

Lab 3

● Graded

Group

Santhosh Deshineni

Tejas Kumar

Payas Khurana

...and 1 more

Total Points

40.25 / 50 pts

Question 1

Database Design

4 / 5 pts

- 0 pts All Correct

- 1 pt Un-normalized database

- 1 pt Improper use of constraints

✓ - 1 pt Slow queries, not used pagination

- 1 pt Extensibility

Other errors

- 0.5 pts Missing Foreign Keys

- 0.5 pts Small errors

Question 2

Login

Resolved 1.5 / 3 pts

Password

+ 0.5 pts min length/mix character requirement in password

+ 0.5 pts Re-enter password (Confirm Password Text Box)

+ 0.5 pts Password Encryption

Email Authentication

+ 0 pts No Check

+ 0.5 pts Only regex check at frontend

+ 1 pt Email Authentication using OTP or Forgot Password

Duplicate username

+ 0 pts Allows duplicate users

+ 0.25 pts Disallowing duplicate username but don't show any error

+ 0.5 pts Disallowing duplicate username and shows error

+ 0 pts Registration didn't work

+ 0 pts Baadal VM Not working

+ 0 pts Baadal VM link not provided

 Regrade Request

Submitted on: May 11

Sir/ Ma'am, we have implemented the password Encryption.

As soon as we take the input from the user regarding password, we hash it with Encryption, and then save the hash, so the password is never visible.

So, I request you to please give us 0.5 marks of the password encryption in this part.

Done. You have used `generate_password_hash` python function. So, giving marks

Reviewed on: May 13

Question 3

ML API

Resolved 2 / 2 pts

Relevance of ML API

+ 0 pts Relevance: 0 marks incomplete

+ 0.5 pts Relevance: 0.5 marks some relevance

✓ + 1 pt Relevance: 1 marks relevant

Working of ML API

+ 0 pts Working: 0 marks incomplete

+ 0.5 pts Working: 0.5 marks something works - issues like Not on Baadal etc

✓ + 1 pt Working: 1 marks works completely

C Regrade Request

Submitted on: May 11

Sir/Ma'am, our ML API is of OpenAI which is used in our chat bot, and it works even hosted on Baadal.

To use the chatbot, after logging in on our website on the home page itself in the bottom right corner you can find a floating action button with chat icon. On clicking it a chat window will pop up., and questions can be asked on it which will be replied by OpenAI's API.

You can even ask the bot to assist you in going to our store page and it will give a hyperlink to our store's page.

Thus, as our ML API is fully functional even on baadal, we request you to please give us full marks in this part.

resolved

Reviewed on: May 14

Question 4

API Design

4.5 / 5 pts

Working

+ 0 pts Incomplete/Not working

✓ + 0.5 pts It works!

Security

+ 0 pts Incomplete/major bugs - no authorization checked while editing profile etc

+ 0.5 pts Some bugs - most of the functionality is secure

✓ + 1 pt No visible vulnerabilities

API naming

+ 0 pts incomplete/completely wrong solution

+ 0.5 pts Descent naming notations are used. Some notations are confusing.

✓ + 1 pt Good notations

Generality of API

+ 0 pts Incomplete/Completely incorrect

+ 0.5 pts Some APIs are repeated. Scope for condensation

✓ + 1 pt Modular design.

+ 1.5 pts Modular and well thought design (Example: Pagination)

+ 0 pts Click here to replace this description.

GET, PUT, POST relevance

+ 0 pts Incomplete/Incorrect

+ 0.5 pts Multiple types of requests are used /type of requests used are not relevant

✓ + 1 pt Many types of request used and are relevant

Question 5

Attractiveness

✓ + 0.5 pts **Visual appeal:** Does the website have an overall visually appealing look? This includes things like colors scheme, font choices, and use of images.

+ 0.5 pts **Consistency:** Are the design elements consistent throughout the website? For example, are the colors, font sizes, and button styles the same across all pages?

✓ + 0.5 pts **Accessibility:** Does the website use good contrast between text and background colors? Is the text easy to read and the font size appropriate? Are there any accessibility features such as alt text for images?

✓ + 0.5 pts **Use of white space:** Does the website use white space effectively to create a clean, uncluttered look? Or is it too sparse, leaving the website feeling empty, or too crowded, leaving the website feeling cluttered? Is Image rendering proper (Images are not stretched out, the aspect ratio of images is okay, etc)?

+ 0 pts Click here to replace this description.

+ 1 pt **Responsiveness** Can adjust to screen size. Does the website look good and function well on mobile devices? Is the layout optimized for smaller screens and touch input?

✓ + 1 pt **Layout and organization:** Is the layout of the website easy to navigate and well-organized? Are the important elements (e.g., navigation menu, search bar, calls-to-action) easy to find and use? Discoverability and navigation are obvious. Does ML API have a single button to translate the entire page (Clicking again and again to translate posts is bothersome)?

✓ + 1 pt **Immediate feedback** Does the website load quickly? Slow loading speeds can negatively impact the user experience and make the website feel unattractive. If you click a button, then how much time it takes to take action

✓ + 0 pts **Brand identity:** Does the website accurately reflect the brand's identity and personality? Is the design consistent with the brand's other marketing materials? Does it have a consistent logo?

+ 0 pts Baadal VM Not working. Baadal VM was not working when I checked.

+ 0 pts Baadal link not added in the google sheet

Consistency: Ratings was not properly sitting with the UI. Probably used template and then added elements. later but didn't properly modified the elements according to the UI. About page is totally different from home page. Responsiveness: Not very responsive. Zenfit logo was cutting the last T. We had to zoom out to see complete logo.

C Regrade Request

Submitted on: May 12

Sir/ ma'am,

Responsiveness:

We have made our website responsive, not only does most of the elements resize on a smaller screen, but also we have used breakpoints so that we can handle the case in which the screen sizes are very small, as compared to normal.

For example, in the home page if you decrease the screen width the layout of posts and recommended products change, same in store page.

The example of zenfit logo is due to it being image and to preserve its aspect ration, the image behaves as such. But, website is fully responsive.

Thus, I request you to please grant us full marks in responsiveness section as we had done resizing and used breakpoints in our website.

.....

Visual Apeal and Consistency:

Sir/ Ma'am We have not used any template for our frontend, as it can be checked in the figma file we shared, we had painstakingly designed each and every element there and then utilised this design's HTML and CSS code, you can see our website design and figma design are almost identical, and thus it is not any later utilization of some Bootstrap template like many other teams.

The about page is not any feature for our site, we just added it for this demo so that the examiner has easy access to our figma/ ER diagram and other links, So we linked it to our canva report directly, thus it is not a page of our site.

Other than that in each and every page it is ensured that they are consistent with each other.

Sir/Ma'am We have put a very serious efforts into our design to ensure both the visual appeal and consistency we had curated a very soothing color pallet for our website to ensure that all the pages are in design unity, and each and every page has a similar set of fonts, even for the objects we ensured solid shapes style in our website and did not mix it with other styles like glossy or shadow objects to ensure this consistency of visual effect.

I would humbly request you to that we deserve full marks in Visual appeal and Consistency, as we had worked very hard on our design daily for weeks before the design deadline, and not just inserted some rectangles and created a wireframe on the last day.

Open <http://10.17.51.178:5000/> on the phone. You will realize that it is not responsive.

Giving marks for appearance (0.5)

Reviewed on: May 14

Question 6

Code Cleanliness 2.75 / 5 pts

+ 1 pt Hidden passwords and Configuration files

+ 1 pt static files in git ignore

✓ + 1 pt git commits (more than one commit using git commands by all team members)

+ 0 pts Private Github

DRY

✓ + 1 pt No repetition or extra functions

+ 0.75 pts Some repetition

+ 0 pts Lot of functions doing same task

Code Structure

✓ + 1 pt Proper Code Structure

✓ - 0.25 pts Typing not used

+ 0.5 pts Poor structure

Question 7

Completeness

8 / 10 pts

Key Features

✓ + 0.5 pts Feature 1 is present

✓ + 0.5 pts Feature 1 is working as expected

✓ + 0.5 pts Feature 2 is present

✓ + 0.5 pts Feature 2 is working as expected.

✓ + 0.5 pts Feature 3 is present

✓ + 0.5 pts Feature 3 is working as expected.

✓ + 0.5 pts Feature 4 is present

✓ + 0.5 pts Feature 4 is working as expected.

✓ + 0.5 pts User Profile is implemented

+ 0.5 pts User Profile is working as expected

+ 0 pts Missing Features

Error Handling / Software Quality Assurance (QA)

✓ + 1 pt No errors in the application.

✓ + 1 pt No QA issues found

+ 0 pts Error found

+ 0 pts QA issues found

Testing

✓ + 1.5 pts Unit Tests implemented with coverage >= 60%

+ 0.75 pts Unit Tests implemented with coverage >= 30%

+ 0 pts No Unit Tests implemented / coverage < 30%

CI/CD

+ 1.5 pts Able to run tests automatically when pushing to github

✓ + 0 pts Test are not triggered automatically when pushing to github

💬 Feature 1) - Implemented a complete store, can purchase items, view order history etc.

Feature 2) - Sort items based on ratings and categories

Feature 3) - Community page, recipes,articles can be posted here.

Feature 4) - Write comments on posts.

User Profile - User profile is implemented - edit feature unexpected results, able to remove my email, name, etc. from the profile and save the changes, not desirable.

Errors - None

QA Issues - None

Question 8

Presentation/Report

Presentation

Resolved 14 / 15 pts

- ✓ + 2 pts Working demo

+ 1.5 pts Some inconsistencies during demo

+ 1 pt Some features working

+ 0.5 pts Poorly prepared ppt

+ 0 pts Not working demo / Not present in demo

- ✓ + 1 pt Descriptive presentation

Design Choices

+ 2 pts Correct

- ✓ + 1.5 pts Some partially correct choices / Partially generic answer

+ 1 pt Some unlisted choices / Given a generic answer

+ 0.5 pts Listed very few choices

+ 0.5 pts No specific choice or explanation provided

+ 0 pts Unanswered / Incorrect

Uniqueness

- ✓ + 1 pt Catchy website idea - Overview

- ✓ + 2 pts Unique features

+ 1.5 pts Partially distinctive

+ 1 pt Some unique elements

+ 0.5 pts Not answered properly.

+ 0 pts Unanswered / not distinctive

API Description

+ 1 pt APIs have been described in detail

- ✓ + 0.5 pts Only names etc are mentioned, have not mentioned their function

+ 0 pts API description not given

Challenges

- ✓ + 2 pts Listed challenges

+ 1 pt Listed some challenges

+ 0.5 pts Listed limitations / Expressed features as challenges

+ 0 pts Unanswered / Answered poorly

Limitations / Future work

✓ + 2 pts Limitations noticed

+ 1.5 pts Unnoticed limitations / Listed few limitations

+ 1 pt Only some limitations listed

+ 0.5 pts Poorly answered

+ 0 pts Unanswered / Poor answer

Sitemap and ML API

✓ + 1.5 pts Sitemap planned

+ 1 pt Sitemap incomplete, unexplained

+ 0.5 pts Sitemap not given, explanation provided

+ 0 pts Unanswered / Poorly answered

✓ + 0.5 pts ML API choice

Experience with LLM

✓ + 0 pts Correctly described

+ 0 pts Poor description

+ 0 pts Not mentioned

Some design choices are explained while other are just stated that we used this.
And some more limitations should be stated like responsive UI.

C Regrade Request

Submitted on: May 12

Sir/ Ma'am,

API Description:

We have inserted the API design and description link

https://app.swaggerhub.com/apis/ITSKARTIKARORA_1/zen-fit/1.0.11

in our google docs report, it has complete description of functioning of each and every API we created. As it was instructed to us to not include these internal details in presentation, thus we had not explained it further in our presentation, but it is shared in report.

Moreover for ML API, we have discussed and elaborated about their functioning in our presentation itself.

Thus I request you to please grant us 1 marks in API design description as we had attached the description in our report.

.....

Limitations:

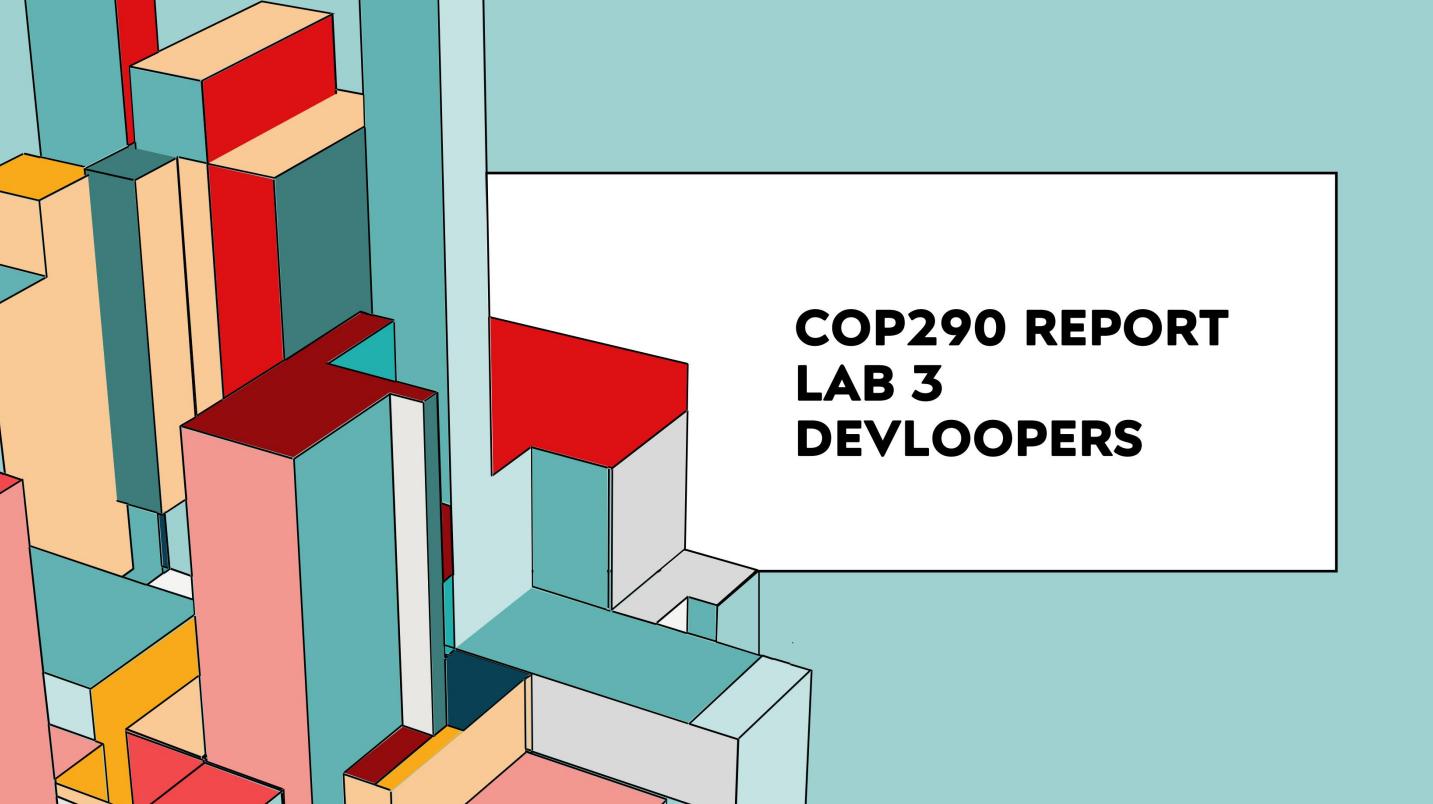
Sir/ Ma'am as we have also requested a regrade in Responsive UI Question, it was a misunderstanding that our UI is not responsive, we have added resizing and breakpoints to ensure Responsiveness. Thus, we had also not written it as our limitation in presentation.

Thus I request you to please grant us full marks in the Limitations Section of this question.

I don't know which doc report are you mentioning. in this report which you have submitted in the final submission there wasn't any description like it was asked.

Still giving you partial marks.

Reviewed on: May 13

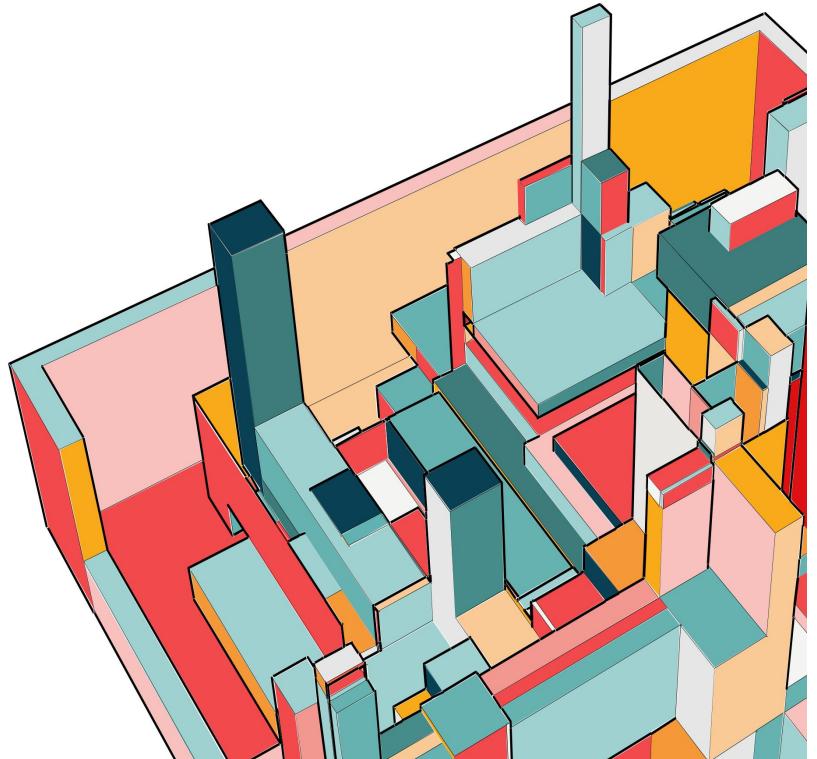


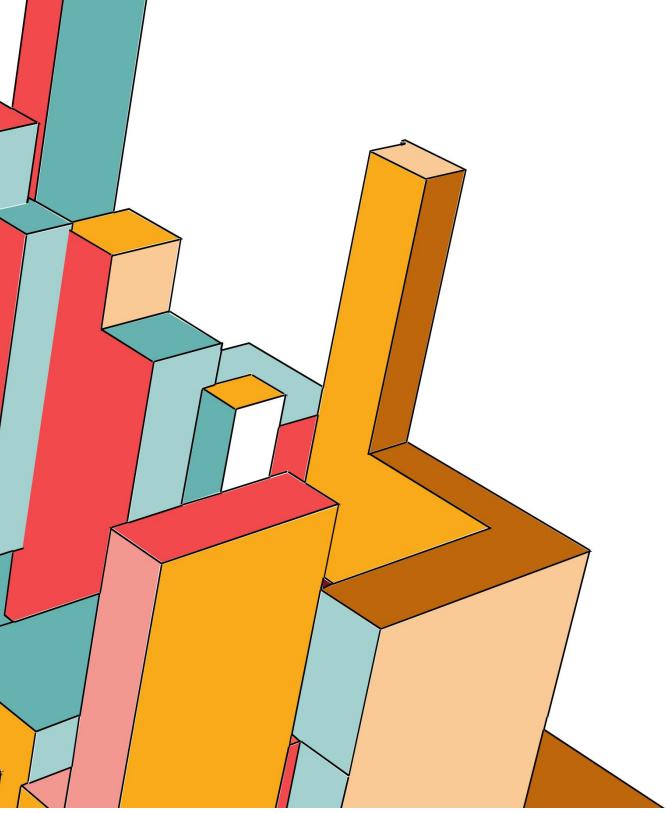
The background features a collection of abstract, 3D-rendered geometric shapes, primarily cubes and rectangular prisms, arranged in a cluster. The shapes are rendered in a variety of colors including teal, orange, red, yellow, and grey, with some having multiple colored faces. They are set against a light blue background.

**COP290 REPORT
LAB 3
DEVLOOPERS**

ABOUT US

ZenFit is a comprehensive fitness website that offers a wide range of products and services to help users achieve their health and fitness goals. The website can provide workout plans and wellness coaching to help users stay on track with their fitness journey. In addition to its fitness services, ZenFit also sells a variety of high-quality fitness products. These products are designed to help users optimize their fitness routine and get the most out of their workouts. ZenFit also offers a community forum where users can connect with like-minded individuals to share tips, advice, and support.



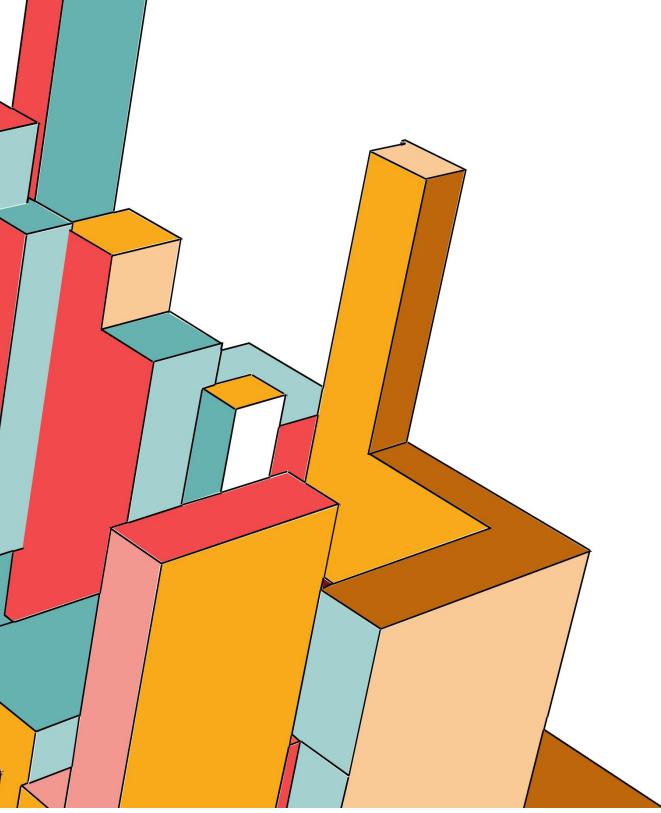


DESIGN CHOICES

We have not seen any implementation of pose detection in other fitness websites and we think it's a good way to make exercise fun. We have made a rep counter which can count the number of reps of your bicep curls. ↗

To make it look like a real website, we have added some features(like the footer in homepage) to make it look complete, but not implemented them.

Figma to html/css was done with the help of locofy.
Backend was made from ground up(with some help from swagger).
Chatbot is the 3rd party API used. The tensorflow pose detection ML was implemented by downloading all the dependencies, thus is not a 3rd party API.
The whole site is **responsive** and breakpoints change layout of some elements when screen size < 1200px.
Final cart page can only be opened from user page, not any other.



DESIGN CHOICES

Directed to home once order placed. You can check previous orders in past orders page (in user page).

To logout, either change password or change link to [http....00/logout](http://....00/logout)

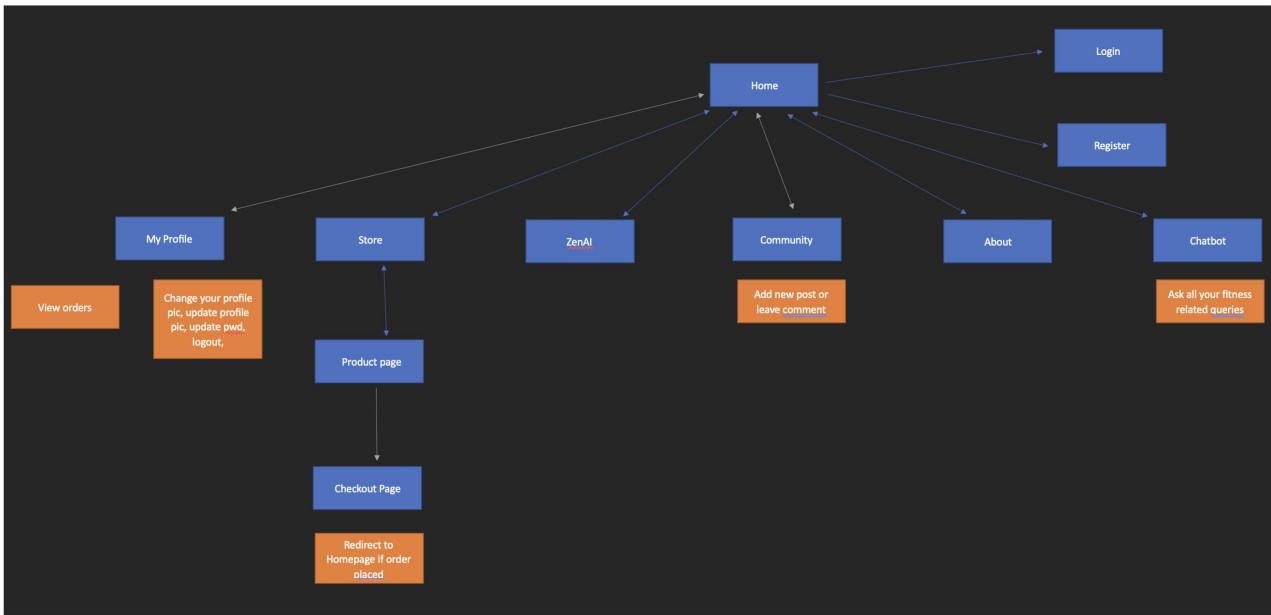
Chatbot is available only on homepage.

The zenAI rep counter feature isn't working on baadal vm so we have included a link of it working below. It's one of the main features of our website. You can count the reps of your bicep curls using this feature

ZenAI working

video: <https://drive.google.com/drive/folders/1-yt2KQf9ALZ7719iW4MJDeA9rTtyrcNo?usp=sharing>

SITEMAP



* White arrow for things you can do only when logged in

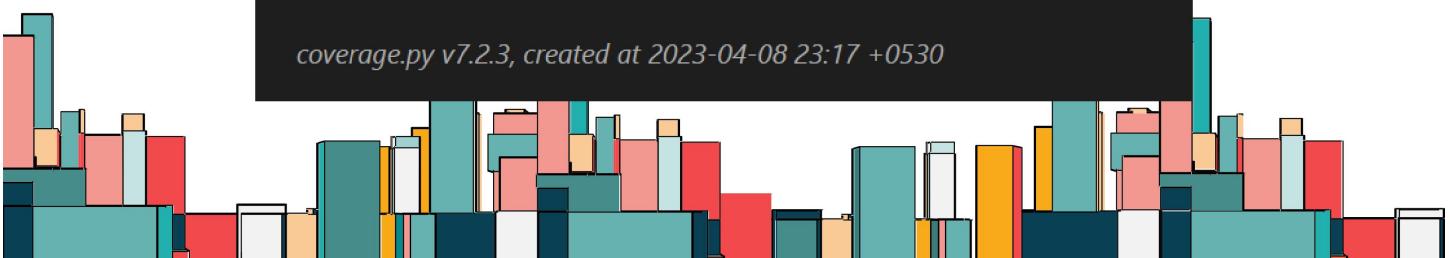
TEST COVERAGE REPORT

Coverage report: 79%

coverage.py v7.2.3, created at 2023-04-08 23:17 +0530

Module	statements	missing	excluded	coverage
app.py	251	63	0	75%
help.py	26	9	0	65%
test_api.py	61	0	0	100%
Total	338	72	0	79%

coverage.py v7.2.3, created at 2023-04-08 23:17 +0530



KEY FEATURES OF ZENFIT

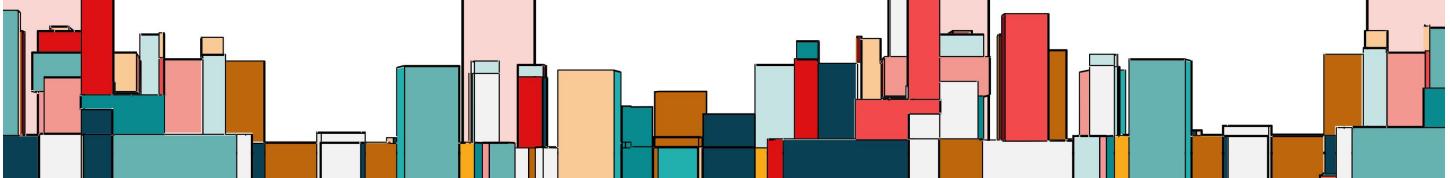
Buy
products from
our store



Read community posts
and learn from others.
You can also reply to
others' posts.



Ask doubts on our
Chatbot. It can give you
meal plans and fitness tips.



ADDITIONAL FEATURES OF ZENFIT

Movement Detection

You can see your body endpoints on ZenAI and have fun with your stick figure. Now do all exercises with proper form. Break your personal records and do more and more bicep curls daily. We will count them for you.

Update Profile

As you get fitter, update your profile photo(AWS used) and let the world know where you have come. You can also change your password if you think your account has been breached.

History stored

We store past order history of every user.

CHALLENGES FACED

Swagger to backend. Many modifications had to be done.

Figma to frontend was done using locofy. It isn't a perfect tool so we had to finetune manually

Finding an apt dataset. We couldn't find any on Kaggle

LIMITATIONS

We have not implemented a proper secure payment gateway

The user can't delete account (couldn't implement due to time scarcity)

ML MODELS

External ML API - Our chatbot can answer any queries you have.

**Our zenAI can detect your body endpoints. Different people have different body shape and type. But the correct form of exercise can be implemented if their endpoints are known. We have implemented counting bicep reps using endpoint coordinates.

*not an external API. All the dependencies were downloaded and external code written to make it work. It is just an ML model we used

Zen AI

Give me a brief workout plan to get fit in 30 days

Sure, here's a brief 30-day workout plan that you can follow to get fit:

Week 1:

- Day 1: 30 minutes of cardio workout (jogging, cycling, or brisk walk)
- Day 2: 20 minutes of strength training (bodyweight exercises such as push-ups, squats, lunges, etc.)
- Day 3: Rest day
- Day 4: 30 minutes of cardio workout
- Day 5: 20 minutes of yoga or stretching
- Day 6: Rest day
- Day 7: 30 minutes of cardio workout

Week 2:

- Day 1: 30 minutes of cardio workout
- Day 2: 20 minutes of HIIT (high-intensity interval training)
- Day 3: Rest day
- Day 4: 30 minutes of strength training (using weights or resistance bands)
- Day 5: 30 minutes of cardio workout
- Day 6: Rest day
- Day 7: 20 minutes of yoga or stretching

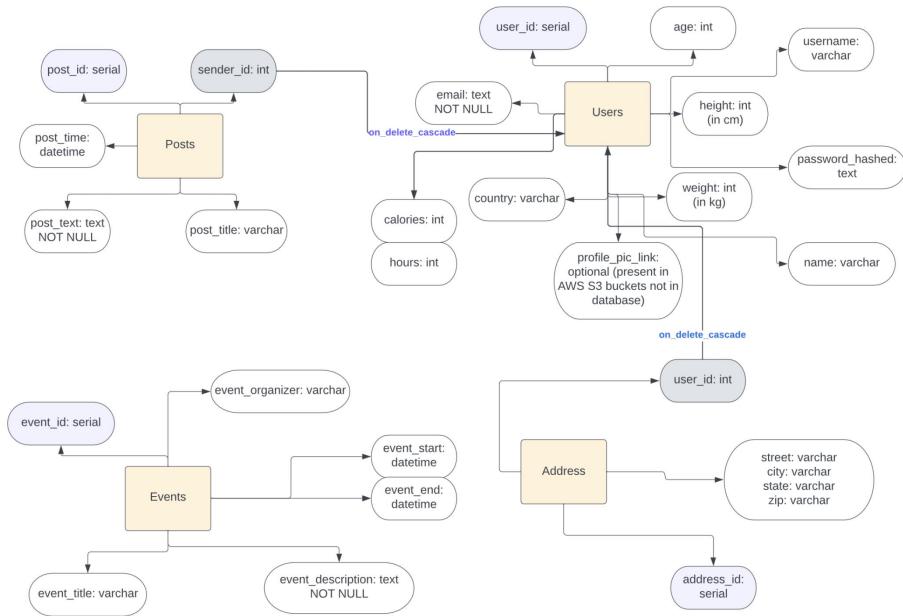
Week 3:

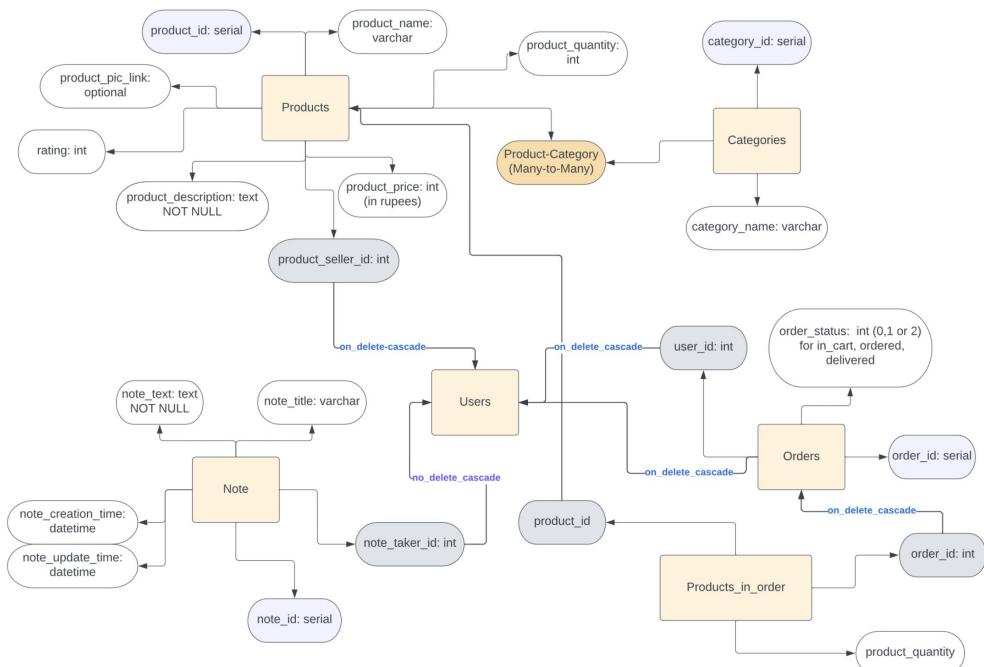
- Day 1: 30 minutes of cardio workout



A photograph of a man in a blue shirt. A white wireframe skeleton overlay is drawn over his body, with small green dots marking various body endpoints like the head, shoulders, and joints. He is waving his right hand. In the background, another person in a yellow shirt is partially visible.

ER DIAGRAM





LARGE LANGUAGE MODELS

Swagger

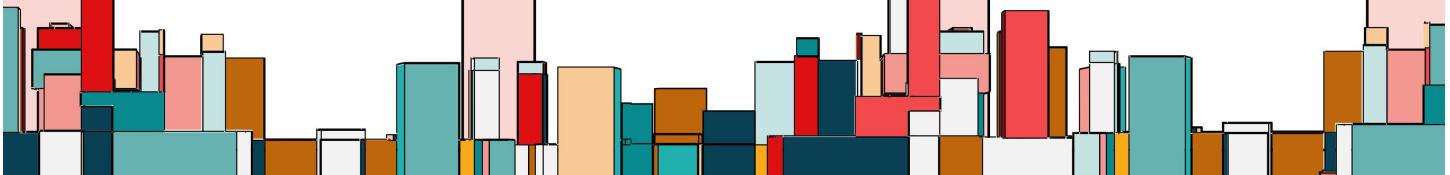
For yaml file.

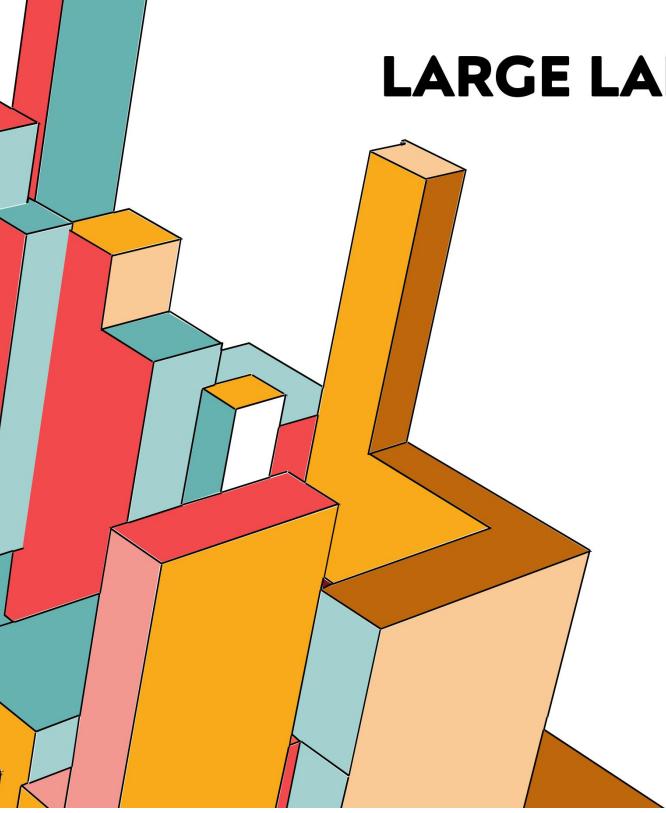
Locofy

To convert Figma design to HTML/CSS code.

ChatGPT

For general queries and error handling; 3rd party ML API





LARGE LANGUAGE MODELS

We used chatGPT and GPT4 for error handling. Most code was written by backend developers from scratch with some inspiration from GitHub repos. These LLMs were very helpful in error resolution.

Prompts were like: <codeblock>...<error>..“how to resolve the error?” We used Locofy to convert Figma design into code. It worked fine for the most part. Finetuning was done manually.

Swagger didn’t produce an apt code as per our requirements, so we had to write it all from scratch. Though it did help us learn.

Using LLMs was very helpful and saved us a considerable amount of time. It did generate errors but debugging was made easy with chatgpt and that sometimes can take up a lot of time.

If I were to do this project again, I would surely use the help of LLMs because they help us learn and code faster. We did learn how to write better prompts with time as we understood the output better.

LIBRARIES USED

flask

pymysql

flask_session

boto3

requests

cryptography

openai

Posenet

CONTRIBUTORS

Tejas Kumar(2021CS10079) : Frontend(major), ML model : 10 tokens

Kartik Arora(2021CS50124) : Frontend, Dataset, ML model : 10 tokens

Payas Khurana(2021CS50948) : Backend, Unit and Integration tests : 10 tokens

Santhosh Deshineni(2021CS10564) : Backend(major), Integrating dataset : 10 tokens

Github link : <https://github.com/TejasKumar3005/COP290-DevLoopers>

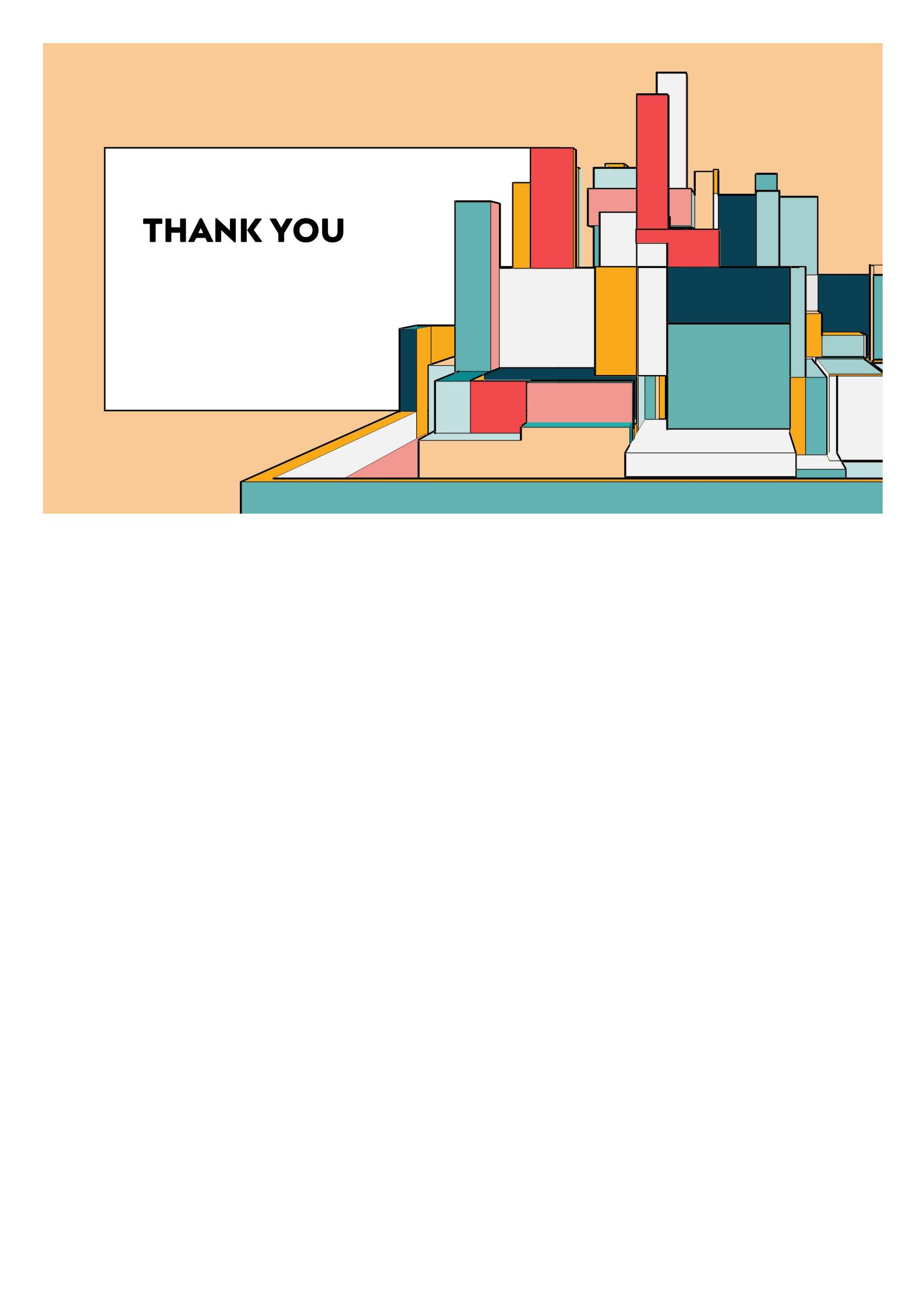
Baadal VM link : <http://10.17.51.178:5000/>

Swagger yaml file: https://app.swaggerhub.com/apis/ITSKARTIKARORA_1/zen-fit/1.0.11

Figma design: <https://www.figma.com/file/v4U0np4jOGP0i8pm3skyNN/COP290-Website?node-id=0-1&t=a3NLf2drTlhbnqrS-0>

Previous Submission link: <https://docs.google.com/document/d/1VI1BxsJr3TEUFmt1K1W-HCuYrjE71jhq6R46es1gvHU/edit>

ZenAI working video: <https://drive.google.com/drive/folders/1-yt2KQf9ALZ7719iW4MJDeA9rTtyrcNo?usp=sharing>



A minimalist graphic design featuring a white rectangular frame containing the text "THANK YOU". The background is a light orange color with a central cluster of abstract, colorful geometric shapes (bars and rectangles) in shades of red, yellow, blue, and pink. The overall aesthetic is clean and modern.

THANK YOU