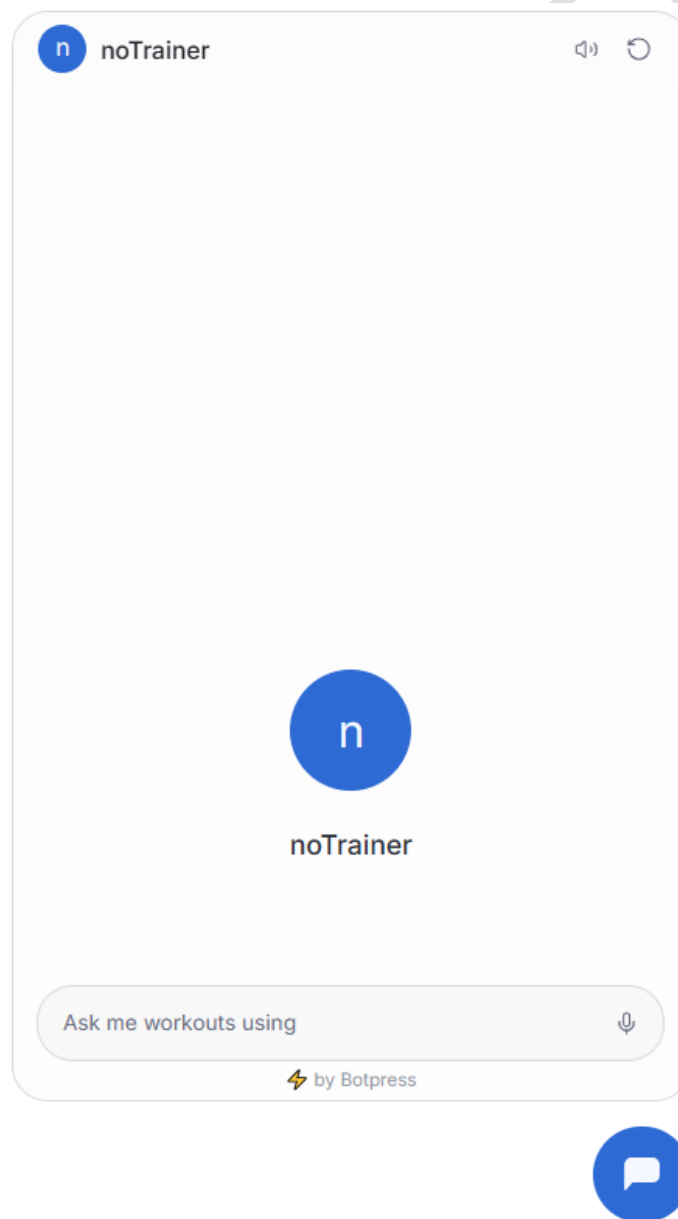
We spent a lot of time thinking on how we can make the website visually appealing. We observed different styles and design cores that existed. Out of many we selected Neobrutalism design. Neobrutalism is a design style that focuses on bold, raw, and unapologetic visuals. It uses simple, harsh shapes, 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 relevant fields required to function properly.

exercisesTable

Filter Refresh

#	Created At	Updated At	name	force	level	mechanic	equipment	primaryMuscles	secondaryMuscles	Instructions
1	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	3/4 Sit-Up	pull	beginner	compound	body only	["abdominals"]	[]	["Lie down on the floor with knees bent and feet flat on the floor. Lift your hips off the floor and hold for 10 seconds. Repeat 10 times."]
2	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Ab Crunch Machine	pull	intermediate	isolation	machine	["abdominals"]	[]	["Select a light weight and sit on the machine. Crunch your abdomen up towards your knees and hold for 10 seconds. Repeat 10 times."]
3	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Ab Roller	pull	intermediate	compound	other	["abdominals"]	["shoulders"]	["Hold the ab roll with both hands and roll forward. Stop when you feel a burn in your abdomen. Repeat 10 times."]
4	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Adductor	static	intermediate	isolation	foam roll	["adductors"]	[]	["Lie face down with your knees bent and feet flat on the floor. Roll your adductors over the foam roll. Repeat 10 times."]
5	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Advanced Kettlebell ...	push	intermediate	isolation	kettlebells	["abdominals"]	["glutes", "hamstrings"]	["Clean and press the kettlebell with both hands. Repeat 10 times."]
6	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Air Bike	pull	beginner	compound	body only	["abdominals"]	[]	["Lie flat on the floor with your hands on the handlebars. Pedal and crunch your abdomen. Repeat 10 times."]
7	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Alternate Hammer Curl	pull	beginner	isolation	dumbbell	["biceps"]	["forearms"]	["Stand up with your feet shoulder-width apart and hold a dumbbell in each hand. Curl the dumbbells up towards your shoulders. Repeat 10 times."]
8	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Alternate Heel Touch...	pull	beginner	isolation	body only	["abdominals"]	[]	["Lie on the floor with your knees bent and feet flat on the floor. Touch your heels with your hands. Repeat 10 times."]
9	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Alternate Incline Dumbbell	pull	beginner	isolation	dumbbell	["biceps"]	["forearms"]	["Sit down on an incline bench and hold a dumbbell in each hand. Curl the dumbbells up towards your shoulders. Repeat 10 times."]
10	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Alternating Cable Sh...	push	beginner	compound	cable	["shoulders"]	["triceps"]	["Move the cables from one side to the other, alternating sides. Repeat 10 times."]
11	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Alternating Deltoid R...	push	beginner	isolation	dumbbell	["shoulders"]	[]	["In a standing position, hold a dumbbell in each hand. Lift the dumbbells up towards your shoulders. Repeat 10 times."]
12	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Alternating Floor Press	push	beginner	compound	kettlebells	["chest"]	["abdominals", "shoulders"]	["Lie on the floor with your knees bent and feet flat on the floor. Press the kettlebells up towards your chest. Repeat 10 times."]
13	10/26/2025, 4:11 PM	10/26/2025, 4:11 PM	Alternating Hang Clean	pull	intermediate	compound	kettlebells	["hamstrings"]	["biceps", "calves"]	["Place two kettlebells on the floor in front of you. Squat down and grab the kettlebells with both hands. Stand up and lift the kettlebells up towards your chest. Repeat 10 times."]

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Dataset Schema

Column	Possible Values
id	Any string: <code>^[0-9a-zA-Z_-]+\$</code>
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)