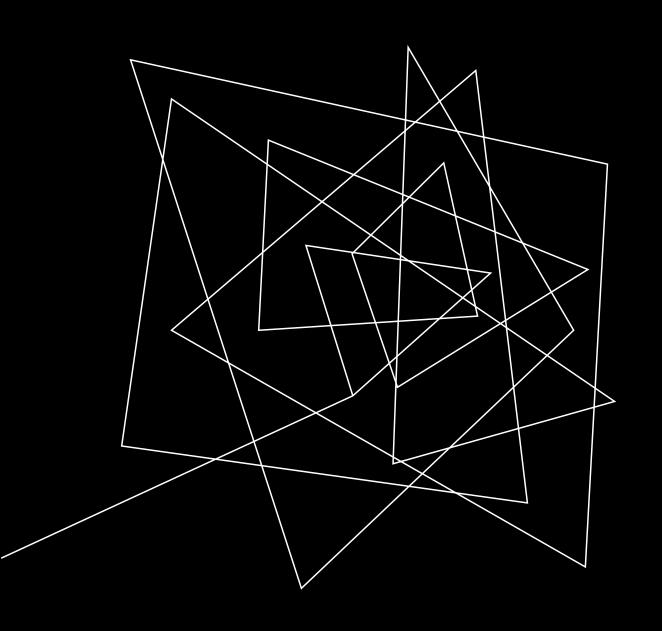


# STUDENT HIVE

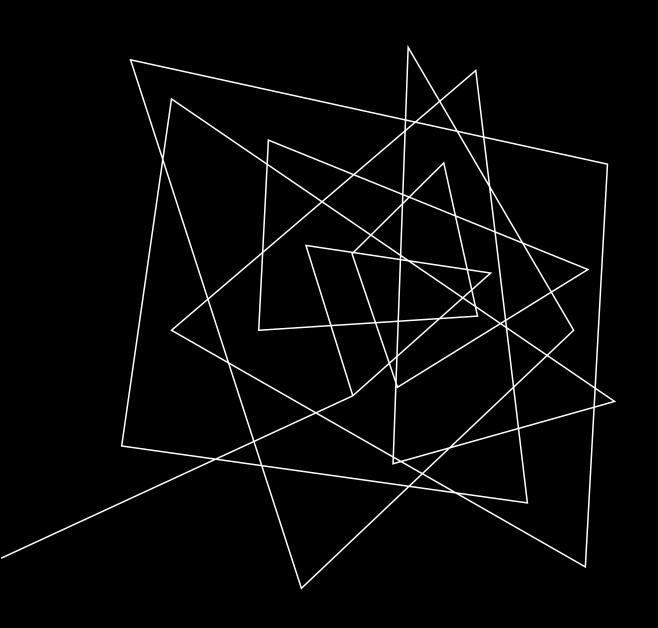
CS 691 – Computer Science Capstone Project



AGENDA

#### **AGENDA**

- Review progress towards project deadlines and milestones and discuss any delays or challenges encountered and identify solutions.
- Ensure alignment on the development progress and tasks completed and address any roadblocks hindering development and strategize solutions.
- Mark important submission dates and deadlines for the project deliverables on the shared excel sheet with everyone's schedules.
- Review presentation topics to ensure they align with project goals and discuss iterative updates to the presentation and delegate tasks accordingly.
- Brainstorm and study through personas to understand client requirements thoroughly and Identify and prioritize the necessary features and functionalities from the client's perspective.
- Discuss potential risks associated with the project and their impact and Strategize mitigation plans to address identified risks effectively.
- Emphasize the importance of interaction, attendance, cooperation, teamwork and discuss the significance of individual contributions and attention to detail for project success.
- Sync on the next steps for development, including task assignments, deadlines and Outline action items and responsibilities for each team member.
- Recap key discussion points and action items also confirm the date and time for the next meeting, if necessary and ensure open communication and collaboration among team members.



# TEAM MEMBERS & ROLES

## **MEET OUR TEAM**



SMIT
FRONT END
DEVELOPER



SUJAN SIDDARTH
TESTER



FULL STACK DEVELOPER



YASHKUMAR

DATABASE
ADMINSTRATOR



PARTH
PROJECT MANAGER



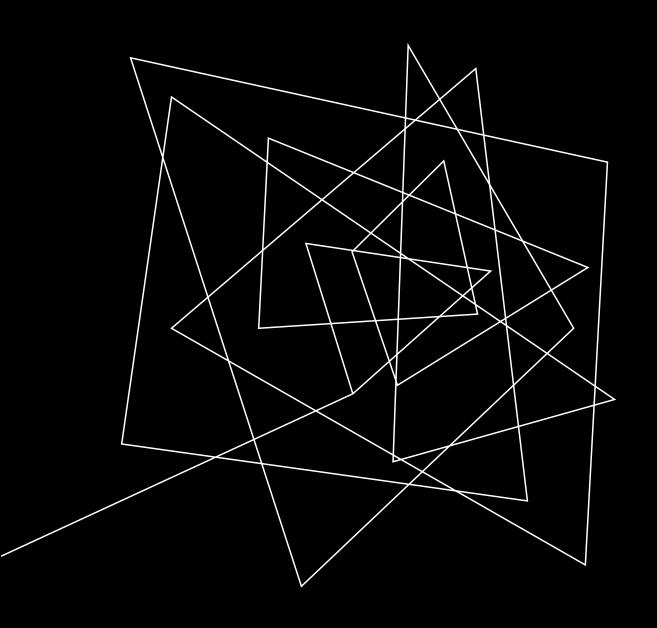
SIDDHARTHKUMAR



RAJ KOUSHIK

FULL STACK
DEVELOPER

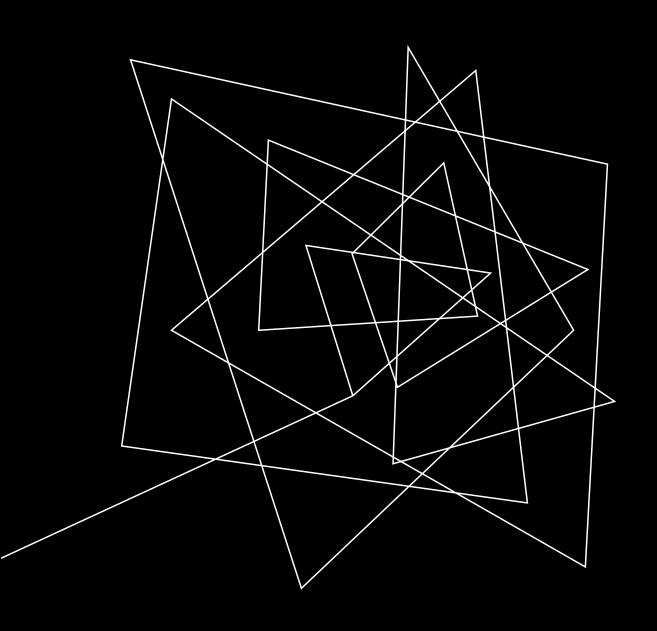
DATA ANALYST



# **IMPROVEMENTS**

#### **IMPROVEMENTS**

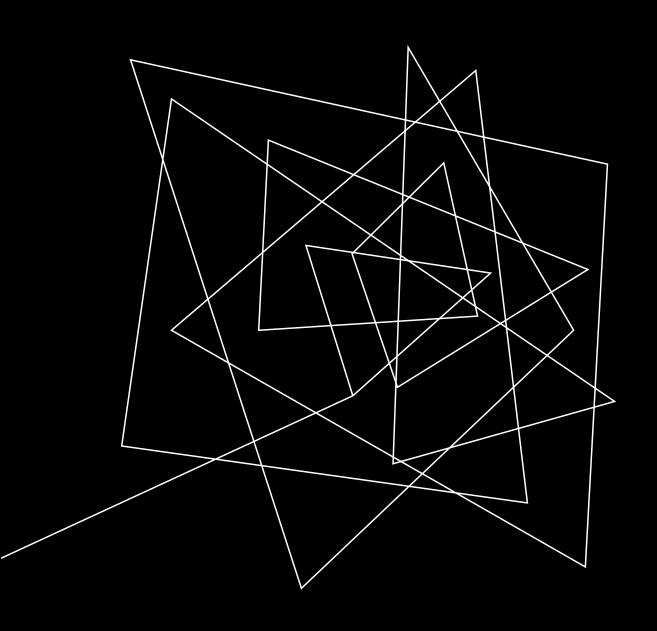
Post the Deliverable 1 Presentation, We received feedback from the professor on changing the personas by updating the information with demographics, profile, interests, frustrations and goals. We also made few changes while recording on zoom for the presentation for better visibility, format and understanding.



# PROBLEM STATEMENT

#### PROBLEM STATEMENT

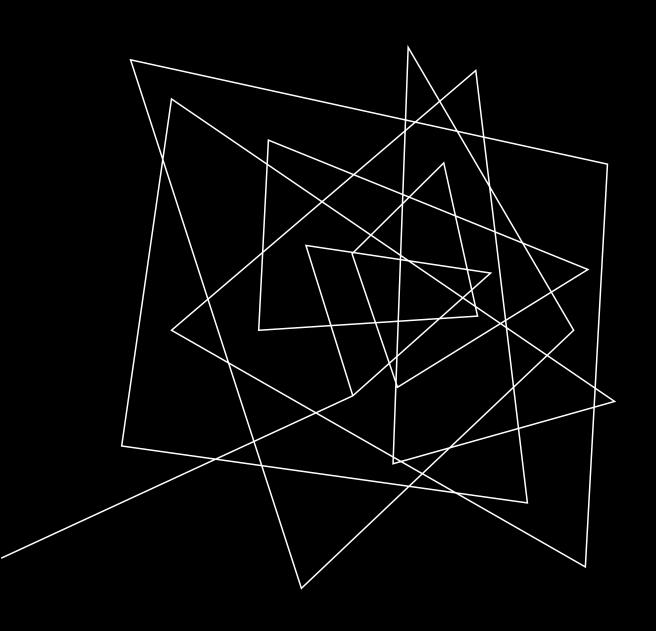
In the current landscape of student housing, there exists a lack of secure and convenient platforms tailored specifically to the needs of students seeking shared living arrangements. Many students struggle to find reliable and trustworthy accommodation options that align with their preferences, leading to frustration and uncertainty in their housing search. Additionally, the absence of comprehensive resources such as transportation information and nearby amenities further complicates the process, leaving students feeling overwhelmed and disconnected from their potential living environments. As a result, there is a pressing need for a solution that addresses these challenges and provides students with a seamless and empowering experience in finding suitable accommodation.



# PROJECT DESCRIPTION

#### PROJECT DESCRIPTION

"Student Hive" is a secure and convenient platform designed for students seeking shared living arrangements. By registering with their school email, users gain access to comprehensive listings tailored to their accommodation preferences and budgeting needs. Advanced search options and communication tools facilitate connections with potential roommates or landlords, while additional resources such as transportation information and nearby amenities enhance the overall living experience. With support and community engagement features available, "Student Hive" empowers students to confidently navigate their search and find the perfect accommodation suited to their needs.



# PERSONAS



# PERSONA 1: EMILY, BUDGET-CONSCIOUS STUDENT

Name: Emily

**Age**: 25

Location: Pacific Northwest, USA

Salary: \$20,000 per year

Job: Graduate Student Research Assistant

Family: Single, no children

**Profile**: Emily is a dedicated graduate student who balances her studies with a part-time job, all while living a sustainable lifestyle.

**Interests**: Environmental science, outdoor activities, sustainable living practices.

**Frustrations**: Difficulty in finding affordable, eco-friendly housing near campus and compatible roommates.

**Goals**: To live in an affordable, sustainable home close to campus with roommates who share her eco-conscious values.



# PERSONA 2: ALEX, INTERN/CO-OP SEEKER

Name: Alex

**Age**: 22

Location: NY, USA

Salary: \$8,000 (Summer Internship Stipend)

Job: Undergraduate Computer Science Student/Intern

Family: Single, no children

**Profile**: Alex is a focused computer science student and intern, seeking convenient housing to support her summer internship and interests.

Interests: Coding, gaming, tech meetups.

Frustrations: Challenges in finding short-term, furnished,

affordable housing close to her internship.

Goals: To find flexible housing that enables her to

concentrate on his internship and personal tech projects.



## PERSONA 3: JORDAN, GRADUATE STUDENT/YOUNG PROFESSIONAL

Name: Jordan

**Age**: 27

Location: Austin, Texas, or similar vibrant city

Salary: \$50,000 per year

**Job**: Marketing Professional/Graduate Student

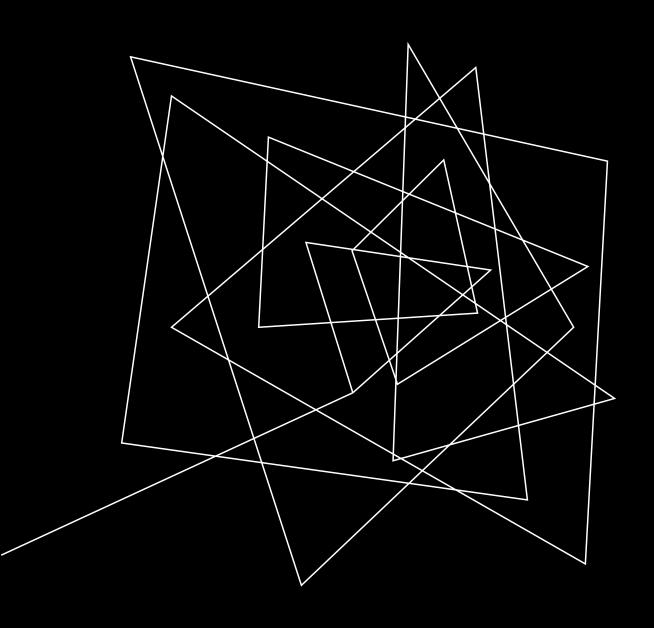
Family: Single, no children

**Profile**: Jordan is an ambitious marketing professional and potential graduate student, seeking a lifestyle balance in an urban environment.

**Interests**: Photography, social media, urban exploration, cafes, co-working spaces.

**Frustrations**: Finding an affordable place in a desirable neighborhood that caters to her professional and social needs.

**Goals**: To secure a living situation that aligns with her aspirations for career growth and an active social life in a dynamic neighborhood.



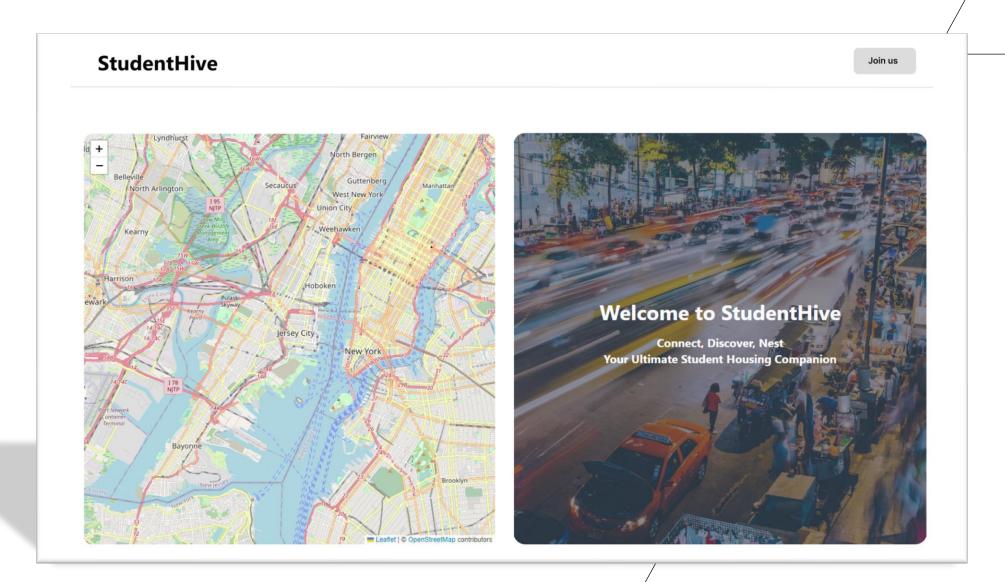
MINIMAL VIABLE PRODUCT
STUDENTHIVE

## MINIMAL VIABLE PRODUCT (MVP)

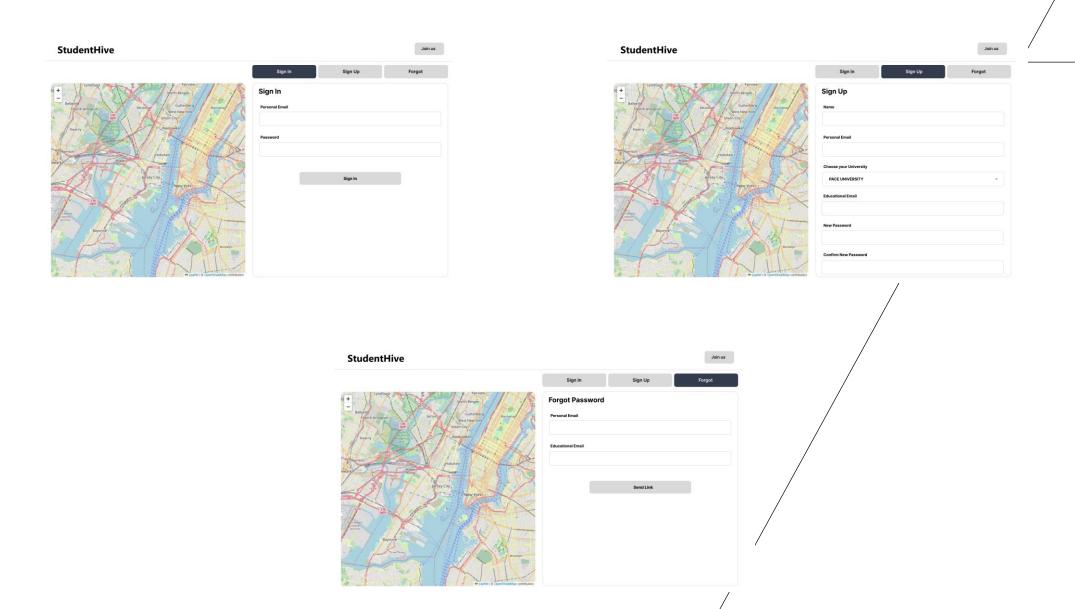
The following are the features that we are covering in our MVP:

- Landing Page
- Login page with Sign In, Sign up and Forgot Password
- Home Page with Map and Listings

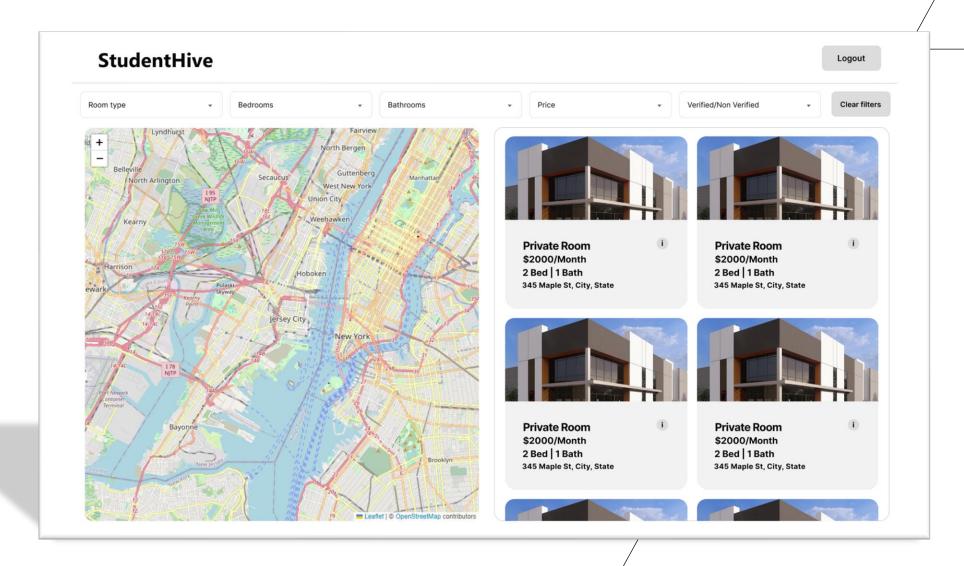
# LANDING PAGE (FIGMA PROTOTYPES)

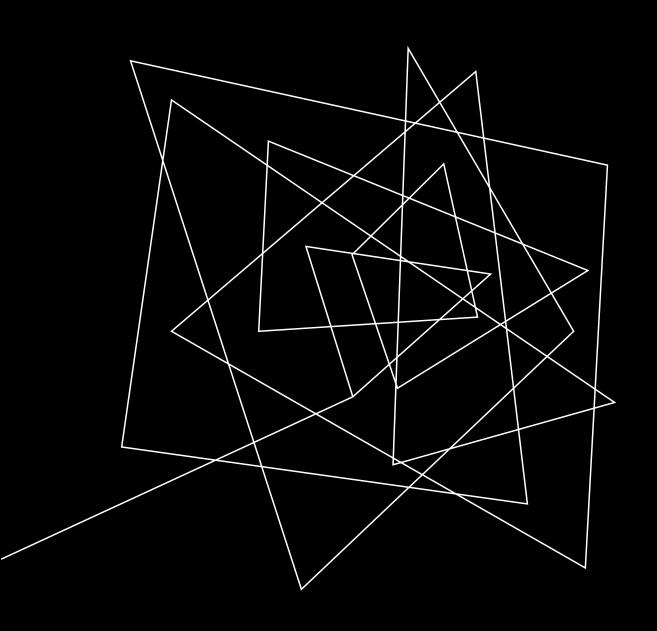


## LOGIN PAGE (SIGN IN, SIGN UP, FORGOT) (FIGMA PROTOTYPES)



# HOME PAGE (FIGMA PROTOTYPES)





TECHNOLOGIES & ALGORITHMS

### **TECHNOLOGIES**

#### **Front End**

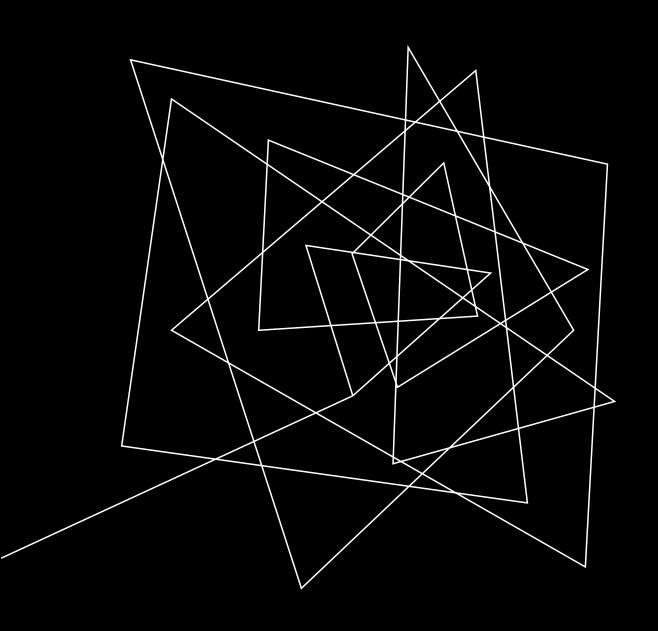
React, Oauth2.0, TanStack Query(Context API - State Management), Axios, Zod (Validation)

#### **Back End**

Node JS, Fastify, MongoDB, Passport JS(Auth), Mongoose (ORM)

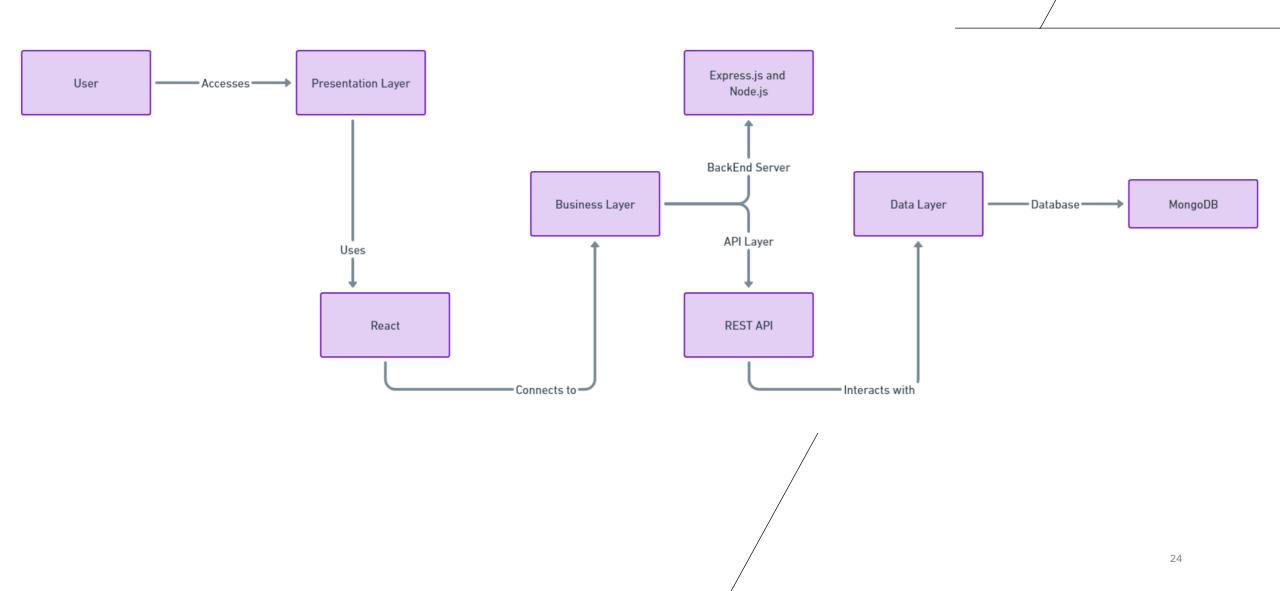
### **ALGORITHMS**

KNN, Linear Regression

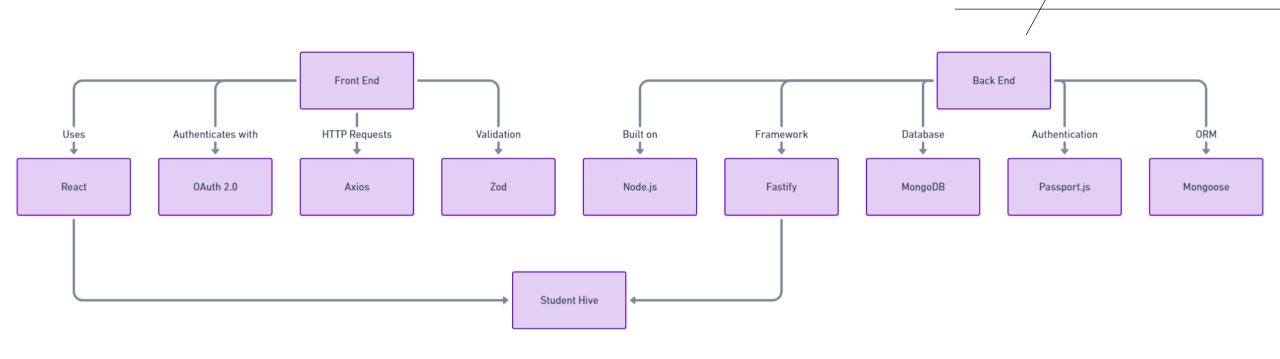


DIAGRAMS

## **ARCHITECTURAL DIAGRAM**

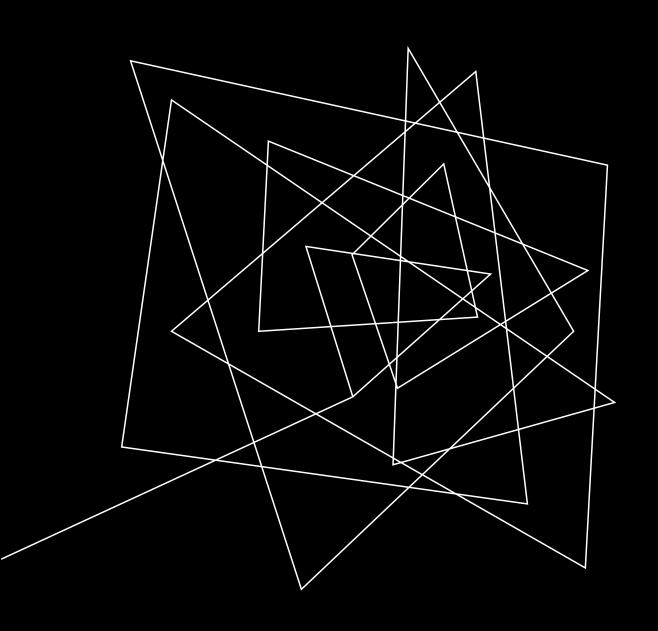


# ARCHITECTURAL DIAGRAM (EXTENDED)



#### **ER DIAGRAM**

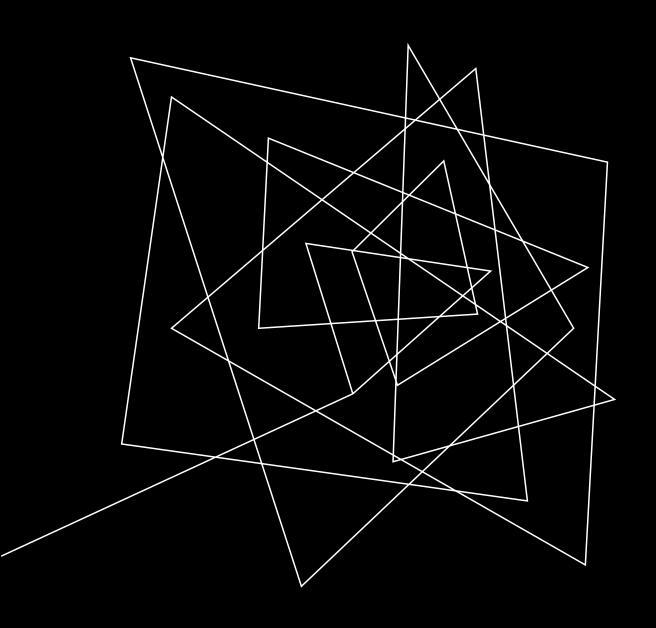




# PRODUCT BACKLOG

# PRODUCT BACKLOG

Board (20 issues)		20 ①
SHK-2 As a user, I want to edit my listings to update any changes in price, availability, or details to keep potential renters informed.	TO DO ✓	Θ
SHK-1 As a user, I want to use filters to sort listings by room type to quickly find accommodations that match my living situation preferences.	TO DO ♥	0
SHK-10 As a user, I want to sign up for Student Hive using my personal email to start my accommodation search.	ΤΟ DΟ マ	RV
SHK-9 As a user, I want to browse the home page to see a map showcasing the locations of available accommodations.	ΤΟ DΟ マ	RV
SHK-18 As a user, I want to verify my student status with my educational email after signing up to ensure access to student-specific listings.	TO DO ∨	Θ
SHK-7 As a user, I need a way to reset my password in case I forget it, ensuring I can regain access to my account without hassle.	TO DO V	0
SHK-6 As a user, I want to communicate directly with potential roommates or landlords to ask questions or express interest in a listing.	TO DO ~	0
SHK-20 As a user, I want to filter listings based on the number of bedrooms to find accommodations that meet my space needs.	ΤΟ DΟ マ	0
SHK-19 As a user, I want to view the coordinates of a listing to understand its exact location and how it fits with my needs.	TO DO ✔	Θ
SHK-12 As a user, I want to see listings of rentals, including houses and apartments, to explore a variety of living arrangements.	TO DO ✔	RV
SHK-5 As a user, I want to set and update my university search preference to receive listings relevant to my campus location.	TO DO ✔	Θ
SHK-15 As a user, I want to report listings or users that violate platform policies to maintain a safe and respectful community.	TO DO ✔	Θ
SHK-16 As a user, I want to see listings of rooms, both shared and private, on the home page to find options that suit my preferences.	TO DO ✔	RV
SHK-13 As a user, I want to remove my listings when they are no longer available to avoid receiving inquiries for occupied spaces.	TO DO ✔	Θ
SHK-3 As a user, I want to adjust filters based on price to find accommodations within my budget.	TO DO ✔	RV
SHK-11 As a user, I want to change my password through my profile settings to maintain the security of my account.	TO DO >	Θ
SHK-8 As a user, I want to sign in to Student Hive using my personal email to access my account and view listings.	TO DO ~	RV
SHK-4 As a user, I want to create a listing with specific details such as address, price, and description to offer my space for rent.	10 00 ✔	Θ
SHK-17 As a user, I want to filter listings by the number of bathrooms to ensure the accommodation meets my privacy and convenience needs.	TO DO ✔	Θ
SHK-14 As a user, I want to manage my profile to keep my personal information up to date.	TO DO ✔	0



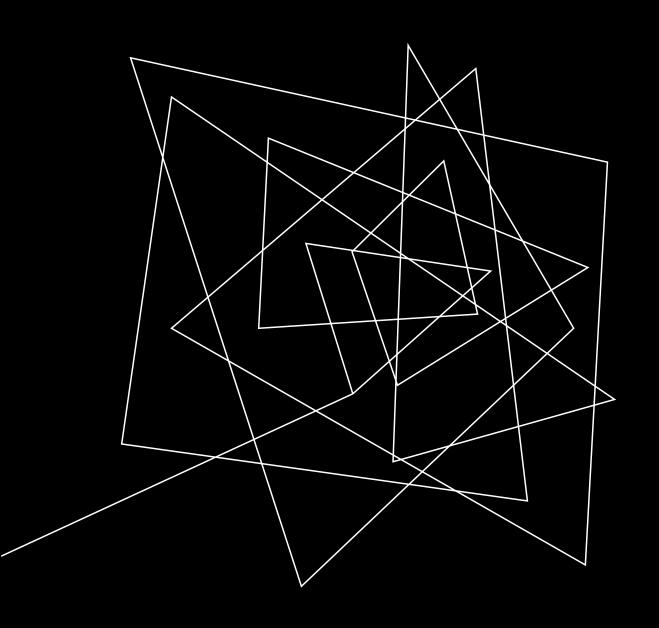
# ACCEPTANCE CRITERIA

## **ACCEPTANCE CRITERIA**

Issue Type	ID	Summary	Acceptance Criteria	Place
Feature	1	Scenario: New user registration  Sign up with Given the user is on the Sign-Up page  personal email When the user inputs a personal email address and completes the registration form  Then the user receives a confirmation email to complete the signup process		Login Page
Feature	2	Verify student status with educational email	Scenario: Verifying student status Given the user has signed up with a personal email When the user enters an educational email address for verification Then the user receives a verification email at the educational email address And upon clicking the verification link, the user's profile is marked as verified	Manage Profile
Feature	3	Sign in with personal email	Scenario: User login gn in with Given the user has an account	
Feature	4	Password reset functionality	Scenario: Resetting a forgotten password Given the user has forgotten their password Word reset When the user clicks on "Forgot Password" and enters their email address	
Feature	5	Browse listings with a map view		
Feature	6	Filter listings by accommodation type  Scenario: Filtering listings by accommodation type  Given the user is on the Listings Page  When the user selects an accommodation type (shared, private) from the filter options  Then the listings are updated to only show the selected accommodation type		Home Page
Feature	7	Filter listings by number of bedrooms	Scenario: Filtering listings by bedrooms Given the user is on the Listings Page When the user selects a specific number of bedrooms from the filter options Then the listings are updated to only show options with the selected number of bedrooms	Home Page
Feature	8	Filter listings by price	Scenario: Filtering listings by price Given the user is on the Listings Page When the user specifies a price range Then the listings are updated to only show options within the specified price range	Home Page

## **ACCEPTANCE CRITERIA**

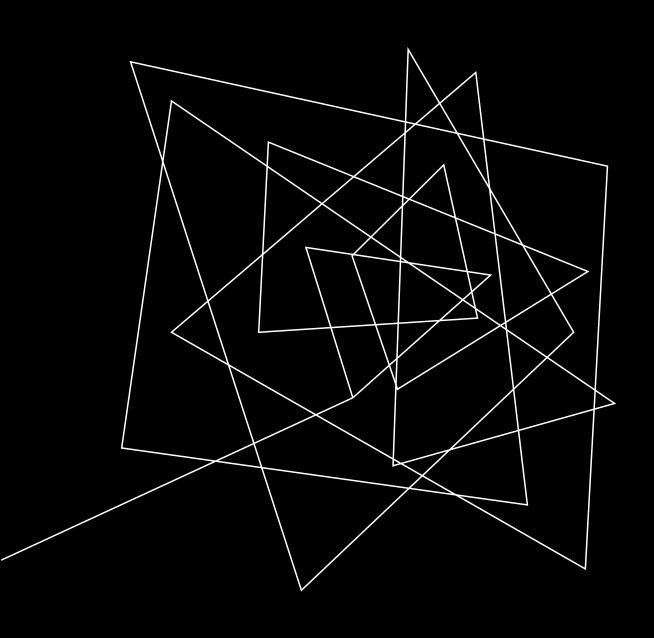
Feature	9	Create a listing	Scenario: Creating a new listing Given the user is logged in and on the Create Listing page When the user inputs all required details for the listing and submits it Then the listing is created and visible on the platform	Create Listing Page
Feature	10	Edit a listing	Scenario: Editing an existing listing Given the user is logged in and owns a listing When the user edits the listing details and saves the changes Then the updated listing reflects the changes made	
Feature	11	Remove a listing  Given the user is logged in and owns a listing When the user chooses to remove one of their listings Then the listing is no longer visible on the platform		Manage Listings Page
Feature	12	View listing details	Scenario: Viewing detailed listing information Given the user is browsing listings When the user selects a listing to view more details Then the user is presented with detailed information including amenities, price, and location	Listing Page
Feature	13	Manage profile information	Scenario: Updating profile information Given the user is logged in When the user goes to Profile Settings and updates their information Then the user's profile information is updated accordingly	Mange Profile
Feature	14	Direct communication with potential roommates or landlords	Scenario: Messaging a listing owner Given the user is interested in a listing When the user sends a message to the listing owner via the platform's messaging feature Then the message is successfully sent and can be viewed in the Messages section	Messages Page
Feature	15	Manage messages from other users	Scenario: Managing received messages Given the user is logged in and has received messages When the user goes to the Messages section to view and respond to messages Then the user can successfully manage their messages including reading, replying to, and deleting messages	Messages Page



TEST CASES

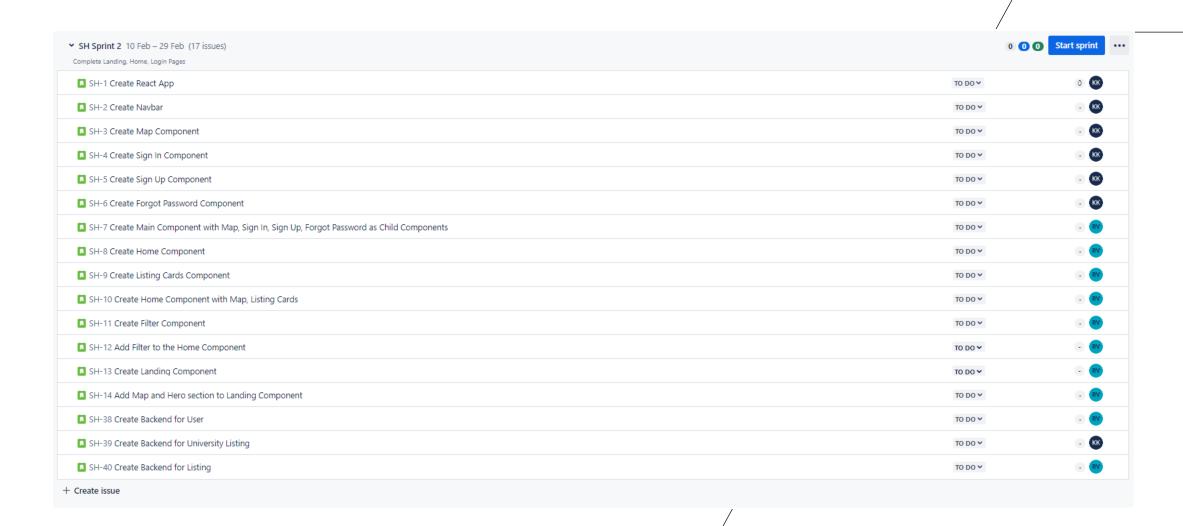
# **TEST CASES**

TestCaseId	Unit to Test	Assumptions	TestData	Steps to be Executed	Expected Results
TC01	Landing Page Button	The landing page is loaded correctly.	N/A	1. Open the landing page. ⟨br⟩2. Click on the login button.	Redirect to the login page.
TC02	Login Page	The login page is accessible.	Valid email and password.	1. Navigate to the login page. br>2. Enter valid email and password. br>3. Click on sign in.	Redirect to the home page with listings.
TC03	Login Validation	The login page requires email and password.	Invalid email format, Correct password.	1. Navigate to the login page. br>2. Enter invalid email format and correct password.  br>3. Click sign in.	Display error message for invalid email format.
TC04	Login Validation	The login page requires email and password.	Valid email, Incorrect password.	1. Navigate to the login page. br>2. Enter valid email and incorrect password. br>3. Click sign in.	Display error message for incorrect password.
TC05	Sign Up Navigation	The login page includes a sign-up option.	N/A	1. Navigate to the login page. br>2. Click on sign up link.	Redirect to the sign-up page.
TC06	Forgot Password	The login page includes a forgot password option.	Registered email.	1. Navigate to the login page. br>2. Click on forgot password link. br>3. Enter registered email.	Instructions for resetting password are sent to email.
TC07	Unregistered User	Only registered users can log in.	Unregistered email and any password.	1. Navigate to the login page. br>2. Enter unregistered email and any password. dr>3. Click sign in.	Display error message for unregistered user.
TC08	Logout Process	User is logged in.	N/A	1. Navigate to the home page. br>2. Click on logout button.	Redirect to the landing page.
TC09	Session Timeout	User session expires after inactivity.	N/A	1. Log in and reach the home page. < br>2. Remain inactive for the session timeout duration.	Automatically log out and redirect to the login page.
TC10	Responsive Design	The site is accessible on various devices.	N/A	1. Open the landing page on different devices (desktop, tablet, mobile).	The page renders correctly on all device types.

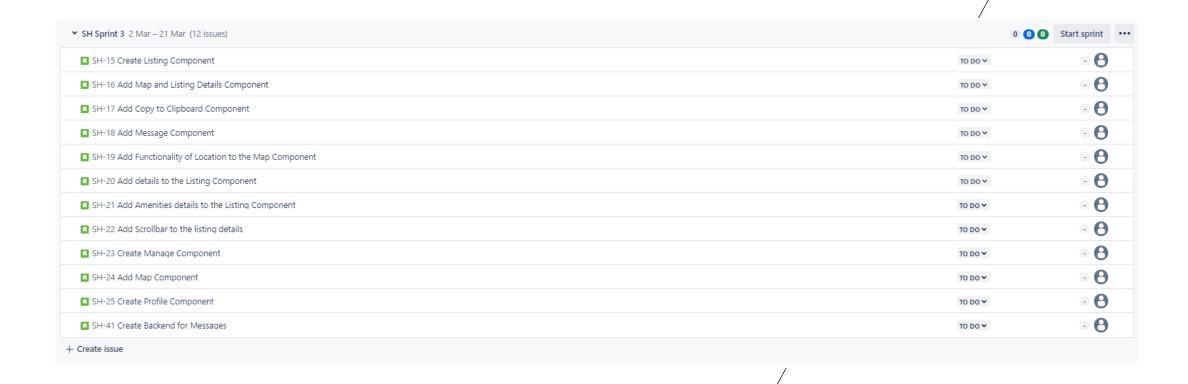


SPRINT PRODUCT BACKLOG

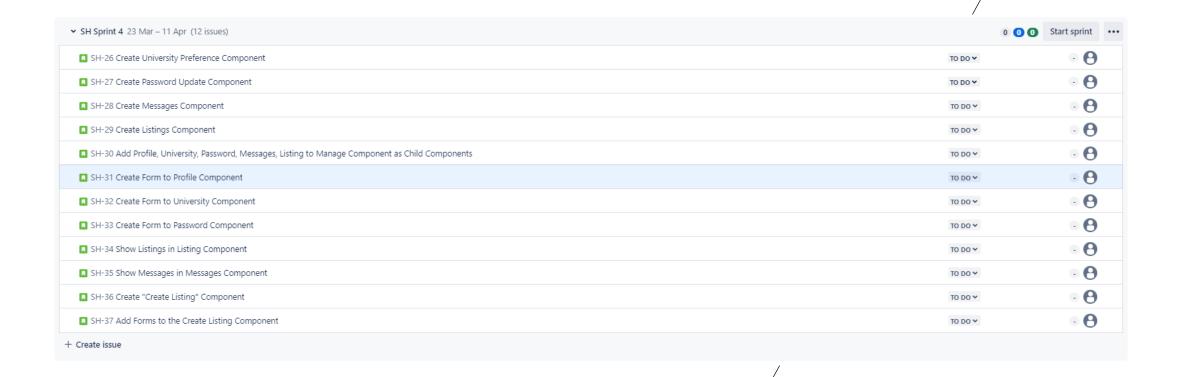
#### **SPRINT 2**



#### **SPRINT 3**



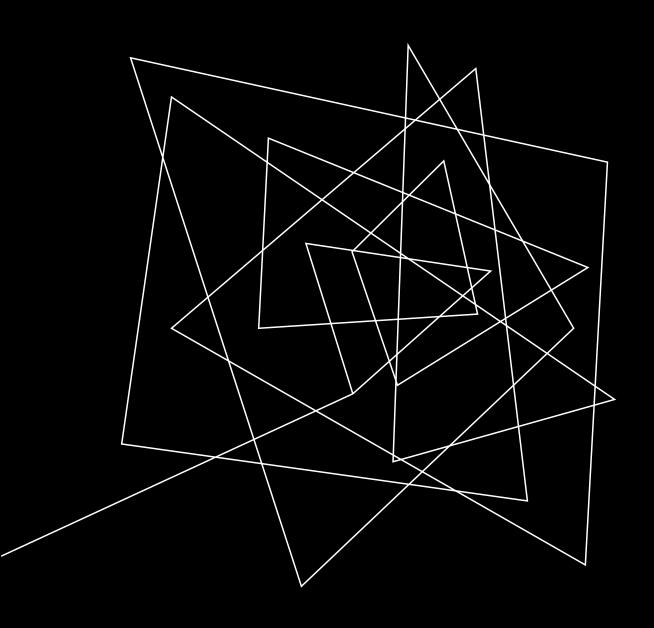
### **SPRINT 4**



### SPRINT UPCOMING USER STORIES

Backlog (14 issues)		14 0 0	Create sprint
SHK-2 As a user, I want to edit my listings to update any changes in price, availability, or details to keep potential renters informed.	TO DO 🗸		0
SHK-1 As a user, I want to use filters to sort listings by room type to quickly find accommodations that match my living situation preferences.	TO DO 🗸		0
SHK-18 As a user, I want to verify my student status with my educational email after signing up to ensure access to student-specific listings.	TO DO 🗸		0
SHK-7 As a user, I need a way to reset my password in case I forget it, ensuring I can regain access to my account without hassle.	TO DO 🗸		0
SHK-6 As a user, I want to communicate directly with potential roommates or landlords to ask questions or express interest in a listing.	TO DO 🗸		0
SHK-20 As a user, I want to filter listings based on the number of bedrooms to find accommodations that meet my space needs.	TO DO 🗸		0
SHK-19 As a user, I want to view the coordinates of a listing to understand its exact location and how it fits with my needs.	TO DO 🗸		0
SHK-5 As a user, I want to set and update my university search preference to receive listings relevant to my campus location.	TO DO 🗸		0
SHK-15 As a user, I want to report listings or users that violate platform policies to maintain a safe and respectful community.	TO DO 🗸		0
SHK-13 As a user, I want to remove my listings when they are no longer available to avoid receiving inquiries for occupied spaces.	TO DO 🗸		0
SHK-11 As a user, I want to change my password through my profile settings to maintain the security of my account.	TO DO 🗸		0
SHK-4 As a user, I want to create a listing with specific details such as address, price, and description to offer my space for rent.	TO DO 🗸		0
SHK-17 As a user, I want to filter listings by the number of bathrooms to ensure the accommodation meets my privacy and convenience needs.	TO DO 🗸		0
SHK-14 As a user, I want to manage my profile to keep my personal information up to date.	TO DO ❤		0

+ Create issue



## SPRINT 2 BACKLOG

### **SPRINT 2 BACKLOG STORIES**

Туре	Key	Summary	Assignee	Р	Status	Resolution	Created ↓	<b>□</b> ~
	SHK-16	As a user, I want to see listings of rooms, both shared and private, on the home page to find options that suit my preferences.	KK Kiran Kumar	^	DONE ~	Done	Feb 28, 2024	•••
	SHK-12	As a user, I want to see listings of rentals, including houses and apartments, to explore a variety of living arrangements.	KK Kiran Kumar	^	DONE ~	Done	Feb 28, 2024	
	SHK-10	As a user, I want to sign up for Student Hive using my personal email to start my accommodation search.	Raj Koushik Velamarthi	*	DONE ~	Done	Feb 28, 2024	
	SHK-9	As a user, I want to browse the home page to see a map showcasing the locations of available accommodations.	Raj Koushik Velamarthi	=	DONE ~	Done	Feb 28, 2024	
	SHK-8	As a user, I want to sign in to Student Hive using my personal email to access my account and view listings.	KK Kiran Kumar	^	DONE ~	Done	Feb 28, 2024	
	SHK-3	As a user, I want to adjust filters based on price to find accommodations within my budget.	Raj Koushik Velamarthi	=	DONE ~	Done	Feb 28, 2024	
<b>♣</b> Give	feedback	1-6 of 6     ₹2					<	1 >

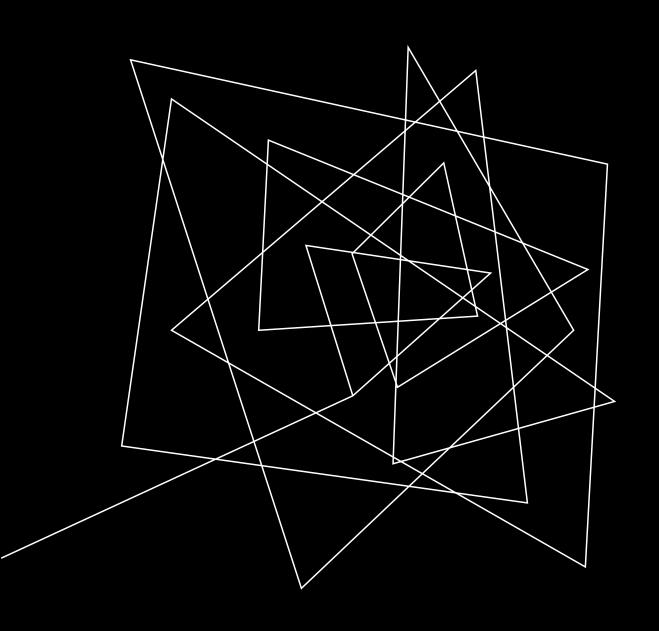
### **SPRINT 2 SPRINT SCHEDULE**

♣ Give feedback

Туре	Key	Summary	Assignee	Р	Status	Resolution	Created ↓	Sprint	Ш~
	Key • Sort A → Z	Create Backend for Listing	RV Raj Koushik Velamarthi	=	DONE V	Done	Feb 28, 2024	SH Sprint 2	•••
	SH-39	Create Backend for University Listing	KK Kiran Kumar	=	DONE ~	Done	Feb 28, 2024	SH Sprint 2	
	SH-38	Create Backend for User	RV Raj Koushik Velamarthi	=	DONE V	Done	Feb 28, 2024	SH Sprint 2	
	SH-14	Add Map and Hero section to Landing Component	RV Raj Koushik Velamarthi	=	DONE ~	Done	Feb 28, 2024	SH Sprint 2	
	SH-13	Create Landing Component	RV Raj Koushik Velamarthi	=	DONE V	Done	Feb 28, 2024	SH Sprint 2	
	SH-12	Add Filter to the Home Component	RV Raj Koushik Velamarthi	=	DONE V	Done	Feb 28, 2024	SH Sprint 2	
	SH-11	Create Filter Component	RV Raj Koushik Velamarthi	=	DONE ~	Done	Feb 28, 2024	SH Sprint 2	
	SH-10	Create Home Component with Map, Listing Cards	Raj Koushik Velamarthi	=	DONE V	Done	Feb 28, 2024	SH Sprint 2	
	SH-9	Create Listing Cards Component	Raj Koushik Velamarthi	=	DONE ~	Done	Feb 28, 2024	SH Sprint 2	
	SH-8	Create Home Component	Raj Koushik Velamarthi	=	DONE V	Done	Feb 28, 2024	SH Sprint 2	
	SH-7	Create Main Component with Map, Sign In, Sign Up, Forgot Password as Child Components	Raj Koushik Velamarthi	=	DONE	Done	Feb 28, 2024	SH Sprint 2	
	SH-6	Create Forgot Password Component	KK Kiran Kumar	=	DONE V	Done	Feb 28, 2024	SH Sprint 2	
	SH-5	Create Sign Up Component	KK Kiran Kumar	=	DONE V	Done	Feb 28, 2024	SH Sprint 2	
	SH-4	Create Sign In Component	KK Kiran Kumar	=	DONE	Done	Feb 28, 2024	SH Sprint 2	
	SH-3	Create Map Component	KK Kiran Kumar	=	DONE V	Done	Feb 28, 2024	SH Sprint 2	
	SH-2	Create Navbar	KK Kiran Kumar	=	DONE	Done	Feb 28, 2024	SH Sprint 2	
	SH-1	Create React App	KK Kiran Kumar	<b>~</b>	DONE	Done	Feb 28, 2024	SH Sprint 2	

1-17 of 17 ₹2

< 1 >



METRICS

### **CUMULATIVE FLOW DIAGRAM**

12:20 28 Feb

Projects / Student-Hive / Reports

12:02 28 Feb

12:10 28 Feb

#### Cumulative flow diagram

Time

12:30 28 Feb

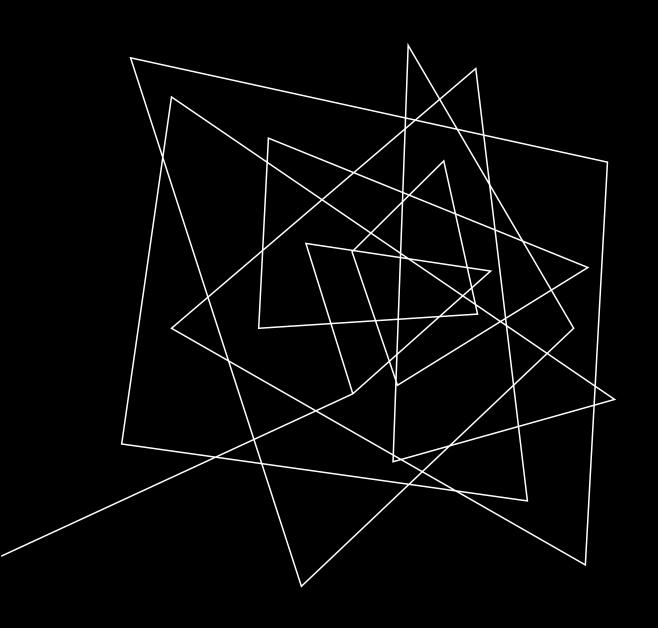
12:40 28 Feb

12:50 28 Feb

01:00 28 Feb

01:08 28 Feb

> How to read this report <



### RETROSPECTIVE

### WHAT WENT WELL

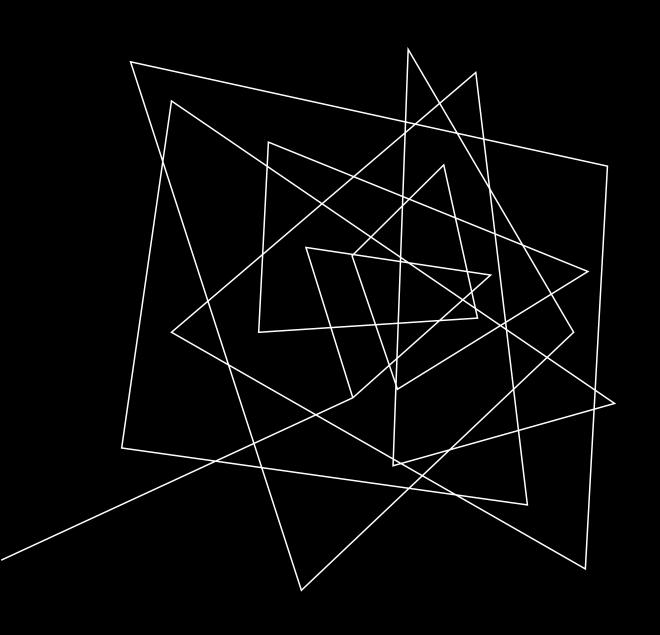
The product's aesthetic appeal is outstanding. It captivates with its sleek design, attention to detail, and overall visual allure.

#### WHAT NEEDS IMPROVEMENTS

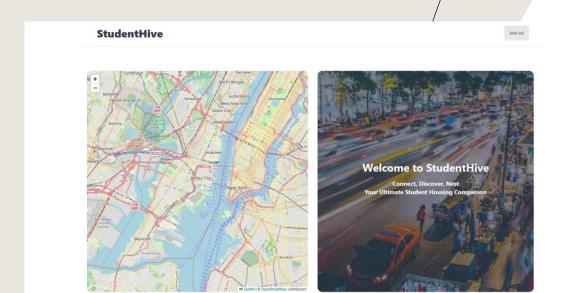
Improving clarity, frequency, and transparency in communication will foster greater cohesion and efficiency within the team.

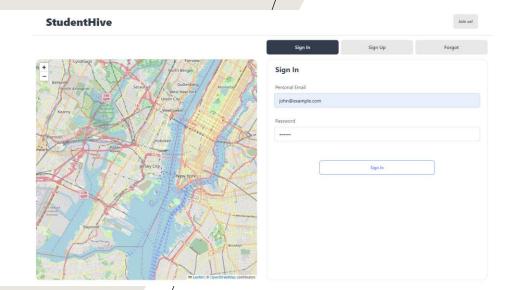
### **NEXT STEPS**

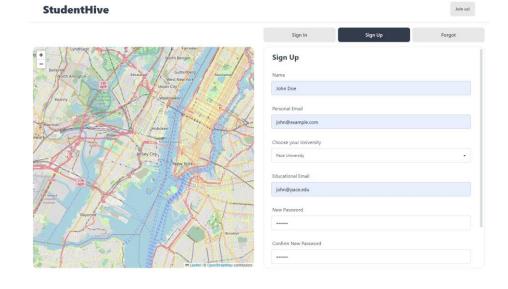
Increasing the frequency of meetings will enhance team communication and alignment, promoting smoother project execution and problem-solving.

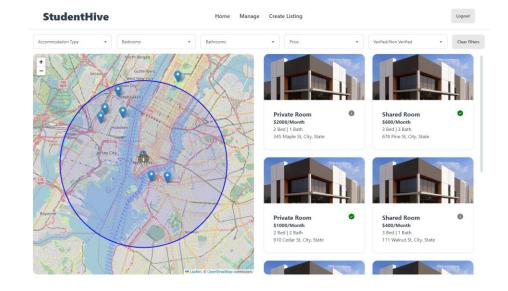


SPRINT 2 PROJECT DEMO



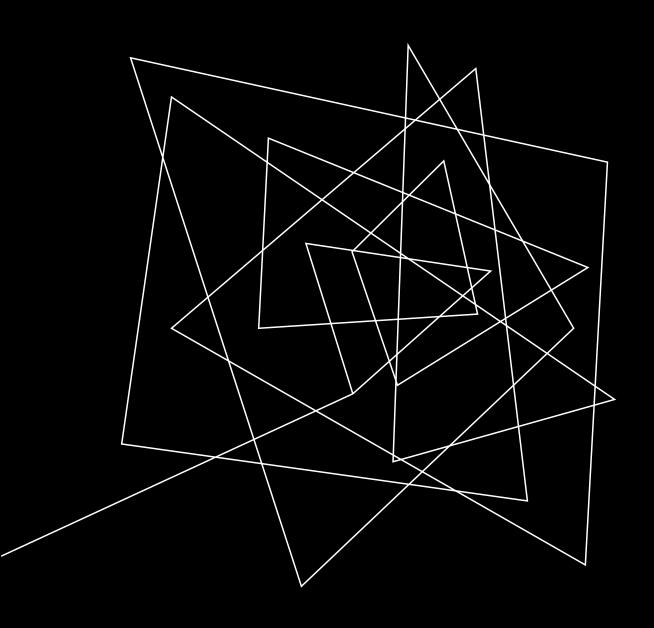






### WIKIPAGE LINK

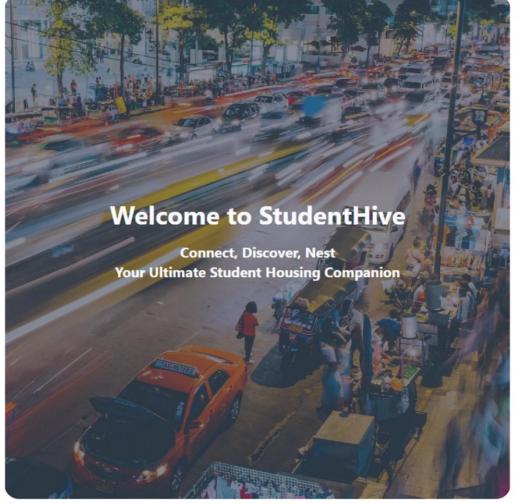
HTTPS://GITHUB.COM/RAJKOUSHIKV/STUDENTHIVE/WIKI/WIKIPAGE

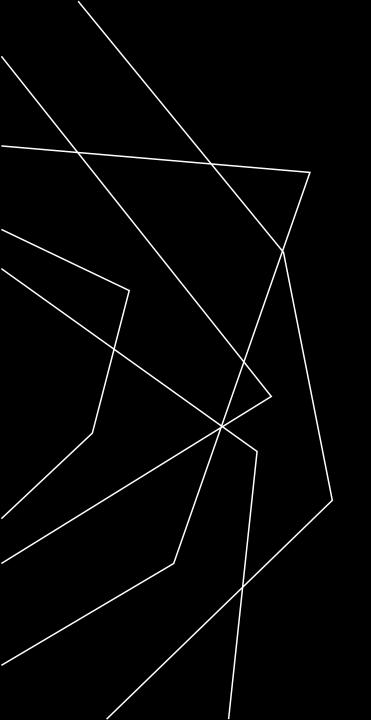


### LIVE APPLICATION DEMO

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