

# PRD: Easy Live

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## Vision

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Our product Easy Live is a web application that serves as a single portal for tenants to rent apartments and it would help landlords and leasing management companies efficiently manage any maintenance requests and provide top notch customer service. Unlike existing applications in the market, we offer a product for the tenants, landlords and property management with seamless user experience and simplified navigation that would cater to all age groups.

Tenants facing hassles to reach out to the leasing management/landlords regarding maintenance work and general complaints can use the application's portal to create, submit and track their maintenance work-orders.

For the property management and landlord, who are looking after several leased apartments, the application will serve as a one-stop solution to identify, address, respond to customer complaints and remind tenants of the rent deadline and most importantly safety checks.

## Motivation

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### Unmet Needs

If we look at all the property management portals we have today, they are restricted to a specific leasing management company and are generally restricted to preliminary features like rent payment and work-order requests. In this application, we are trying to incorporate more multiple listings from multiple landlords/leasing management companies.

- The tenants would be able to compare among properties and assess factors like the rent, the neighborhood and past reviews of tenants who were residents of the respective properties and accordingly decide.
- The property manager can have access to the tenant's data for verification, servicing the maintenance request as early as possible. The application will act as an online portal for the initial payments (security deposit, LMR, FMR, brokerage) rent payment, so visits to banks can be avoided.
- The tenants can set up rent reminders before the due date ensuring a payment is never missed.
- The property management can directly interact with the tenants if there are any problems related to the rent payment.

## Customer Segments

### ***Tenants:***

This group largely includes university students as well as working professionals, a digitalized approach towards renting the apartment and dealing with the maintenance will come in as an extremely handy feature and the tenants will not have to depend on the Management office working hours of 9 to 5 to submit/receive updates on maintenance requests or pay the rent.

### ***Landlords:***

A landlord can have multiple properties that he has currently leased/are to be leased out. This app would be very convenient for him as he would get to check the updates on all his properties in one go; this would include the status if leased, term of lease, rent amount, monthly rent received, maintenance amount charged, total money earned from an apartment for the month etc. Being able to monitor his properties would give the landlord a sense of cohesiveness as they would know exactly all that they need to about the property at any given point in time.

### ***Property Management:***

Property Managers deal with finding tenants, reviewing their applications and their requirements throughout the course of their stay. They must maintain the billing status of each of the apartments and manage the schedule and salaries of the maintenance men. Usually there is an entire team involved in this process, however, this app will provide the Property Managers a platform to manage each of these aspects, also if they are responsible for multiple localities, they can have separate tabs for each.

## Personas

### **Tyler, A regular college student**

Tyler is a graduate student who has left his comfortable house on the west coast and shifted to Boston to complete his education in order to pursue his dreams. Tyler has a lot of things to take care of now, along with the heavy burden of acing his grades, he must do grocery shopping, cooking, laundry, dishes, work part-time to save up some money. Tyler has very little time to keep in touch with the property management physically to call for maintenance, go to the bank to pay the apartment rent (which he often forgets to pay before the due date). The Easy Live app can help to lower the burden on poor Tyler, by being a one-stop solution to all his apartment needs.

### **City View Apartments**

Located at the heart of Boston, the City View Apartments rents most of the students coming to Boston. The City View Apartments consists of 20 floors, consisting of more than 10,000 units to be leased and managed. Now it would be a great hassle for the property management to look after the rent payment, maintenance, security, condition, leasing, renewal of the lease, the tenants associated with the apartments individually. The Easy Live app will greatly reduce their problems and help them manage and satisfy their huge customer base.

### **Terri, A Working woman**

Terri is a working-class woman who is employed at an IT firm in the Silicon Valley. She has an apartment available for lease in Boston. She wants to lease it out directly and see over the maintenance, listing, tenant's acquirement herself. Apart from her full-time job, she will have to take a considerable amount of time, to look after the leased apartment. She will need to be in

constant contact with the tenants, their requirements, the apartment maintenance, sending out rent reminders. Easy Live can help her out, as it will be a one-stop solution wherein she can keep a check on all the above problems mentioned.

## Existing Solutions

The current trending and high value among numerous solutions that our target customers rely on are Buildium and Accurently. There are a couple of other competitors as well, which are comprehensively listed in the analysis below.

	Accurently	Buildium	RentBerry	LandLord Vision	EasyLive
<b>Customer Size</b>	1-99	1000+	1000+	1-1000	1-500
<b>Free trial</b>	Yes	Yes	No	No	Yes
<b>Free version</b>	No	No	Yes	Yes	No
<b>Deployment</b>	Web: Cloud	Web: Cloud Mobile: Android	Web: Cloud	Web: Cloud	Web: Cloud Mobile: Android, iOS
<b>Pricing</b>	\$9.99/month	\$45/month	N/A	N/A	9.99/year
<b>Expense Management</b>	Yes	Yes	No	Yes	Yes
<b>Online Payments</b>	No	Yes	Yes	Yes	Yes
<b>Owner portal</b>	No	Yes	No	Yes	Yes
<b>Tenant Portal</b>	No	Yes	Yes	No	Yes
<b>Vacancy Tracking</b>	No	Yes	No	Yes	Yes
<b>Local Business endorsement</b>	No	No	No	No	Yes

### ***Buildium:***

Being one of the closest property management application that has 70 percent of the features that Easy Live has but its pricing becomes a major stumbling block for most of the customer. Giving away the membership for \$45/ month is very costly for customers such as Students who think 100 times before buying a subscription for Netflix, Amazon Prime etc. will find it difficult to pay such a hefty amount for a property management application.

**Accurently:**

Is a cheaper version which has a subscription of \$9.99/ month. Affordable for students and other customers but still it lacks various features such as Online Payments, Owner Portal, Tenant Portal, Vacancy Tracking etc. which are most important and must have for a Paid Subscription Application.

**Differentiation**

Buildium application is not available for iOS, making it difficult for Apple users to access the app on phone. Although this app is very good, pricing is proving to be major drawback making the customers settle for a cheaper app which will have fewer features than this one. And, as far as Accurently is considered, although the app is priced at \$9.99/month, let's just take a step back and look at our customer base which mainly consists of tenants being students, and landlords. Customers who are paying \$10 a month would want to have the luxury to communicate with the owner and property managers, be reminded about the safety checks and rent, have an easy fix for document and expense management and not including these features would make them less satisfied and look for an alternative in the market.

Easy Live will not only have all the features that the competitors failed to provide but it will also have a yearly subscription plan which will be for \$9.99. Based on the customer reviews, we infer that most of the customers are finding it difficult to pay for subscriptions for the property management apps and are unsatisfied with the services these expensive apps provide. Keeping that in mind, we propose to provide our customers a free trial of 30 days which will help them to get familiar with the app and if they are satisfied, they can buy the subscription for a year.

**Verbal walkthrough of Use Cases**

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**Tenants:**

**1) A prospective graduate student from New York is moving to Boston and he has no idea how to go about looking for apartments.**

- He goes on Easy Live website and creates a profile
- He logs in and clicks on 'Search Rental' tab
- He inputs the price range and other filters to set his best preference
- He finds plethora of apartments, with all the information he needs regarding landlord, monthly maintenance, past tenant reviews etc.

**2) A working woman from Watertown has recently moved in her new apartment. She discovers that the insinkerator in the sink is clogged and there are patches of paint falling off in her living room.**

- She logs into her tenant portal on our website
- Goes to 'Submit Maintenance Request' tab
- Selects the apartment she is living in
- She puts in a request using a drop-down menu and adds specific comments

- She also sees the progress bar to track her request

#### **Landlords:**

**1) A landlord from Nashville, Tennessee has an apartment leased out in Chicago. He has been dealing with potential tenants. He needs to request documents of the tenants as well as the rent.**

- He logs into a Landlord portal on our website (through the profile created earlier)
- He goes into the apartment dashboard
- He has the tenant profiles in front of him
- He sees the options to request rent and documents from the tenants
- He also has a feature where he can upload a copy of a lease signed by him

**2) A landlord from Boston have had to deal with a heavy fire damage to his apartment last year. He has grown circumspect that necessary safety measures be taken.**

- He logs into the landlord portal
- He goes under the apartment unit listed under his name
- He sees the 'checklist' dropdown containing basic safety measure listed out. He has the option to add a few of his own.
- He pushes the checklist to the current tenants of the apartment which are notified through email and receive a message on the website.

#### **Property Management:**

**1) Cornerstone Real Estate has been a successful group in Roxbury area of Boston. With increasing student population in the area, their business seems to be booming. As an appreciation of the response for the community, they wish to flash some lucrative deals to their loyal customers.**

- CSRE logs into their portal through the website
- They have local business operating in and out of the community, they push some deals and coupons to their tenants as well as the landlords leasing the apartments with them.

**2) Burbank apartments operating out of Blacksburg, Virginia must request the FMR, LMR and brokerage fee through checks because evidently, they do not have a money transferring app. The tenants would have to personally drop off the check at the bank or pay in cash at their local office.**

- With Easy Live, Burbank can now log in to the website
- Enter their portal
- Click on 'Expense Management' that tracks pending dues from tenants
- They can also view the transaction history over a time period using the time slider provided.

## Design principles and feature description

Our primary aim with Easy Live web application is to make the apartment renting easier for everyone involved in the process. Keeping this aim in mind, we have the following design principles for our application:

- Ease of use for customers from different age groups
- Clean and uncluttered design
- Intuitive for Tenants, Landlords and Property Managers
- Scalability in terms of incorporating more communities within Massachusetts
- Data Security
- Availability to have more states within the country adopt our platform

We will be building our web application on a cloud platform such as AWS. The architecture will have EC2 servers host our application and deliver it to the end users. Application data will be stored in S3 buckets with backups taken and archived in Glacier.

Features:

Customer	Feature	Details	Dependencies/Mock ups	Priority
Applicable to all types of customers	Login	The customer will be able to login in to Easy Live website using an email address and a password. Password will be needing to have a lower case, upper case, a number and a special character.	Refer to <i>Fig 3. Use case mockups – login page</i>	1
	Sign up	If the customer is visiting for the first time, he will be needed to create a profile submitting an email address, password of his choice (conforming requirements above) and selecting a profile type.	Refer to <i>Fig 2. Use case mockups – Sign up Page</i>	1
Tenant	Search Rental	After successful login, this will be the first tab tenant will see. The tenant will be asked to set his preferences: Price, number of beds and bath	The dependency will be to get the information of every listing that is open in the market. This must be done corroborating information	1

		<p>Search Result: Based on the filters, the website will obtain the best results on right side of the screen. Every listing showcases photos, address and contact information of the landlord as well as the management.</p>	<p>from various property managements within a geographical region.</p> <p>Refer to <i>Fig 4. Use case mockups – Tenant Portal: Searching for rentals</i></p>	
	Maintenance Request	<p>This feature allows tenant to submit a service request to the property management responsible for maintenance of the unit.</p> <p>The feature tab will require the tenant to put the following information:</p> <ul style="list-style-type: none"> <li>• Street address</li> <li>• Unit number</li> <li>• Issue (drop down menu)</li> <li>• Additional comments</li> </ul> <p>There will also be a progress bar indicating the status of the service request.</p>	<p>The key dependency in this case will be to gather information regarding different maintenance issues to put in the drop-down menu.</p> <p>Refer to <i>Fig 5. Use case mockups – Tenant Portal: Submitting Maintenance Request</i></p>	1
	Messages	<p>The tenants will be able to view, send and receive messages to/from its respective landlords and property management. These messages can be regarding general concerns regarding document verification or an apartment showing for prospective future tenants.</p>		2
	Alerts	<p>Alerts will be slightly different from messages in a sense that these will only be utilized to convey information that requires immediate attention.</p>		2

		<p>Alerts will also be sent via email and personal contact number to be addressed immediately.</p> <p>They can used for following:</p> <ul style="list-style-type: none"> <li>• Rent Reminders</li> <li>• Safety Alerts</li> <li>• Lease violation alert</li> </ul>		
Landlord	Tenant & Listing Information	<p>This will be primary function of the Landlord portal which will show the listings under him. For every listing, there will a list of tenants occupying the unit.</p> <p>The list will have information of the respective tenant and will have options to contact the tenants, request rent and documents for identification.</p>	Refer to <i>Fig 6. Use case mockups – Landlord Portal: Tenant &amp; Listing information</i>	1
	Documents	<p>The landlord can view the documents sent by the tenants to him using a viewer on the tab. He can also upload a document for a respective tenant if need be i.e. signed lease, maintenance bills etc.</p> <p>There will be combo box enlisting all the tenants that are occupying an apartment in his listing.</p>	<p>The dependency will be to incorporate Adobe pdf viewer to view the document within the website <b>OR</b> have an external link open the document the pdf in a new browser tab.</p> <p>Refer to <i>Fig 7. Use case mockups – Landlord Portal: Accessing Document</i></p>	1
	Messages	<p>The landlord will be able to send tenants messages using this feature. The messages can be general communication or specific to a topic which can be selected from the 'Issue' drop-down menu.</p> <p>Landlord will be able to select</p>	Refer to <i>Fig 8. Use case mockups – Landlord Portal: Sending &amp; viewing messages</i>	2



		<p>the tenants based on the listing under him.</p> <p>There will be a Roster showing the messages sent and received from the tenants.</p>		
	Rent	<p>Using this feature, landlord can request rent or any type of unpaid dues.</p>	<p>The dependency will be aligning payment portals i.e. Google pay <b>OR</b> individual bank payment gateways with the application.</p>	2
Property Manager	Deals & Coupons	<p>The property management will have a record of local business and the communities based on the geographical region they are operating in.</p> <p>A property manager can select a specific deal from the menu and apply it to the community. The deal will be communicated to every tenant within that community to be availed through an emailed coupon code, which will be a background process.</p>	<p>The dependency will be getting those local businesses to flash deals on our web application.</p> <p>Refer to <i>Fig 9. Use case mockups – Property Manager Portal: Pushing Deals and Coupons</i></p>	2
	Expense Management	<p>A property manager will be able to request upfront costs like first/last month rent, brokerage and/or security deposit via this feature.</p> <p>He can simply select a particular listing and the tenant to request the type of fee to be paid.</p> <p>He can view a list of payments happened over time and their status (completed?) also. There will be a time slider to see records within specific time frame.</p>	<p>Refer to <i>Fig 10. Use case mockups – Property Manager Portal: Expense Management</i></p>	1

**V1 aka Minimum Viable Product:**

All the feature with **Priority 1** will be a part of our MVP. They are integral part of the application and addresses basic requirements which needs to be fulfilled.

**vNext:**

Features will **Priority 2** will constitute this product. In addition to the features mentioned above, we plan to incorporate the following:

- More payment methods: Visa Checkout, Apple Pay, Samsun Pay, Paypal etc.
- Add a notification feature across the entire site to send updates about various tasks on the website
- Implement recommender system to suggest similar listings based on a tenant's search criteria and market them using email (Notification feature will work in conjunction with feature)
- Add a Google calendar to sync with the Easy Link Calendar.

**vLongTerm:**


Our long-term goal will be to develop a mobile application to ease the entire user experience. The decision on the development will be taken after surveying the comfortability quotient of the current web application by rolling out feedback surveys to the customer on website.

## Roadmap

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We will follow an Agile methodology while developing our application where solutions will evolve through a collaborative effort of self-organization and cross-functional teams and their customers. Following is a tabular representation of a roadmap that will be followed. Throughout each quarter, there will be multiple scrum cycles (in weeks) which will help develop the product iteratively gaining insights from previous versions.

For convenience of implementation, prioritization is done using colors.

High Priority:   
 Medium Priority: 

EASY LIVE ROADMAP 2019			
Q1	Q2	Q3	Q4
<b>Goals:</b> - Release beta version	<b>Goals:</b> - Start marketing campaign	<b>Goals:</b> - Fix software bugs - Channelize market to	<b>Goals:</b> - Referral strategy - Mobile app

- Define marketing goals - Analyze targeted customers	- Activation: Free subscription - Improve/add website functionality	reduce acquisition cost - Activation: Freemium subscription	development - Improve overall latency and experience - Migrate to cloud
<b>Features:</b>  - New admin console used by sales and tech team - Application portal - Gmail Integration	<b>Features:</b>  - Improved dashboard for each customer segment - Rent Payment function - Maintenance Request Portal - Document Management	<b>Features:</b>  - Payment portal - Multiple user accounts with different user types - Online lease renewal/termination - Background check	<b>Features:</b>  - Text Reminders - Recommendation System for Tenants - Add more payment portals (Google Pay, Samsung Pay, Apple Pay) - Google Drive integration for cloud storage
<b>Key Performance Indicators:</b>  - User registrations from invite links	<b>Key Performance Indicators:</b>  - Web traffic - Customer conversion rate	<b>Key Performance Indicators:</b>  - Conversion rate - Web traffic - In-app purchase	<b>Key Performance Indicators:</b>  - Customer Retention rate - Number of Clicks

## Metrics

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### Quantitative Measures:

- Number of total website visits
- Number of new account registrations
- Conversion rate = Total visits / New accounts
- Average time spent on website per user
- Average time spent by a user on a task (tenant searching rentals)
- Bounce rate
- Customer retention rate
- Average number of leads per month
- Return on Investment (ROI) = Revenue (Paid subscriptions, pay per click ads) – cost

### Qualitative Measures:

- Top landing pages
- Top exit pages
- Lead generating medium
- Lead generating customer segments

- Traffic sources
- Location of visitors
- Quality of referrals

## International

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Our application is only focused on its implementation in the United States. Considering the number of international students that travel to US for their studies and the overall percentage of working individuals in the country, we feel our application will be more suited and have good reception here than in other country. Our application will not be customized for customers outside of United States. Hence, Easy live is not applicable for Internationalization.

## Projected Costs

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We intend to hire 1 web designer and 1 UX designer for development purposes of our application. We will also be roping in 1 Engineer for testing of our end product.

Here is the breakdown cost structure for development of MVP:

- Time required for development: 6-person months
- Time required for development and testing: 12-person months
- Computational costs: 2 Amazon EC2 servers for a year
- Storage costs: 2 Amazon S3 buckets (1 Master & 1 Slave) for a year, 300 GB per month
- Total Operational costs = \$1476 (EC2) + \$3 (350 Gb S3) + \$90,000 (Engineering)  
= \$91,479

*Assumptions:*

- *2 Engineers work for first 6 months on development and the Tester works for remaining period*
- *Engineers are paid at \$30 per hour*
- *Amazon EC2: \$0.084/hourly*
- *Amazon S3: \$0.023 per 50GB/month*

## Operational Needs

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Operational assistance will be needed from the following parties to ensure smooth functioning of Easy Live application.

**1. Integration of Easy Live Database with Property Management's Database:**

- Our database must integrate with the databases of the property managements to keep the records and managed expenses consistent

**2. Integration of Easy Live's Recommendation System into various Apartment finding websites:**

- Easy Live's recommender system will scrape real time data from websites like Zillow, hot pads to better recommend apartment listings to the customer. For this, the scraper must be integrated with the APIs of the websites. This will need considerable amount of engineering effort.

**3. Legal advice and approval:**

- We will be needing to consult with third party legal teams and technical advisors for terms and conditions. We will require to draw up some policies like Protecting PII (Personal Identifiable Information) and corresponding standard operating procedures which we need to comply with in order to store data of the entities of our application.

**4. Customer Feedback**

- We will periodically conduct surveys to collect feedbacks with respect to user experience and additional feature which can be implemented in order to understand the pain points of our customer and address them better with future versions of our product.

## Addressing Caveats/Risks

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Risk	Description	Mitigation Strategy
Privacy	All user data must be protected from inappropriate use and access from third party	<p>All personally identifying information (PII) will not be provided to third-party without consent of the user. Any data provided to partners for research will not include PII. Strategies to optimize website security (not inclusive):</p> <ul style="list-style-type: none"> <li>• Keep software up to date</li> <li>• Error messages</li> <li>• Server-side validation/form validation</li> <li>• Complex passwords</li> <li>• Inspect all files uploaded into the</li> </ul>

		server <ul style="list-style-type: none"> <li>• Using website security tools</li> </ul>
Legal Compliance	Ensure compliance with all laws governing the use of private personal data and e-commerce. Reduce number of lawsuits arising from negligence or misuse of user data.	Contract with law firm to ensure compliance with all federal laws and regulations.
Application Downtime	Prevent server crashes and ensure zero downtime.	24-hour development and IT team to ensure data integrity and protection. Also have AWS architecture support continued application service through load balancers and back up servers.
Low Adoption	Property managements might be hesitant to adopt our solution when they have a system in place working well for their customers and them.	Hire and train competent sales team to ensure that we accurately convey the value of our product to Property Managements. Provide an exceptional user experience.
Operational cost	Before rolling out the MVP, operational costs might be too high	Operate on lean start-up model and have appropriate monetization strategy.
Security	Application can be vulnerable to phishing attacks, scammers and DDOS attacks.	Have firewalls guard our application. Implement two factor authentications in case of user forgetting his credentials. Financial data managed by property managements will be TLS encrypted.

# Mockups

Fig 1. Use case mockups – Home Page

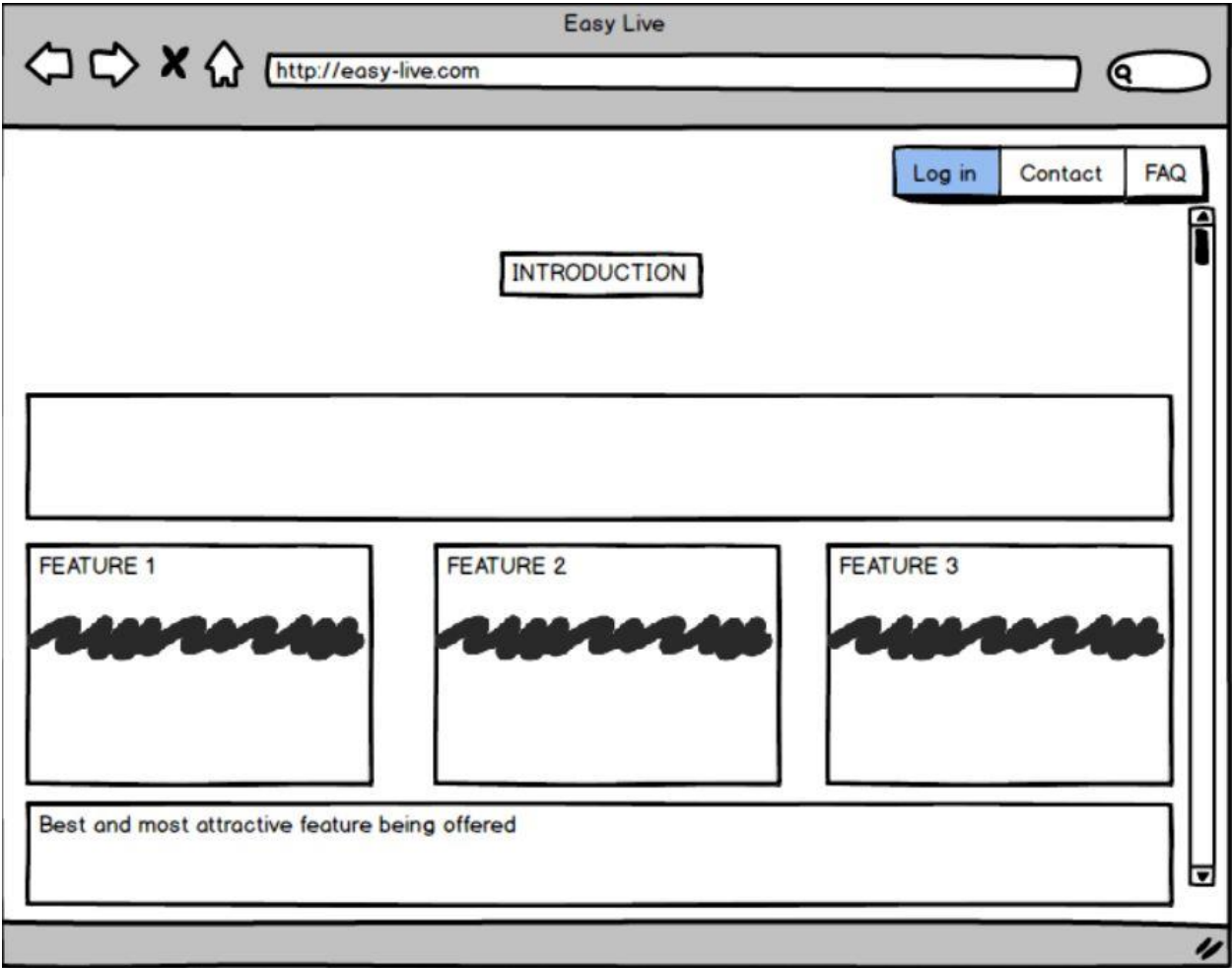


Fig 2. Use case mockups – Sign up Page

Easy Live

http://easy-live.com

Q

Create a Profile

Profile type: ☐ Tenant ☐ Landlord ☐ Property Manager

Email Address:

Password:

Confirm Password:

Sign up

Already a member? Sign in!





Fig 3. Use case mockups – login page

The mockup shows a web browser window with the title 'Easy Live'. The address bar contains 'http://easy-live.com'. The main content area has the heading 'LOG IN' centered. Below the heading are two input fields: 'Email Address:' and 'Password:'. A 'LOG IN' button is positioned below the password field. The browser window has a grey header and footer bar.

Easy Live

http://easy-live.com

## LOG IN

Email Address:

Password:



Fig 4. Use case mockups – Tenant Portal: Searching for rentals

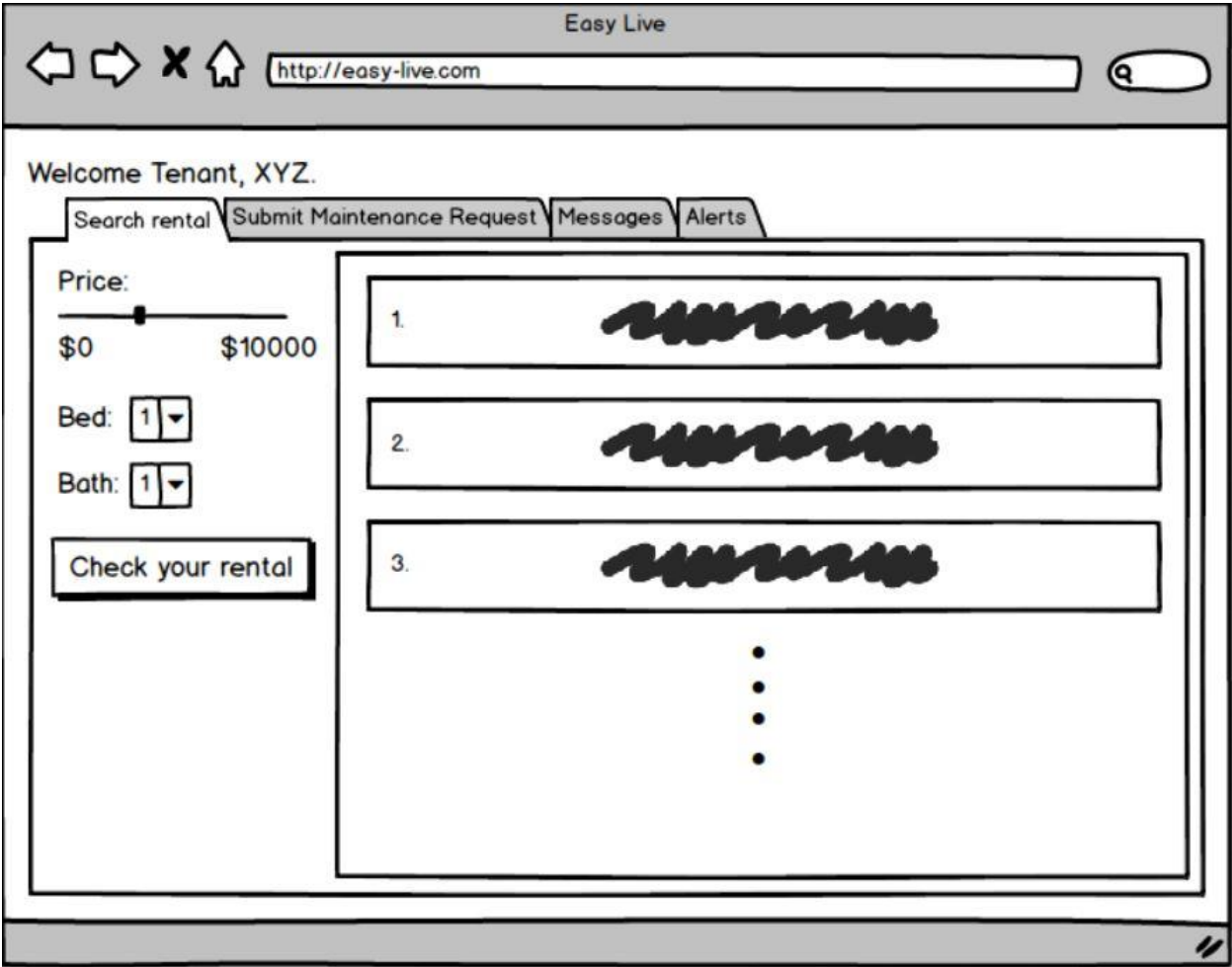


Fig 5. Use case mockups – Tenant Portal: Submitting Maintenance Request

Easy Live

http://easy-live.com

Q

Welcome Tenant, XYZ.

Search rental

Submit Maintenance Request

Messages

Alerts

Service progress bar

Street:

Hillside St.

Unit:

48

Issue:

Sewage

Comments:

Blockage since 2 weeks.

Submit



Fig 6. Use case mockups – Landlord Portal: Tenant & Listing information

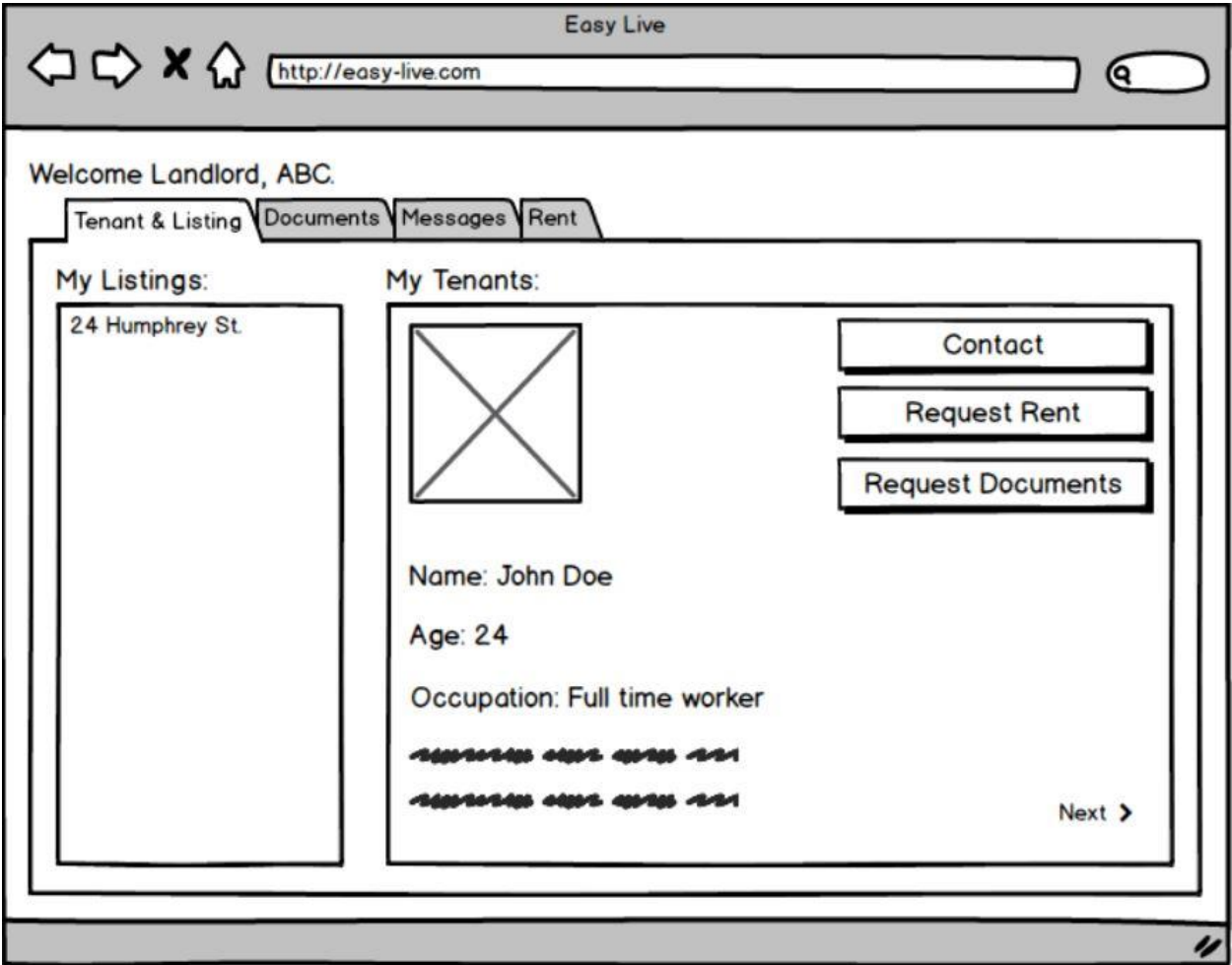


Fig 7. Use case mockups – Landlord Portal: Accessing Document

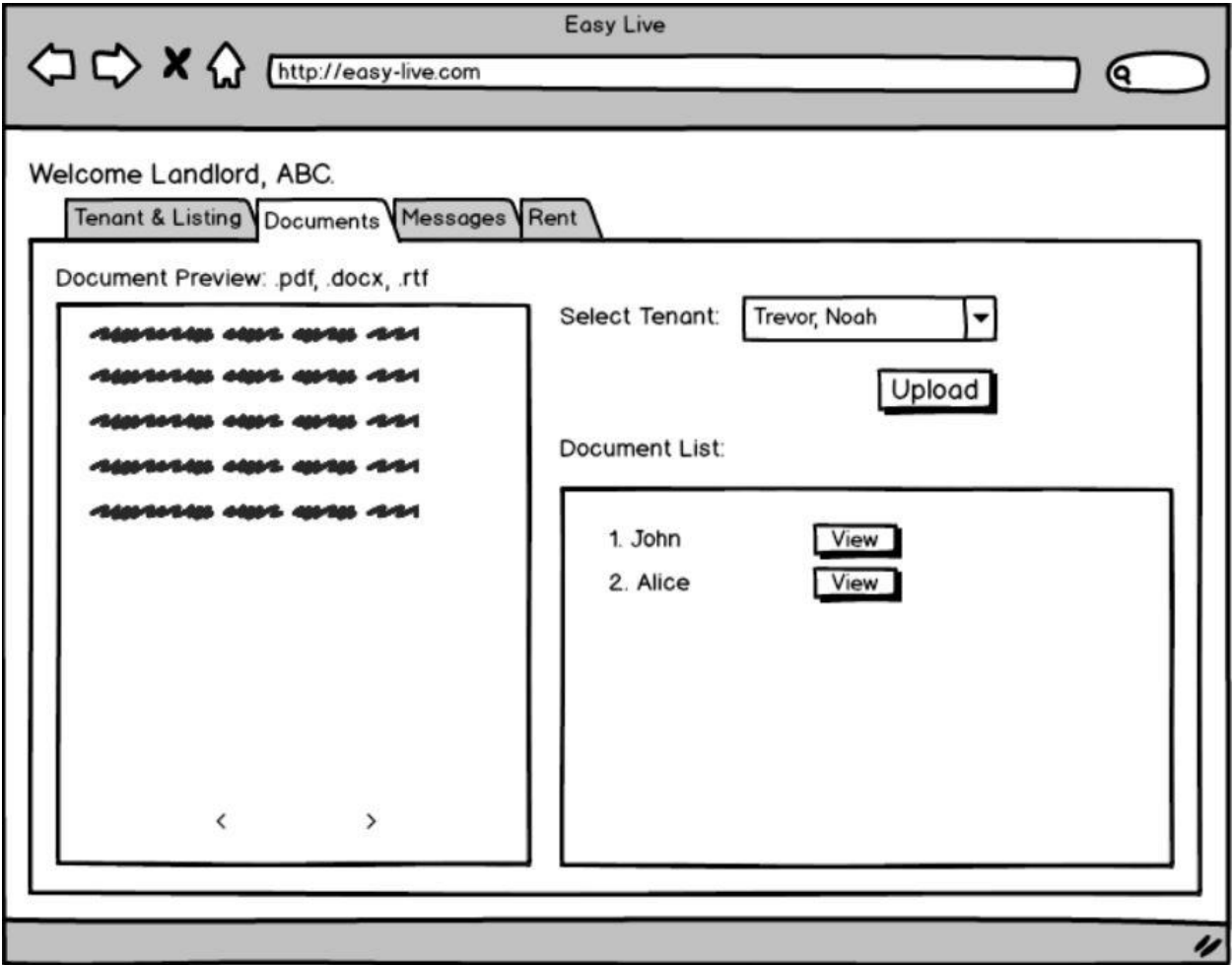


Fig 8. Use case mockups – Landlord Portal: Sending & viewing messages

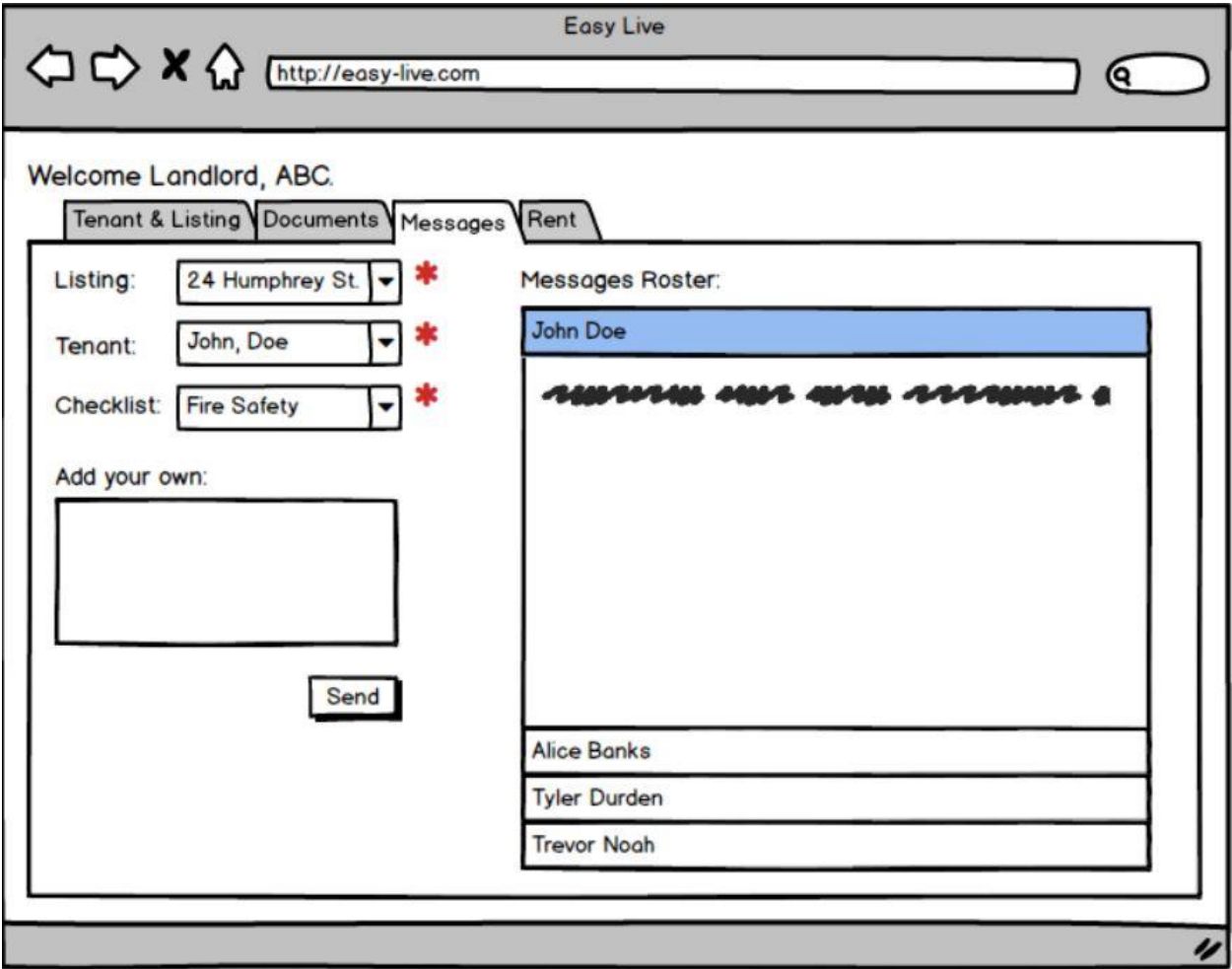


Fig 9. Use case mockups – Property Manager Portal: Pushing Deals and Coupons

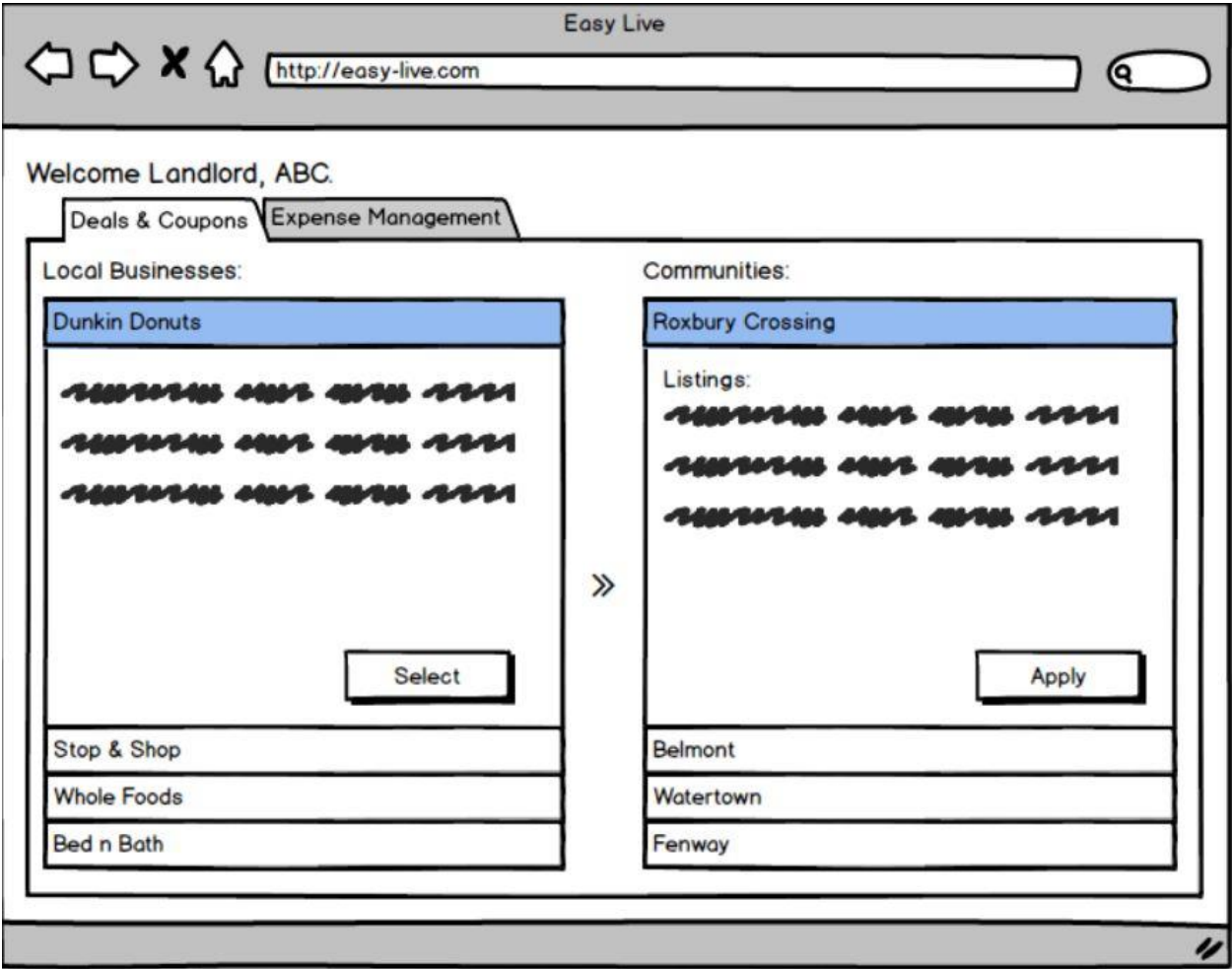


Fig 10. Use case mockups – Property Manager Portal: Expense Management

Easy Live

http://easy-live.com

Welcome Landlord, ABC.

Deals & Coupons

Expense Management

Listing:

ComboBox

Tenant:

ComboBox

Fee:

ComboBox

Request

Payments:

Name	Age	Listing	Completed?
Giacomo Guilizzoni	24	xyz	Y
Marco Bottone	38	abc	N
Mariah Maclachlan	29	mno	Y
Valerie Liberty	26	xxz	N

Time:

Jan

Dec