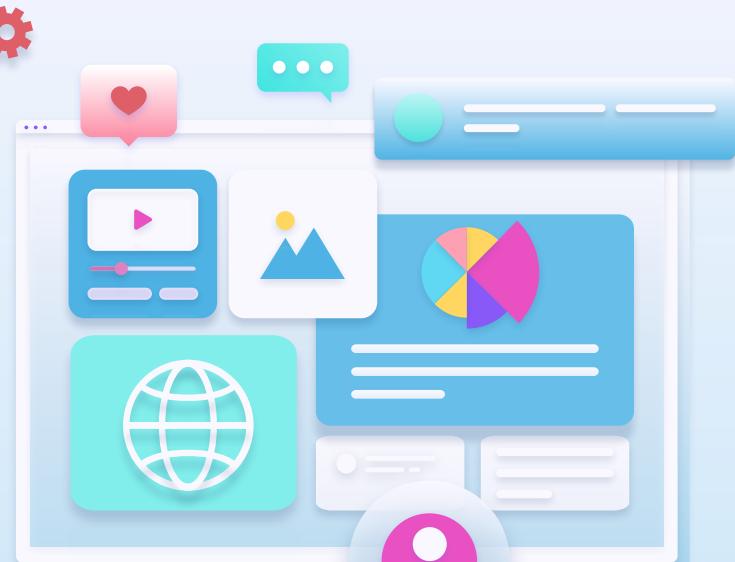


LANGURU^{*} APP

SPRING 2023 - CS 691- CAPSTONE PROJECT
PROFESSOR HENRY WONG
PACE UNIVERSITY



OUR TEAM



Thanh (Kate) Pham

Developer,
Scrum Master



Musa Nishat

Developer



Noel Sam Routhu

Database
Administrator





MEET OUR TEAM



**Indeevara
Tadikonda**



Developer

**Hariharammurthy
Krishnamoorthy**



Quality Analyst
And Tester





AGENDA

1. Improvement from Professor's Feedback.	8. Product Backlog and Sprint Backlog
2. Problem Statement vs Solution	9. Metrics
3. Personas	10. Retrospective
4. Minimum Viable Product	11. Sprint 4
5. Technologies	12. Product Demo Sprint 3
6. Architecture Diagrams	13. Live Application Demo
7. Sprint 2 Recap	



01

Professor's feedback and improvement



- The team was missing the **API slide** → will add it at Sprint 4
- Stories points are always in the Fibonacci series → **Changed stories points to Fibonacci series.**
- The team must **create tables in slides** instead of using screenshots → **Changed**
- The team is **missing the burndown chart** → **Burndown chart was added in this Sprint.**
- Late submission



02

PROBLEM VS. SOLUTION





PROBLEM STATEMENT

English learners faces challenges when they speak E.L correctly due to limited feedback on their speech while English teachers' feedback is costly and time consuming.

The current speech recognition technology is not accurate enough to provide reliable feedback on pronunciation, which can hinder the learning process.



PROJECT DESCRIPTION

Languru - Project Description

Project Description	
Project Name:	Languru
Team:	Radiant
Project Description:	<p>Recording voice and breaking down the sound of a word with real-time feedback on users pronunciation accuracy.</p> <p>For customers who want to improve their English pronunciation.</p> <p>the Languru is a mobile app that checks users' single words and provides accurate feedback. unlike the traditional way English learners get feedback from their teachers. our application brings together the best of language and guru to help English learners improve their pronunciation and fluency.</p>
Benefit Outcomes:	
	<ul style="list-style-type: none">- Users can improve their speaking skill anywhere and anytime.- Users can record their voice and receive feedback from Languru to improve.- Users will have a number of topics to choose to master their speaking skill.
Github Link:	https://github.com/htmwl/Languru/wiki

Team Working Agreement

Team Working Agreement

Purpose of the agreement:

- To complete Computer Science Project 1(CS 691) as smoothly as possible.

Name of the Project:

- Languru

Terms of Agreement:

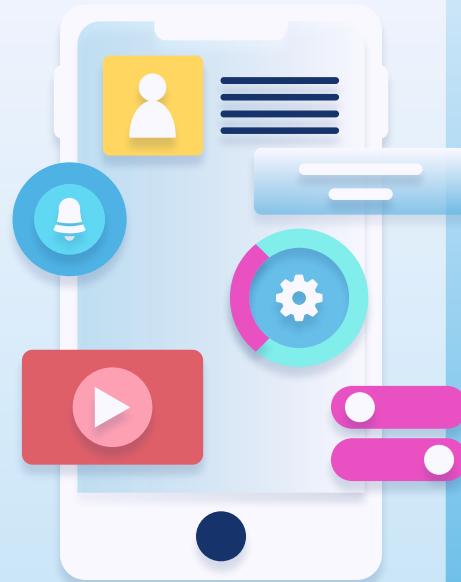
- All the team members are expected to attend the weekly meetings(Wednesday 8:00 PM) without fail
- If in any case you are not able to join the call, you are expected to update the other team members of your absence.
- In the case of absence for a weekly meeting, you are expected to make it up before the next team meeting.
- The weekly meetings are held on zoom and any updates can be communicated through Whatsapp messenger.
- Google workspace, GitHub and Agile can be used to track and divide all of our work.
- You are expected to be active on the WhatsApp messenger group chat for any updates.
- Work should be divided equally amongst the peers.
- Each team member should complete the work before the deadline. In case you are not able to do so, inform your peers so that they can divide the work accordingly. Failing to do so might lead to the decrease of the Team's grade.
- The Scrum Master is responsible for organizing the weekly meets, and everybody should be open to meet virtually more than once weekly if the situation demands it.
- Every team member is expected to be active in the weekly meetings, be productive and open to discussions and give a timely update of their part of the work.

Team Members:

Indeevara Tadikonda	it49412n
Thanh Pham	tp89638n
Musa Nishat	mn64635n
Noel Sam Routhu	nr66642n
Hariharanmurthy Krishnamoorthy	hk97281n

03

PERSONAS



PERSONA 1



"With languru, I can easily practice my English pronunciation for IELTS without having to go through a long sign up process or paying a premium fee."

Name: Areeba

Age: 21

Occupation: University Student

Location: Lahore, Pakistan

Level: Senior

Goals

- Finish her undergrad
- Study for IELTS and GRE
- Apply to MBA programs in the United States

Loves

- School
- Maths
- Spending time with her family

User Description

Areeba is in the final year of her Business Management degree from LUMS University. When she graduates, she wants to get an MBA in the UK

Interests

- Entrepreneurship
- Reading
- Community Organizing

Frustrations

- Struggling to find an affordable and proficient English tutor
- Apps like Duolingo not focusing on speaking and pronunciation enough

Motivations:

- Convenience
- High Quality
- Price



PERSONA 2



"When I first came to America, I could barely speak a word of English. Every night, I would open up languru and practiced and practiced until I mastered the language, which greatly helped my business"

Name: Gao
Age: 37
Occupation: Taxi Driver
Location: New York City

Goals

- Save for children's education and retirement
- Open his own taxi company
- Become a chess master

Frustrations

- Culture shocks, language barriers, racism
- Fundraising and organizing for his taxi business

Loves

- His children
- Playing guitar
- Old Kung Fu movies

Motivations:

- Convenience
- High Quality
- Price

User Description

Gao moved to the United States four years ago from Beijing. After a year, he brought his family along too. They live happily in Queens.

Interests

- Acquiring a green card
- Entrepreneurship
- Joining City Council

PERSONA 3



"In a perfect world, I would spend hours every day with every one of the kids I work with, but that's unfortunately not possible. With languru I can rest easy knowing that some of my kids have a resource they can use anytime which helps them with their speech."

Name: Daniella

Age: 31

Occupation: Speech Pathologist

Location: San Juan, Puerto Rico

User Description

Daniella has loved kids since she was a kid and always knew she wanted to be some kind of children's doctor when she grew up. Today, she helps children with learning and speaking disabilities

Goals

- Raise awareness and money for children's healthcare in PR
- Write a book on speech therapy

Loves

- Kids
- Hiking
- Collecting records

Interests

- Child healthcare
- Medical research
- Development of Puerto Rico

Frustrations

- Giving each patient enough attention
- Lack of medical resources and infrastructure
- Prejudice to those who are differently abled

Motivations:

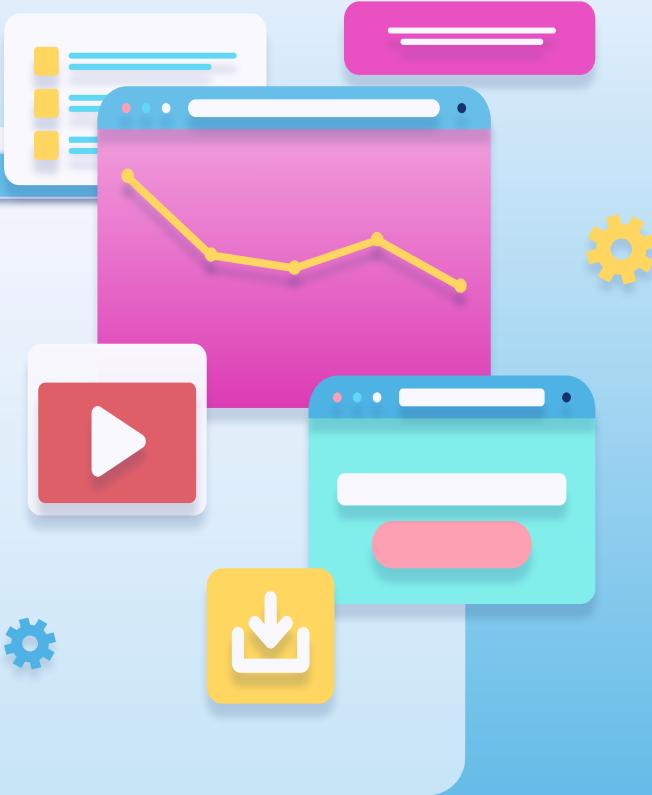
- Convenience
- High Quality
- Price





04 Minimum Viable Product

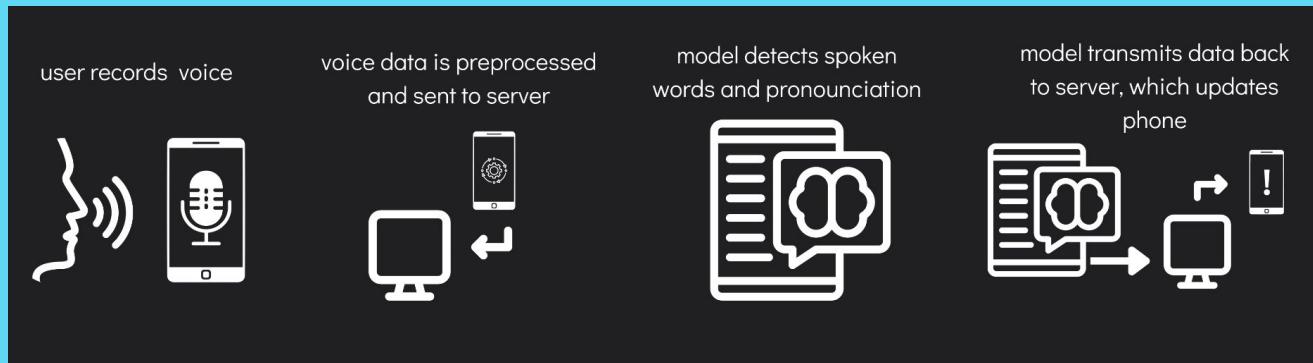
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MINIMAL VIABLE PRODUCT (MVP)

- Mobile application with speech recording capability
- Machine learning algorithm/API to break down individual spoken words, detect, and note incorrect pronunciations
- Server with functionality to receive voice data and send back analyzed data
- Server to host machine learning model

Steps:





APP LOGO

The name of the app is a combination of Language and guru. Blue will be the main theme of the application.

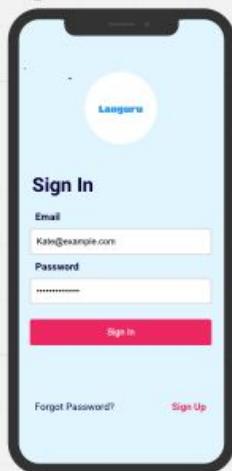


Languru logo



MOCK UP DESIGN

Login



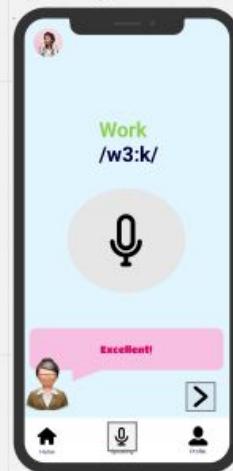
Home Page



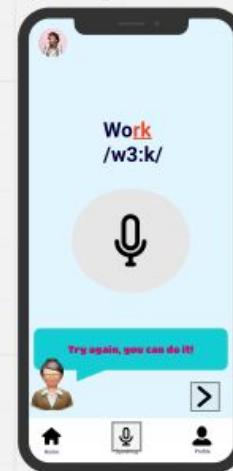
Speaking



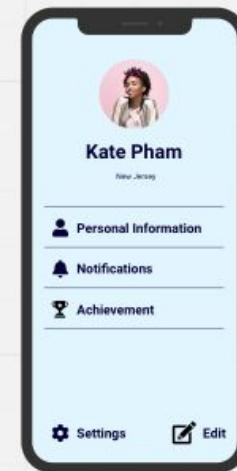
Speaking



Speaking

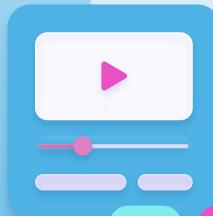


Profile



05

Technologies





Coding languages



JavaScript

Databases



Tools



git



Visual Studio



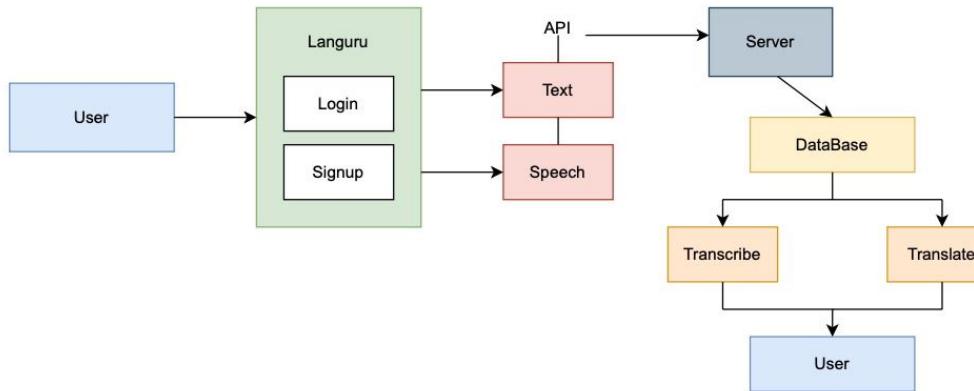
TensorFlow PyTorch



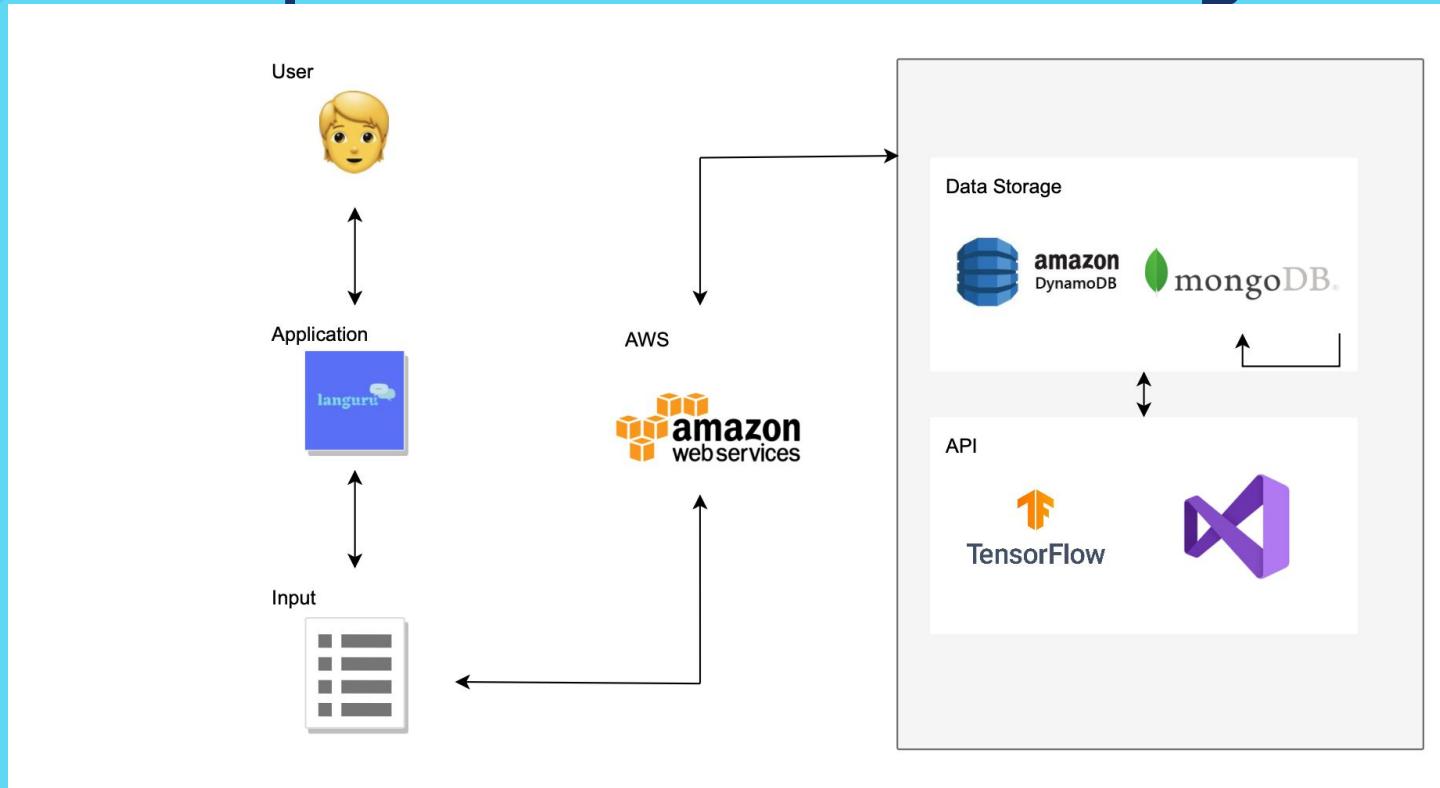
ARCHITECTURE DESIGN



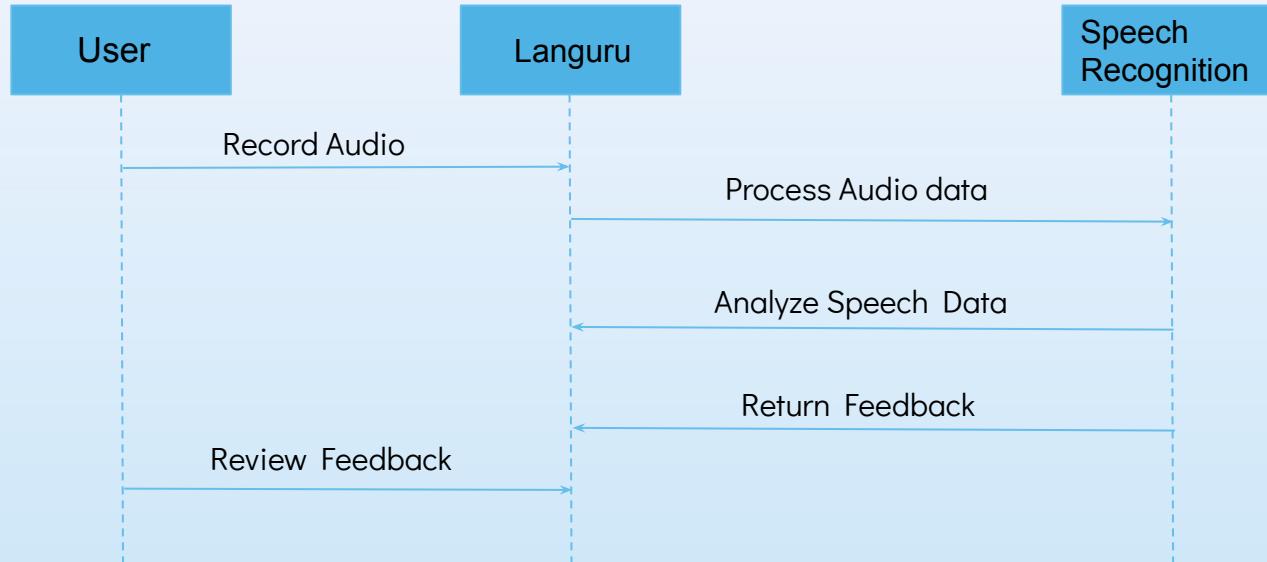
System Diagram



Conceptual Architecture Diagram

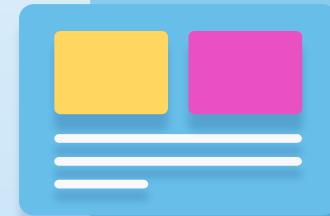


SEQUENCE DIAGRAM



SPRINT 2 RECAP

07





SPRINT 2 - SPRINT 3



SPRINT 2



- SAMPLE SENTENCE FOR PRACTICE
- RECORD FUNCTION
- PLAY BACK RECORD FUNCTION



SPRINT 3

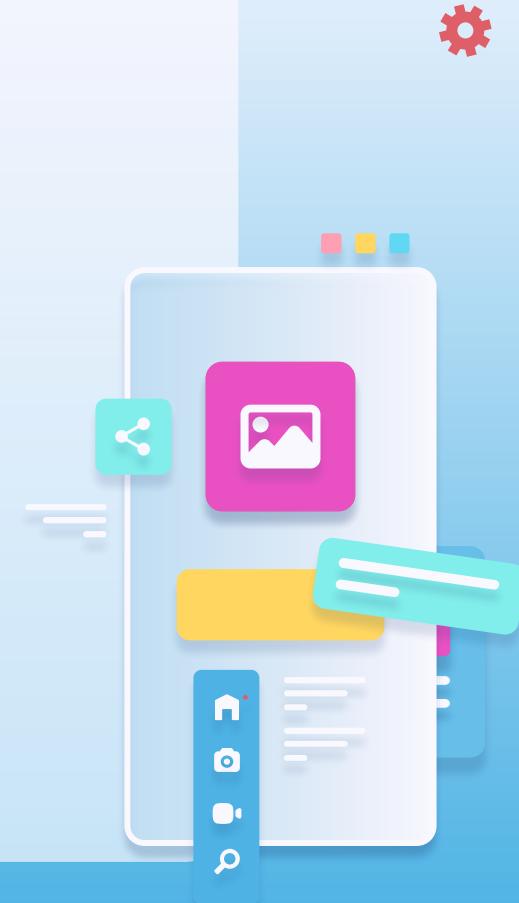


- LOGIN PAGE
- SIGN UP
- HOME PAGE
- RECORD PAGE WITH SCORE FUNCTION
- PROFILE PAGE BASIC
- SETTING PAGE BASIC



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PRODUCT BACKLOG



Issue Type	Key	Needs
Story	LNG-101	As a user, I want to be able to choose a topic for pronunciation practice So that I can focus on specific areas of improvement.
Story	LNG-102	As a user, I want to keep track of my progress in pronunciation and fluency So that I can see my improvement over time.
Story	LNG-103	As a user, I want to receive scores and feedback on my pronunciation accuracy So that I can understand my strengths and areas for improvement.
Story	LNG-104	As a user, I want to recover my account in case I forget my login credentials So that I can continue using the app without losing my progress.
Story	LNG-105	As a user, I want to reset my password if I forget it So that I can regain access to my account and continue using the app.
Story	LNG-106	As a user, I want to access and manage my personal settings So that I can customize my learning experience according to my preferences.
Story	LNG-107	As a user, I want to be able to edit my personal information So that I can manage it.
Story	LNG-108	As a user, I would like to have a navigation bar to switch from one page to another, login and logout for more convenient use.
Story	LNG-109	As a user, I want to receive notifications for new exercises and updates So that I can stay engaged with the app and continue improving my English pronunciation and fluency.



SPRINT 3 BACKLOG

Issue type	Key	Name
Story	LNG-97	As a user, I want to create a login and sign-up page to access the Languru app.
Story	LNG-98	As a user, I want to create and edit my user profile, so that my preferences and progress are saved.
Story	LNG-88	As a user, I want to see my score and receive feedback on my pronunciation and fluency.
Story	LNG-87	As a user, I want to recover my account and reset my password if I forget it.
Task	LNG-89	Draft Technical Paper





STORIES COMPLETED AND STORIES NOT COMPLETED

Name	Status	Date
As a user, I want to create a login and sign-up page to access the Languru app.	Done	04/13/2023
As a user, I would like to have a navigation bar to switch from one page to another, login and logout for more convenient use.	Done	04/16/2023
As a user, I want to create and edit my user profile, so that my preferences and progress are saved.	Done	04/13/2023
As a user, I want to see my score and receive feedback on my pronunciation and fluency.	Done	04/16/2023
As a user, I want to recover my account and reset my password if I forget it.	Done	04/13/2023
As an user, I want to be able to choose a topic for pronunciation practice So that I can focus on specific areas of improvement.	Done	04/16/2023
As an user, I want to receive scores on my pronunciation accuracy So that I can understand my strengths and areas for improvement.	Done	04/16/2023
Draft Technical Paper	Done	04/14/2023



STORIES AND ACCEPTANCE CRITERIA





User Story ID	Summary
1	As an English language learner I want to receive real-time feedback on my pronunciation accuracy so that I can improve my speaking skills and sound more fluent.
	Scenario: User is looking for feedback for their speaking Given I'm in a role of user who bad at pronounce in English Then Languru can give feedback
2	As an English language learner I want to Practice speaking English using different words and phrases so that I can expand my vocabulary and improve my pronunciation skills
	Scenario: User want to practice on different topics Given I'm in the role of user When I'm click on Speaking page Then a list of topics show up for user to choose
3	As an English language learner I want to Receive personalized recommendations for pronunciation practice based on my weaknesses so that I can focus on improving areas where I need the most help.
	Scenario: User have trouble cannot improve their speaking after many tries with the same word Given I'm a role of user When many try, the system recommend a personalized lesson





User Story ID	Summary
4	<p>As an English language learner I want to Track my progress and see improvement over time so that I can stay motivated and feel a sense of accomplishment.</p>
	<p>Scenario: User want to keep track of their progress Given I'm in the role of user When open the app, click on profile, I can see our progress and achievements.</p>
5	<p>As an English language learner I want to Practice my pronunciation in different contexts, such as in a business setting or social setting so that I can prepare for real-life situations where I need to speak English</p>
	<p>Scenario: User want to improve speaking through different conversation Given I'm in the role of user When i search on search box the specific context Then desired outcome should show up</p>





TEST
CASES



TEST CASE ID	TEST SCENARIO	TEST CASE	PRE-CONDITION	TEST STEPS	TEST DATA	EXPECTED RESULT	ACTUAL RESULT	STATUS (PASS/FAIL)
TC_LOGIN_1	Verify the login of email	Enter valid User Name and valid Password	1. Need a valid email Account to do login	1. Enter User Name 2. Enter Password 3. Click "Login" button	<Valid User Name> <Valid Password>	Login Successful	Login Successful	PASS
TC_LOGIN_1	Verify the login of email	Enter valid User Name and invalid Password	1. Need a valid email Account to do login	1. Enter User Name 2. Enter Password 3. Click "Login" button	<Valid User Name> <Invalid Password>			
TC_LOGIN_1	Verify the login of email	Enter invalid User Name and valid Password	1. Need a valid email Account to do login	1. Enter User Name 2. Enter Password 3. Click "Login" button	<Invalid User Name> <Valid Password>			
TC_LOGIN_1	Verify the login of email	Enter invalid User Name and invalid Password	1. Need a valid email Account to do login	1. Enter User Name 2. Enter Password 3. Click "Login" button	<Invalid User Name> <Invalid Password>	A message "The email or password you entered don't match" is shown	A message "The email or password you entered don't match" is shown	PASS

TEST CASE ID	TEST SCENARIO	TEST CASE	PRE-CONDITION	TEST STEPS	TEST DATA	EXPECTED RESULT	ACTUAL RESULT	STATUS (PASS/FAIL)
TC_SIGNUP_2	Verify sign up	Enter valid User Name and valid Password	1. Need a valid user name and password (characters and number from1 to 9) to sign up	1. Enter User Name 2. Enter Password 3. Click "signup" button	<Valid User Name> <Valid Password>	Sign up Successful	Sign up Successful	PASS
TC_SIGNUP_2	Verify sign up	Enter used User Name	1. Need a valid user name and password (characters and number from1 to 9) to sign up	1. Enter User Name 2. Enter Password 3. Click "signup" button	<used Username >	A message "The user name is already used" is shown	A message "The user name is already used" is shown	PASS
TC_SIGNUP_2	Verify sign up	Enter invalid User Name and invalid Password	1. Need a valid user name and password (characters and number from1 to 9) to sign up	1. Enter User Name 2. Enter Password 3. Click "signup" button	<Invalid Password>	A message "password don't match our requires" is shown	A message "password don't match our requires" is shown	PASS

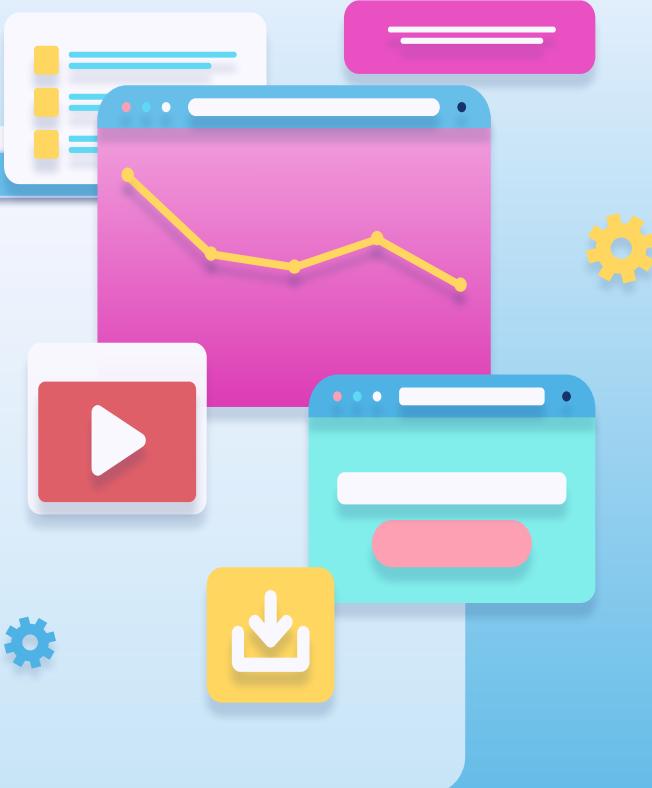
TEST CASE ID	TEST SCENARIO	TEST CASE	TEST STEPS	TEST DATA	EXPECTED RESULT	ACTUAL RESULT	STATUS (PASS/FAIL)
TC_HOMEPAGE_3	Verify the HOME PAGE	A welcome message should show up on screen			Check if a welcome message appear on the home screen		PASS
TC_HOMEPAGE_3	Verify the HOME PAGE					
		User should be able to search from homepage			Homepage can show expected results.		
TC_HOMEPAGE_3	Verify the HOME PAGE	User should be able to open the home page			Homepage should appear when user click on it.		PASS

TEST CASE ID	TEST SCENARIO	TEST CASE	PRE-CONDITION	TEST STEPS	TEST DATA	EXPECTED RESULT	ACTUAL RESULT	STATUS (PASS/FAIL)
TC_FGPASS_6	Check on Forgot Password	Should direct to the email in order to change password.				Password resetted and send back to login page.		PASS

TEST CASE ID	TEST SCENARIO	TEST CASE	PRE-CONDITION	TEST STEPS	TEST DATA	EXPECTED RESULT	ACTUAL RESULT	STATUS (PASS / FAIL)
TC_PROFILE_4	Check on Profile editable					Users can existing profile information successfully.		
TC_PROFILE_4	Check on features in Profile page					On the Profile page, users should be able to see list of features		

TEST CASE ID	TEST SCENARIO	TEST CASE	PRE-CONDITION	TEST STEPS	TEST DATA	EXPECTED RESULT	ACTUAL RESULT	STATUS (PAS S/ FAIL)
TC_SPEAKING_5	Verify the speaking page	User should be able to record their voice				Record voice sucessfully		PASS
TC_SPEAKING_5	Verify the speaking page	User should be able to see their feedback after they recorded their voice.				The score will show up after voice was recorded.		PASS
TC_SPEAKING_5	Verify the speaking page	User should be able to see the topics that they want to practice and open it				The topics category will show up as expected.		PASS
TC_SPEAKING_5	Verify the speaking page	User should be able to see where was pronounce incorrectly.				User can see the part was pronounce incorrect which is underlined.		
TC_SPEAKING_5	Verify the speaking page	User should be able to access the Speaking page				User can see the part was pronounce incorrect which is underlined.		

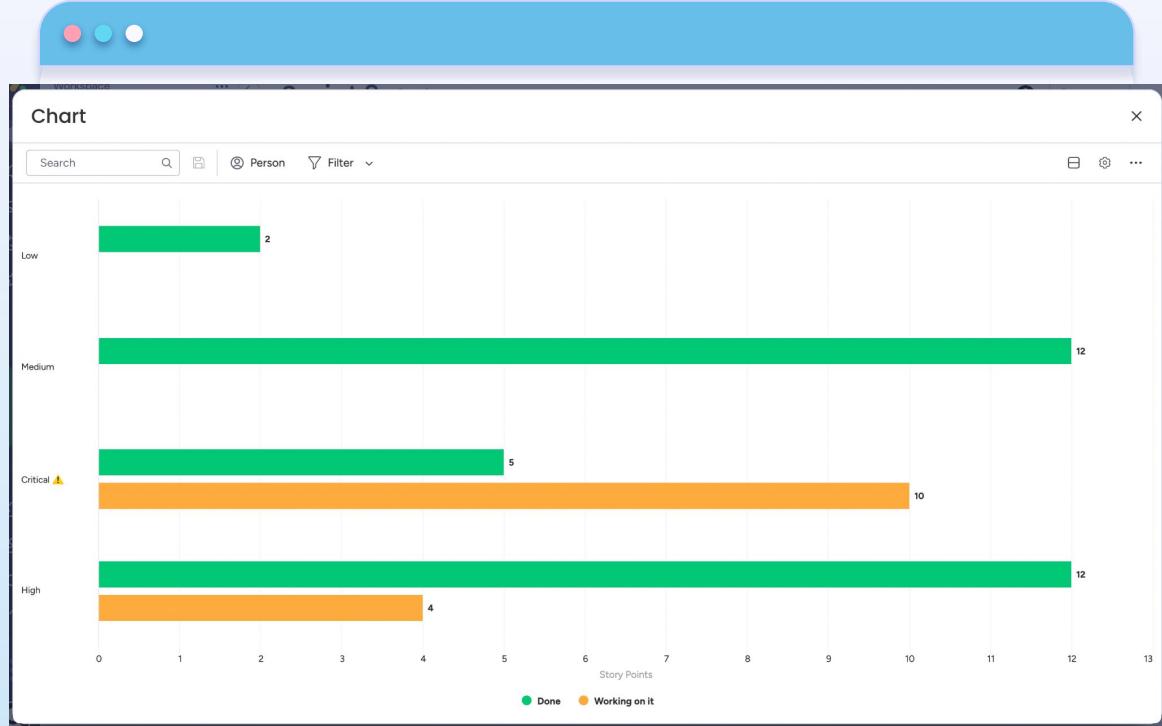
METRICS



TEAM HISTORY VELOCITY



TEAM Burndown Chart





Completed tasks

▼ Sprint 3 12 Tasks

<input type="checkbox"/>	Task	Status	Priority	Story Points	+	
<input type="checkbox"/>	MVP		Done	Critical	5	
<input type="checkbox"/>	Algorithms		Done	Medium	3	
<input type="checkbox"/>	Retrospective		Done	Medium	3	
<input type="checkbox"/>	Backlogs		Done	High	4	
<input type="checkbox"/>	User Stories		Done	High	4	
<input type="checkbox"/>	Deliverable 3 video		Working on it	Critical	5	
<input type="checkbox"/>	Deliverable 3 PPT		Working on it	Critical	5	
<input type="checkbox"/>	Project Demo		Done	High	4	
<input type="checkbox"/>	Technical Paper		Working on it	High	4	
<input type="checkbox"/>	Test Cases		Done	Medium	3	
<input type="checkbox"/>	Metrics		Done	Medium	3	
<input type="checkbox"/>	Sprint 4 stories		Done	Low	2	
<input type="checkbox"/>	+ Add task					



45
sum

10

RETROSPECTIVE





RETROSPECTIVE

WHAT WENT WELL

We successfully add more functionality to our application and it worked perfectly.



NEXT STEPS

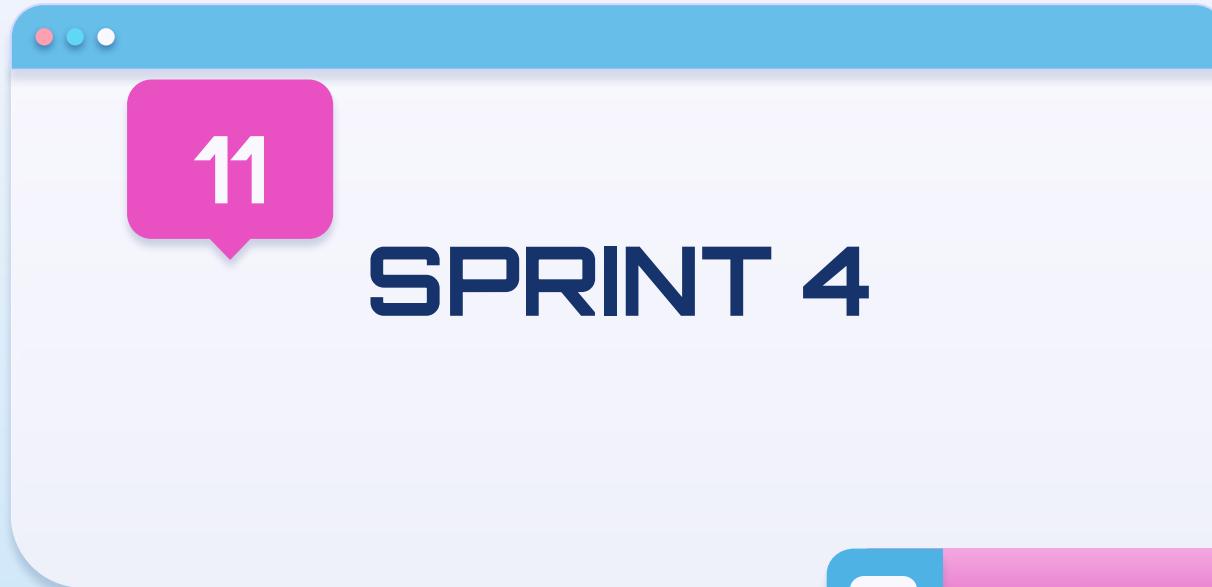
- Meet more often to track the progress of each team member to avoid delays.
- Develop more functionality for our application.
- Work on technical paper.

WHAT NEEDS TO IMPROVE



Commitment among team members should be stronger. There have been a lot of late submissions of team members in this sprint. This was lead to the whole process delayed.



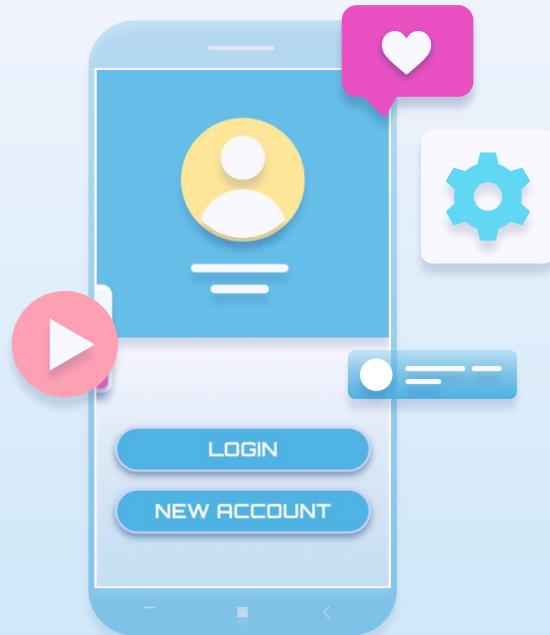




Stories planned and committed for Sprint 4

Issue Type	Key	Name	Status	Story Point Estimate
Story	LNG-102	As an user, I want to keep track of my progress in pronunciation and fluency So that I can see my improvement over time.	To do	3
Story	LNG-112	As an user, I want to receive feedback on what part from my pronunciation incorrect So that I can understand my strengths and areas for improvement.	To do	5
Story	LNG-107	As a user, I want to be able to edit my personal information So that I can manage it.	To do	3
Task	LNG-89	Finish Technical Paper	To do	8





12

PRODUCT DEMO (SPRINT 3)



APP SCREENSHOTS



languru

Username

Password

Sign In

Forgot password?

Sign In with Facebook

Sign In with Google

Sign In with Apple

Don't have an account? Create one

Sign in page

Create an account

Username

Email

Password

Repeat Password

Register

By registering, you confirm that you accept our [Terms of Use](#) and [Privacy Policy](#)

Sign In with Facebook

Sign In with Google

Sign In with Apple

Have an account? Sign in

Sign up page

Reset your password

Username

Send

Back to Sign in

Forgot password

Confirm your email

Enter your confirmation code

Confirm

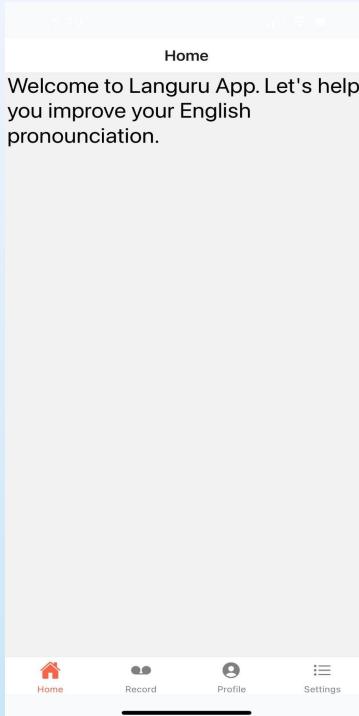
Resend code

Back to Sign in

After register



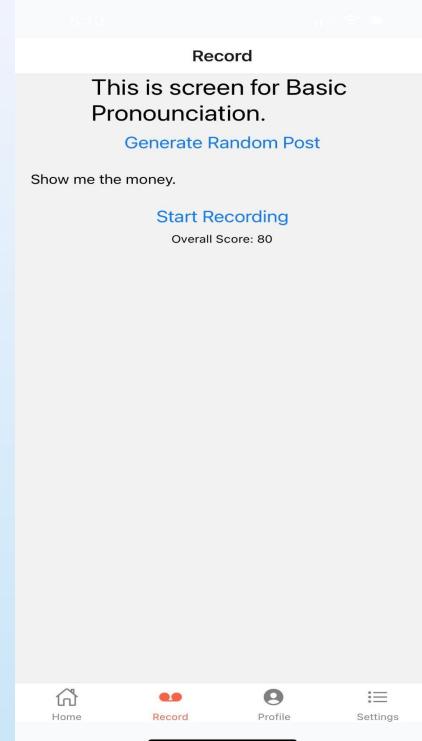
APP SCREENSHOTS



Home page



Record page 1



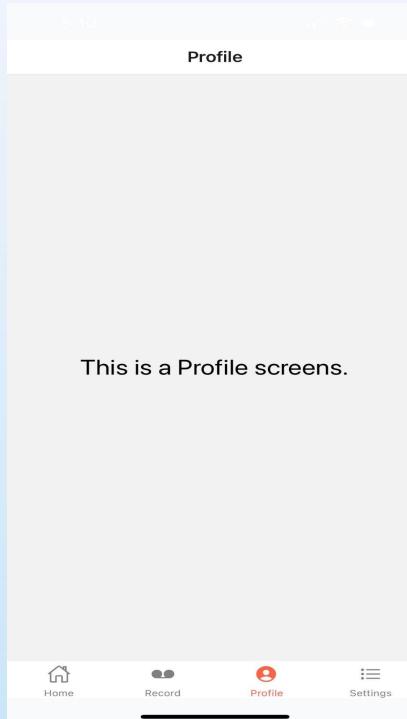
Record page 2



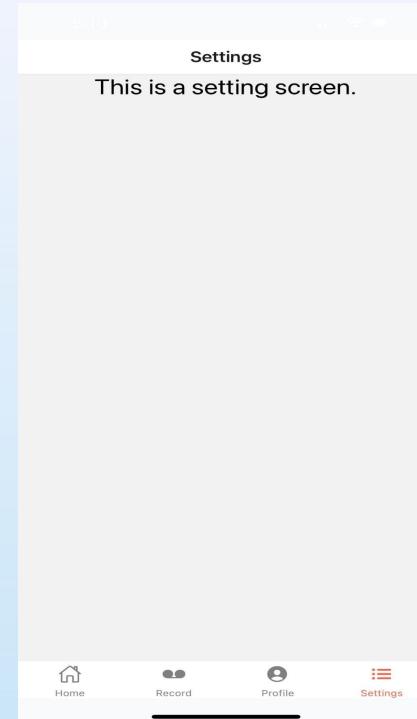
APP SCREENSHOTS



Profile page

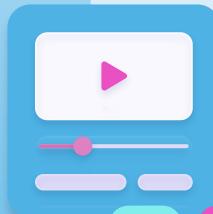


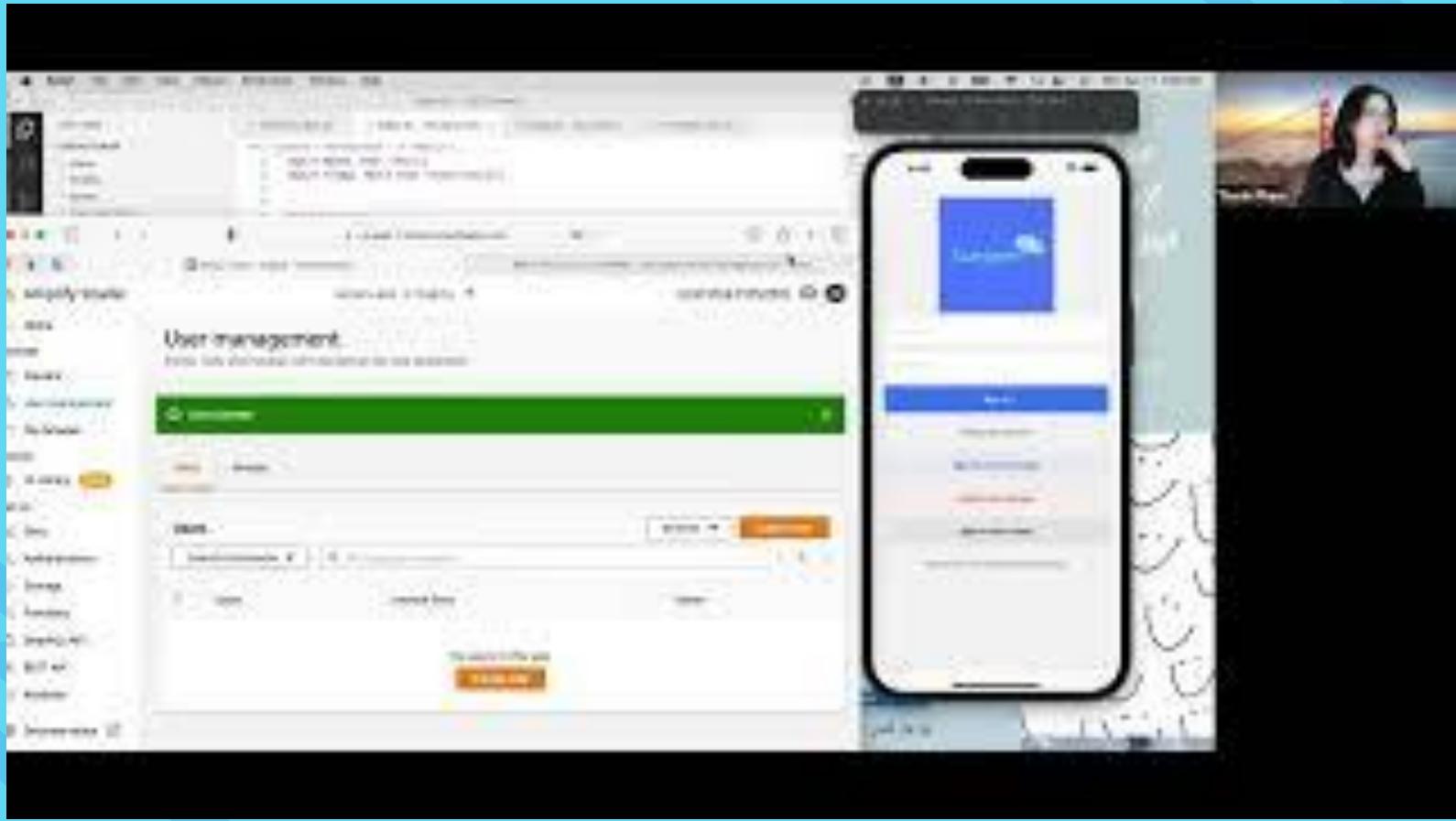
Setting page



13

LIVE APPLICATION DEMO



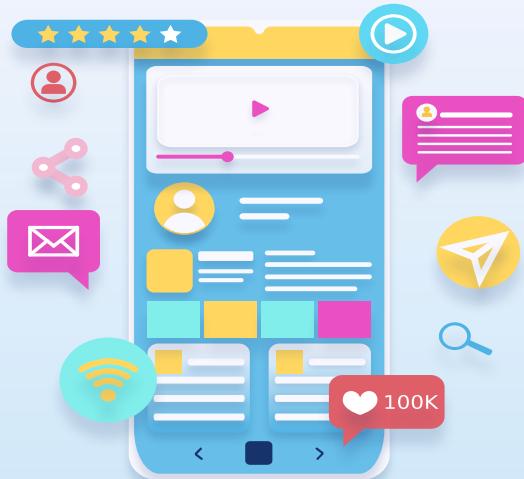


GITHUB LINK:

<https://github.com/htmwlangu魯/wiki>

TECHNICAL PAPER LINK:

https://github.com/htmwlangu魯/blob/main/documentation/Deliverable_e3/CS691%20-%20Radiant%20Team%20Technical%20paper.pdf



THANK YOU FOR WATCHING!

TEAM 5 - RADIANTS

