1 Project Title

EaseLease

Find Your Place, Name Your Price

2 Project Summary

EaseLease is a transformative online subletting platform created by UIUC students to address the unique housing challenges of university graduate programs. It aims to simplify the process of finding and managing short-term leases, thereby filling a void in the traditional rental market.
Landlords have access to Property Listing, Rental Management, Financial Reporting, Bidding System, and a Rewards Mechanism. For tenants, the platform provides Property Search and Filters, an Application Process, a Roommate Matching System, and the ability to Place a Bid. Collectively, these features are designed to facilitate a more efficient and user-friendly leasing process, ensuring that both landlords and tenants can navigate the rental landscape with confidence and ease.

3 Brief Description

As students of UIUC, we have discovered an interesting phenomenon in the duration of the university's graduate programs: many of them last for about one and a half years, and it is difficult for students to find apartment leases for the last 0.5 years of their programs. Usually, students would look for sublease options from social media platforms like Facebook or Reddit due to the unavailability of half-year leases. Nevertheless, the downside of seeking help on social media is obvious, as it is extremely difficult and cumbersome to gather and aggregate all the information. Therefore, we introduce **EaseLease**, an online subletting platform that allows students to find appropriate sublet apartments and connect with possible sublessees. Our platform will also allow sublessees to post sublease listings and analyze their revenues visually for the benefit of both parties.

4 Creative Component

4.1 Landlord Interface

1) Property Management Tools: Provide landlords with tools to list their properties, manage rental applications, and track occupancy status. Features could include photo uploads, property descriptions, floor plans, and pricing options.
2) Financial Reporting and Analytics: Offer comprehensive financial reporting tools for landlords to track income, expenses, and overall profitability from their rental properties. Include capabilities for generating rent reports, visualizing earnings over time, and comparing performance against market trends.

4.2 Tenant Interface

1) Roommate Matching System: As previously discussed, incorporate a roommate finding

feature that allows tenants to post profiles, search for potential roommates based on lifestyle preferences, and communicate securely within the platform.
2) Place a Bid: On the property page, tenants have the option to place a bid by entering an amount. The interface should include guidance on the bidding process, minimum increment amounts, and any maximum bid limits.

5 Usefulness

5.1 For Landlords

Basic Functions:
1) Property Listing: Landlords can list their properties, providing detailed descriptions, photos, and available amenities, similar to Airbnb.
2) Rental Management: Track applications, manage leases, and communicate with potential and current tenants.
3) Financial Reporting: Access to financial analytics and reporting tools to monitor income, expenses, and occupancy rates.
Complex Features:
1) Bidding System: A unique feature where landlords can receive competitive offers from potential tenants, maximizing their rental income potential.
2) Rewards Mechanism: Landlords earn rewards for maintaining high standards of accommodation, receiving positive reviews, or participating in eco-friendly initiatives.

5.2 For Tenants

Basic Functions:
1) Property Search and Filters: Tenants can search for properties using various criteria, including location, price, and specific amenities.
2) Application Process: Streamlined application submission, including background and credit checks.
Complex Features:
1) Rewards Mechanism: Tenants receive rewards for timely rent payments, maintaining the property, and other positive behaviors.
2) Bidding for Rentals: Tenants can bid on properties, giving them the chance to secure rentals that are in high demand or negotiate better terms.

5.3 Similarity & Difference

Similarity:
1) Listing and Search Functionality: EaseLease, like Airbnb and traditional rental websites, offers a platform for landlords to list properties and for tenants to search for housing using various filters, such as location and price.
Difference:
1) Bidding System: EaseLease introduces a bidding system for tenants, a feature not commonly found on Airbnb or traditional rental websites, allowing for flexible lease term negotiations and potential cost savings.

2) Rewards Mechanism: Unique to EaseLease, both landlords and tenants can earn rewards for positive behaviors, such as timely payments and property maintenance, encouraging a higher standard of accommodation and reliability within the community.

6 Data Source (Realness)

We used listing, calendar, and review data from Airbnb (http://insideairbnb.com/get-the-data/) as our starting point because Airbnb has similar functionality to us and it provides a lot of open-sourced data. Specifically, we chose the data from Chicago due to its geographical proximity to us. The dataset consists of 3 tables, all of which are in .csv format. The cardinality and degree of each table is shown below:

Table Name	Cardinality	Degree
listing	8949	76
calendar	1048575	7
review	418573	6

These three tables collectively capture the location, description, price, room type, reviews, etc. of each sublease listing.

7 Detailed Functionality

7.1 For Landlords

1) Property Listing: The house owner can **create** their own property records. Each record should include the location, sqft, house type/floor plan, availability, price, and other information.
2) Rental Management: Landlords could **update** or **delete** the rental information and check the status of each property through their personal profile pages.
3) Financial Reporting: Landlords could generate financial reports by **selecting** the time range and property types.
4) Bidding: If interested in bidding, landlords could **set** a minimum price as a starting point for subleasing auctions on their properties when creating their rental records.
5) Rewards Mechanism: If the landlord keeps getting high scores or positive reviews, the platform would automatically assign a reward to the landlord by **trigger**.

7.2 For Tenants

1) Property Search and Filters: Tenants can **filter** the rental listing by selecting different criteria on the listing interface.
2) Application Process: Tenants can **check** the process of their applications, our platform would **update** the process on tenants' profiles.
3) Rewards Mechanism: Check if the tenants reach a high review score, our platform will provide a discount for the next rent by **trigger**.
4) Bidding for Rentals: Tenants could participate in bidding by **updating** the price they

would like to pay for the specific rent through the listing interface.

8 Low-Fidelity UI Mockup

Details can be found in UI_Mockup.pdf in the doc folder.

9 Project work distribution

9.1 Individual Responsibilities

Sizheng: Backend Developer (Landlord Functionalities):
1) Develop the backend logic for property listing creation, updates, and deletion.
2) Implement the auction system's backend where landlords can set starting prices and accept bids.
3) Integrate financial reporting tools, allowing landlords to generate and view financial reports.

Chenyu: Backend Developer (Tenant Functionalities):
1) Build the backend system for the tenant application process, including submission, updates, and status tracking.
2) Handle the rewards mechanism for tenants, triggering discounts and incentives based on tenant behavior.
3) Design the data models for tenant profiles and their interaction with the property search and bidding features.

Chenzhao: Frontend Developer (Landlord Interface):
1) Create the landlord interface for property management, including listing properties and managing applications.
2) Design the frontend components for the financial reporting section, ensuring clarity and ease of use.
3) Collaborate with Sizheng to ensure the frontend communicates effectively with the backend services.

Keyu: Frontend Developer (Tenant Interface):
1) Develop the tenant-facing sections of the website, focusing on the property search, filters, and application process.
2) Implement the bidding interface for tenants, allowing them to place and update bids on properties.
3) Work with Chenyu to integrate frontend functionalities with the tenant backend systems.

9.2 Collaborative Responsibilities

1) Ensure cohesive design across all frontend components for both landlord and tenant interfaces.
2) Collaborate on debugging and testing both frontend and backend systems.
3) Participate in regular team meetings to discuss progress, challenges, and synchronize development efforts.