



**Global Distributed Software Development – AI5088 (WiSe24/25)**

**Master Team Project – Fall 2024**

**“Fulda Student Hub”**

# Milestone 1

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## **Executive Summary: Fulda Student Hub**

The **Fulda Student Hub** is an innovative platform designed to solve the growing accommodation challenges faced by students in Fulda. With an influx of new students expected, the platform exclusively focuses on student housing, streamlining the rental process and providing a secure, user-friendly experience. The **Fulda Student Hub** also provides helpful recommendations and tips, especially for international students unfamiliar with the local rental market.

This platform is designed to meet the unique needs of students by highlighting **active listings**, eliminating the frustration of encountering outdated properties. If a listing is inactive, students are provided with alternative suggestions based on their preferences, saving time and ensuring they always find relevant options.

## **Why Fund Fulda Student Hub?**

**Fulda Student Hub** addresses the pressing need for dedicated student accommodation solutions, especially considering the upcoming surge in student admissions. It features a **live auction bidding system** that allows students to place competitive bids on urgent rental listings, offering flexibility and transparency. Additionally, all listings are verified by active moderators, ensuring the platform remains free from scams and fraud, making it an attractive solution for both landlords and students. This project represents a scalable opportunity in a growing market, and funding it will help provide a much-needed service to the Fulda student community.

## **The Team Behind the Project**

The **Fulda Student Hub** is developed by a team of six students of MSc. **Global Software Development**. With expertise in **software engineering**, **web technologies**, and **project management**, we combine technical skills and managerial experience to deliver a high-quality solution. Our team has several years of industry experience, allowing us to build a secure, scalable, and user-friendly platform that addresses real-world challenges in student housing.

We are confident that **Fulda Student Hub** will become a vital resource for students in Fulda, transforming the rental experience and supporting students as they settle into their new academic lives.

## Personas and Use Cases

### Personas

#### Mia - The Renter (Student of Hochschule Fulda)

**Background:** Mia is a second-year student at Hochschule Fulda studying International Business. Originally from another city, she's on a budget and looking for a convenient, affordable, and safe place to stay close to campus.

**Goals:** Find affordable and furnished apartments within a short commute to campus. Easily filter and compare listings to quickly decide on the best options. Connect with landlords and arrange viewings that fit her study schedule.

**Challenges:** Limited budget and time to search due to her academic load. Needs clarity on rental terms, costs, and roommate arrangements if applicable.

**Values:** Transparent pricing, easy-to-navigate listings, and a reliable communication channel with landlords.

#### Mr. Schmidt - The Landlord/Seller

**Background:** Mr. Schmidt owns several rental properties near Hochschule Fulda. He's interested in renting to students who are generally reliable and respectful of rental terms.

**Goals:** Quickly post listings with all essential details to attract serious student renters. Find long-term renters who are responsible and respectful of property rules. Minimize time spent on repetitive inquiries by providing detailed listings.

**Challenges:** Handling multiple inquiries and managing rental arrangements while balancing his other commitments. Occasionally facing delays in rent payments from students.

**Values:** A platform that allows efficient ad posting, clear tenant communication, and tools to screen potential renters.

#### Sarah - The Admin/Moderator

**Background:** Sarah works as a digital administrator for Fulda Student Hub, ensuring smooth operations on the site and keeping content appropriate and relevant to students' needs.

**Goals:** Review and approve posts swiftly to keep the platform active and engaging. Ensure all listings meet the platform's guidelines and that the information provided is accurate. Assist with disputes, resolve complaints, and manage user feedback to improve the platform's reputation.

**Challenges:** Balancing prompt post approvals with quality control and accuracy. Managing disputes between landlords and renters while maintaining a neutral stance.

**Values:** Integrity of content, fair and transparent communication, and a secure, welcoming platform for users.

### **Anna - The Guest (Non-registered User)**

**Background:** Anna is a potential renter who recently moved to Fulda and is considering enrolling at Hochschule Fulda. She's exploring rental options and wants a general idea of pricing and availability.

**Goals:** View available listings without needing to register, to gain an idea of rental costs and types of accommodation. Save time by being able to browse quickly and easily without commitment.

**Challenges:** Limited access to contact landlords or save listings as a guest user. Unable to filter options based on personal preferences without full access.

**Values:** Ease of access to browse options without registration, and a user-friendly interface for general research.

These personas address the primary types of users for Fulda Student Hub, each with unique needs and goals, ensuring the platform provides value to students, landlords, admins, and prospective renters alike.

## **Use Cases**

### **1. Searching for a Property**

**Scenario:** Mia, the renter, is looking for a property that meets her requirements.

**Steps:**

1. Mia logs into the platform using her username and password.
2. She clicks on the "Search Properties" option on the main menu.
3. She enters her preferred criteria, including location near Hochschule Fulda or another specified area, a monthly budget cap that fits her finances, and additional requirements like furnished rooms, WiFi, heating, and laundry access.
4. Mia can further filter options by property type (studio, shared apartment, etc.) or lease duration.
5. The platform displays a list of properties that meet Mia's criteria.
6. Mia can save specific listings to her "Favorites" for easier comparison.
7. If there are too few results, Mia can modify her criteria, such as expanding the location radius or adjusting her rent limit.
8. Mia logs out after completing her search or leaves the results open for further browsing.

### **2. Viewing Property Details and Photos**

**Scenario:** Mia wants to know more about a property before scheduling a visit.

**Steps:**

1. Mia clicks on one of the saved or recent property listings from her search results.
2. The platform shows a gallery of high-quality photos, allowing her to view each room and property features like the kitchen, bathroom, and common areas.
3. Mia reads a comprehensive property description, which includes dimensions and layout information, a full list of amenities, such as furniture, internet, heating, and key details about the neighborhood, such as nearby stores or public transportation.
4. She reviews specific rental terms, including move-in availability, security deposit, and lease duration.
5. If previous renters have left reviews, Mia reads them to assess the landlord's reliability and the property condition.
6. Mia decides if she wants to proceed with contacting the landlord or saving the listing for later.

### **3. Contacting the Landlord for More Information or Scheduling a Viewing**

**Scenario:** Mia is interested in a property and wants to ask the landlord questions or arrange a viewing.

**Steps:**

1. Mia clicks on the "Contact Landlord" button within the property listing.
2. She drafts a message, including a brief introduction about herself as a student, any questions about lease flexibility, included amenities, or move-in conditions, and a request to schedule an in-person or virtual viewing.
3. Mia sends the message through the platform.
4. Once the landlord responds, Mia receives a notification.
5. Mia reviews the landlord's answers and confirms a convenient viewing time.
6. She adds the viewing appointment to her calendar.
7. Mia waits for a reminder or any further details from the landlord closer to the viewing date.

### **4. Applying for Property**

**Scenario:** After viewing the property, Mia decides to apply.

**Steps:**

1. Mia selects "Apply for this Property" from the listing page.
2. She provides details, including her name, student ID, contact information, and current address.
3. If required, Mia lists any rental history and references.
4. She uploads relevant documents, such as proof of student status, identification, and financial proof like bank statements or guarantor documents.
5. Mia reviews all information, ensuring accuracy, and submits her application.
6. The platform sends a confirmation that her application was successfully submitted.
7. Mia waits for a notification of acceptance, rejection, or a request for additional information from the landlord.

## **5. Signing the Lease Agreement Digitally**

**Scenario:** Mia is approved for the property and needs to sign the lease agreement.

**Steps:**

1. Mia is notified that her application has been accepted, and a lease agreement is available.
2. She opens the digital lease agreement via a secure link provided by the platform.
3. Mia carefully reads through terms including rent, payment dates, duration, and property rules.
4. If she has questions, she uses the platform's messaging tool to contact the landlord for clarification.
5. Once satisfied, Mia digitally signs the lease using an integrated e-signature tool.
6. A digital copy of the signed lease is emailed to Mia for her records.
7. If there's a checklist to complete before move-in, Mia reviews it as a final step.

## **6. Leaving a Review for the Property**

**Scenario:** After renting the property, Mia wants to share her experience.

**Steps:**

1. Mia logs in, navigates to her "Past Rentals," and selects the property to review.
2. She assigns a star rating based on overall satisfaction.
3. Mia writes a detailed review, covering topics such as landlord communication, property condition, neighborhood, and any issues she encountered.
4. She submits her review, which is visible to future prospective renters.
5. The platform sends Mia a confirmation, thanking her for her feedback.

## **7. Creating a Property Listing**

**Scenario:** Mr. Schmidt, the landlord, wants to list a property for rent.

**Steps:**

1. Mr. Schmidt logs into his landlord account.
2. He clicks on "Create New Listing."
3. Mr. Schmidt fills out all required fields, including the exact location or approximate area, monthly rent and any additional costs, a detailed description highlighting property features, and a selection of available amenities like parking, internet, heating, and furniture.
4. He uploads high-quality photos showcasing the property's rooms and features.
5. Mr. Schmidt reviews all listing information for accuracy and submits it for publication.
6. The platform confirms that the listing is live, available for tenants to view.

## **8. Accessing and Editing Property Listings**

**Scenario:** Mr. Schmidt wants to update an existing listing.

**Steps:**

1. Mr. Schmidt logs into his account.
2. He accesses the “My Listings” section to view his active properties.
3. Mr. Schmidt clicks on the specific property he wants to update.
4. He edits details such as rental price, availability, or updates new photos.
5. Once edits are complete, Mr. Schmidt saves the updated listing.
6. The platform confirms the listing is updated and live for tenant viewing.

## **9. Responding to Tenant Inquiries**

**Scenario:** Mr. Schmidt receives an inquiry from a potential tenant.

**Steps:**

1. Mr. Schmidt receives a message notification from an interested tenant.
2. He reads the tenant’s message and considers their questions.
3. Mr. Schmidt drafts a response, answering questions and, if applicable, proposing viewing times.
4. He sends the message through the platform.
5. If the tenant is interested, Mr. Schmidt schedules a viewing and adds it to his calendar.
6. Both Mr. Schmidt and the tenant receive a reminder for the scheduled viewing.

## **Use Case 10. Filtering Applications to Find Suitable Tenants**

**Scenario:** A property owner receives numerous applications for a rental property and needs to find the most suitable candidates.

**Steps:**

1. The owner logs into the platform and navigates to the “Applications Dashboard” for the listed property.
2. They apply filters such as “Student Status” and “Budget” to narrow down applications to those meeting their criteria.
3. The platform displays a refined list of applicants based on the chosen filters.
4. The owner reviews each applicant’s profile, documents, and rental history.
5. They use the messaging feature to contact selected applicants for additional details or to schedule a viewing.
6. After selecting suitable candidates, the owner proceeds with scheduling viewings for the top applicants.

## **Use Case 11. Reviewing and Approving Maintenance Requests**

**Scenario:** A property owner receives a maintenance request from a tenant for a broken heater and needs to review and address it.

### **Steps:**

1. The owner logs into their dashboard and navigates to the “Maintenance Requests” section.
2. They see a new request labeled “Broken Heater,” along with attached photos and a detailed description.
3. The owner reviews the request details and decides whether they can handle it themselves or if a professional is required.
4. They update the request’s status to “In Progress” and notify the tenant through the platform.
5. After scheduling and completing the repair, the owner updates the request status to “Resolved,” and both parties receive a record of the maintenance activity.

## **Use Case 12. Monitoring Listings for Inappropriate Content**

**Scenario:** A moderator reviews new listings to ensure that all posted content is appropriate and accurate.

### **Steps:**

1. The moderator logs into their account and goes to the “Listings Monitoring” page.
2. They review flagged listings, focusing on descriptions, images, and overall accuracy.
3. Upon finding a listing with low-quality images or potential inaccuracies, the moderator flags the listing for review.
4. The moderator contacts the listing owner to request specific changes to improve quality.
5. For any listing with inappropriate content, the moderator reports it to the admin team for further action.
6. After all flagged listings are reviewed, the moderator finalizes approvals for those meeting platform guidelines.

## **Use Case 13. Blocking Suspicious Users**

**Scenario:** A moderator identifies a user exhibiting suspicious behavior, such as sending spam messages to multiple users.

### **Steps:**

1. The moderator accesses the “Suspicious Activity” dashboard and reviews a list of flagged users.
2. They identify a user sending multiple unsolicited messages, which the system has flagged as potential spam.
3. The moderator reports the user to the admin team, detailing their activity.
4. The admin team reviews the report and decides to temporarily block the user until further investigation.
5. The moderator monitors the user’s account status to ensure platform compliance and minimize abuse.

## **Use Case 14. Generating Monthly Site Analytics Reports**

**Scenario:** An admin generates monthly reports on platform usage to monitor growth and identify improvement areas.

### **Steps:**

1. The admin logs into their dashboard and selects “Analytics Reports.”
2. They configure report parameters, selecting metrics like active users, new listings, and total applications submitted.
3. The time frame is set to the previous month, and the admin selects “Generate Report.”
4. Once generated, the admin reviews the report’s key performance indicators, noting user engagement trends.
5. The report is saved as a PDF and shared with the team for analysis and planning.
6. Based on insights from the report, the admin proposes possible updates or promotional efforts to enhance user engagement.

## **Use Case 15. Encouraging Registration with Full Access Prompts**

**Scenario:** A non-registered user browsing properties receives prompts to register for full access to platform features.

### **Steps:**

1. The guest opens the platform homepage and begins browsing available listings.
2. When they click on a listing, basic details like rent, location, and preview photos are visible.
3. On attempting to access additional details, a pop-up message encourages them to register for full access to messaging, favorites, and contact features.
4. Interested in the added features, the guest creates an account.
5. Once registered, they gain access to full listing details, messaging features, and the ability to save listings.

## **Use Case 16: Scheduling Platform Maintenance and Notifications**

**Scenario:** An admin schedules regular platform maintenance and needs to notify users to minimize inconvenience.

### **Steps:**

1. The admin opens the “Maintenance Schedule” tool on their dashboard.
2. They select a date and time for maintenance, aiming for low-traffic hours to reduce user impact.
3. The admin creates an in-app announcement to notify users of the upcoming maintenance, including expected downtime details.
4. They set the announcement to display prominently on the platform starting 24 hours before the scheduled maintenance.
5. After maintenance is completed, the admin removes the announcement and monitors the platform for any post-maintenance issues reported by users.

## **Use Case 17. Tracking Expired Listings for Removal**

**Scenario:** A moderator tracks expired listings to ensure they are removed from the platform's public view.

### **Steps:**

1. The moderator navigates to the “Expired Listings” section in their dashboard.
2. They see a list of listings that have reached their expiry date without updates from the owners.
3. The moderator reviews each expired listing and contacts the owner about renewing or updating the listing if needed.
4. If there’s no response from the owner, the moderator removes the listing from the active page to ensure the platform remains current.
5. The moderator documents any removed listings in case owners inquire about the status change later.

## **Functional Requirements**

### **1. User Registration for Renters**

Renters (students of Hochschule Fulda) can create an account using their university credentials for easy access to the platform. This simplifies the registration process and ensures secure user identification.

### **2. User Registration for Landlords**

Landlords can register by submitting valid identification, enabling them to post property listings. This ensures that landlords are verified and can be trusted by renters.

### **3. Admin and Moderator Verification Access**

Admins and moderators have the ability to verify user registrations and ensure that listings meet platform standards. This helps maintain the integrity of the platform by filtering unverified or inappropriate content.

### **4. Guest Access for Property Browsing**

Non-registered users (guests) can browse available property listings without the need to create an account. This allows potential renters to explore options before committing to registration.

### **5. Property Listing Creation**

Landlords can create detailed property listings by providing essential information, such as location, rent price, and availability. This function enables landlords to showcase their properties effectively.

### **6. Property Listing Editing and Deletion**

Landlords can modify or remove their listings as needed. This gives landlords flexibility in managing their property details and ensuring that outdated information is promptly updated.

### **7. Property Photo and Detail Upload**

Landlords can upload photos and detailed descriptions for each property, including room features, amenities, and neighborhood details. This enhances the attractiveness of the listing and provides a clear picture for potential renters.

### **8. Recommendation System for Listings**

The platform uses a recommendation algorithm to suggest properties to renters based on their preferences, previous search history, and the freshness of listings. This helps renters discover suitable options more quickly.

### **9. Search Functionality for Property Listings**

Renters can search properties based on various criteria such as location, rent, and availability. This streamlines the process of finding suitable listings for renters.

### **10. Filtering Options for Search Results**

Renters can apply multiple filters to narrow down search results based on specific

preferences, such as pet-friendly, furnished, or proximity to public transportation. This helps renters find more personalized matches.

## **11. In-App Messaging System for Communication**

Renters and landlords can securely message each other within the platform to ask questions, clarify details, and schedule property viewings. This ensures secure, documented communication.

## **12. Digital Application Submission**

Renters can submit rental applications digitally through the platform, simplifying the process and reducing the need for paper documentation. Renters can also track the status of their application in real-time.

## **13. Digital Lease Signing**

Renters can review and digitally sign lease agreements on the platform. This feature eliminates the need for physical signatures, speeding up the rental process and maintaining security.

## **14. Review and Rating Submission**

Renters can leave reviews and ratings for landlords and properties, helping future renters make more informed decisions. This function promotes transparency and trust in the rental process.

## **15. Content Moderation by Admins**

Admins can edit or remove inappropriate listings, comments, or user-generated content to ensure the platform remains respectful and professional. This helps maintain a positive environment for all users.

## **16. Dispute Resolution Tools for Admins**

Admins have tools to handle disputes between landlords and renters, review complaints, and manage conflicts fairly. This ensures the platform runs smoothly and issues are addressed promptly.

## **17. Property Availability Tracking**

Landlords can mark properties as "available" or "unavailable" and update their status in real-time. Renters are notified of any changes to availability, reducing the risk of wasted time on outdated listings.

## **18. Lease Renewal Notifications**

Renters and landlords receive automatic notifications when a lease is approaching its renewal date. This feature ensures both parties are informed and can discuss terms well in advance.

## **19. Multi-Language Support**

The platform supports multiple languages to accommodate international students and renters, improving accessibility and user experience. This expands the platform's usability to a wider audience.

## **20. Push Notifications for Important Updates**

Renters and landlords receive push notifications for critical updates such as new messages, lease reminders, or application status changes. This keeps users informed in real-time.

## **21. Customizable Rental Preferences for Renters**

Renters can set and save their preferred property filters and search criteria. This allows them to receive tailored results and notifications that match their specific needs.

## **22. Emergency Contact for Renters**

Renters can provide emergency contact information in case of urgent issues related to the property, ensuring prompt communication between renters, landlords, and emergency services.

## **23. Document Upload for Rental Applications**

Renters can upload required documents, such as identification or proof of income, directly through the platform. This streamlines the application process and ensures that landlords have all the necessary information.

## **24. Viewing History for Renters**

Renters can access a history of previously viewed properties and compare them. This helps renters stay organized and decide on the best options.

## **25. Property Description Translation**

Automatically translates property descriptions into the user's preferred language, ensuring clarity for non-native speakers. This feature is particularly useful for international students and renters.

## **26. Privacy Settings for Users**

Renters and landlords can manage their privacy settings, including who can view their profiles and contact them. This allows for control over personal information and communication preferences.

## **27. Bulk Property Listing Management for Landlords**

Landlord with multiple properties can manage all their listings in bulk, making it easier to update or remove several properties at once. This saves time and improves efficiency.

## **28. Notification System for Renters and Landlords**

Both renters and landlords receive push notifications and email alerts about important events, such as new listings matching their criteria or when a lease is due for renewal.

## **29. User Activity Tracking for Admins**

Admins can track user activity, including login history, messages, and listings viewed. This helps identify potential issues, monitor platform activity, and improve security.

## **30. Advanced Filtering for Renters**

Renters can filter listings by specific features such as pet policies, type of heating system, or access to parking. This ensures renters find the property that best suits their needs.

### **31. Auction Listing Creation by Landlords**

Landlords can create auction listings for properties they need to rent urgently. These auctions will allow students to bid on the property, setting a dynamic market-driven rental price.

### **32. Real-Time Bidding for Renters**

Renters can place real-time bids on properties listed in the auction. This feature allows students to actively compete for properties that have urgent availability.

### **33. Live Auction Updates**

Renters can view live updates on the current highest bid and the remaining time for the auction. This ensures transparency and allows students to adjust their bids accordingly.

### **34. Bidding Notifications for Renters**

Renters receive push notifications if their bid is outbid or if the auction is nearing its end. This keeps students engaged and informed throughout the auction process.

## **Non-functional Requirements**

1. Application shall be developed, tested and deployed using tools and servers approved by Class
2. CTO and as agreed in Milestone 0. Application delivery shall be from chosen cloud server
3. Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of two major browsers
4. All or selected application functions must render well on mobile devices
5. Data shall be stored in the database on the team's deployment cloud server.
6. Full resolution free media shall be downloadable directly, and full resolution media for selling shall be obtained after contacting the seller/owner
7. No more than 50 concurrent users shall be accessing the application at any time
8. Privacy of users shall be protected, and all privacy policies will be appropriately communicated to the users.
9. The language used shall be English (no localization needed)
10. Application shall be very easy to use and intuitive
11. Application should follow established architecture patterns
12. Application code and its repository shall be easy to inspect and maintain
13. Google analytics shall be used (optional for Fulda teams)
14. No e-mail clients shall be allowed.
15. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated in UI.
16. Site security: basic best practices shall be applied (as covered in the class) for main data items
17. Application shall be media rich (images, video etc.). Media formats shall be standard as used in the market today
18. Modern SE processes and practices shall be used as specified in the class, including
19. collaborative and continuous SW development
20. For code development and management, as well as documentation like formal milestones
21. required in the class, each team shall use their own GitHub to be set-up by class instructors and started by each team during Milestone 0
22. The application UI (WWW and mobile) shall prominently display the following exact text on all pages "Fulda University of Applied Sciences Software Engineering Project, Fall 2024 For
23. Demonstration Only" at the top of the WWW page. (Important to not confuse this with a real application).

## Competitive Analysis

	Fulda Student Hub (Our Application)	WG-Gesucht.de	Studenten-WG.de	ImmoScout24.de	HousingAnywhere.com
Student focused listings	✓	✗	✓	✗	✓
Direct communication with Landlords	✓	✓	✓	✓	✓
Lease agreement and management functionalities	✓	✗	✗	✓	✗
Verified Listings	✓	✗	✗	✓	✓
Region-Specific Support	✓	✗	✗	✗	✗

## List of main data items and entities

### Data Entities

S.No.	Entities	Description
1	Owner	The individual or entity managing the property, responsible for creating listings, approving tenants, and handling maintenance requests.
2	Applicant	A potential tenant who expresses interest in renting a property by submitting an application to the owner for consideration. As per our use case, they would be limited to students at Hochschule Fulda.
3	Property	A real estate asset available for rent, including details like address, rent, and amenities. Properties are listed by owners and can be viewed by potential tenants.
4	Listing	An online advertisement for a property, providing information and images to attract student renters. Listings showcase available properties and key details. Interested applicants can apply to a listing.
5	Accommodation Request	Applicants can create their own Requests for searching accommodation which the Owners would be able to view. The applicants can include information and pictures about themselves and their requirements.
6	Lease	A formal rental agreement between the property owner and the applicant, detailing rental terms such as rent, duration, and obligations. Our platform would facilitate the process with a feature to sign a lease digitally.
7	Maintenance Request	A tenant's request for repairs or maintenance to address issues in the rented property, submitted to the owner.
8	Dashboard	A personalized interface for users (owners, applicants, or administrators) displaying key information such as property listings, applications, leases, and requests.

10	Trust Score	A score assigned to owners based on a number of factors including response time to a query, handling of maintenance requests and being reported by other users.
11	Reported	A status indicating that a listing or owner has been flagged for review due to possible issues or violations, requiring further investigation by an administrator.
12	Bidding	A competitive process where potential tenants place offers on a property, with the highest or most favorable bid often winning the rental opportunity.
13	Chat	A messaging feature allowing direct communication between tenants and owners, facilitating questions, negotiations, and updates related to property rentals.
14	Portfolio	A collection of information and documents provided by a rental applicant, such as personal details, proof of financial means, and references, to demonstrate suitability for a property.
15	Verification	The process of validating an applicant's or property owner's information and credentials, ensuring authenticity and trustworthiness for secure rental transactions. Since applicants are limited to students their email addresses can be used for this.
16	Recommendation System	The algorithm to rank the order of the listings a user would see. It can be done on the basis of the following factors: trust score of the owner, overlapping between the user's searching criteria and the listing, and how old the listing is.
17	Admin	A high-level user with full control over the application, responsible for managing users, properties, reported content, and overall system settings to ensure smooth operation and compliance.
18	Moderator	A user with permissions to review and manage reported content, handle user disputes, and assist with maintaining community standards, but with limited access compared to an Admin.
19	Guest	An unregistered or limited-access user who can browse property listings but cannot interact fully with the system (e.g., no ability to apply for properties, chat, or submit requests).

## **Users and Privileges**

S.No.	User Type	Privileges
1	Applicant	<ol style="list-style-type: none"><li>1. Create a User profile and upload photos and documents</li><li>2. Search and filter through the listings</li><li>3. Submit rental applications</li><li>4. Message the author of a listing</li><li>5. Review and sign a lease agreements</li><li>6. Submit and track a maintenance request</li><li>7. Add Favorites for listings</li><li>8. Create and manage Accommodation Requests</li></ol>
2	Owner	<ol style="list-style-type: none"><li>1. Create, edit and delete their posted listings</li><li>2. Search and filter applications</li><li>3. Access a dashboard with details of all the properties they manage</li><li>4. Message the interested applicants</li><li>5. Track and sign a lease agreements</li><li>6. Review a maintenance request</li></ol>
3	Admin	<ol style="list-style-type: none"><li>1. Able to manage and block users</li><li>2. Assist users with account recovery</li><li>3. Edit and Remove listings</li><li>4. Manage Moderators</li><li>5. Schedule application maintenance</li><li>6. Monitor site analytics and generate monthly/annual reports</li><li>7. Configure system settings</li><li>8. Manage in-app announcements and policy updates</li></ol>
4	Moderator	<ol style="list-style-type: none"><li>1. Monitor listing description and images for inappropriate or inaccurate content</li></ol>

		<ul style="list-style-type: none"> <li>2. Able to report users and listings to the Admin</li> <li>3. Verifying listings through preliminary checks for inaccurate images or data</li> <li>4. Monitor expired listings</li> <li>5. Track suspicious activity</li> </ul>
5	Guest	<ul style="list-style-type: none"> <li>1. Browse available properties with basic details and photos.</li> <li>2. Search and Filter Properties</li> <li>3. Access detailed property information, amenities, and availability.</li> <li>4. Receive prompts encouraging registration for full feature access.</li> </ul>

## High-level system architecture and technologies used

**Hosting:** Amazon Web Services

**Back-end Framework:** Node.Js

**Back-end Language:** Javascript

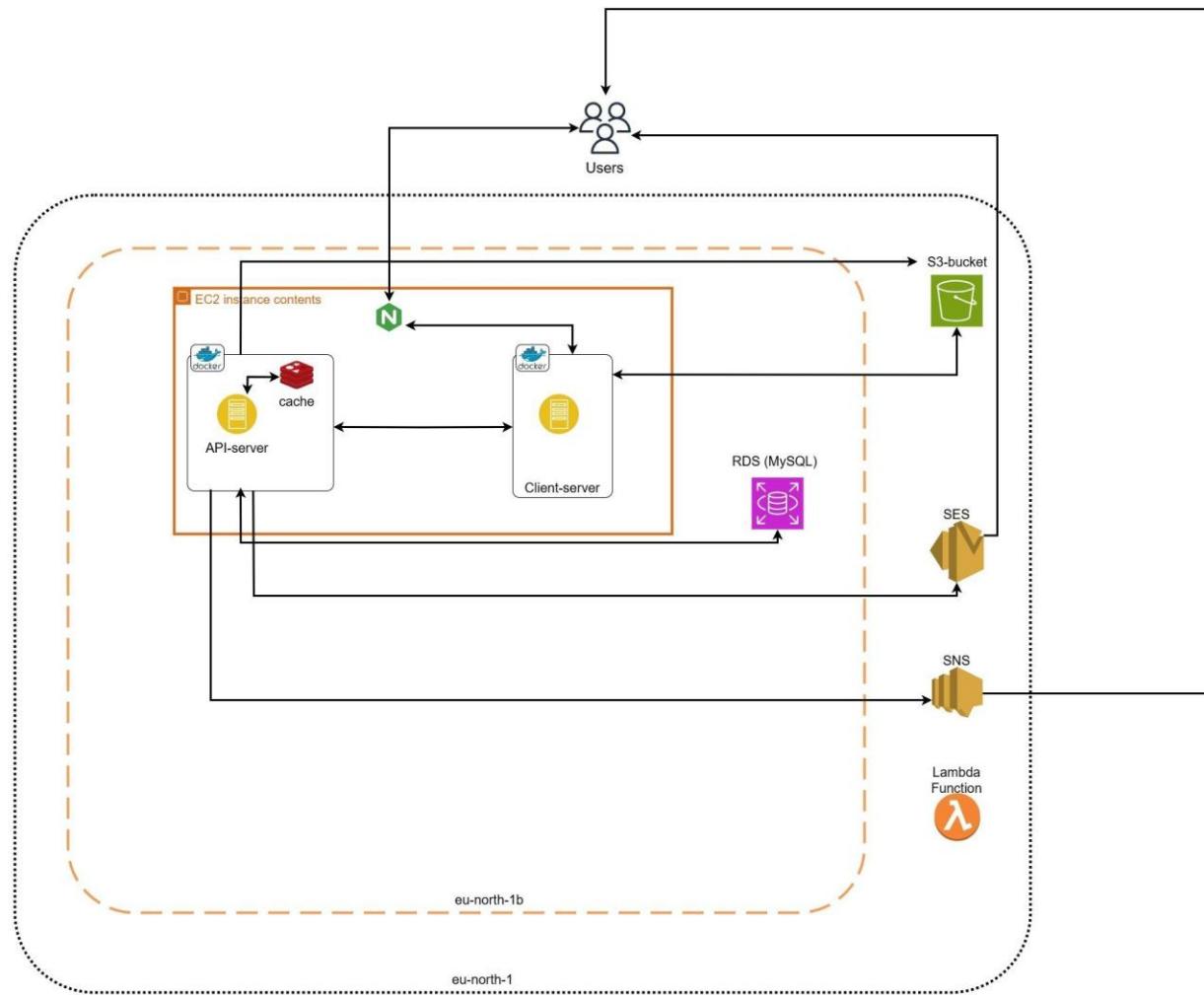
**Front-end Library:** React 18

**Front-end Language:** Javascript, HTML5, CSS3, Bootstrap

**Code Editor:** Visual Studio Code

**Target Web browsers:** Google Chrome, Mozilla Firefox,

**Database:** MySQL



## Team Members and roles

Member Name	Email	Role
Huzaifa Khatri	Huzaifa.khatri@informatik.hs-fulda.de	Team Lead & Backend Affinity
Shafi Shaik	Shafi.shaik@informatik.hs-fulda.de	Github Master
Muhammad Hassan	Muhammad.hassan@informatik.hs-fulda.de	Backend Lead
Divyansh Dahiya	Divyansh.dahiya@informatik.hs-fulda.de	Backend Affinity
Devansh Negi	Devansh.negi@informatik.hs-fulda.de	Frontend Affinity
Aniq Ahmed	Aniq.ahmed@informatik.hs-fulda.de	Frontend Lead

## Checklist

Tasks	Status (Done / On Track / Issue)
Team found a time slot to meet outside of the class	Done
GitHub master chosen	Done
Team decided and agreed together on using the listed SW tools and deployment server	Done
Team ready and able to use the chosen back and front end frameworks and those who need to learn are working on learning and practicing	Done
Team lead ensured that all team members read the final M1 and agree/understand it before submission	Done
GitHub organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.)	Done