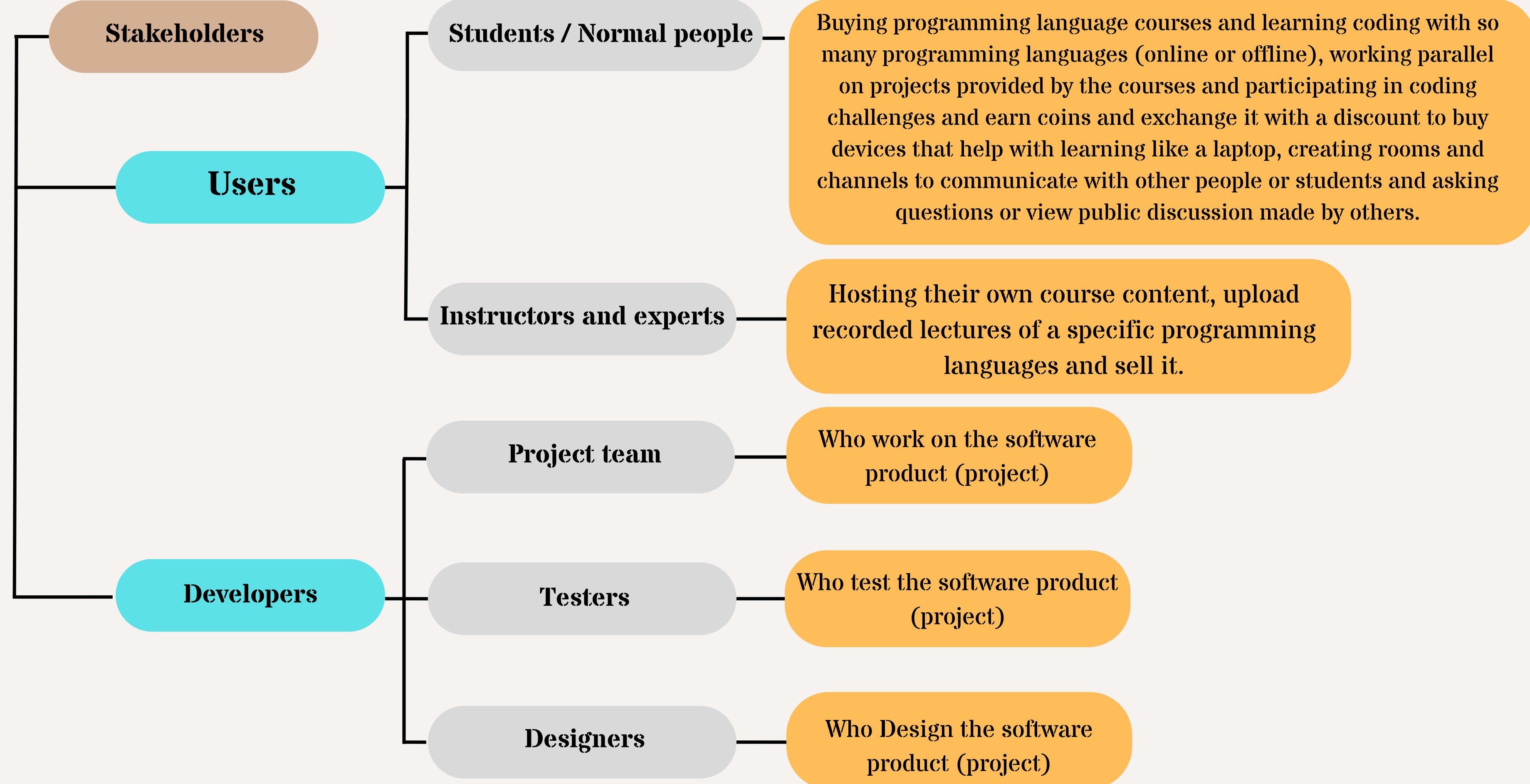


Software Product Introduction :

- Our software product **CodingClan** is a web application that will help the users to learn so many programming languages online, the product will offer many functions that aim to fulfill all the user needs, the functions will solve the problem of wasting time, when the user usually search for programming languages tutorials or search for the fix of a specific problem like some sort of bugs etc..., the product will offer the challenges to motivate the people or the students to learn more about coding, which is a very important part for the development in our world nowadays, our application will offer the service for all users to have a good communication tools by providing voice / video calls or even chat between the users.
- The targeted users for our project are the **students**, all **other people** who want to learn coding and **Instructors/experts**, for example by using our web application “**CodingClan**“ an Instructor will be able to host online lectures by recording lectures about a specific programming language . The students will be able to watch the course online or offline after downloading the videos and ask questions and communicate with other students/people.

The students will be able to add friends and work with them on a project (teamwork).

Stakeholders



Project Team

Dein Partner CV da

Monzr Hajy Omar

Name
Anschrift
Tel.
E-Mail
geb.

Education & qualifications

Since 2021

2016 – 2020

2010 – 2014

2005 – 2010

Work experience

2020 – 2021

Skills

IT skills

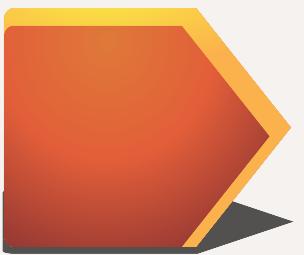
Language skills

Requirements Extraction

Persona

A user persona helps marketers or companies to identify all characteristics of their target customers.

For that we created two personas based on the type **USER**, which is the important type of the stakeholders for our software product.



First Persona

NAME **Abed AlSayed** TYPE **Rational**



Organizational goals and priorities
complete the bachelor's degree and open up his own company in the future.

Experiences
programming languages : java, c++ and python
Data base management

Fears and challenges
spending too much time on searching of bugfixes in big projects
learn more programming languages

Quote
"I feel like there is a smarter way for me to make my dreams true."

Preferred channels

Mail	Phone	Messaging
Tablet	Face to face	

Demographic info

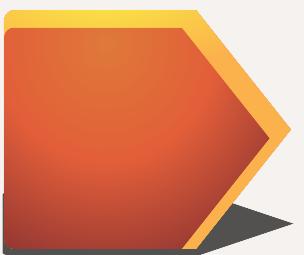
Male	23	years
Germany		
Single		
Student		

Requirements Extraction

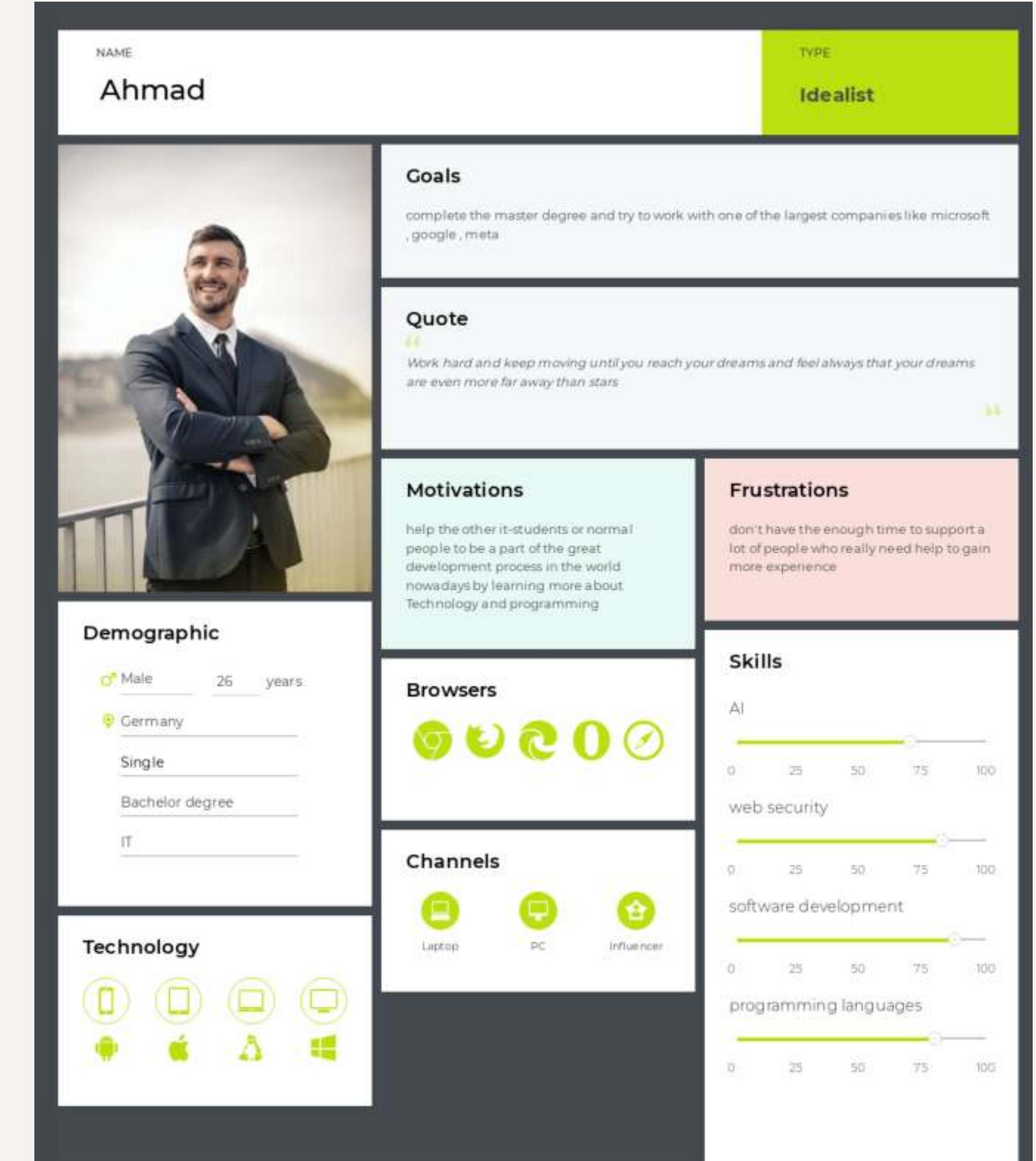
Persona

A user persona helps marketers or companies to identify all characteristics of their target customers.

For that we created two personas based on the type **USER**, which is the important type of the stakeholders for our software product.



Second Persona



Requirements Extraction

interview questions

list of demographic information we want to collect:

Age of customers

User's age is one of the important information to set a software product that fulfill the user needs.

Gender

The gender makes it clear which products are more suitable for men or for women

Education level of customers

allow us to know which users we want to target based on what they are studying.

Work status:

help to build a software project that meet all the user needs in the work and help employees to spend less time on solving problems.

Country of customers

is a very needed information to make the product usable for all languages of the customers.

Requirements Extraction

interview questions

semi-structured interview question:

Introduction:

- What do you think about the opportunity of learning coding (programming languages) online and offline?

Worm-up:

- Which tools are mostly used to learn coding (for students outside and inside the university) ?

Main body:

- Which tool would you use to learn a programming language?
- What are the advantages of this tool and why you prefer to use it?
- What are the disadvantages of other tools?
- What do you do if face a problem while coding ?
- What is your opinion of working with our people on a big project?
- What are the devices that you use to learn a programming language?

Employment questions:

- What do you work ?
- What is the most used programming language in your work ?
- What are the problems that you face usually while you work on a project?
- What motivate you to gain more experience ?

Closure:

- If you use an app to learn a programming languages What are the features that must be provided by the application?

Requirements Extraction

List of participants for the interview

Name : Mohammad Yassin
Age : 23
Gender : male
Education level : Bachelor informatics
Work status : student
Country: Germany

Name : Mayas Khalaf
Age : 21
Gender : female
Education level : biomedical engineering Bachelor
Work status : student
Country: Germany

Name : Ahmad Omar
Age : 26
Gender : male
Education level : Bachelor informatics
Work status : employee at CISPA
Country: Germany

Name : Saleh Ali
Age : 21
Gender : male
Education level : Bachelor informatics
Work status : student
Country: Germany

Requirements Extraction

key findings from Interviews:

most interviewers use youtube to watch free coding tutorials or they visit platforms like Codecademy and buy courses

most interviewers use a desktop browser to learn coding and the majority of them use a laptop

most interviewers visit stack overflow to search for a bugfixes

Teamwork can be difficult for the beginners at work, that's why most of the interviewers recommend an option in the application to work with other people

The software product must offer free courses at least for the students so they can learn the basics.

some interviewers asked for offline learning mode so they can learn even when they are disconnected from the internet

Requirements Extraction scenarios

First scenario :



Abed is a bachelor student at htw saar, he studies informatics in the first semester and has a programming course for java, at the begin he was able to understand everything but after a while he started to face problems with the content of the java course, he asked for help many times from other students but it was not enough for him to gain the required experience, he discovered the new platform **CodingClan** then he made an account and registered in the platform and confirmed his account, he started to see which functions the web application offer so he saw the language option of the web application and he switched the language from German to English , the first thing catched his eyes was buying courses for all programming languages, he went there and searched for a java beginner course he bought it and started watching the first lecture, after that he was motivated to see what other functions the web application offer, he saw the free courses function and directly added the some free courses for java because he is a beginner and he want to learn the basic, then tolled his friends about it, after some days he discovered the channel function and created a channel with his friends after he added them as friend in the platform, so they can learn together if the y want to, or if they want to discuss some programming issues or even work together on a project, one day he faced two errors while coding so he went to the community function and luckily one of these errors was already discussed by other people and the the solution was there, then he searched for the second error if anyone talked about it, but didn't find any thing, so he wrote the error details and posted it, so other people can recommend a fix for this error and mention the cause of it.

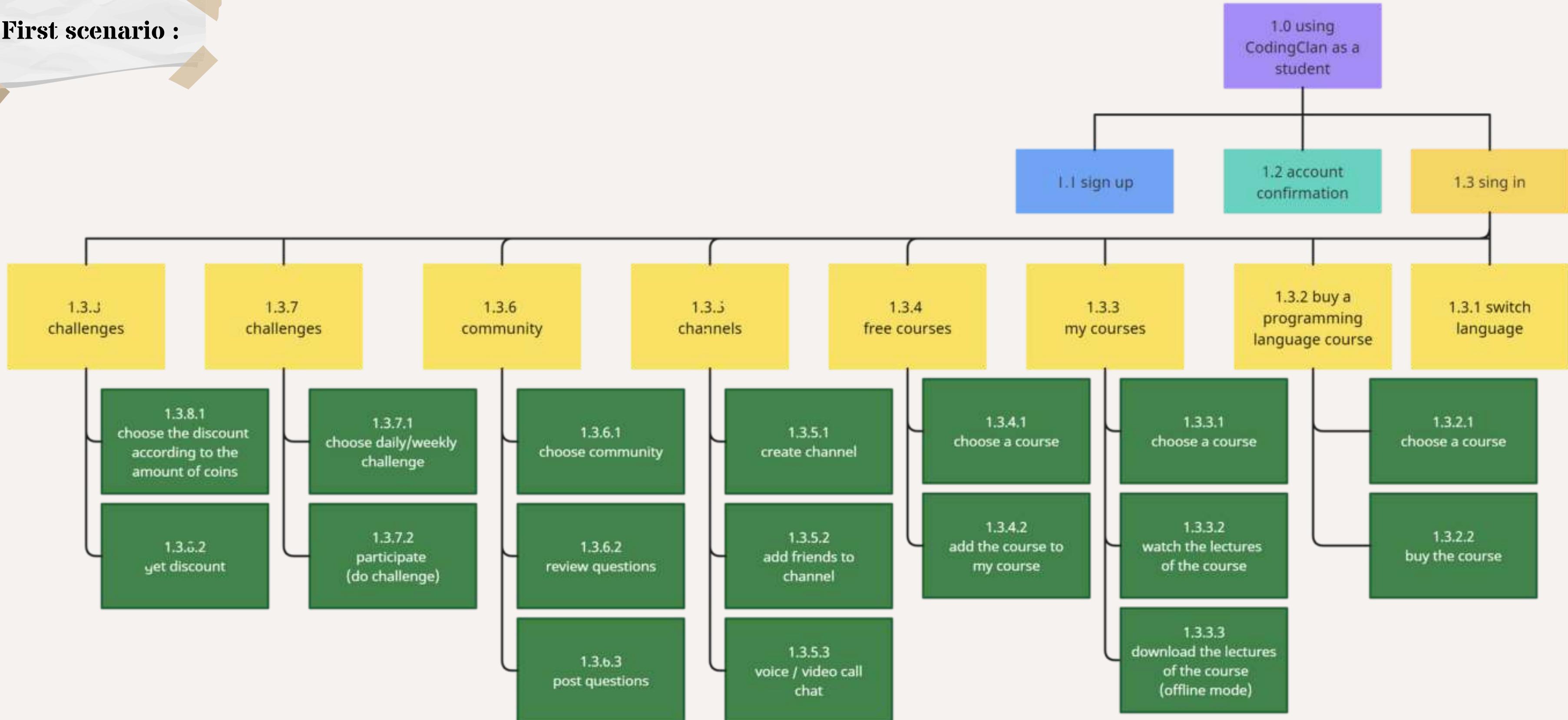
after a month he needed more motivation to gain more experience and this is when he participate for the first time in the challenges function, there was daily and weekly challenges and if the participants solved the challenge he/she will gain some coins, because abed spent so much time on learning he could solve a weekly difficult challenge for beginners and he earned 250 coin, with the 250 coins abed could exchange it with a 10% discount on amazon to buy an ipad air 2022 5 Generation.

Requirements Extraction

scenarios

hierarchical task analysis

First scenario :



Requirements Extraction scenarios

Second scenario :



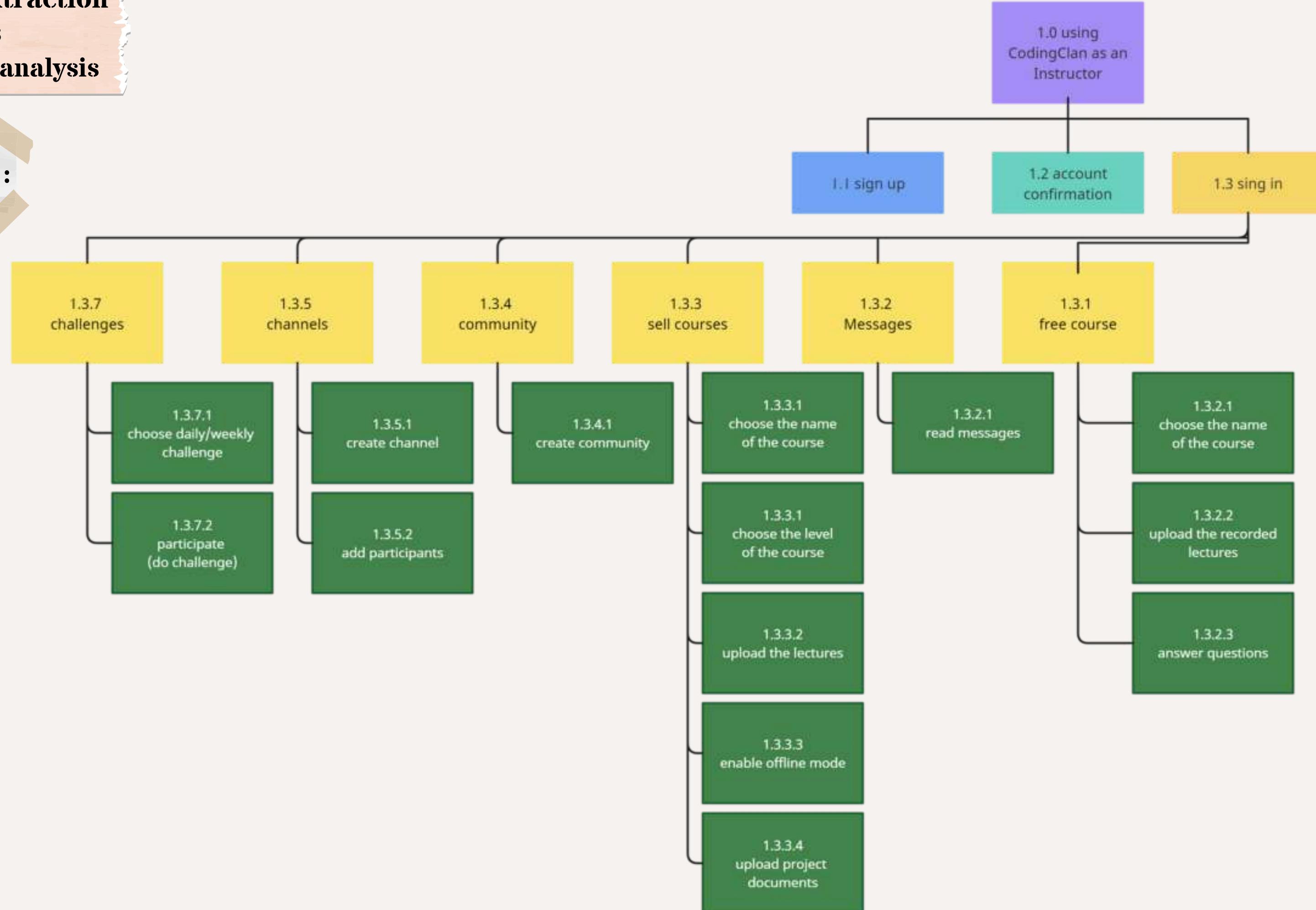
Ahmad is a master student at saarland university, he studies informatics and work at CISPA, he always works on web security issues and also worked as a software developer during his study journey he gained a lot of experience, so he decided to start helping the other students or anyone who want to learn coding, one of his friends mention **CodingClanB** to him, he opened the browser on his laptop and registered directly in the platform after confirming his account, he saw the sell option in the platform and he started reading the terms for hosting a content, so knew that he fulfill all the requirements but to host a course for a specific programming language and sell it, he must host a free course and gain a good review from the participants and that is what he did, he worked on a python free tutorial he could record 41 lecture about the basic in python, named the course and upload it for free in the platform he received a message from the platform that his request has been confirmed and the course is now public to all users, after a while he started receiving many questions from the participants and answer them, after 2 months he received the permission from **CodingClan** to host new contents and sell it for the users , so he worked on two courses, beginners level and advanced level and both of them in web security section, he allowed all participants to learn in offline mode after enabling the download of his content he also offered a big project so the participants can work with him parallel on the project and gain more experience he also created a private community for his audients and created a channel so he can directly discuss with them about related programming issues.

Requirements Extraction

scenarios

hierarchical task analysis

Second scenario :



Introduction of tool and requirements

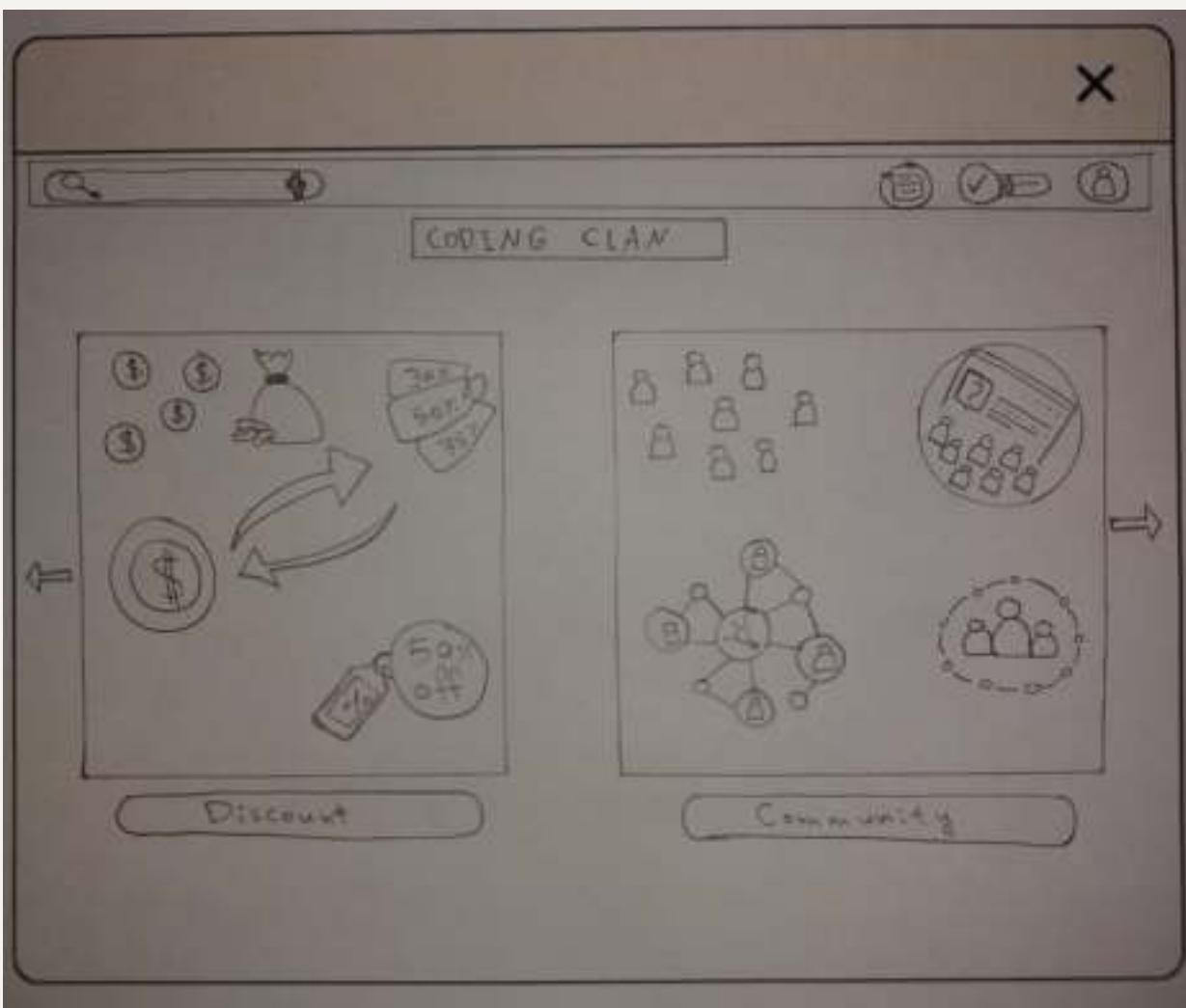
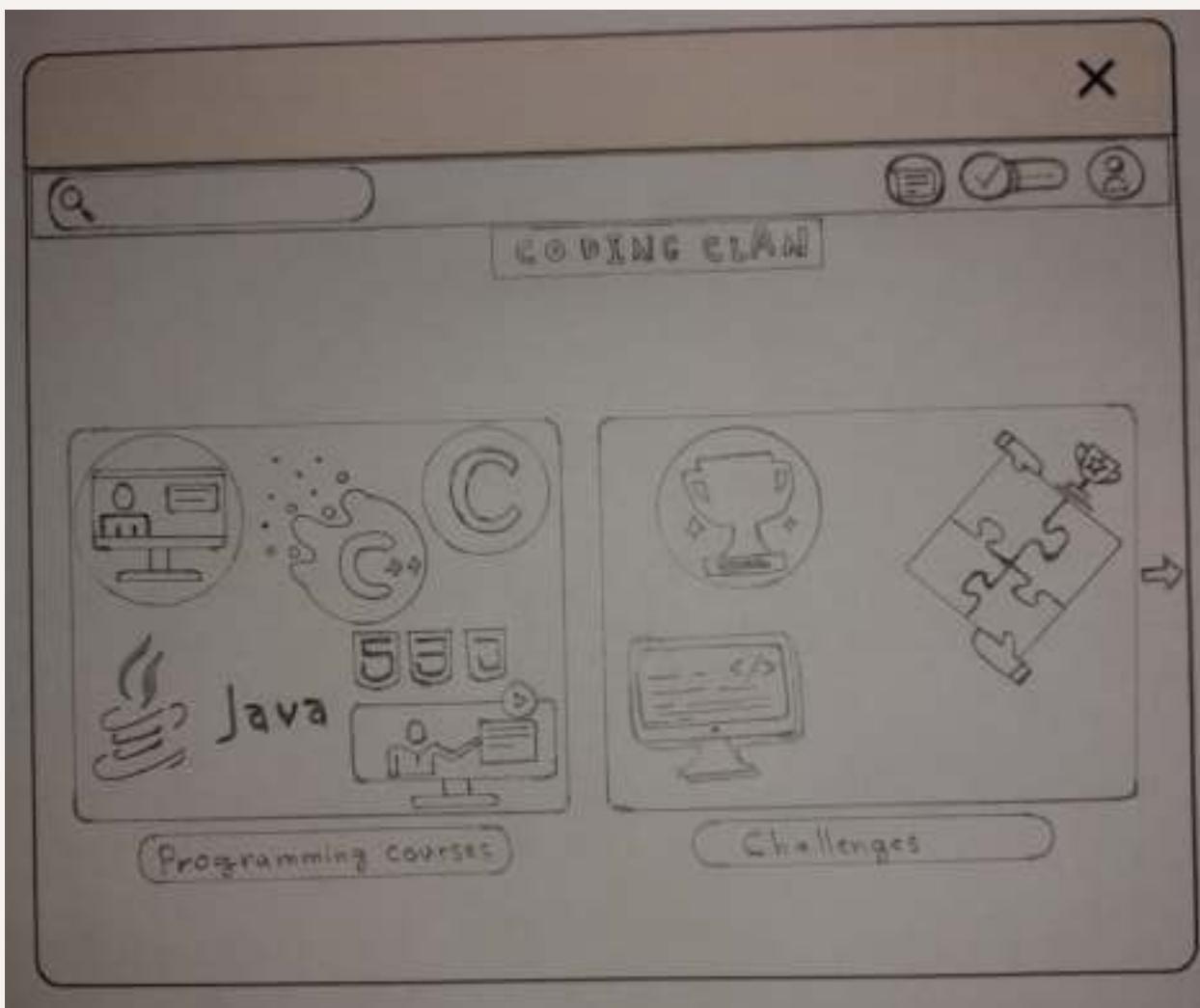
Based on the data that we gathered we can get the following requirements :

Type of Requirements	List of Requirements
Usability Requirements	a)- the system will be supported by mobile and desktop browsers.
Functional Requirements	a)- The user can buy courses. b)- The user can sell courses. c)- The user can watch the course's lectures online. d)- The user can watch the course's lectures offline after downloading the recorded videos. e)- The user can host his/her own content. f)- The user can access free courses and watch them. g)- The user can participate in daily/weekly challenges and earn coins. h)- The user can exchange a specific number of coins with a discount to buy a device that helps with learning like an Ipad or a laptop. i)- The user can join the community to ask questions or answer questions of other people. j)- The user can add friends and create channels and work with friends on a specific project together. k)- The user can communicate with other friends via voice / video call and chat.
Non-Functional Requirements	a)- The product allows unlimited number of concurrent users. b)- Require strong passwords of at least 10 characters. c)- Require confirmation of the account.

Low-fi prototype

creating a visual prototype which can be used to explain to others how our UI should work.

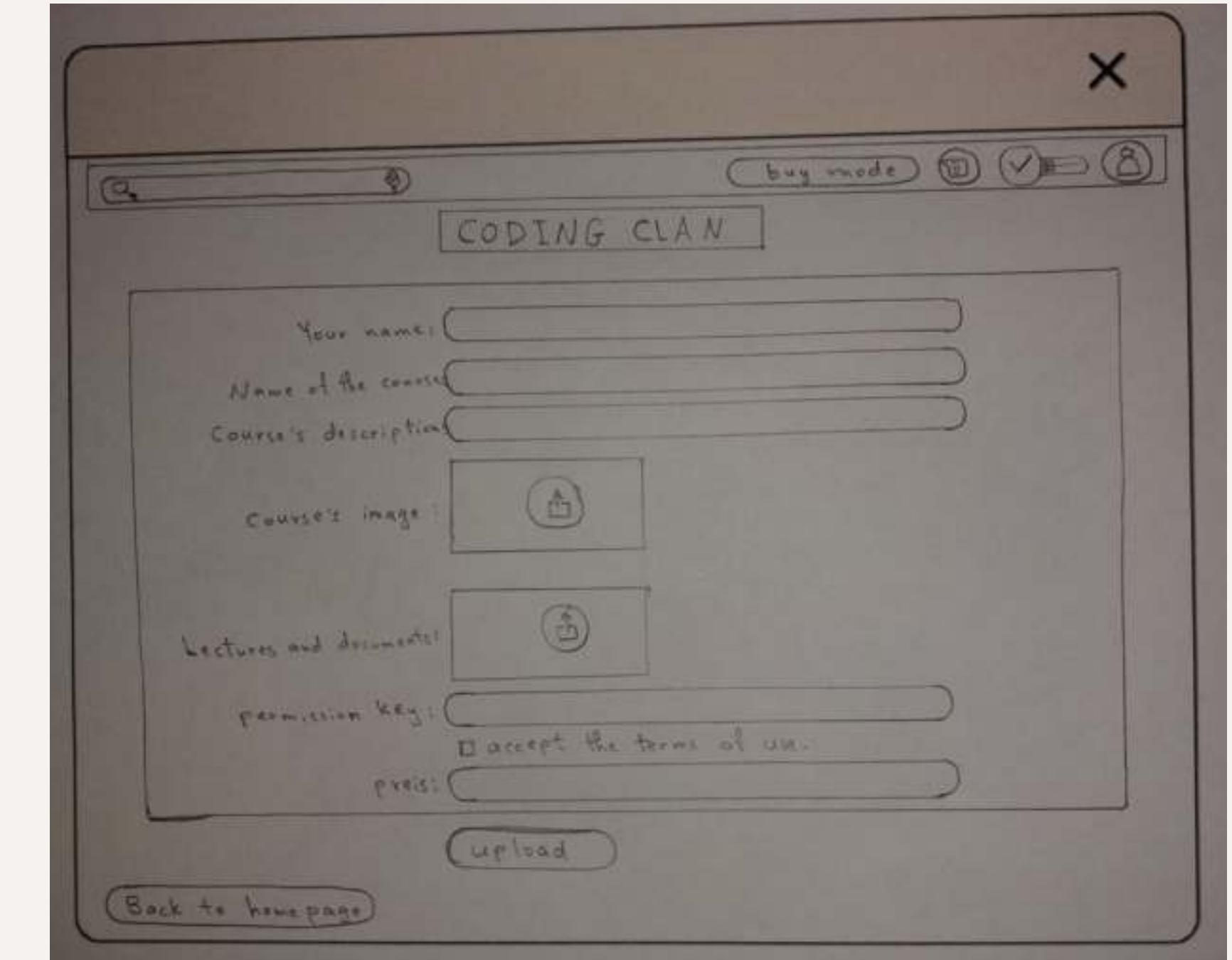
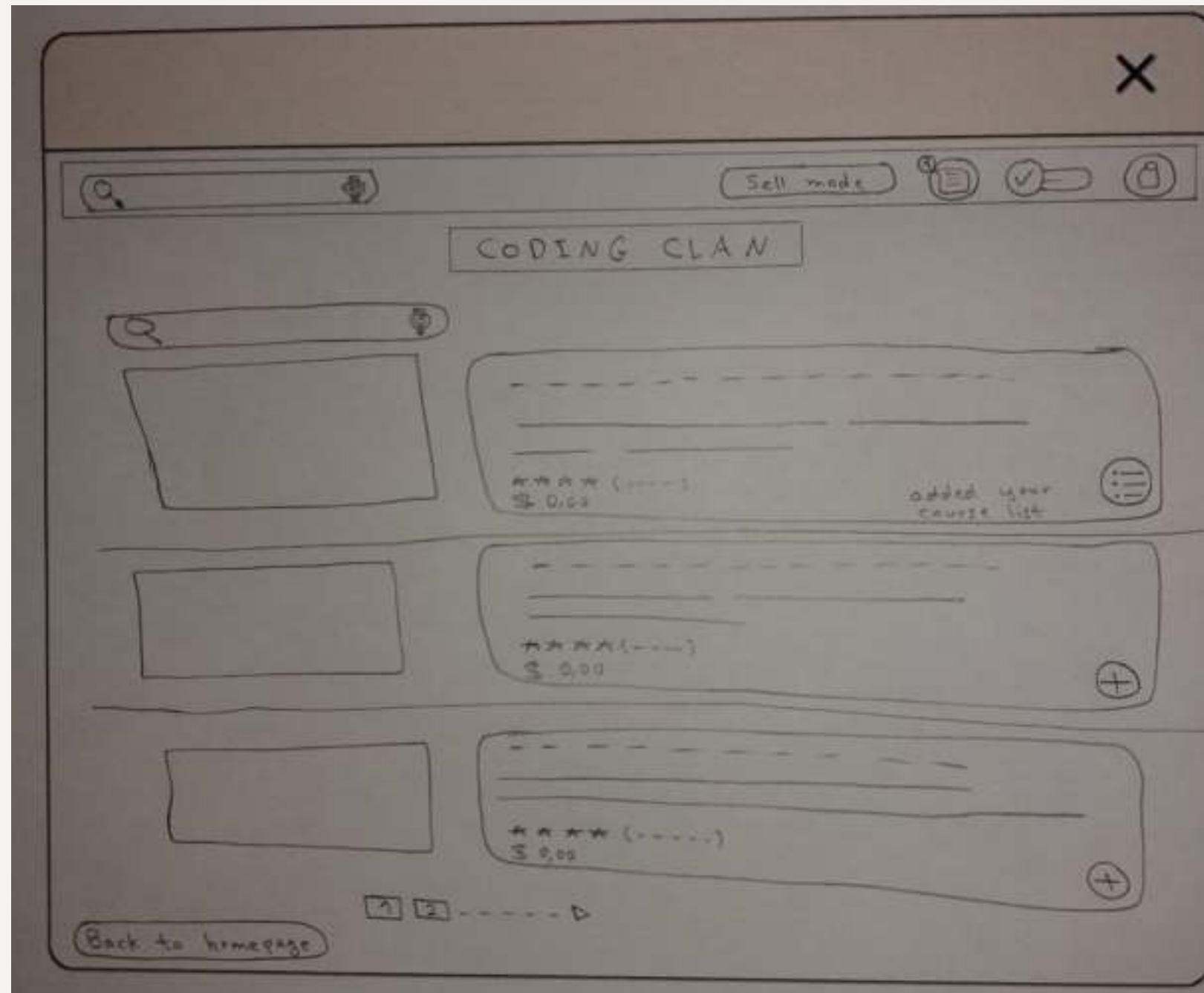
Main - Functions



Low-fi prototype

creating a visual prototype which can be used to explain to others how our UI should work.

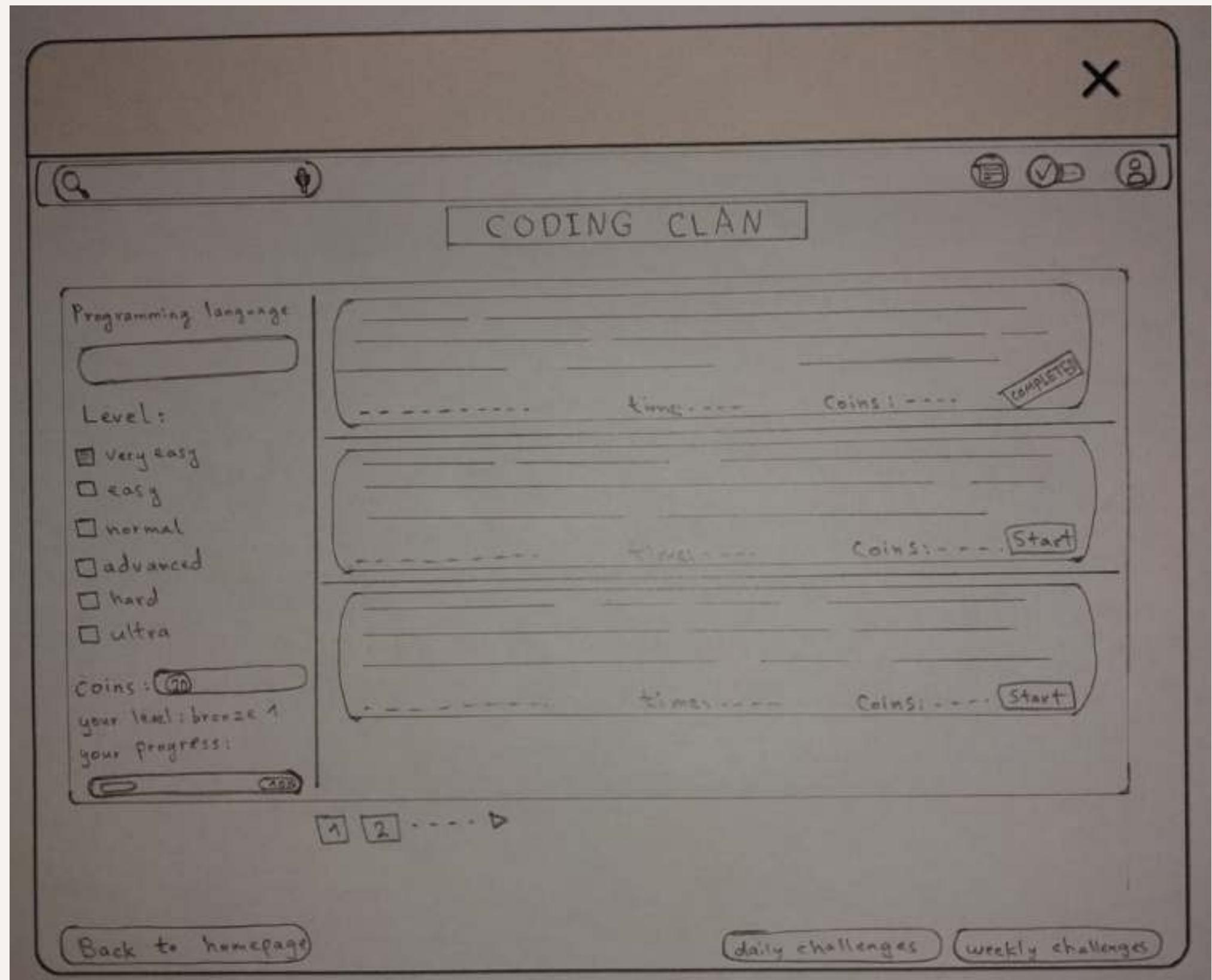
Programming Course + Free course - Functions (buy / sell mode)



Low-fi prototype

creating a visual prototype which can be used to explain to others how our UI should work.

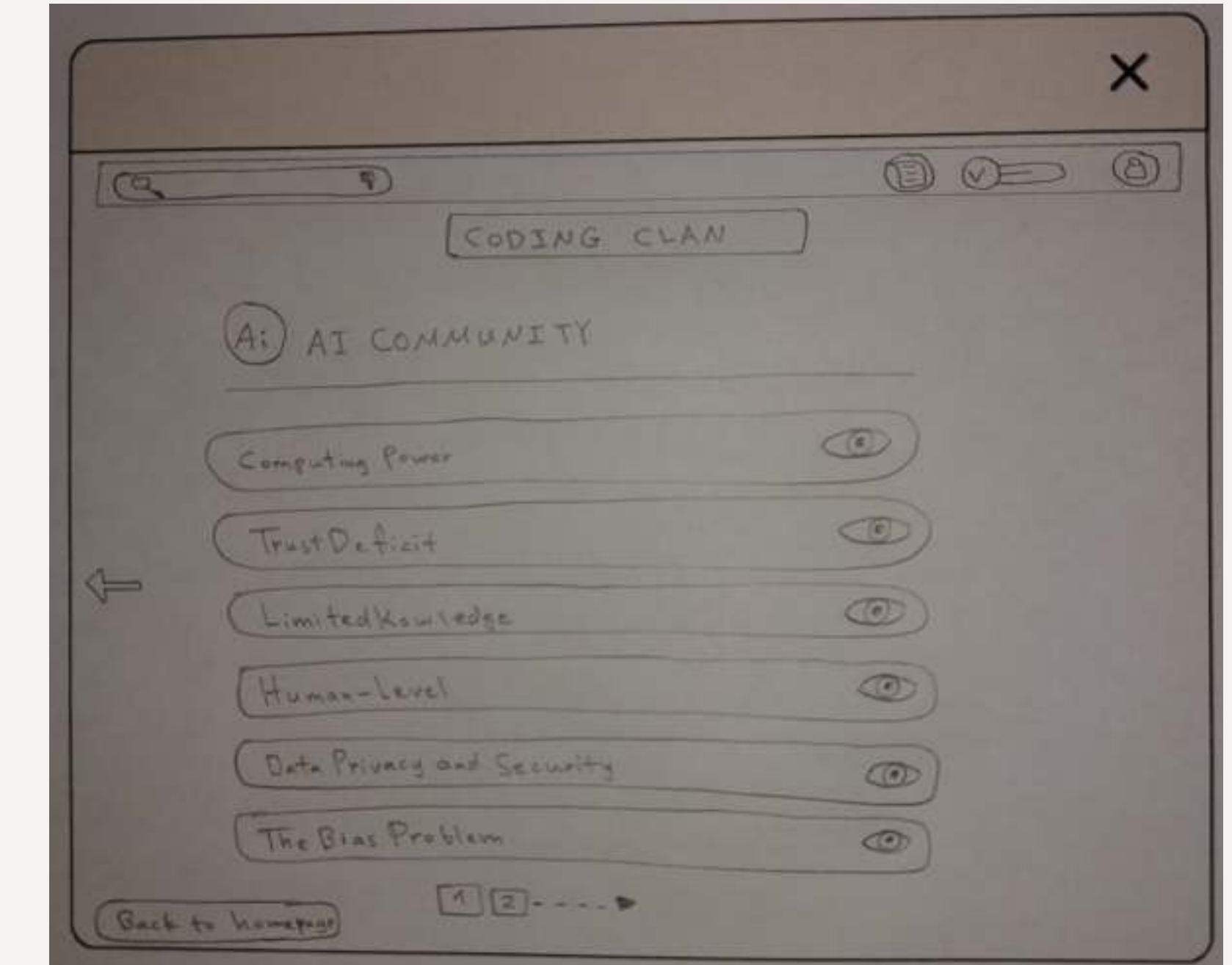
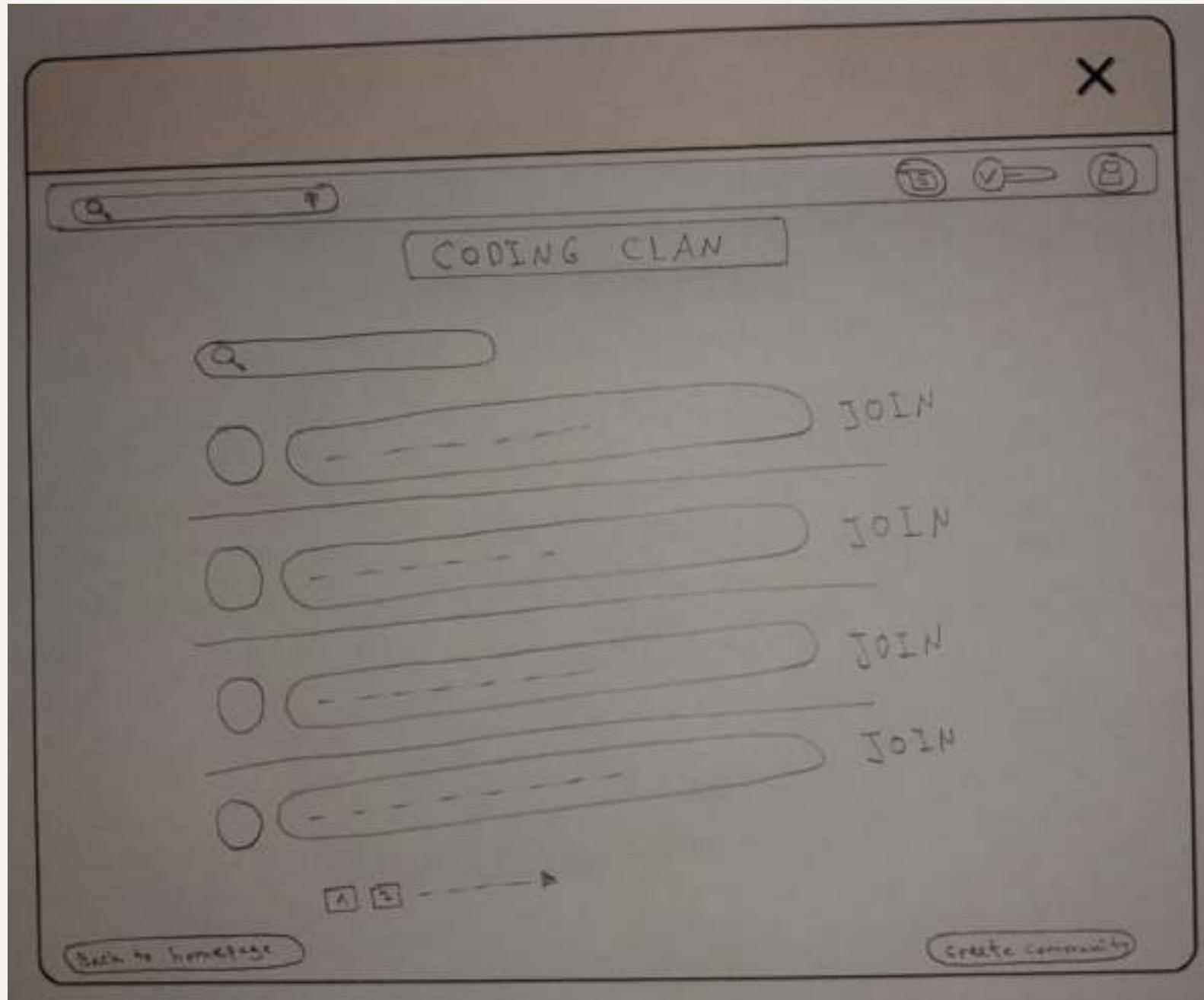
Challenges - Function



Low-fi prototype

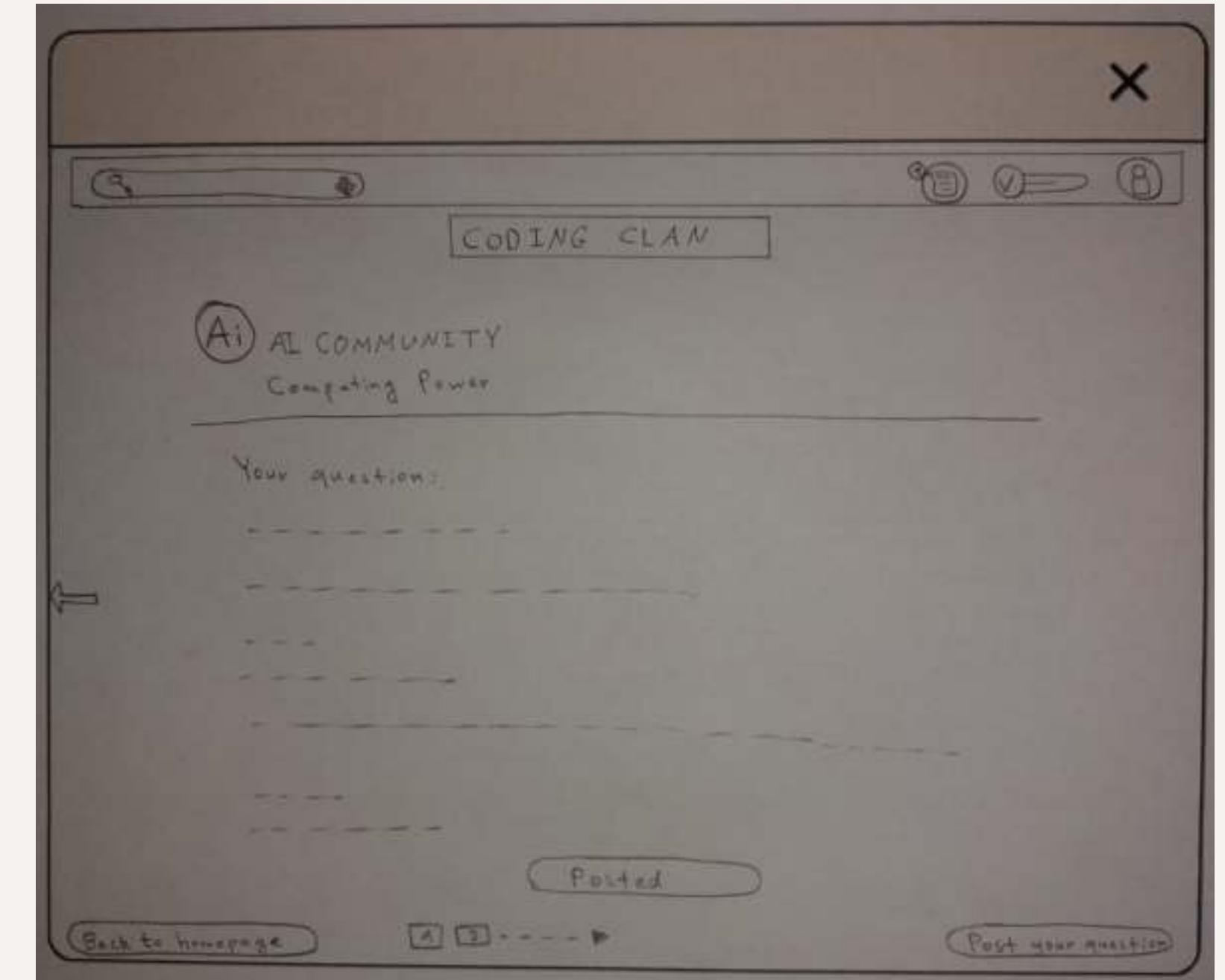
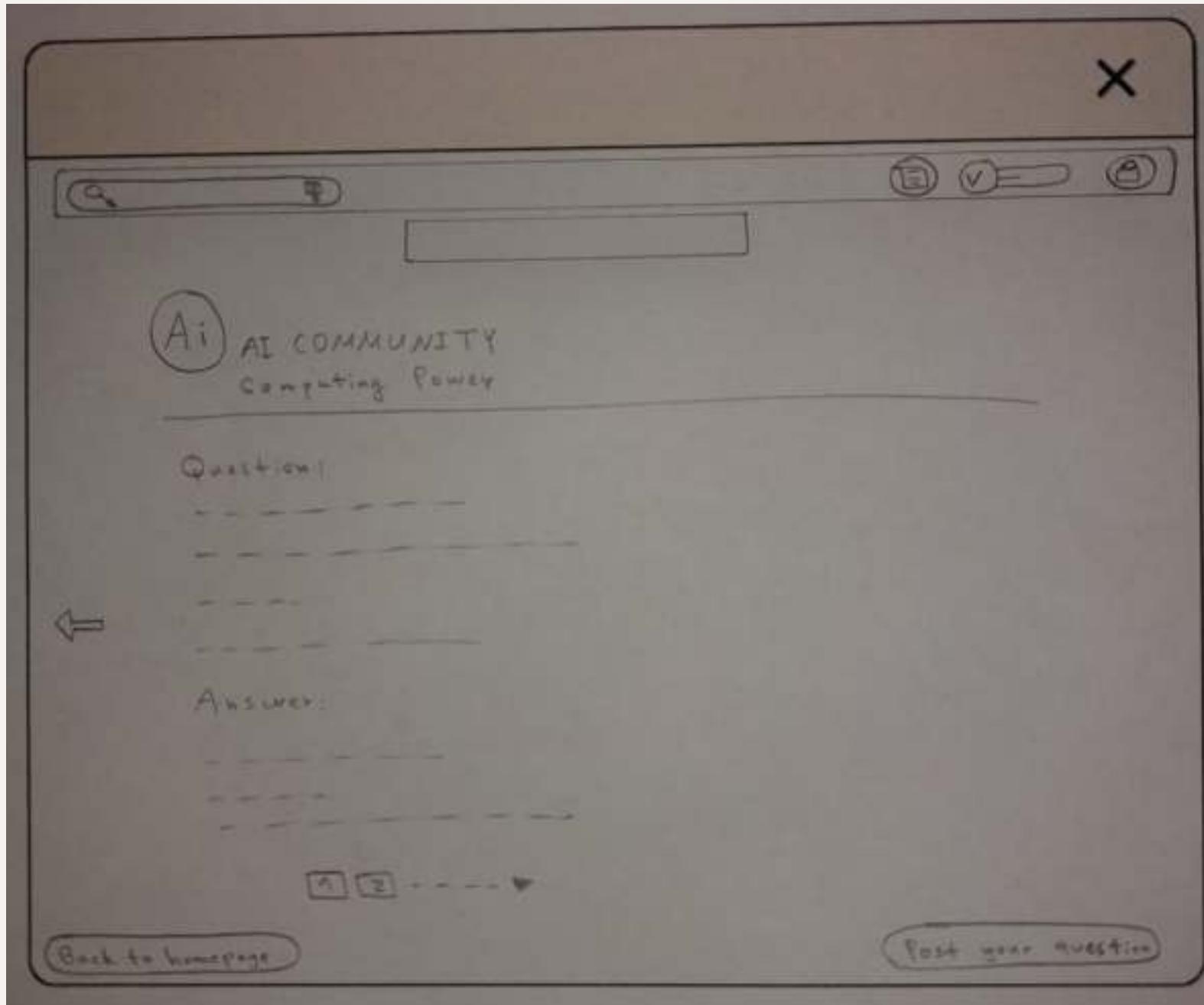
creating a visual prototype which can be used to explain to others how our UI should work.

Community - Function



Low-fi prototype

creating a visual prototype which can be used to explain to others how our UI should work.
Community - Function



Low-fi prototype

creating a visual prototype which can be used to explain to others how our UI should work.

Community - Function (create a community)

A hand-drawn low-fi prototype of a web application interface for creating a community. The interface is contained within a rounded rectangle with a light brown background, simulating a window or card. At the top right is a large black 'X'. Below the header is a horizontal toolbar with icons: a magnifying glass, a person icon, a save icon (with a checkmark), a settings gear icon, and a lock icon. In the center of the header is a search bar containing the text "COPING CLAN".

The main content area is titled "Create your own community" in a handwritten font. It contains three input fields: "Your name:" followed by a long rectangular input box, "Community name:" followed by another long rectangular input box, and "Community description:" followed by a third long rectangular input box.

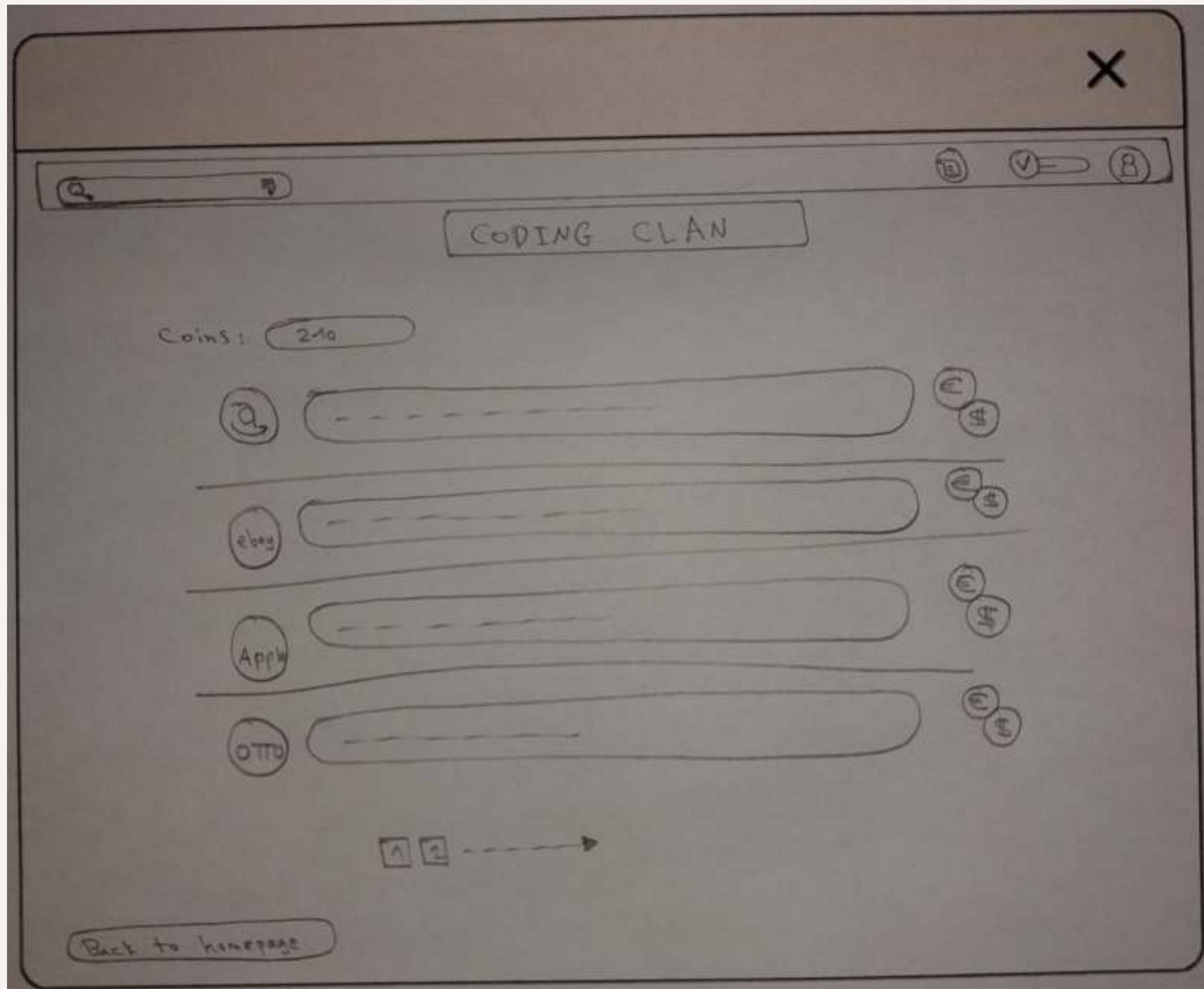
Below these fields are two sections of checkboxes. The first section, preceded by a left arrow icon, asks "Limited members: yes, number: no ". The second section asks "public or private: public private".

At the bottom center is a prominent oval-shaped button labeled "Create community". At the very bottom left is a smaller oval-shaped button labeled "Back to homepage".

Low-fi prototype

creating a visual prototype which can be used to explain to others how our UI should work.

Exchange coins with discount - Function

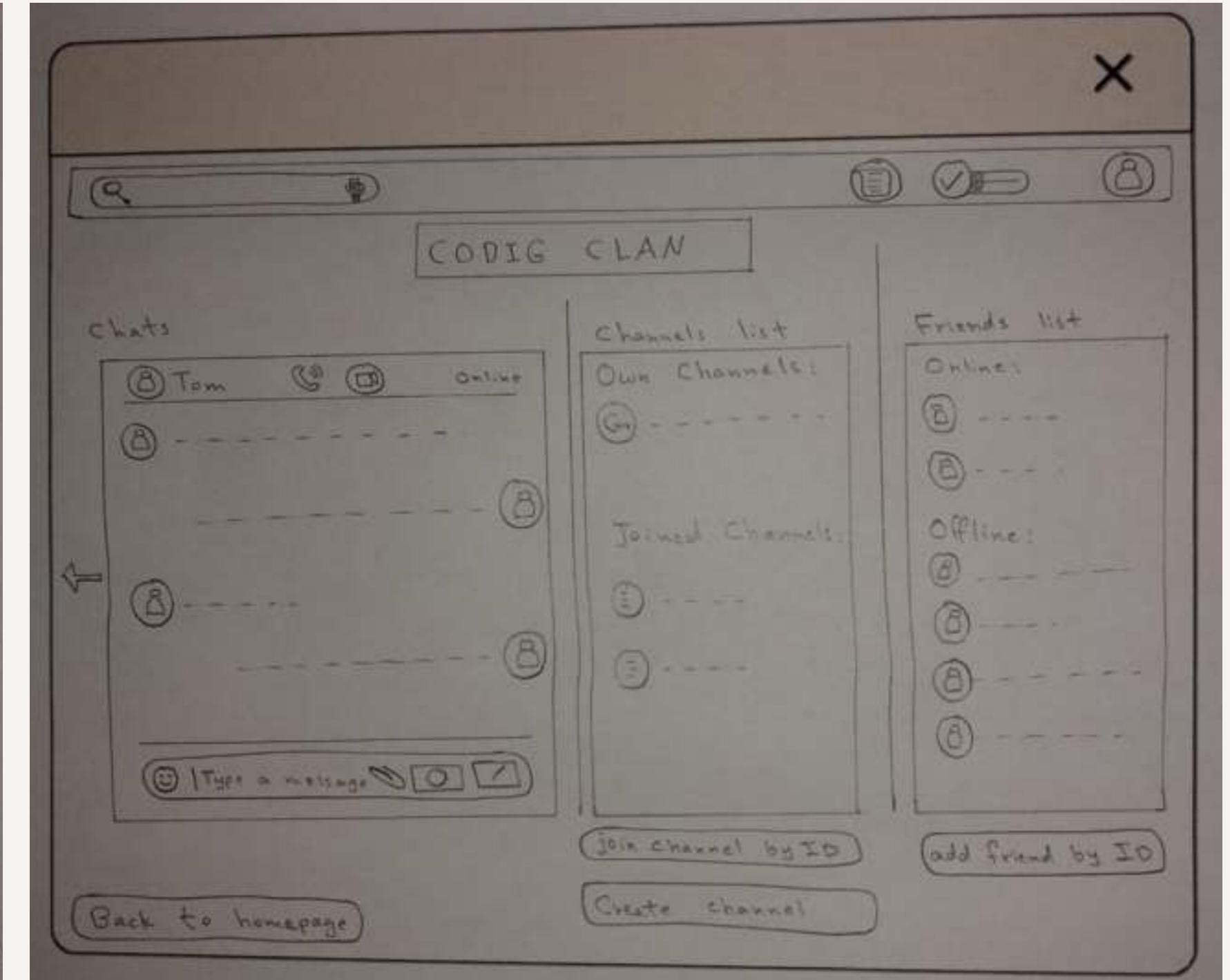
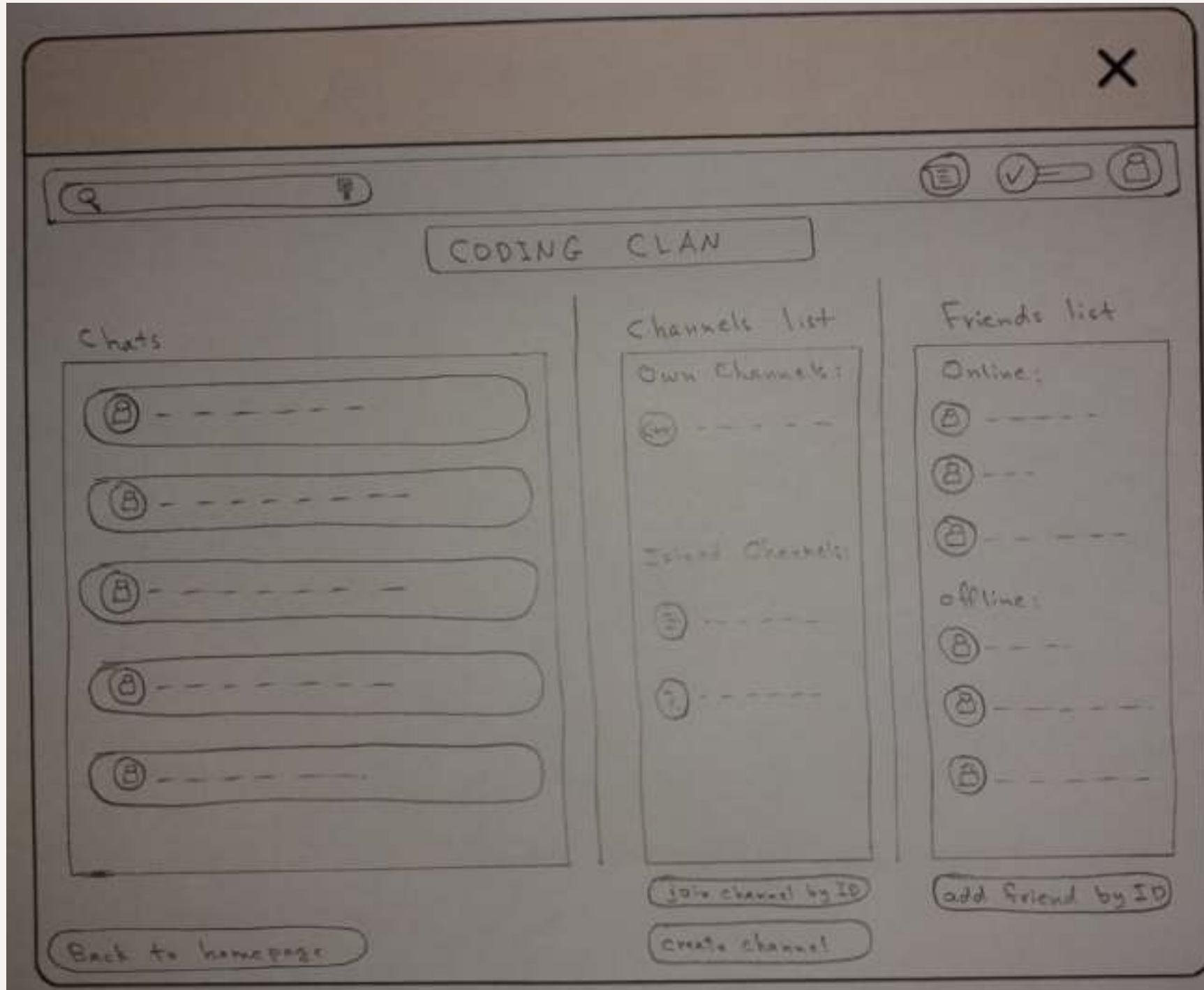


Low-fi prototype

creating a visual prototype which can be used to explain to others how our UI should work.

Friends and channels - Function

chat

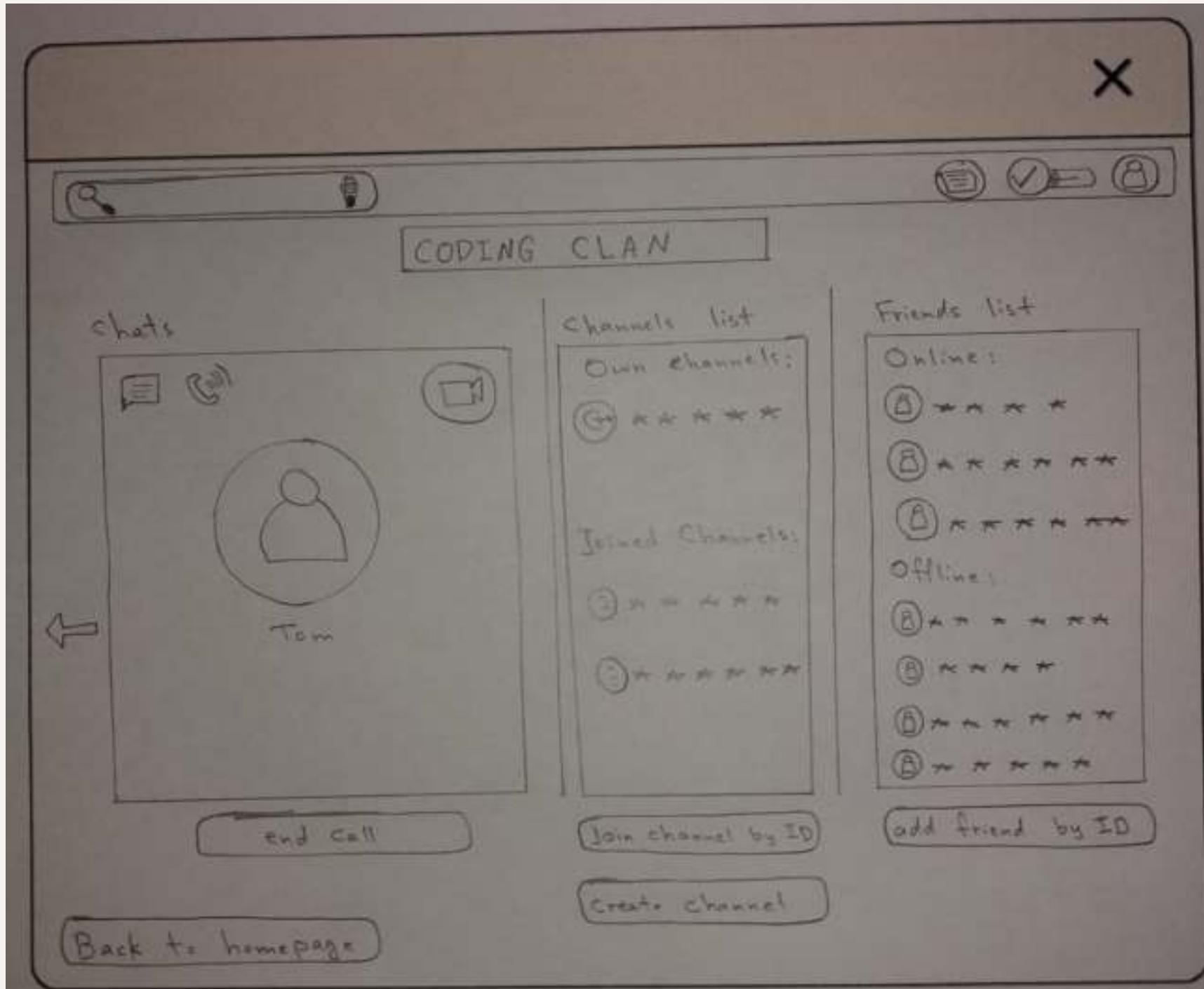


Low-fi prototype

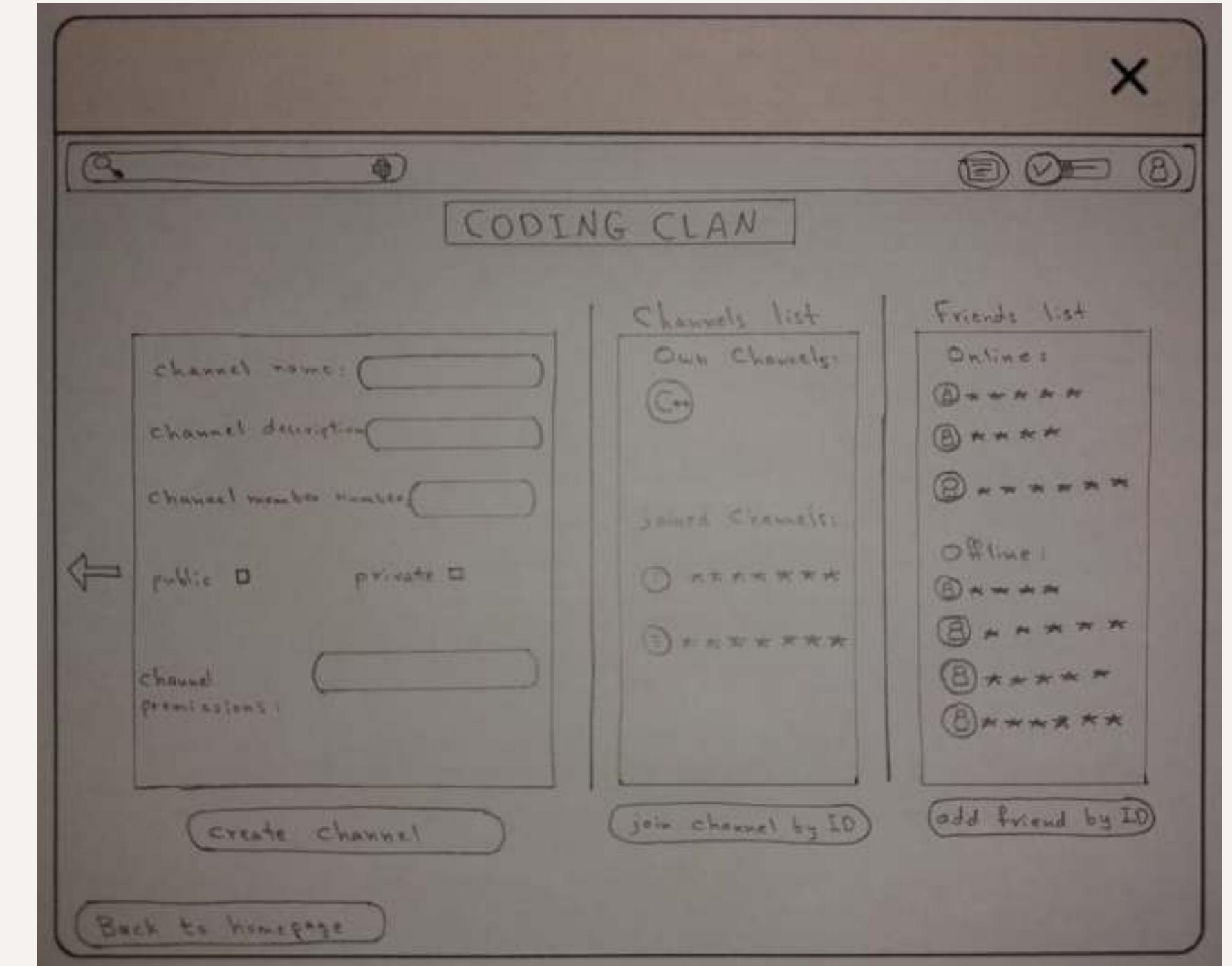
creating a visual prototype which can be used to explain to others how our UI should work.

Friends and channels - Function

video call



create a channel



Hi-fi prototype

How to use it

Sign up / Sign in

A screenshot of a web browser showing a sign-up form. The form is contained within a light-colored box with rounded corners. It features five input fields: "first name", "last name", "email", "password", and "password confirmation". Below these fields is a "sign up" button. At the bottom of the form, there is a link that says "sign in if you are already a member".

first name

last name

email

password

password confirmation

sign up

sign in if you are already a member

entry point

A screenshot of a web browser showing the same sign-up form. In this step, the "first name" field has been populated with the text "Monz". The other fields and the overall layout remain the same.

Monz

last name

email

password

password confirmation

sign up

sign in if you are already a member

type first name (by clicking on it)

A screenshot of a web browser showing the sign-up form. Both the "first name" and "last name" fields now contain their respective values: "Monz" and "Hajy Omar". The other fields and the overall layout remain consistent.

Monz

Hajy Omar

email

password

password confirmation

sign up

sign in if you are already a member

type last name (by clicking on it)

Hi-fi prototype

How to use it

Sign up / Sign in

A screenshot of a web browser showing the sign-up form. The input fields for name, email, and password are empty. The "sign up" button is visible at the bottom.

sign up

Monar

Haly Omar

monar99@gmail.com

password

password confirmation

sign up

sign in if you are already a member

A screenshot of the sign-up form after a password has been typed into the "password" field. The "password confirmation" field is still empty.

sign up

Monar

Haly Omar

monar99@gmail.com

password confirmation

sign up

sign in if you are already a member

A screenshot of the sign-up form after both the "password" and "password confirmation" fields have been filled with identical text.

sign up

Monar

Haly Omar

monar99@gmail.com

sign up

sign in if you are already a member

type password (by clicking on it)

confirm password (by clicking on it)

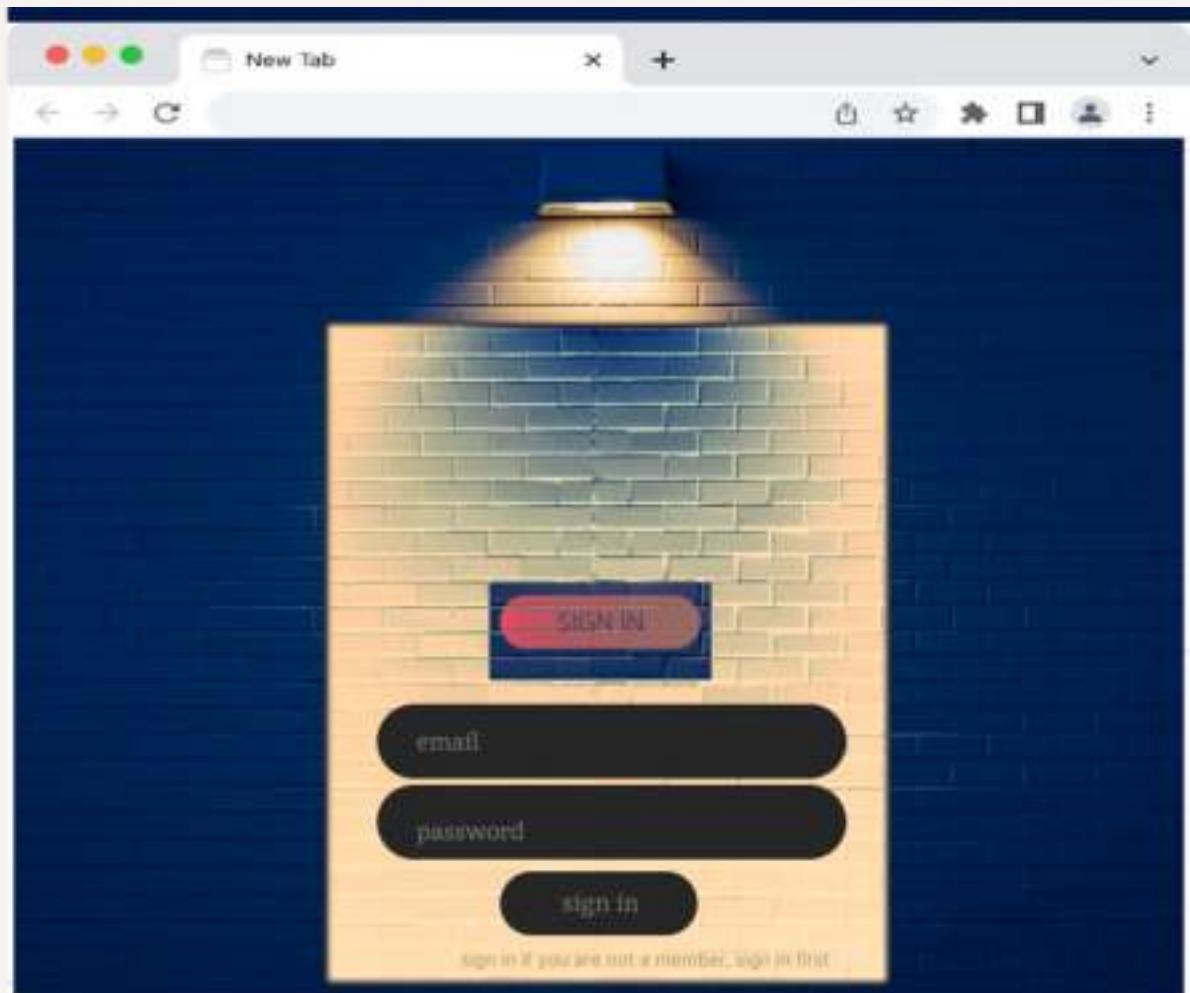
click on sign up

Hi-fi prototype

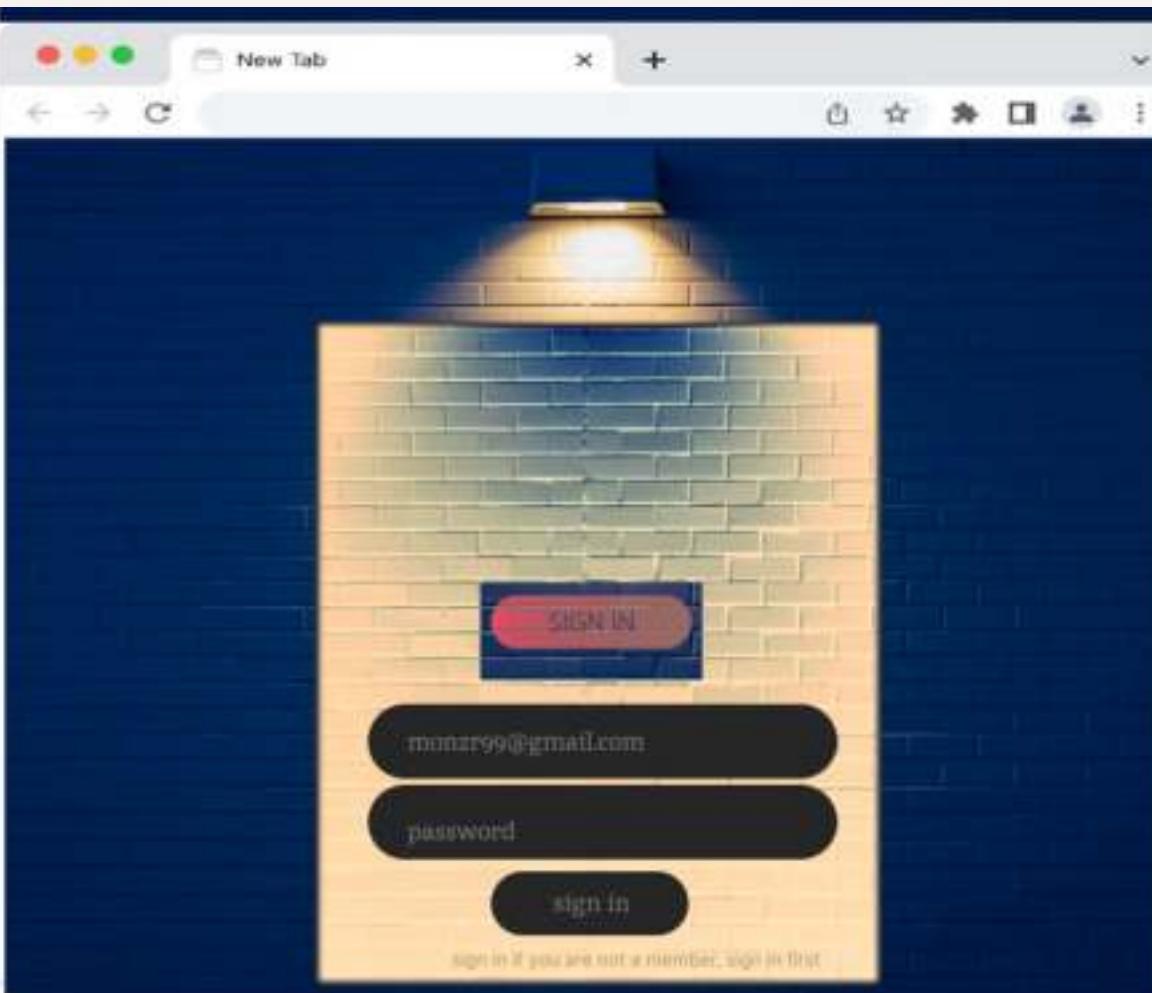
How to use it

Sign up / Sign in

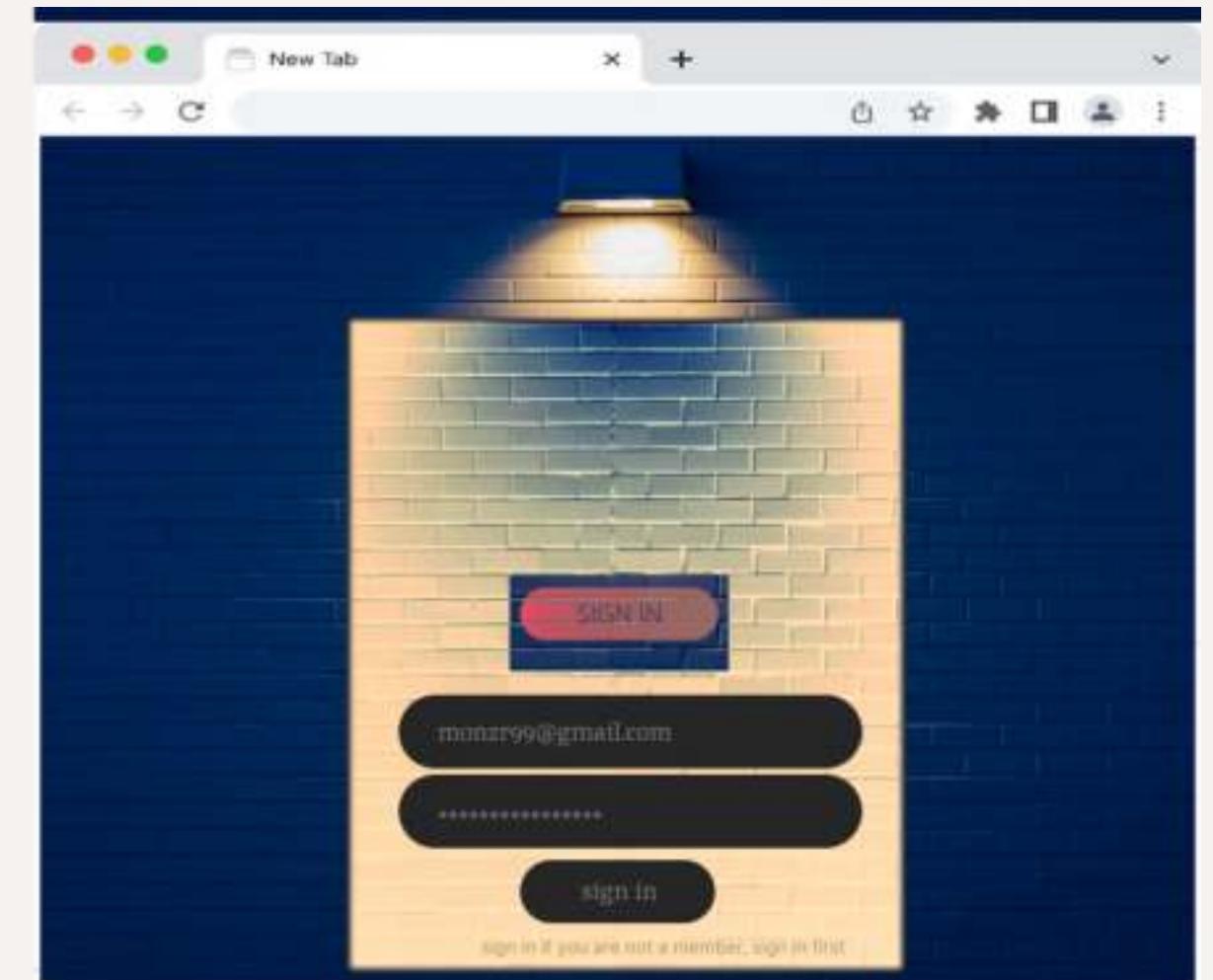
LOG IN 



type email (by clicking on it)



type password (by clicking on it)



click on sign in

Hi-fi prototype

How to use it

Home page



click on the arrow (left and right side) to switch between functions

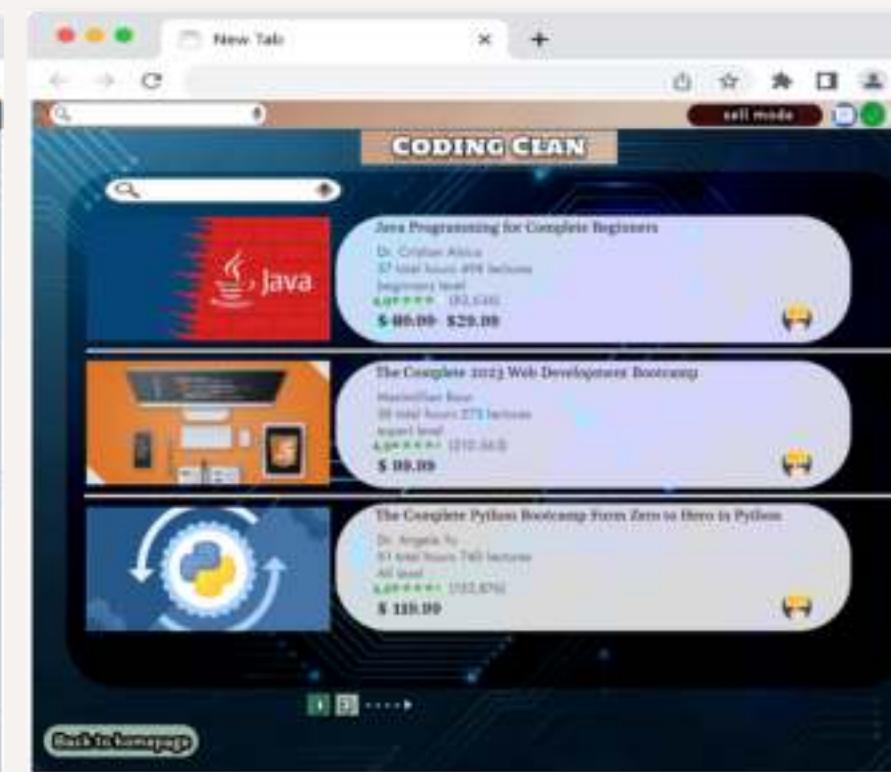
Hi-fi prototype

How to use it

Home page



click on the button programming course



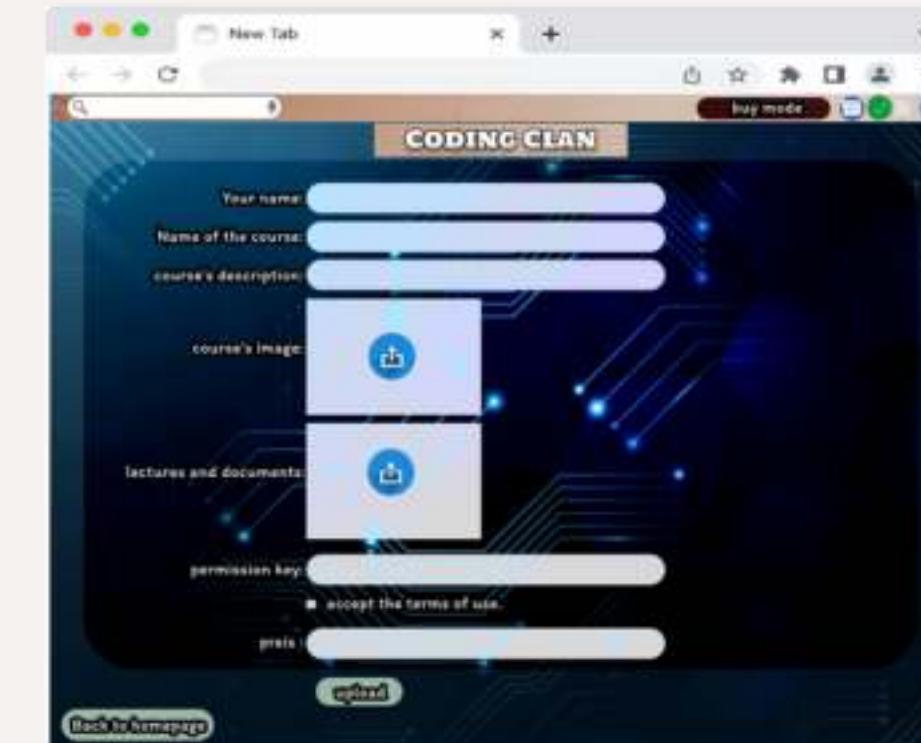
click on the icon Buy to buy the course



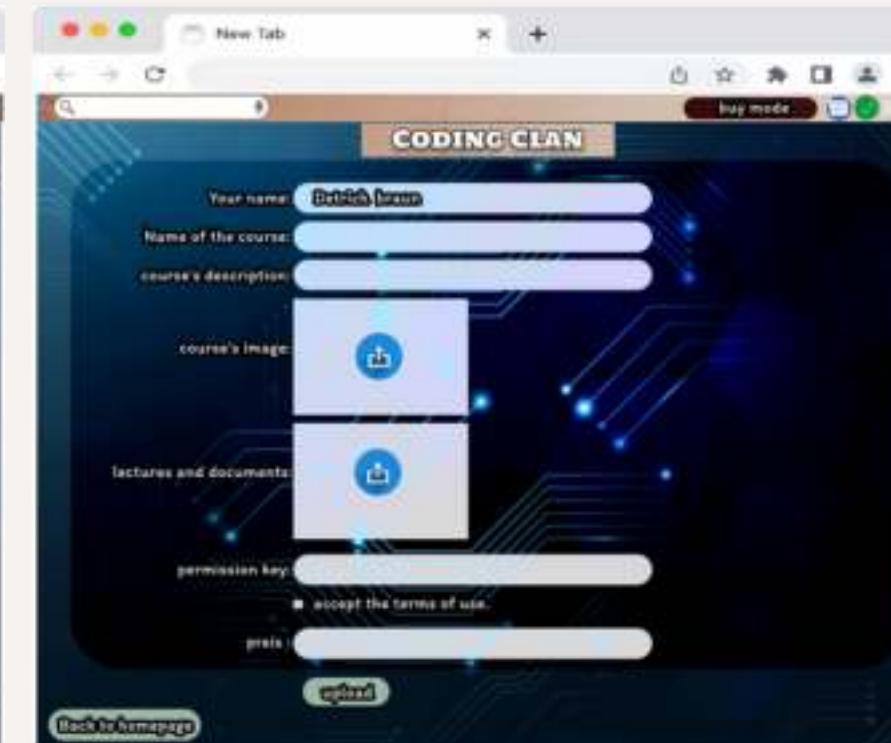
click on the number 2 (bottom) to see more course



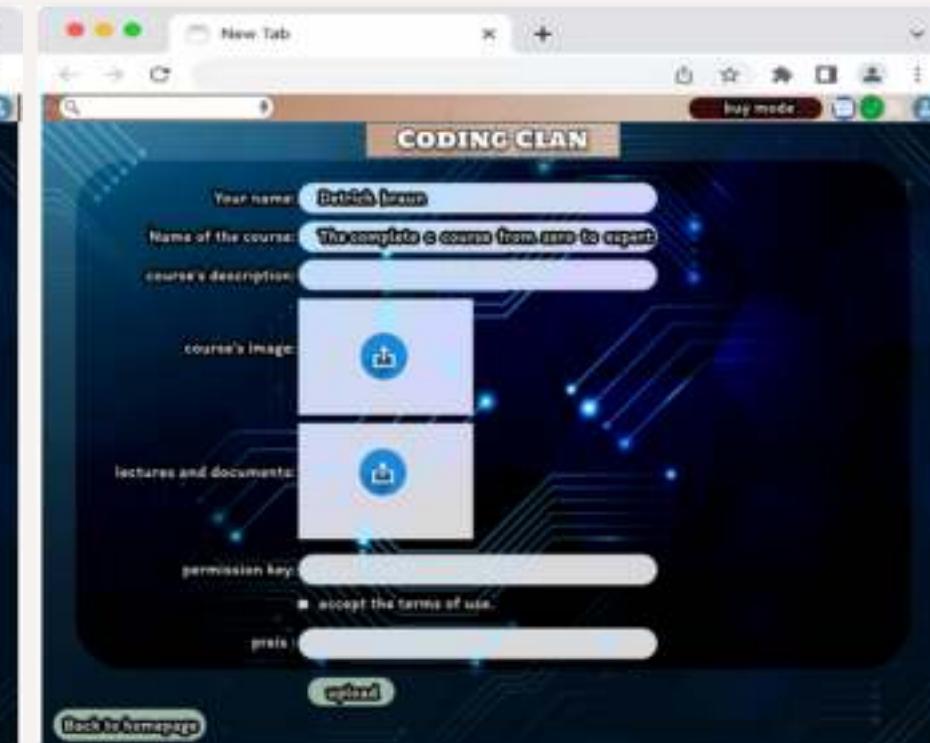
click on the button sell mode (top right)



type name(by clicking on it)



type name of the course(by clicking on it)



type description of the course
(by clicking on it)

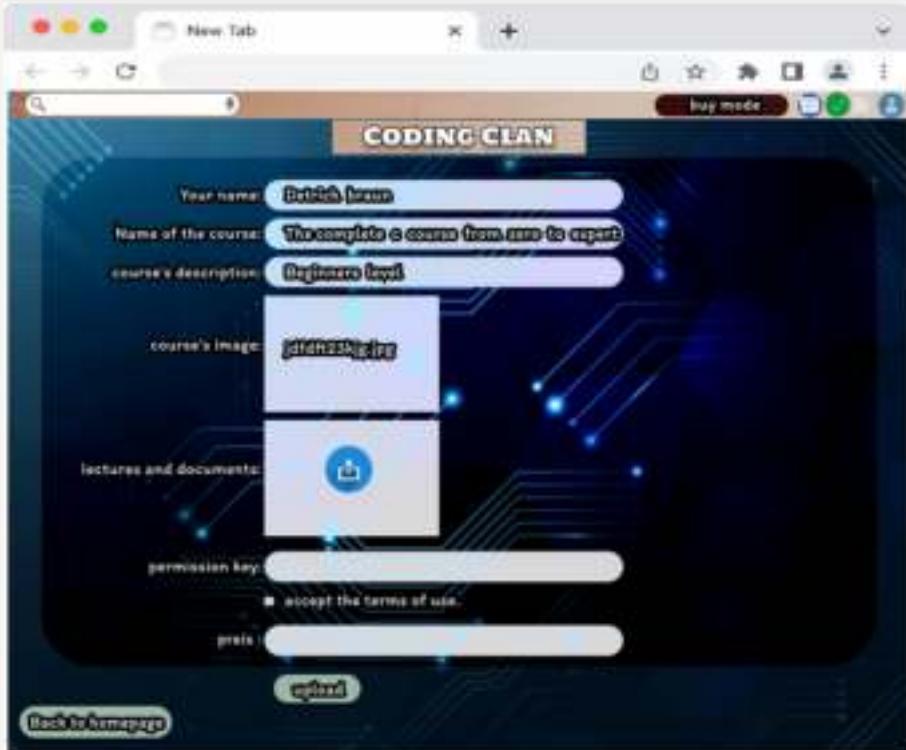


upload the image of the course
(by clicking on it)

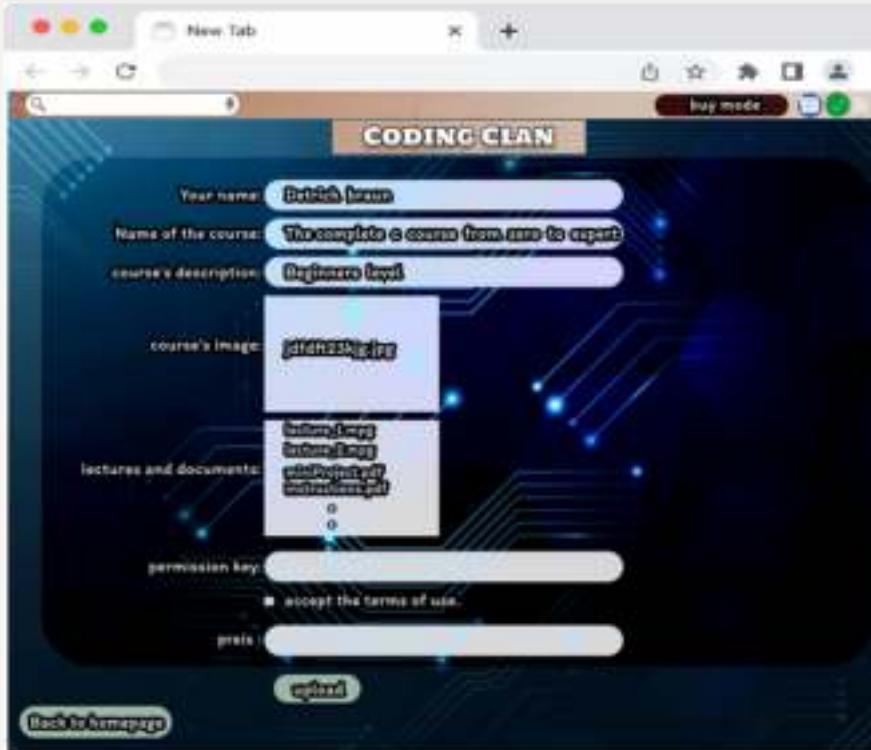
Hi-fi prototype

How to use it

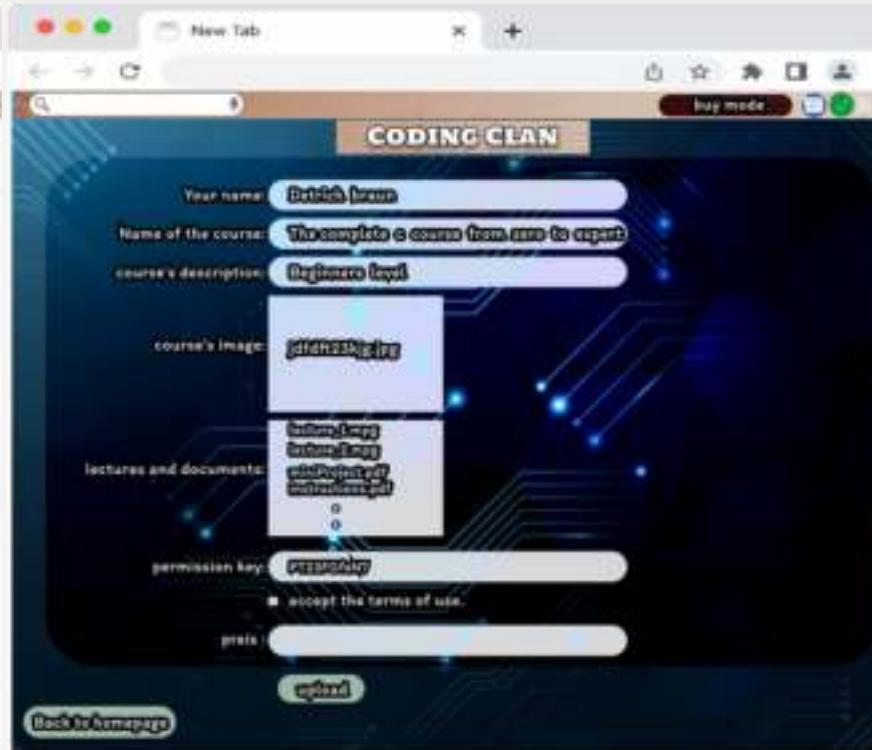
Home page



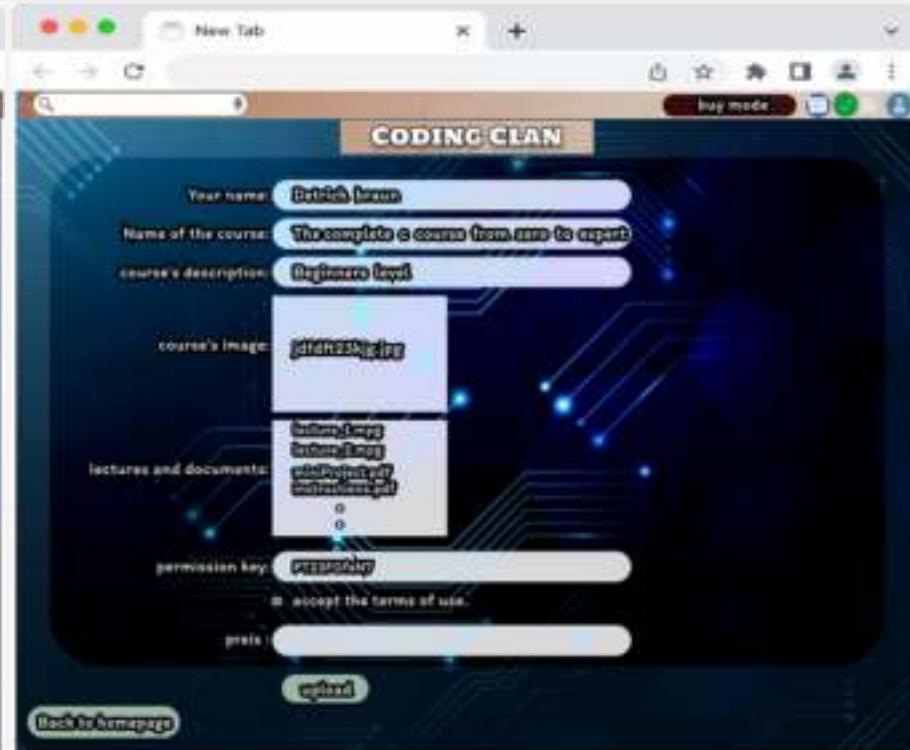
upload the lectures and document
(by clicking on it)



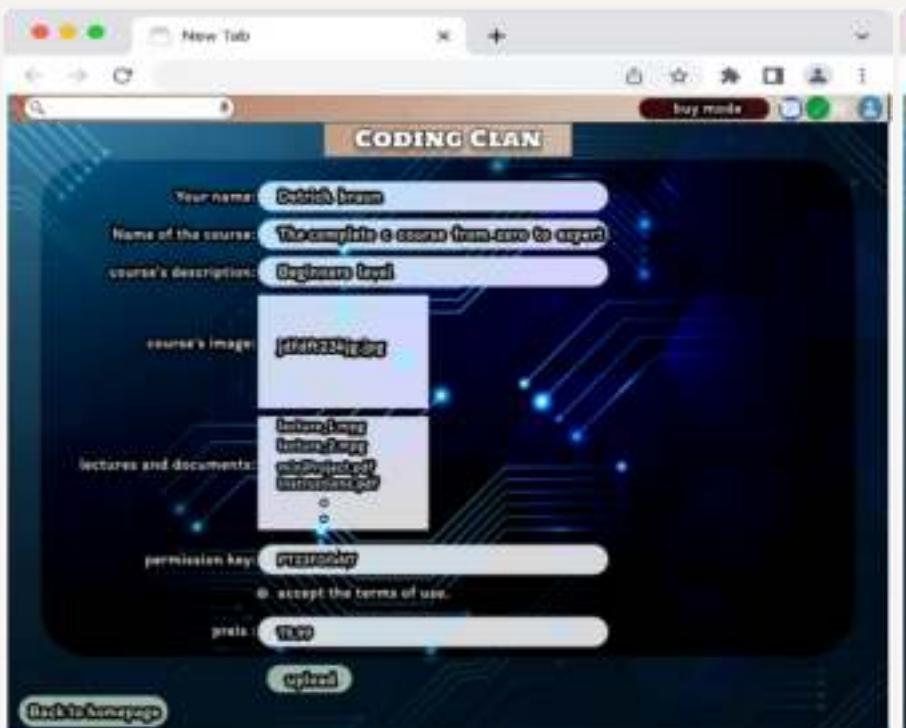
type the permission key(by clicking on it)



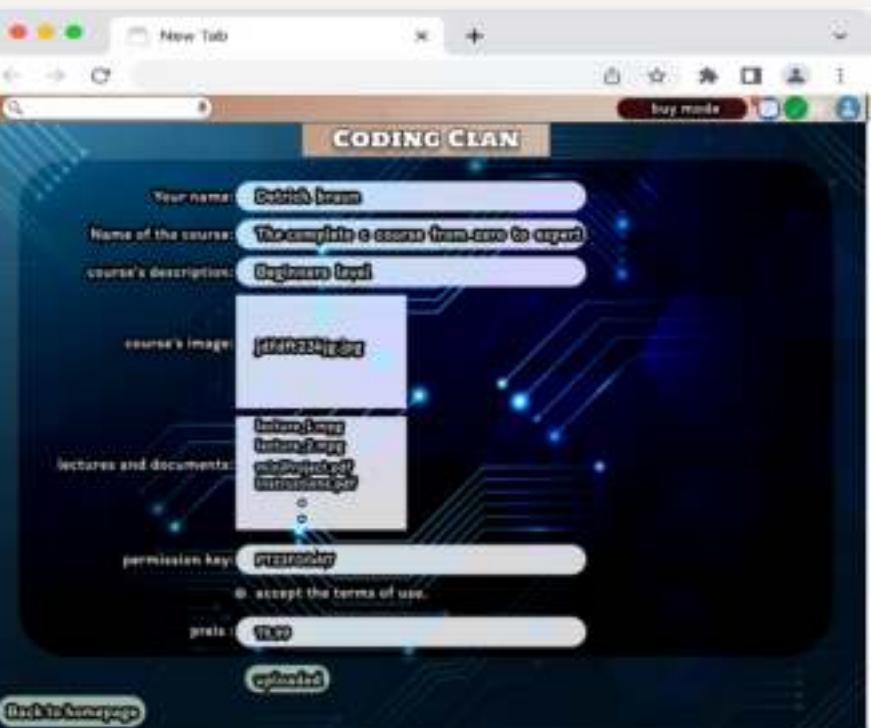
accept the terms (by clicking on it)



type the price (by clicking on it)



upload content (by clicking on it)



back to homepage (by clicking on
the button left bottom)

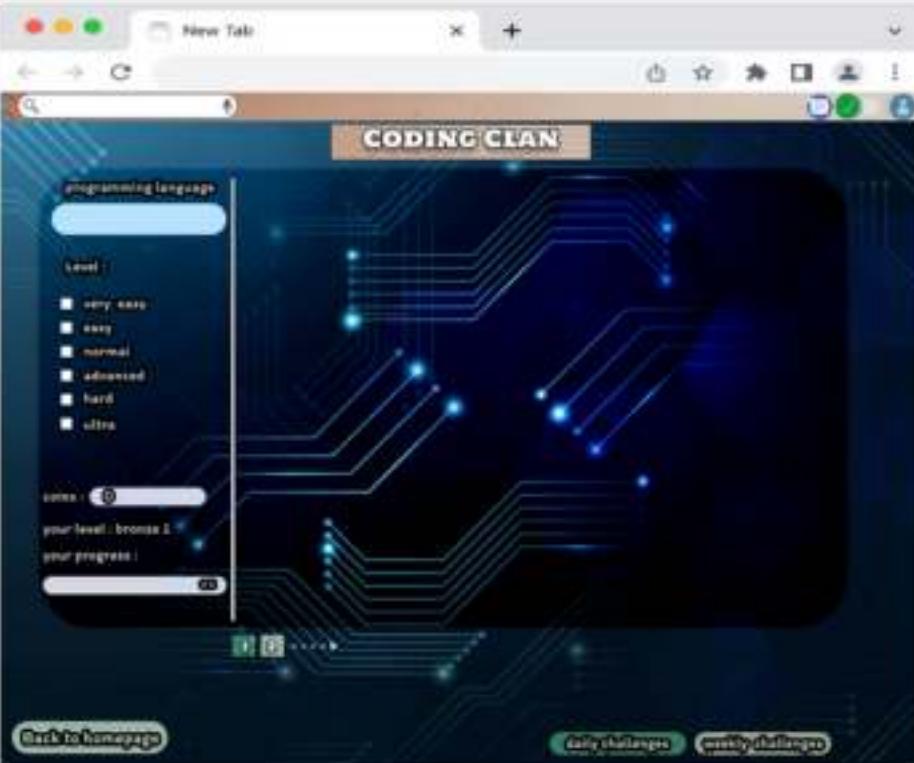
Hi-fi prototype

How to use it

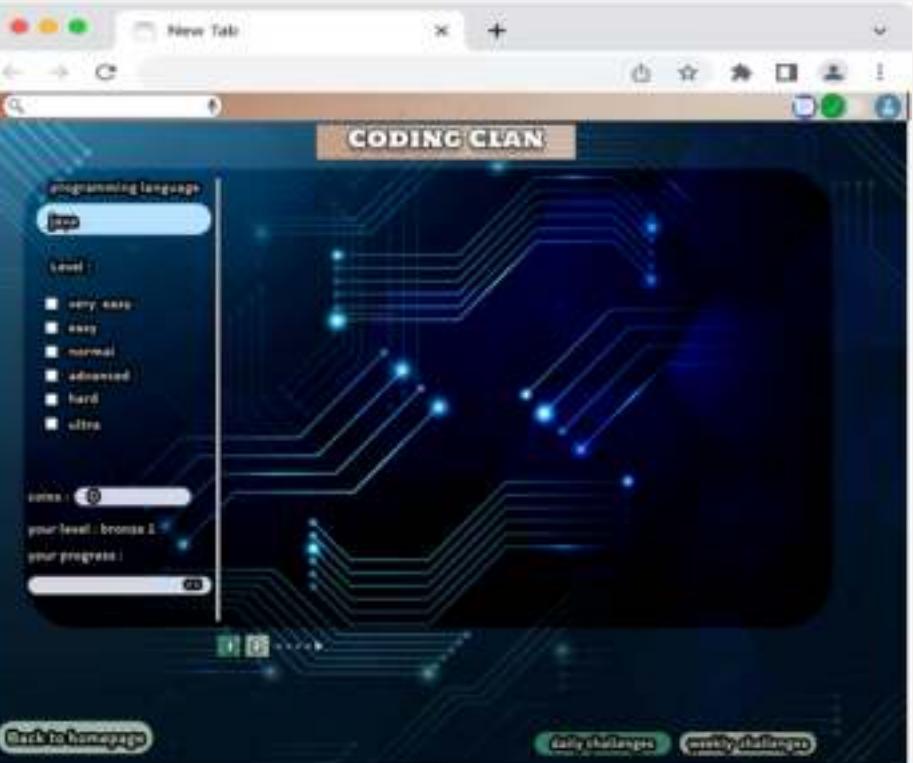
Home page



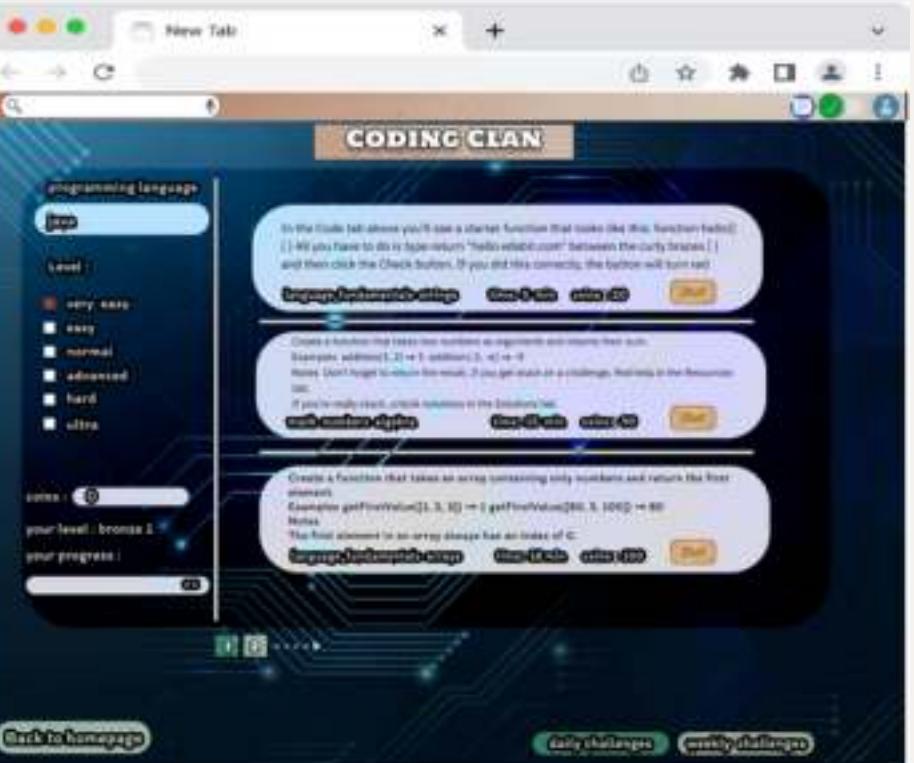
go to challenges (by clicking on the button "Challenges")



type the programming language (by clicking on it)



choose the very easy level (By clicking on it)



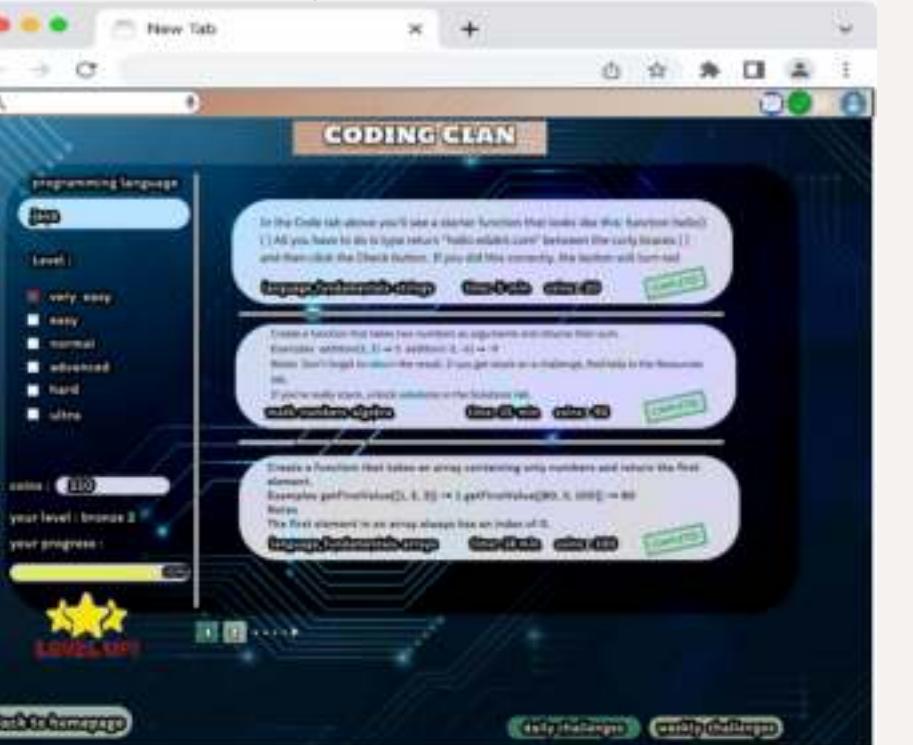
do the first challenge
(By clicking on the "start" button)



do the second challenge
(By clicking on the "start" button)



do the third challenge
(By clicking on the "start" button)



back to homepage (By clicking on the button left bottom)

Hi-fi prototype

How to use it

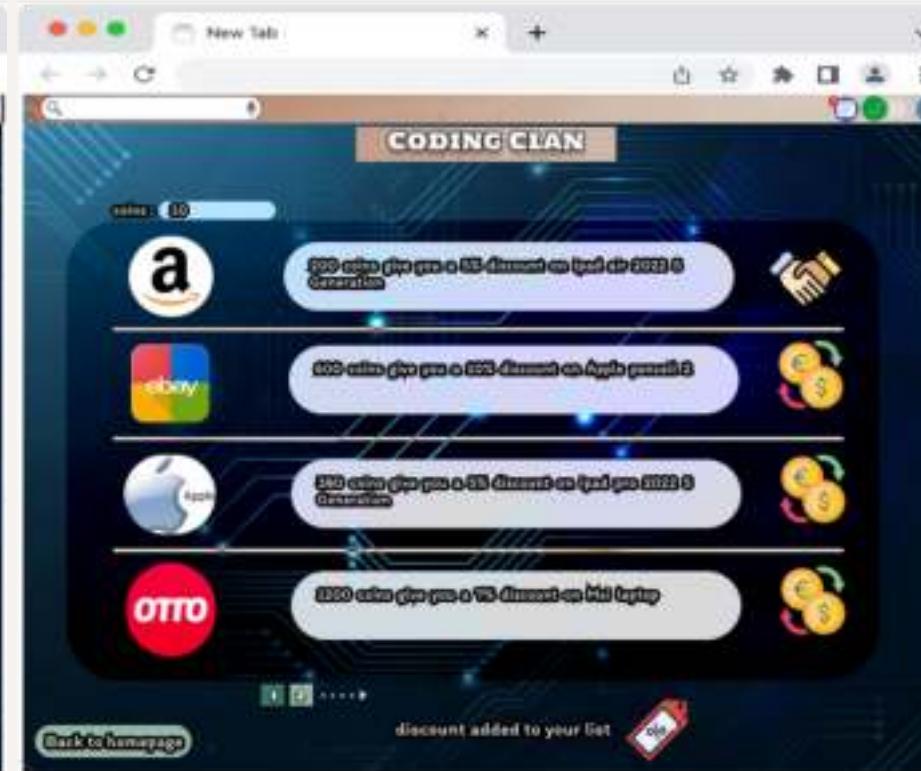
Home page



go to Discount (by clicking on the button "Discount")



exchange with amazon discount (By clicking on the exchange icon mid right)



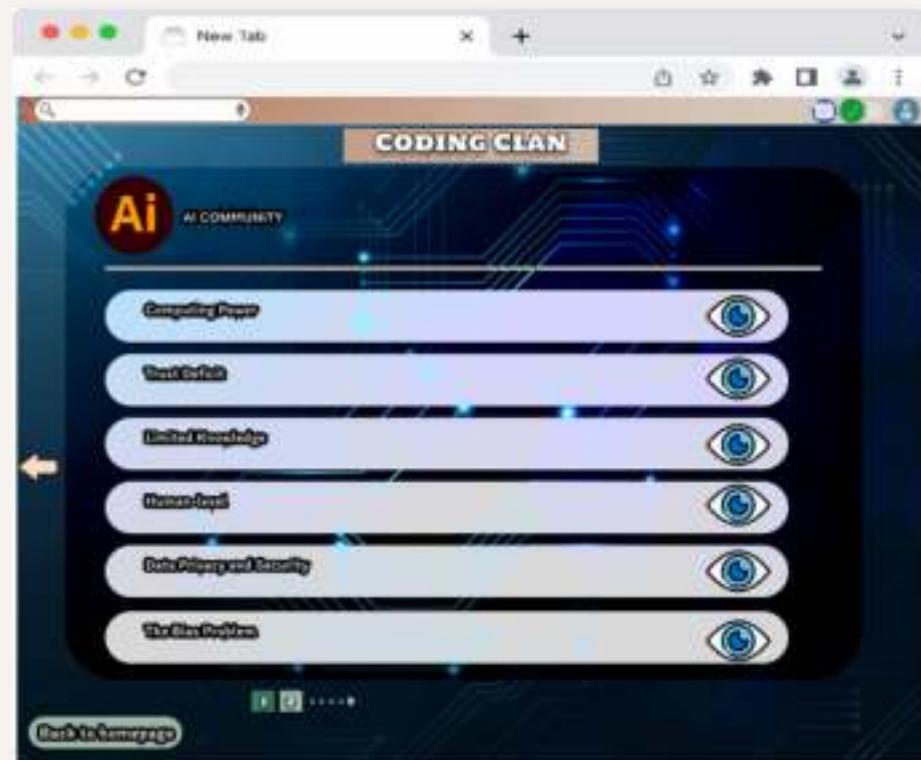
back to homepage (By clicking on the button bottom left)



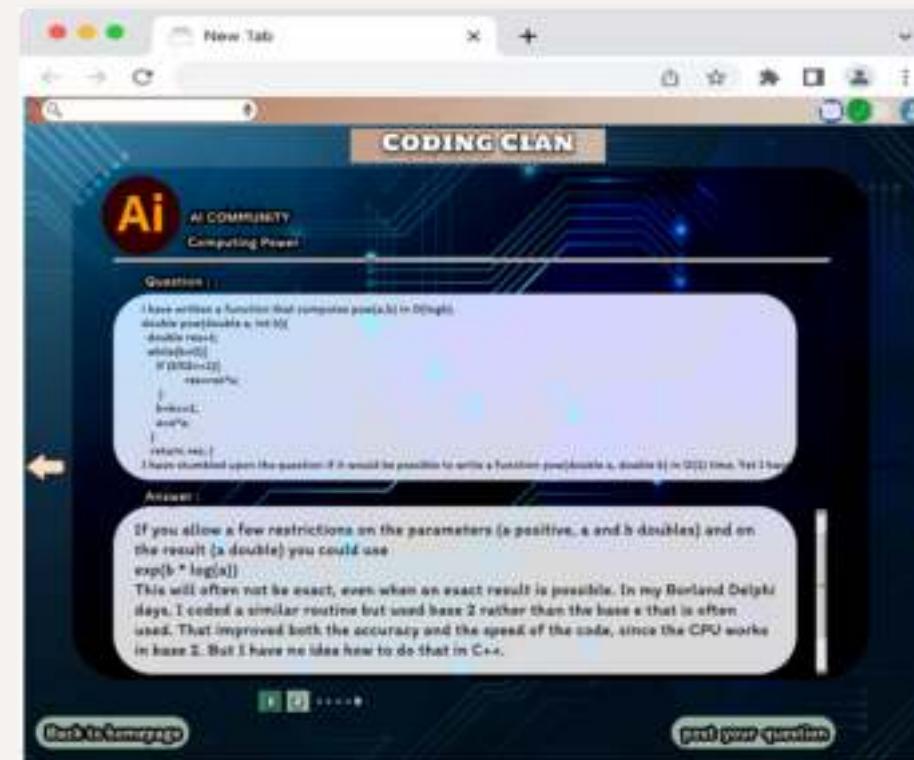
go to Community (by clicking on the button "Community")



join the AI community (By clicking on the "JOIN" icon)



choose the subject computing power (By clicking on the eye icon in the same row)

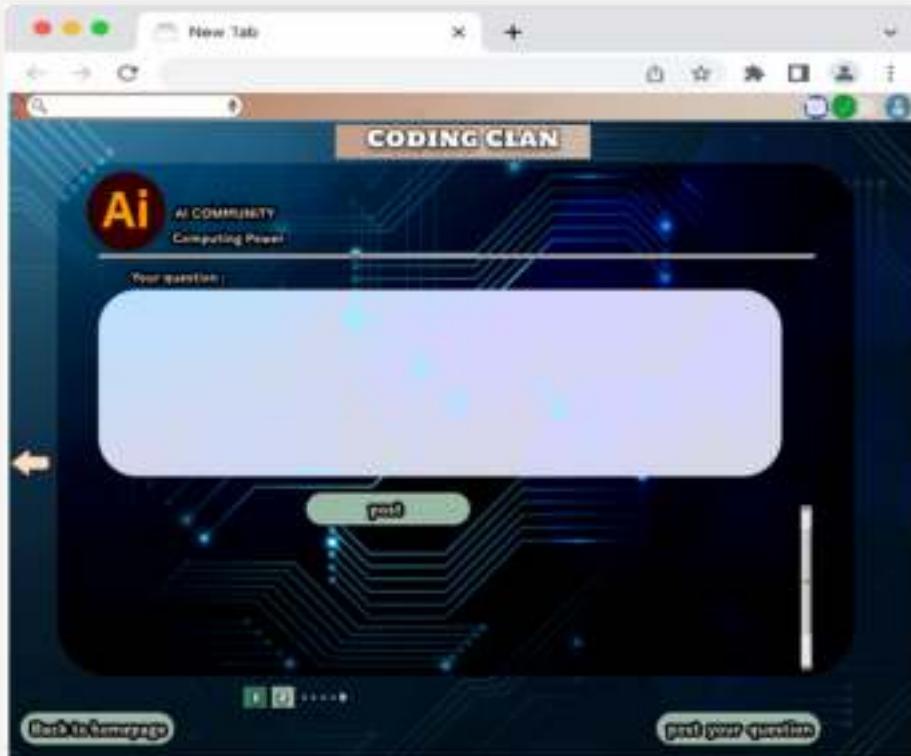


see the question and the answer, and post your own question (by clicking on button bottom right)

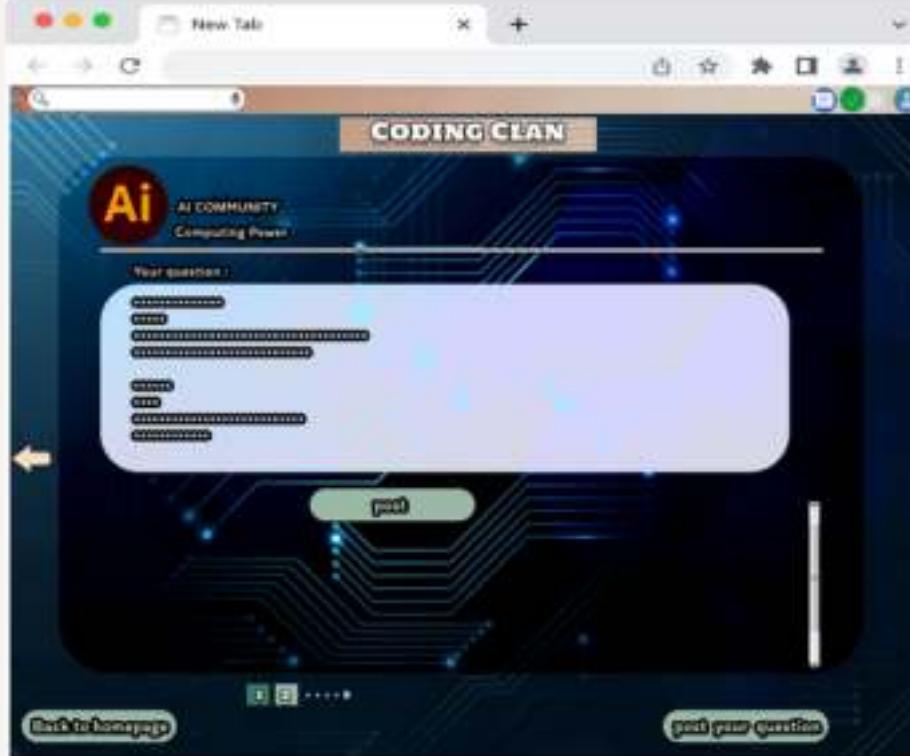
Hi-fi prototype

How to use it

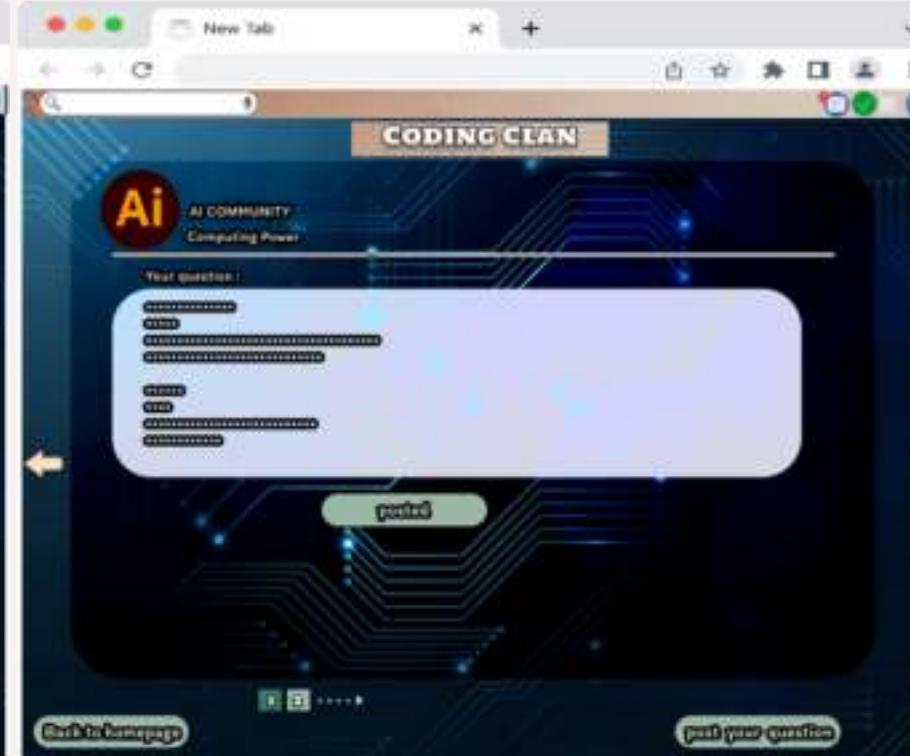
Home page



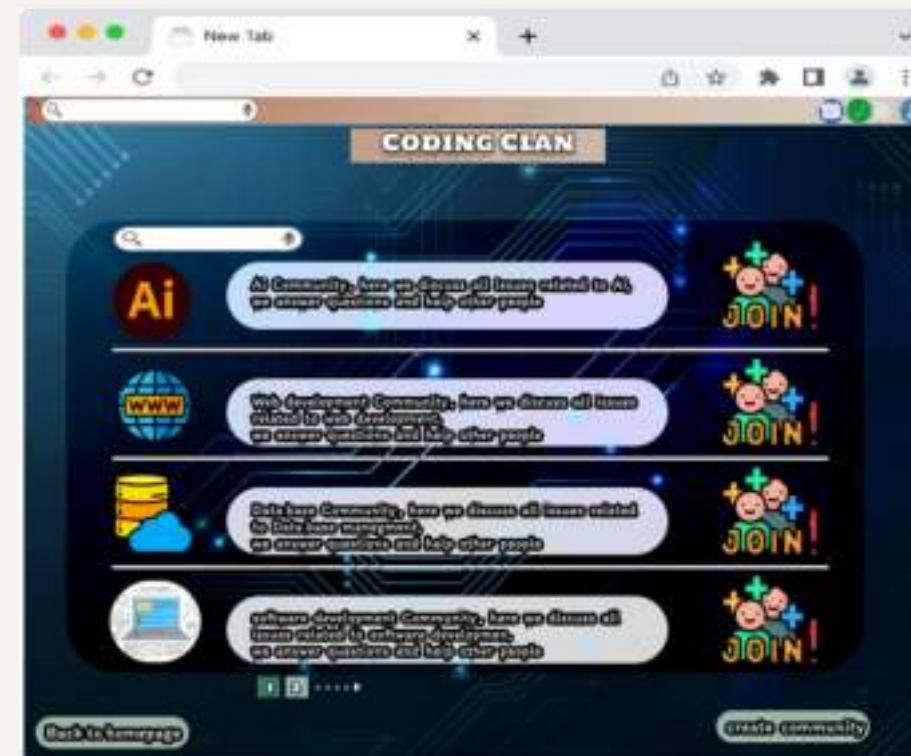
type the question (By clicking on the question's box)



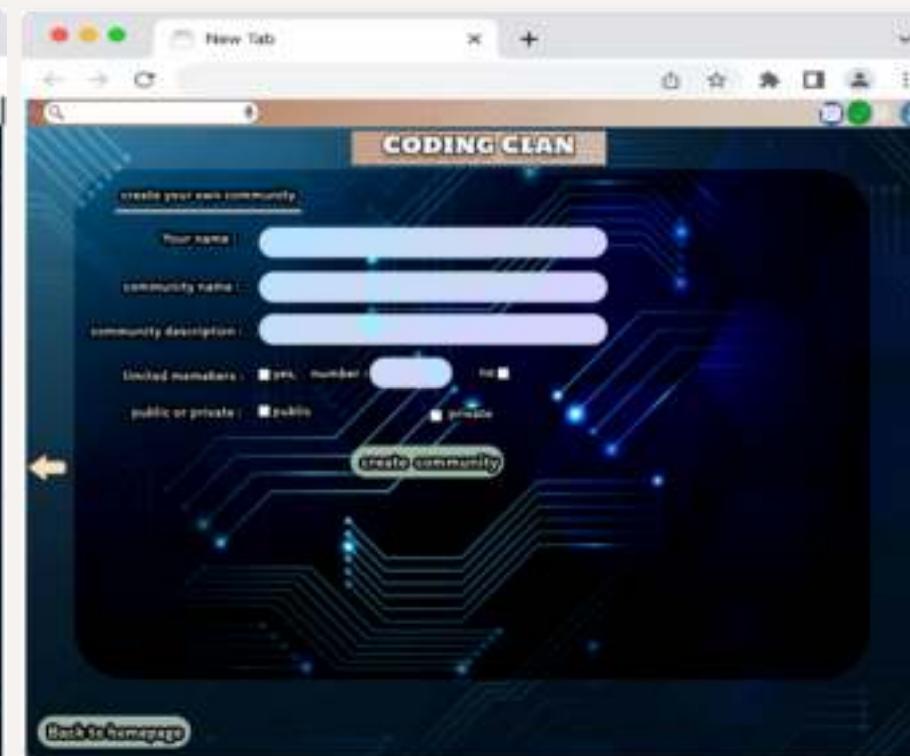
post your question (By clicking on the button bottom right)



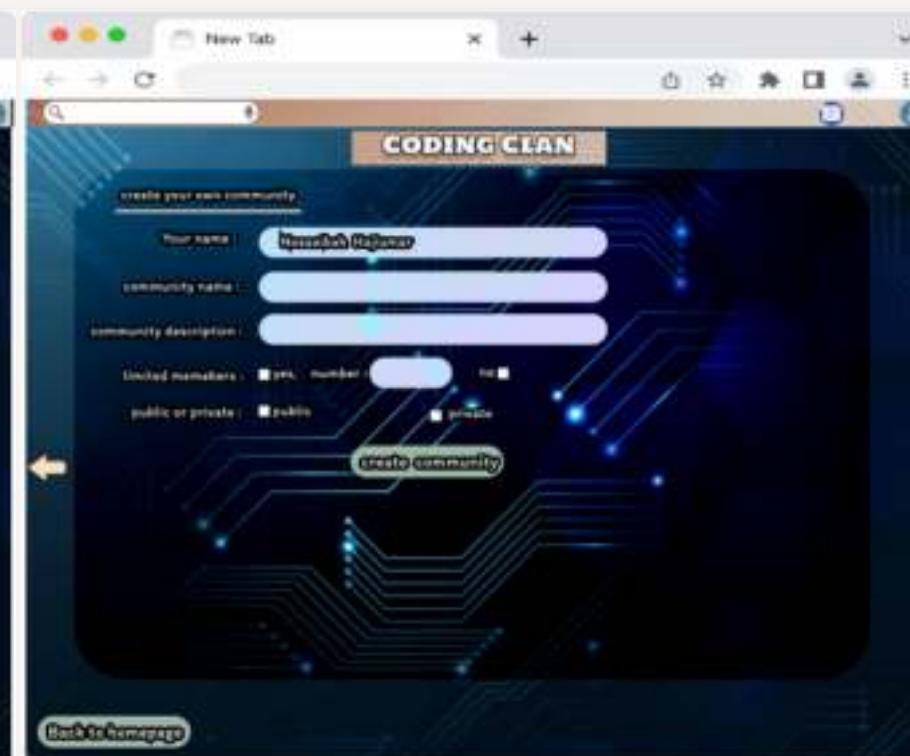
back to community page (By clicking on arrow middle left)



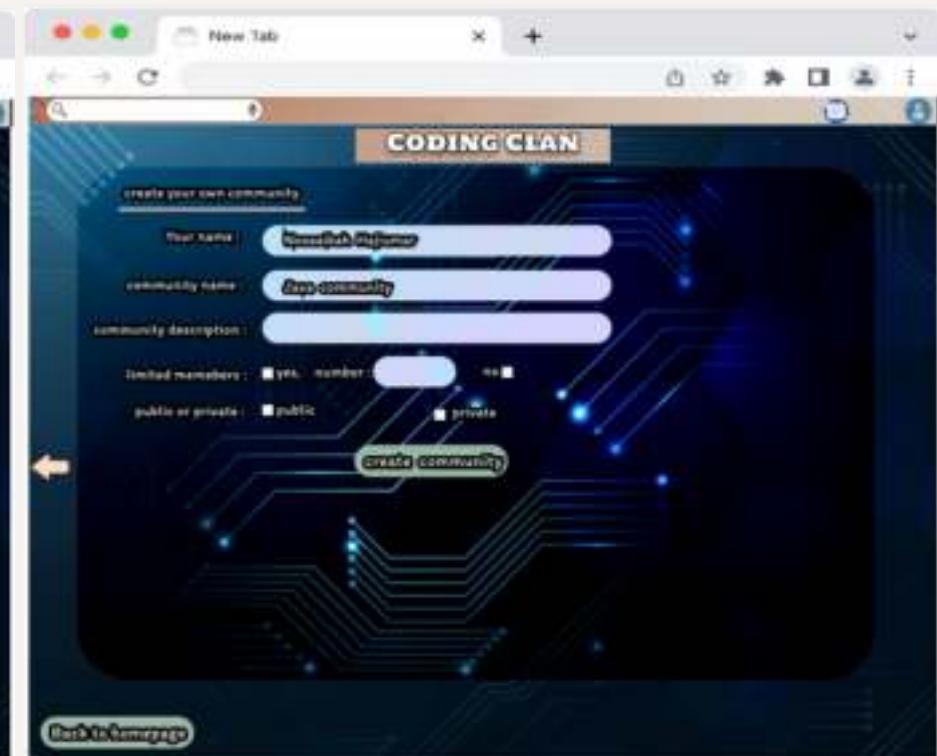
create a community (By clicking on the button bottom right)



type the name of the community (By clicking on it)



type the community's name(By clicking on it)



type the community's description (By clicking on it)

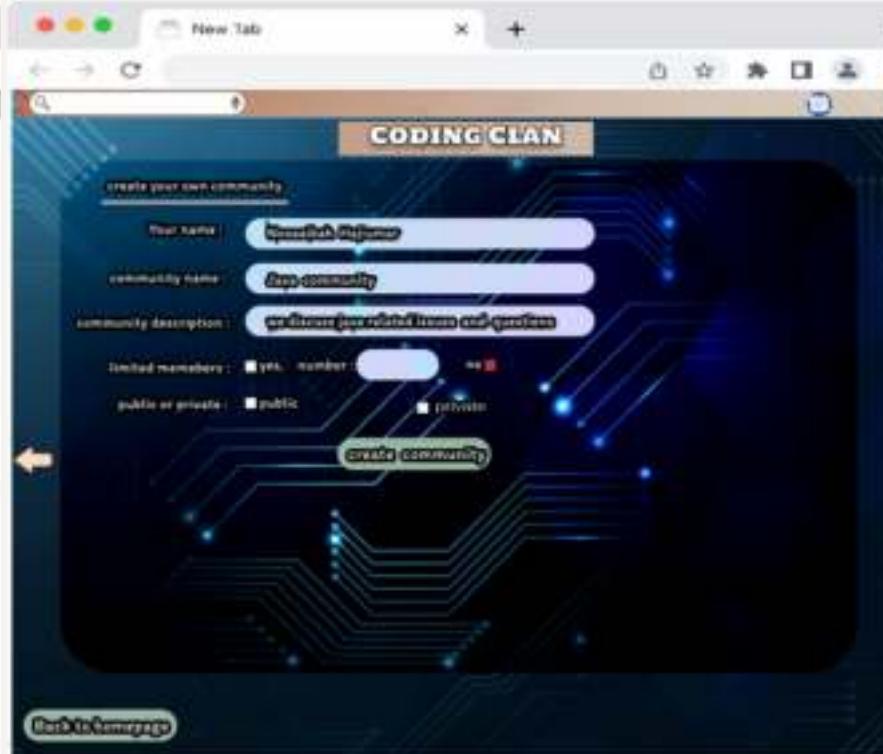
Hi-fi prototype

How to use it

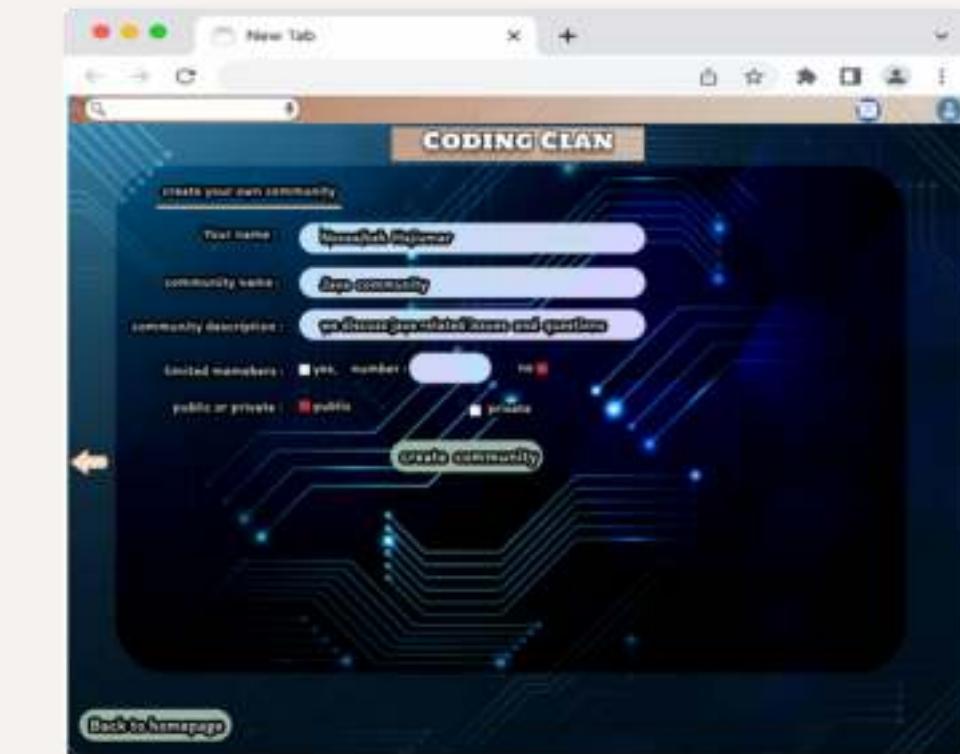
Home page



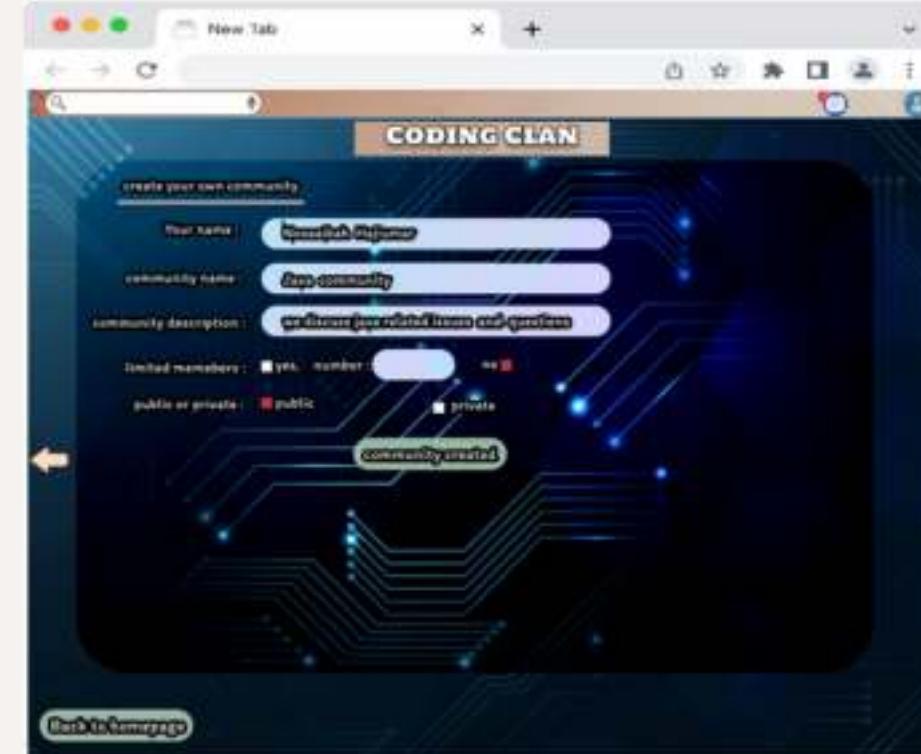
choose unlimited number of members
(By clicking on no)



make the community public (By
clicking on public)



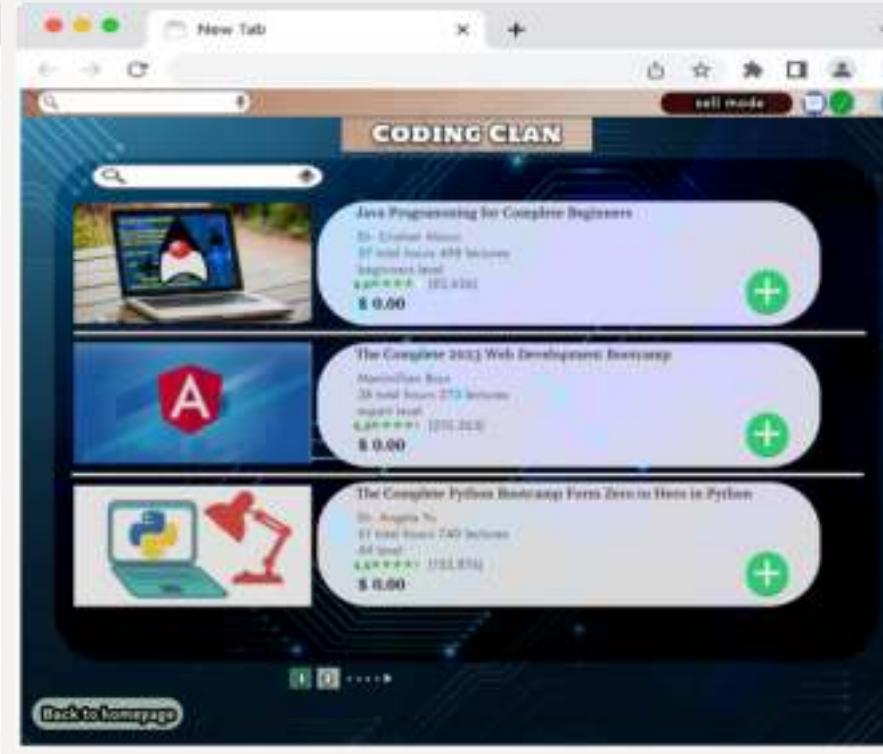
create community (By clicking on
the button " create community")



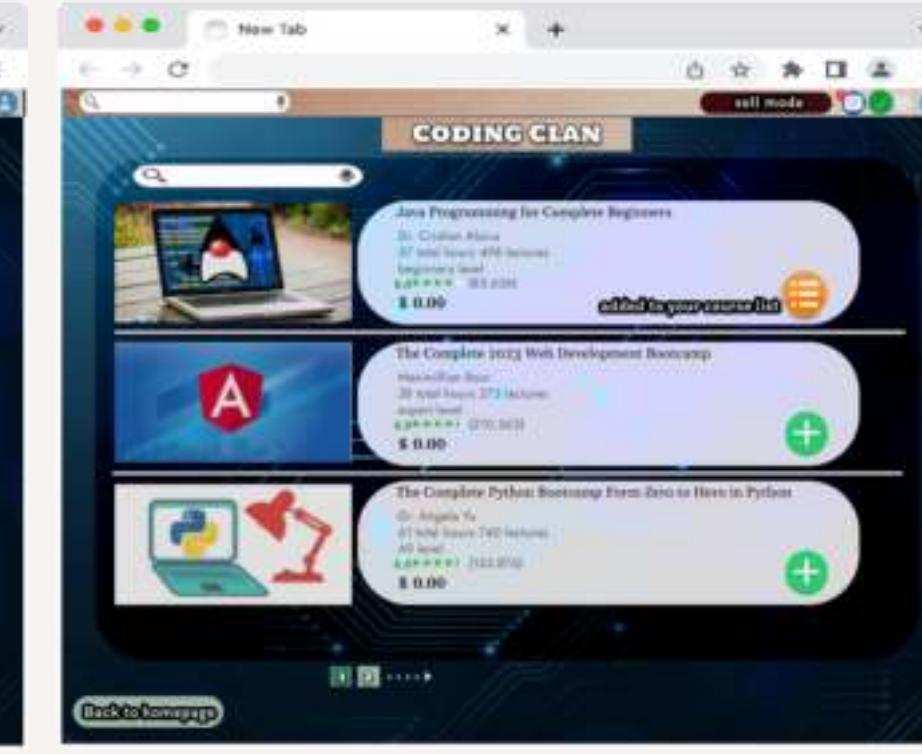
back to homepage (By clicking on
the button bottom left)



add free course to the list (By clicking
on the button "Free courses")



add the first course in the list to your list
(By clicking on "plus" icon same row)



back to homepage (By clicking on the
button bottom left)

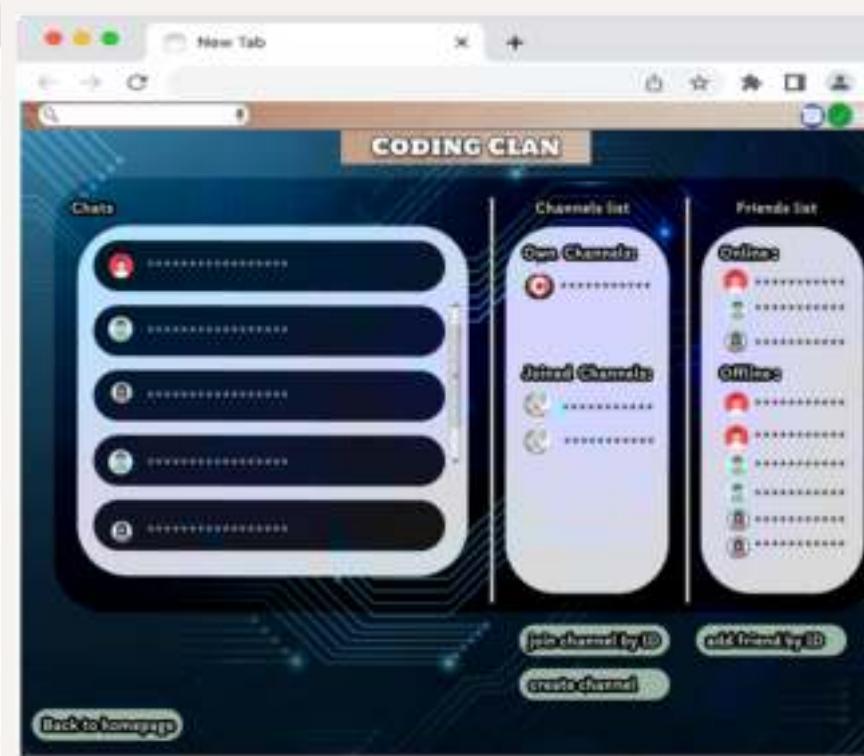
Hi-fi prototype

How to use it

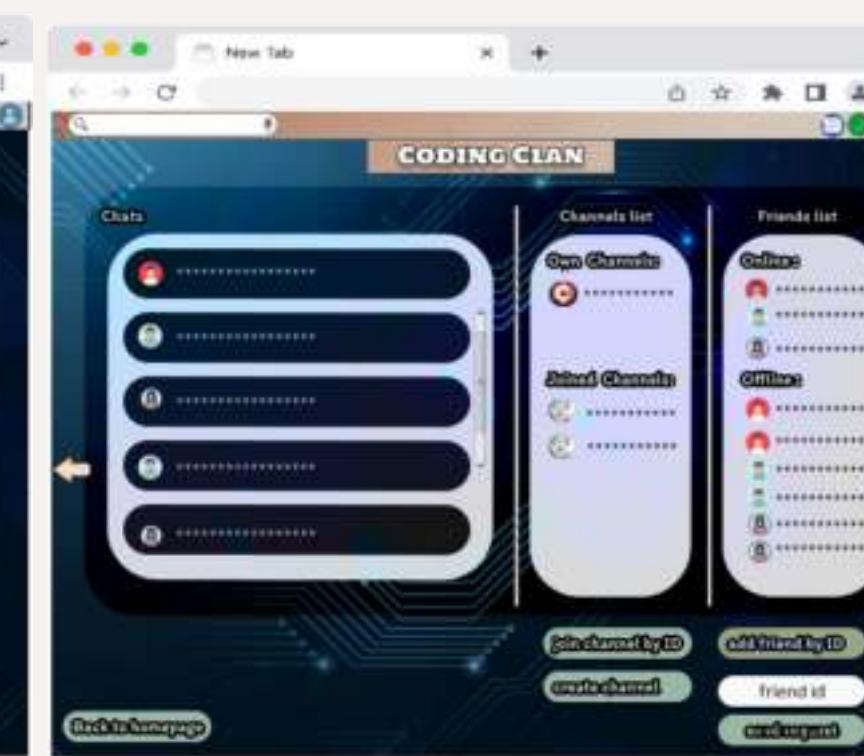
Home page



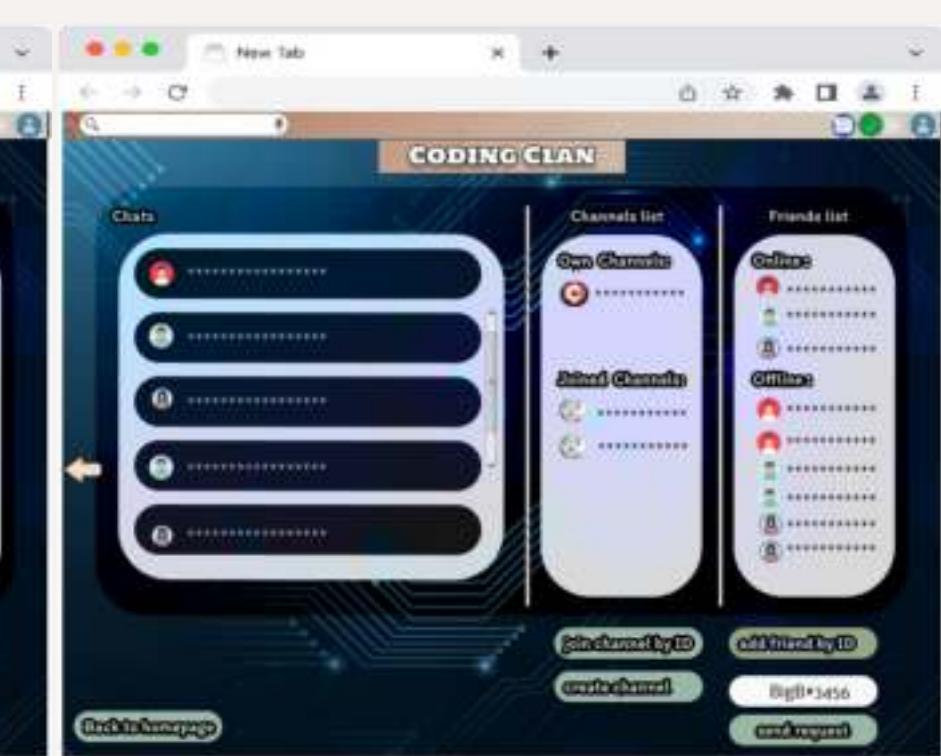
add friends and create channels (By clicking on the button "Friends-Channels")



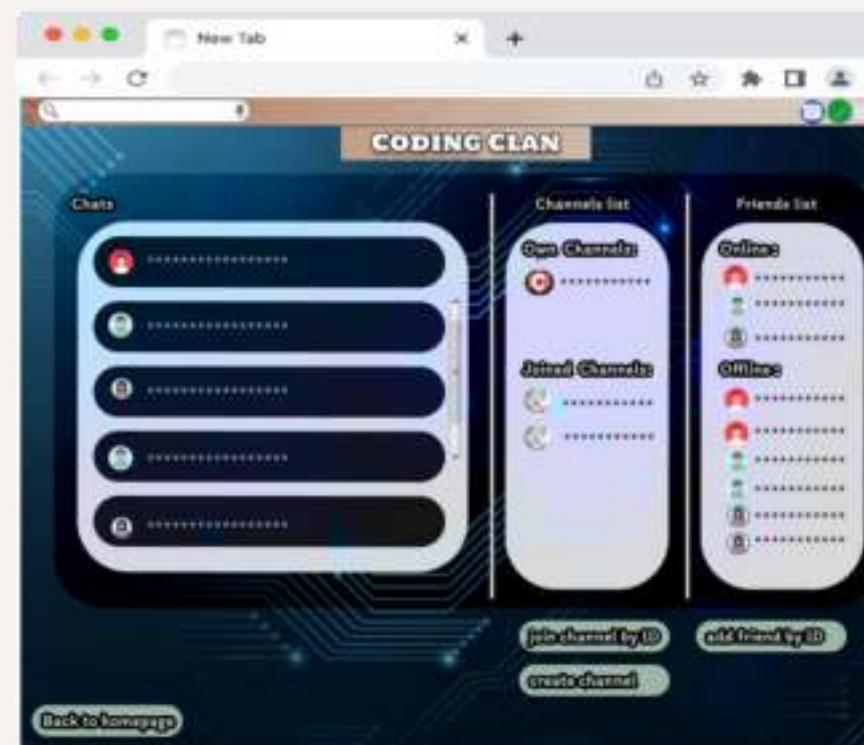
to add friends click on add friends by id



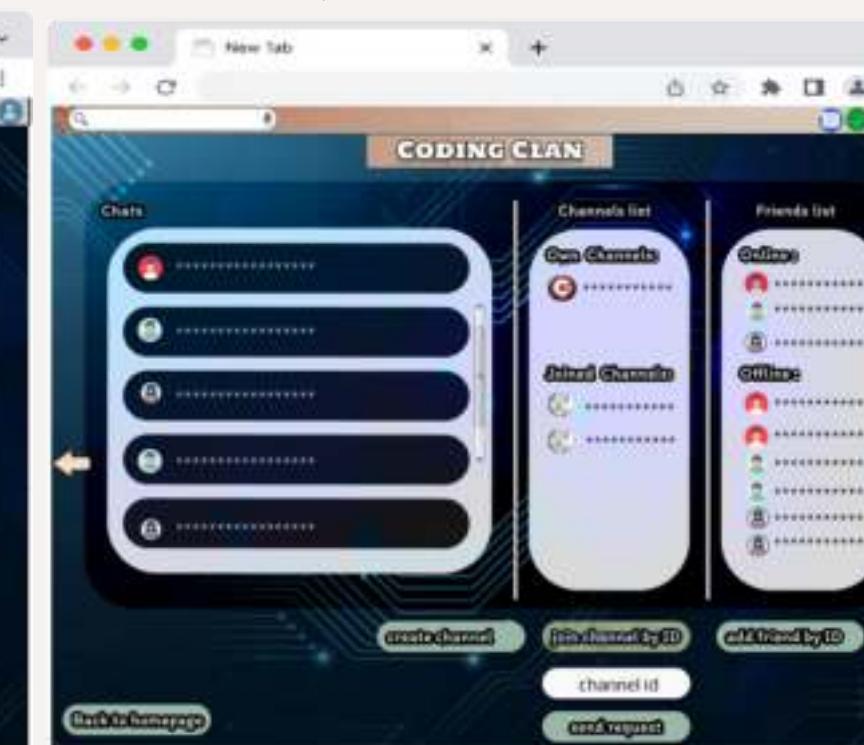
type friend's id (By clicking on friend id)



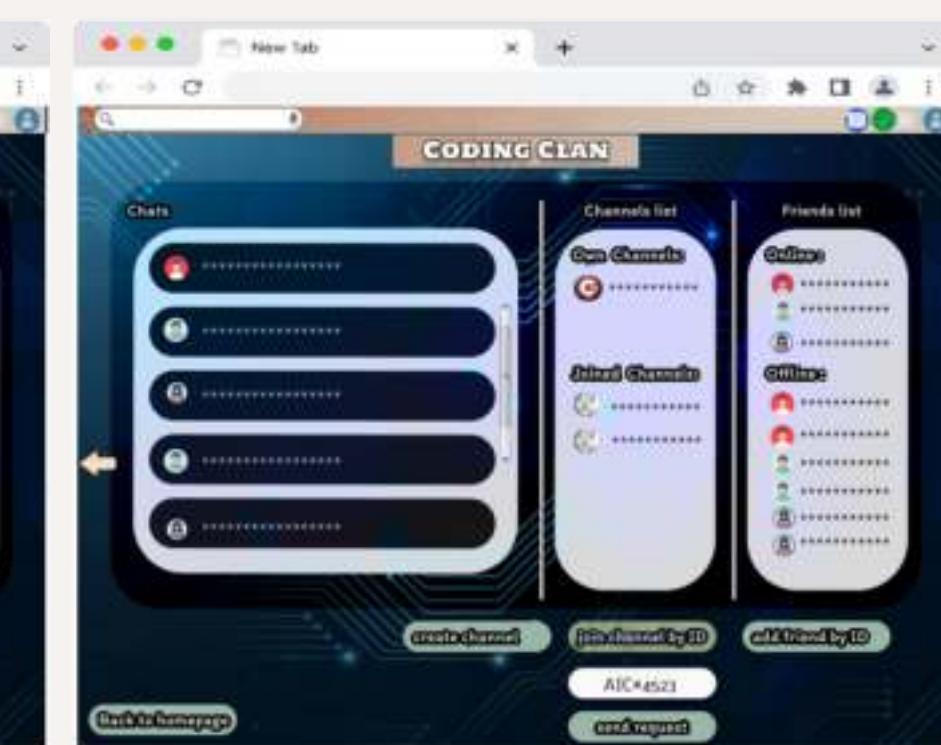
click on send request



to join channels click on join channels by id



type channel id (By clicking on channel id)

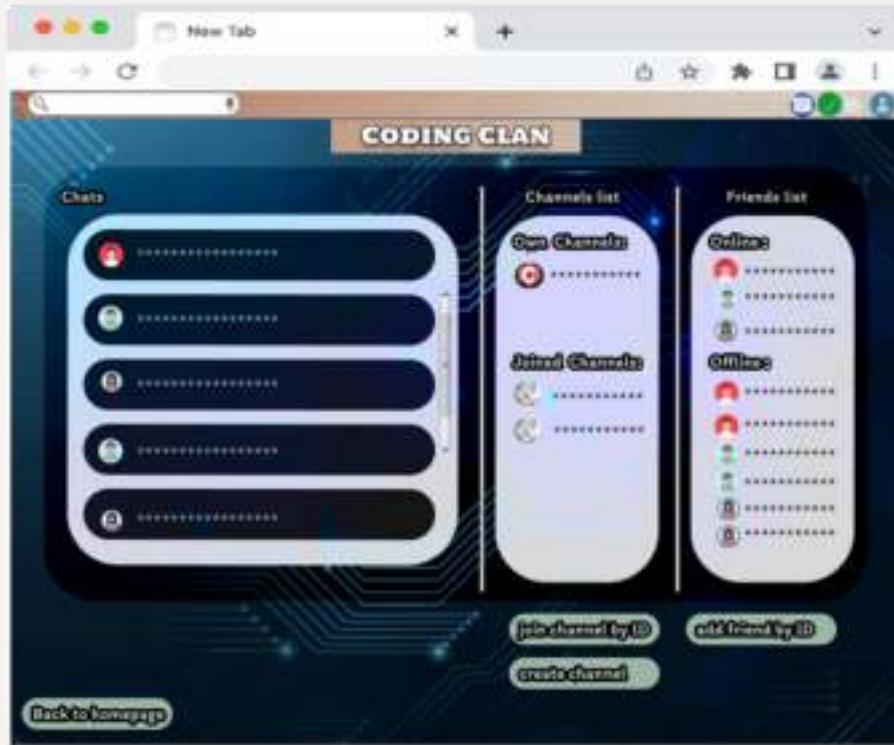


click on send request

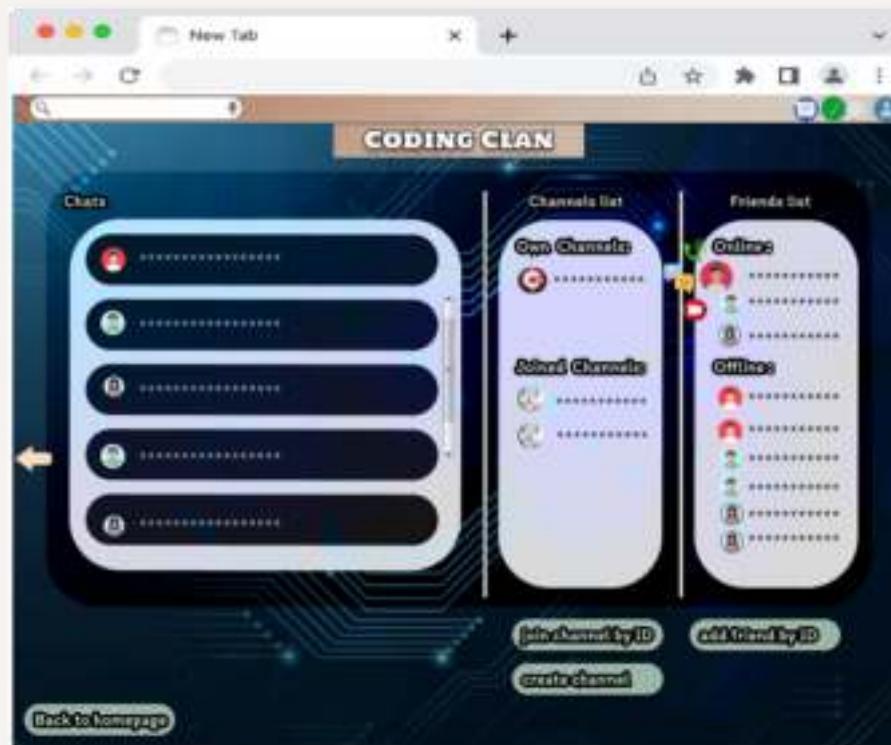
Hi-fi prototype

How to use it

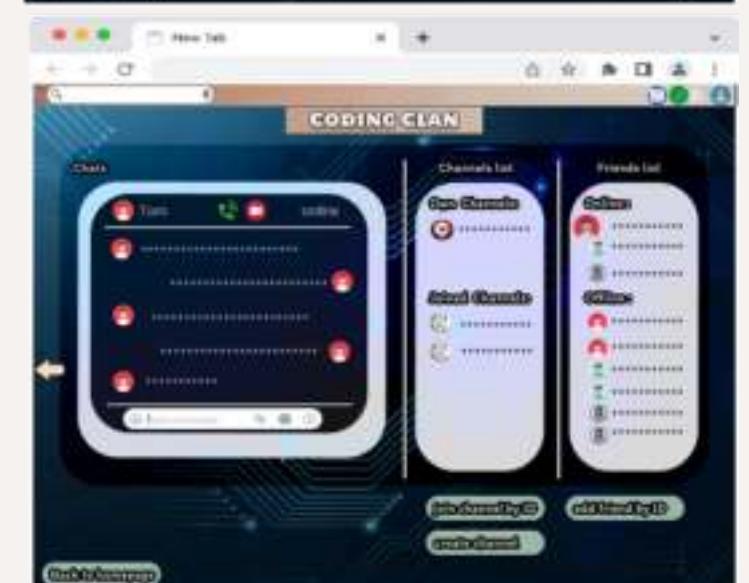
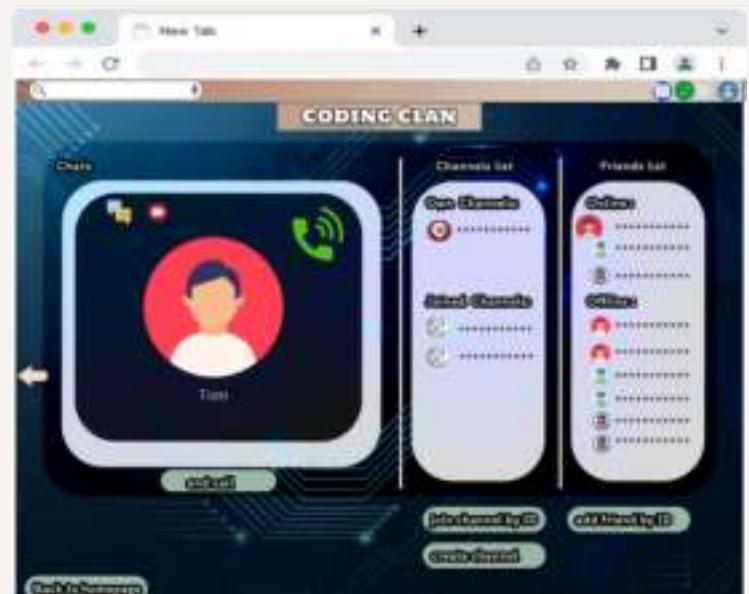
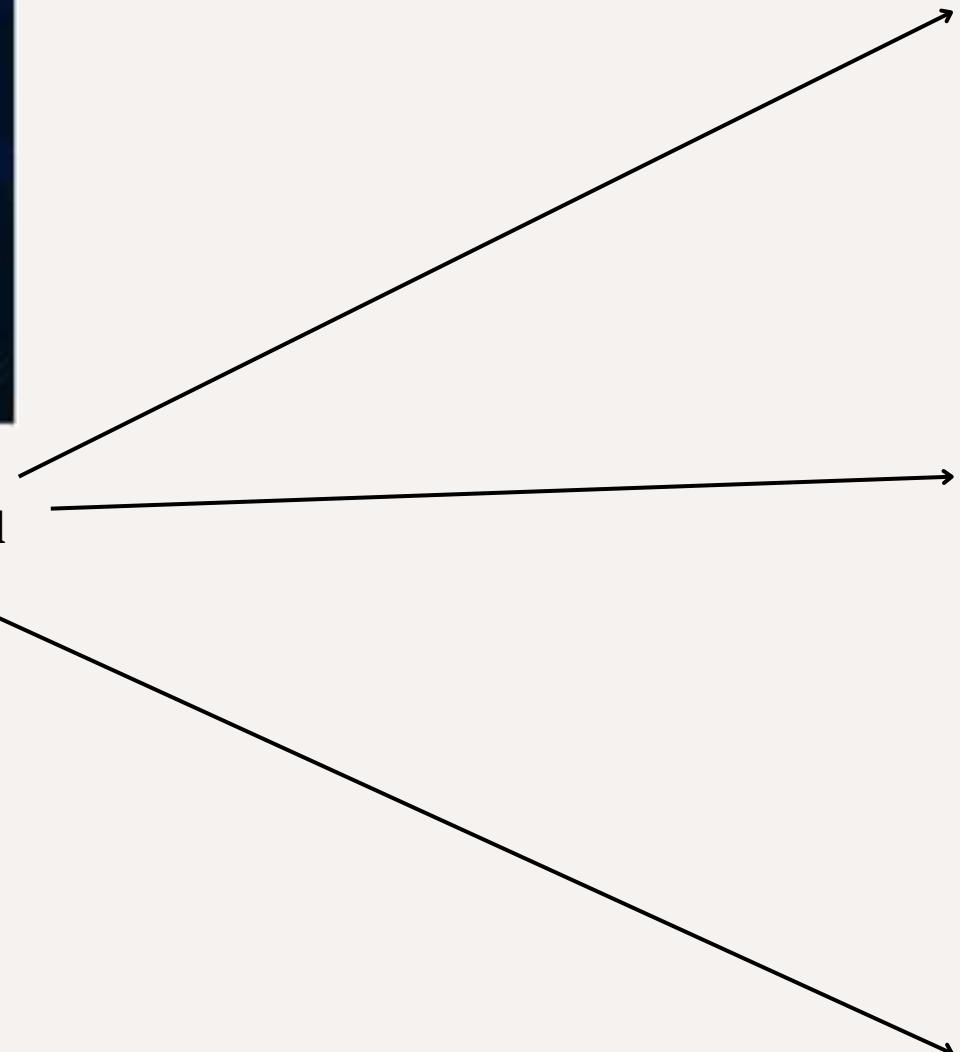
Home page



to make a voice / video call or even start chat with a friend click on profile icon of the first friend in the list



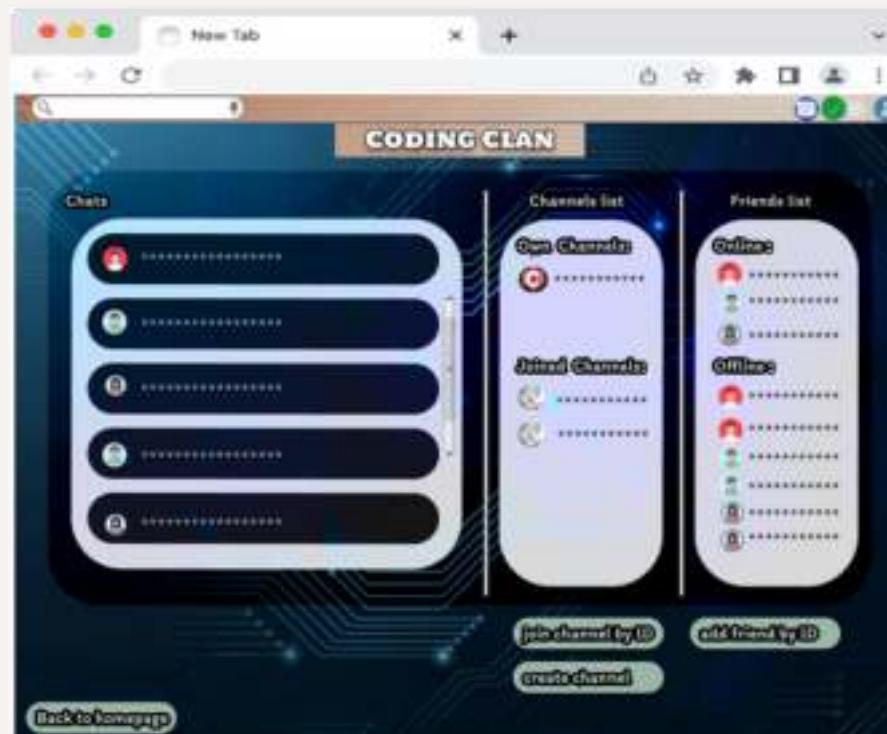
click on phone icon to start a voice call
click on camera icon to start a video call
click on message icon to start a chat



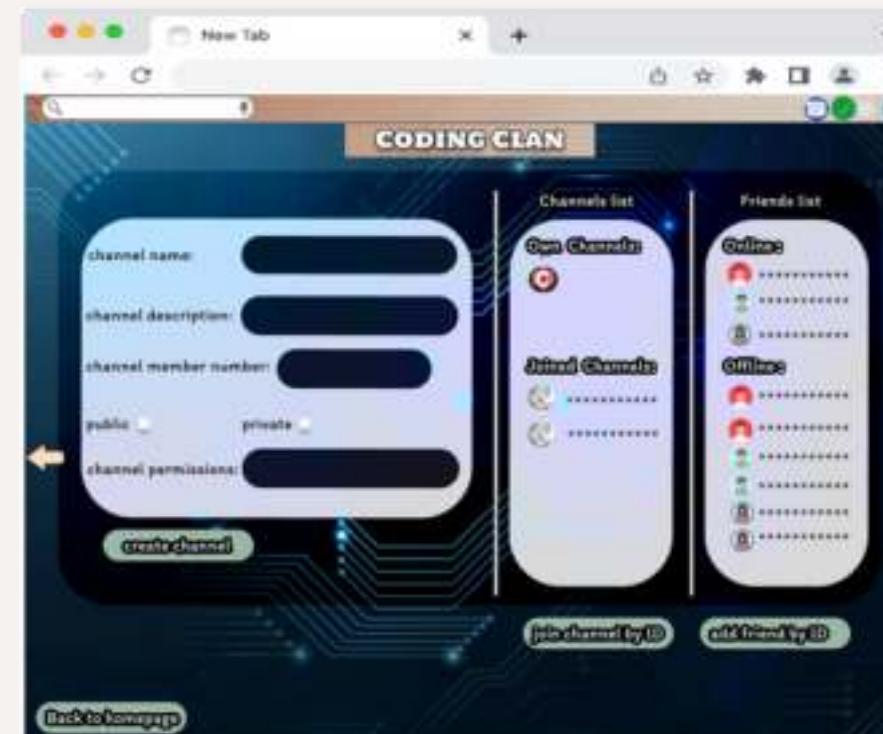
Hi-fi prototype

How to use it

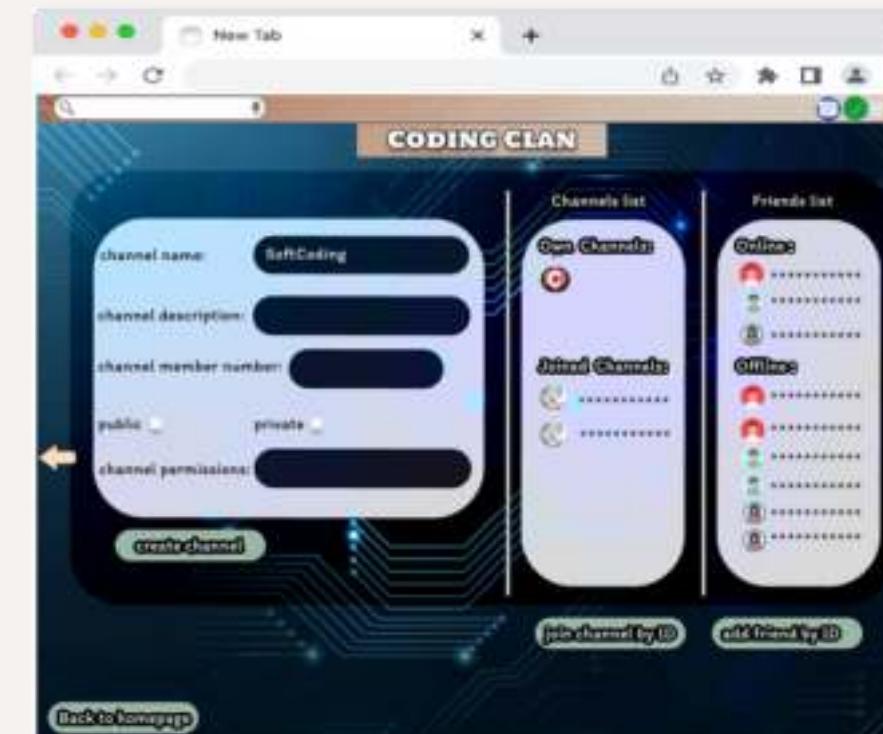
Home page



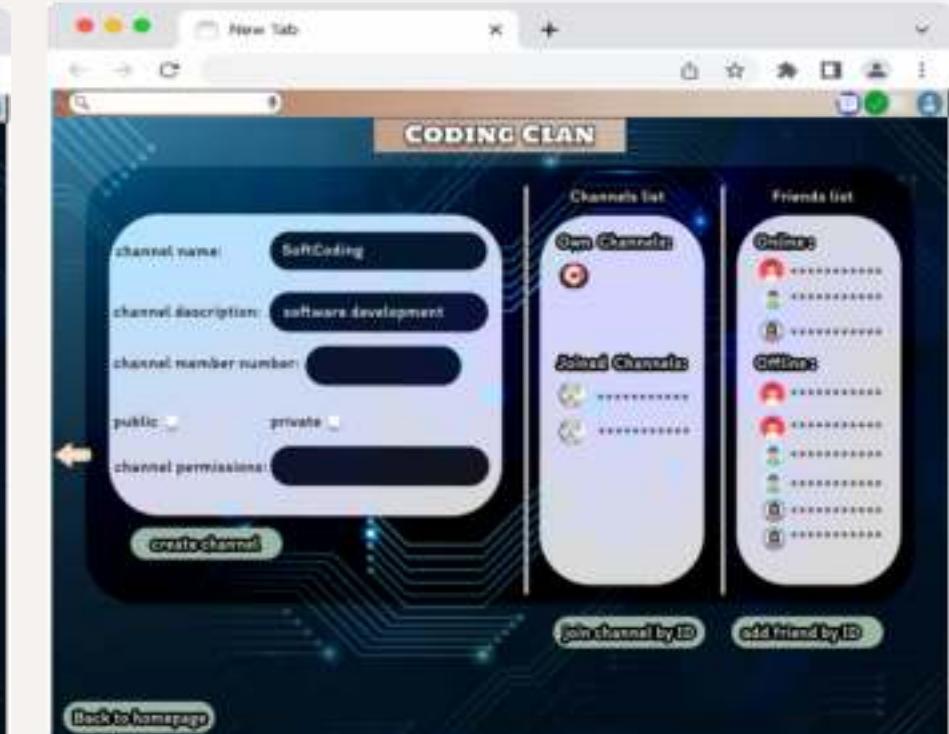
to create a channel click on create channel button



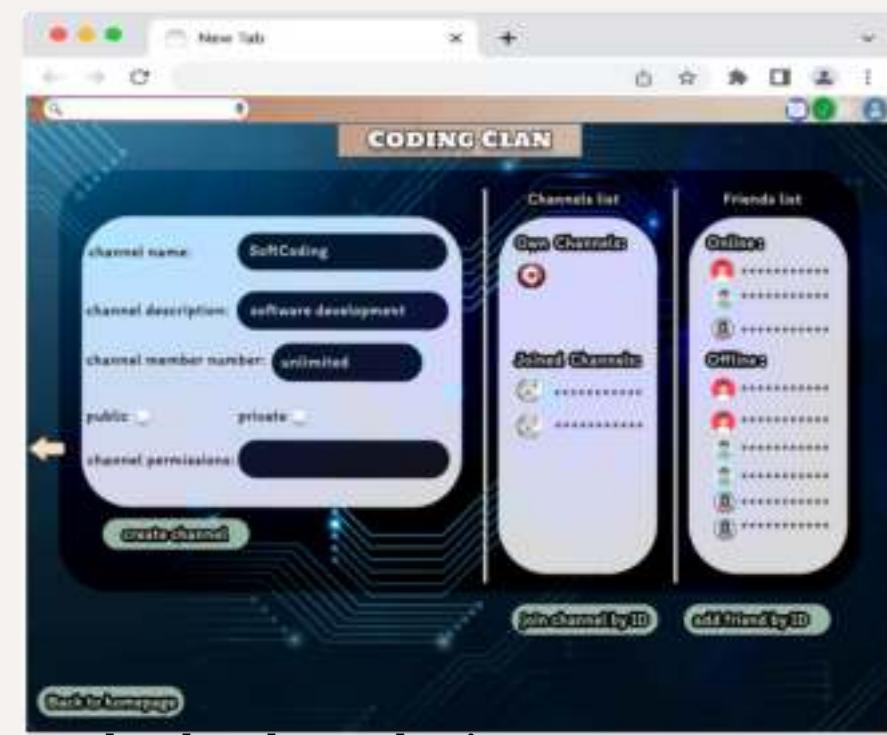
type the name of the channel (By clicking on it)



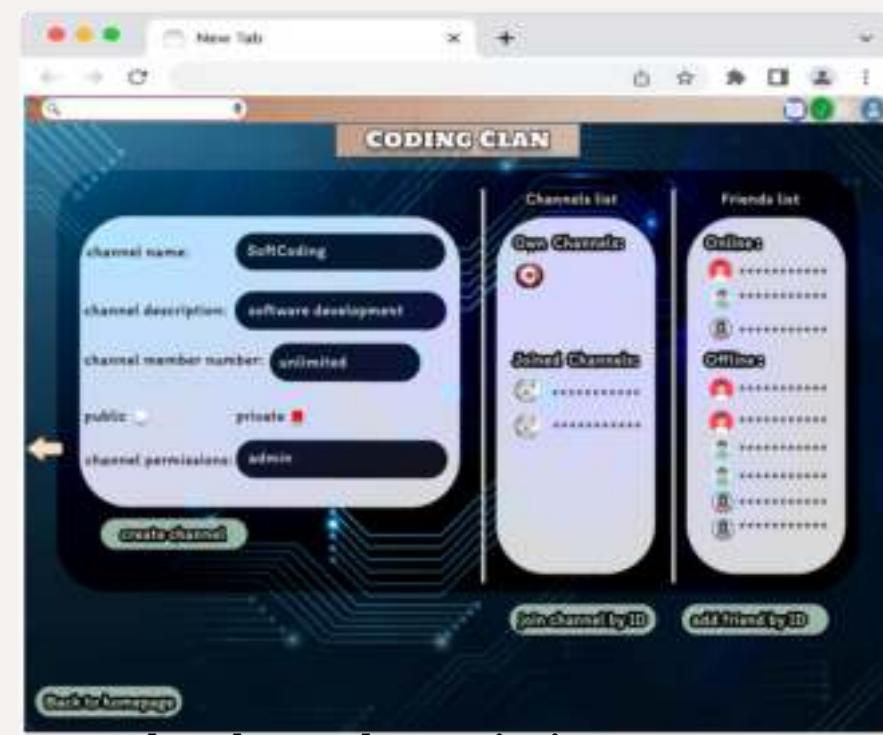
type the description of the channel (By clicking on it)



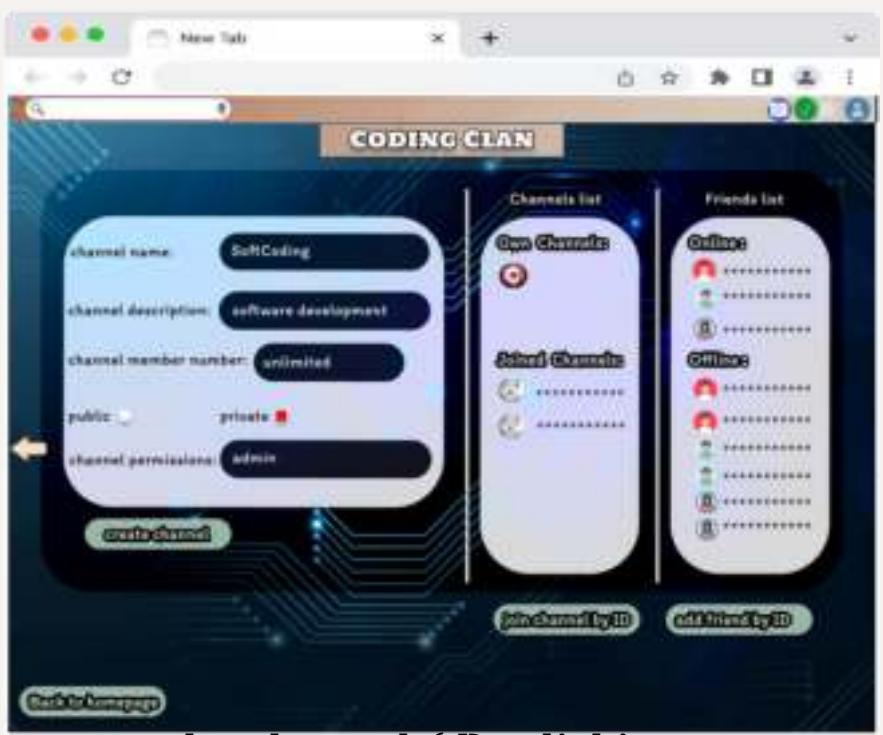
type the number of the members (By clicking on it)



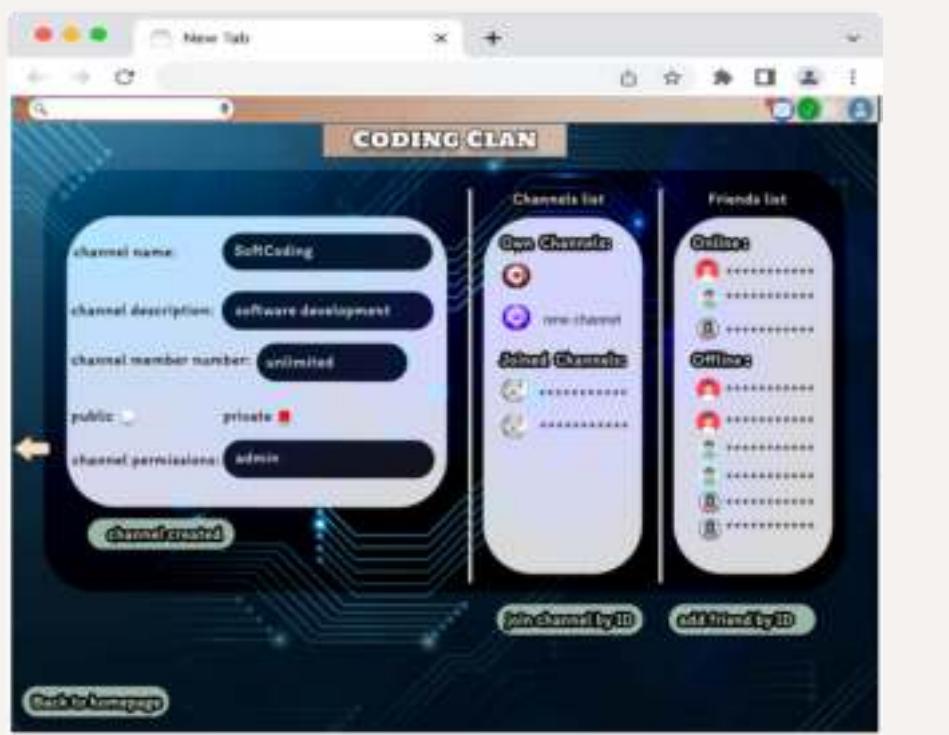
make the channel private
(By clicking on it)



type the channel permission
(By clicking on it)



create the channel (By clicking on
create channel)



link to figma :

<https://www.figma.com/file/W3kQrHulnDq1YBKOXFFdWV/Untitled?node-id=0%3A1&t=Atp9oFns1ePgTmxe-1>

Or click on the QRCode.

