

---

# System Requirements Statement (SRS) - NestFind

---

Doc. Ref. : SRS\_v0.4.doc  
Version : 0.4  
Status : Drafted  
Created by : Kenji Tanaka  
Date : 04-Dec-2012

1.	INTRODUCTION	3
2.	FUNCTIONAL REQUIREMENTS	42.1
	RENTER MODULE	5
2.2	LANDLORD MODULE	11
2.3	ADMIN MODULE	17
2.4	USE CASE DIAGRAM.....	22

THIS DOCUMENT CONTAINS 24 NUMBERED PAGES

## 1. Introduction

This document describes the system requirements and scope for developing a **NestFind** System.

**NestFind** system is divided into three main parts: Renter Module, Landlord Module and Admin Module. This document details the requirements for each module.

## 2. Functional Requirements

The Account part of NestFind System has three modules which are divided 13 processes described as below.

No	BRS require ment ID	Description
<b>2.1</b>	<b>Renter Module</b>	
2.1.1	F1	Account Creation Process
2.1.2	F2	Login Process
2.1.3	F3	Forgot Password Process
2.1.4	F4	Change Password Process
2.1.5	F5	Update Account Process
2.1.6	F6	Search Property
2.1.7	F7	Book Property
2.1.8	F8	Rent Pay Process
<b>2.2</b>	<b>Landlord Module</b>	
2.2.1	F10	Account Creation Process
2.2.2	F11	Login Process
2.2.3	F12	Forgot Password Process
2.2.4	F13	Change Password Process
2.2.5	F14	Listing Property
2.2.6	F15	Update Account Process
2.2.7	F16	View Raised Request
2.2.8	F17	Confirm Request
2.2.9	F18	Track Payment
2.2.10	F19	Remove Property
<b>2.3</b>	<b>Admin Module</b>	
2.3.1	F20	Login Process
2.3.2	F21	Forgot Password Process
2.3.3	F22	Change Password Process
2.3.4	F23	Set Cities & Areas
2.3.5	F24	Status Update
2.3.6	F25	Generate Report
2.3.7	F26	Track Payment

## 2.1 Renter Module

- Renter is the user of System who wants to buy a property on Rent.

### 2.1.1 Account Creation Process

- The system requires users (Renters) to create an account before using it. So, NestFind System should provide the function which makes Landlord creates new account.
- When Renter creates new account, the function demands three information described as below.

1. Login information
2. User Information
3. Security Question Information

- The Login information consists of some items described as below.

1. User ID
2. Password
3. First Name
4. Last Name
5. Email ID
6. User Type (Renters)

➤ All items are compulsory demanded.

➤ User ID

- ✓ The User ID should be unique. If the User ID correspond with not case-sensitive to other which is previously registered, the User ID should not be registered as an account.

➤ Password

- ✓ The Password has constrains which makes the Password consists of more than or equal 8 and less than or equal 11 characteristics including characters described as below.

1. Numeric figure (at least one)
2. Capital alphabet (A-Z)(at least one)
3. Small alphabet (a-z)(at least one)
4. Special character (#, \$, %, &, etc.) (at least one)

- ✓ The Password is masked by dummy characters. The re-entering Password is demanded.
- ✓ The Password must be encrypted in NestFind System.

➤ First Name

- ✓ User should follow the following conditions while writing the First Name and Last Name

1. Length (2 - 25 characters)
2. Alphabets (A-Z , a-z)
3. No Digits and Special Characters

➤ Last Name

- ✓ User should follow the following conditions while writing the Last Name

1. Length (2 - 25 characters)
2. Alphabets (A-Z , a-z)
3. No Digits and Special Characters

➤ User Type

The User Type falls into three categories described as below.

1. Renter
2. Landlord
3. Administrator

- ✓ The User Type defines also three types of user; "Renter user", "Landlord user", and "Administrator user".
- ✓ In an Account Creation Process, the user can select Renter.
- ✓ No one could select The Administrator, because Administrator is implemented to NestFind System in advance.

- User Information
- The Contact Detail consists of some items described as below.
  1. Mobile Number
  2. Aadhar Number
  3. PAN Number
  4. Permanent Address

- All items are compulsory demanded.
  - Mobile Number
    - ✓ Mobile number should be filled.
    - ✓ Only 10 digits number is allowed (0-9)
  - Aadhar Card
    - ✓ Aadhar number should be filled.
    - ✓ It should be only 12 digits (0-9)
  - PAN Card
    - ✓ PAN number should be filled.
  - Permanent Address
    - ✓ Permanent Address should be filled.
    - ✓ State and City should be selected from options.
- The Security Question information

The Security Question information is needed when Renter lost their Password. This information consists of two items described as below.

    1. Selected Question
    2. Answer
  - All items are compulsory demanded.
  - Some questions which are difficult to answer for anyone else are prepared in advance.
    - E.g. which color do you like most?
  - A question should be selected from options by the Landlord, and the Answer is registered by the Landlord.
- Login information should be entered on one screen, and then Renter information and Security Question information should be entered on another screen.

### 2.1.2 Login Process

- NestFind System always compels user authentication before using itself except when a new account is successfully created.
- The user authentication demands User ID and Password. The User ID and the Password should be checked in three ways.
  - First, The User ID and the Password should be existed and correct.
    - ✓ If The User ID and the Password are not equal to what the user has registered, the user authentication cannot be provided.
  - Second, the User Type linked to the User ID should be "Renter".
    - ✓ When the User Type is "Renter", then user can be placed on "Renter Home".
  - Finally, User ID should be available.
    - ✓ The Administrator can decide whether the User ID is available or suspended - Refer to the SRS of the Admin part.
    - ✓ If Renter is rejected, user authentication is not provided for system user.
- The Renter account should alive for so long as the duration decided by Admin.
- Only when the three checks are successfully completed, Renter can be placed on respected page.
- The "Renter Home" provides the some items described as below.
  1. A trigger to login
  2. A trigger to logout
  3. A trigger to update Account
  4. A trigger to Change Password
  5. A trigger to Search Property
  6. A trigger to Book Property for Rent
  7. A trigger to Paying Rent
  8. A trigger to Cancel The Property Booking



### 2.1.3 Forgot Password Process

- When system user lost their Password, the recovery method should be provided by NestFind system.  
The recovery method is described as below.
  - First, system user enters their User ID for NestFind System.
  - Next NestFind System demands the Answer which has been registered since when the Account was created.
  - Only when the Answer is correct, Landlord get the new password by E-mail which also has been registered since when the Account was created.
  - The new password is automatically generated by NestFind System.
    - ✓ Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.
- As a consequence, The Landlord could get the Renter authentication using the new password.
  - Then, the Renter had better change the new password manually.
- If the Answer is not correct, otherwise, the correct Answer is demanded for user again.
  - In that case, Of course, Renter couldn't get the new password.

### 2.1.4 Change Password Process

- When Landlord wants to change their Password, the measure should be provided by NestFind System.
- Therefore, NestFind System should provide the function which is available after getting the Renter authentication.
- The function demands the current password and the new password.

- Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.
- The current password and the new password are masked by using dummy characters.
- The new password is demanded to enter twice to avoid a typing error.
- Only when the current password is correct, Renter could change their Password.
- When the current password is changed into new password, NestFind System compels user authentication again.

### 2.1.5 Update Account Process

- NestFind System should provide the function which makes the account updated for Renter.
- The information Renter could update is described below.
  1. Login information
  2. User information
  3. Security Question Information
- The Login information  
The updatable items as described below.
  1. User ID
  2. Password
  3. First Name
  4. Last Name
  5. Email ID
  6. User Type (Renters)
  - All items are compulsory demanded, but updating is optional.
- The User information  
The updatable items as described below.
  1. Mobile Number
  2. Aadhar Number
  3. PAN Number
  4. Permanent Address

➤ All items are compulsory demanded, but updating is optional.

- The Security Question information  
The updatable items as described below.

1. Selected Question
2. Answer

➤ All items are compulsory demanded, but updating is optional

### **2.1.6 Search Property**

- Search conditions are described as below.

1. City selection
2. Type of Property
3. Postal Code
4. Property Location
5. Availability of Property
6. Property Search as per Rent

### **2.1.7 Book Property**

- Property Booking requirements are described as below.

1. Date of Booking
2. Duration( Days/Months/ Years)
3. Rent Payment

### **2.1.8 Rent Pay Process**

- Paying your fare in advance is the last step after all the registration and booking process. Following steps are required for successful payment.
  1. Payment mode (internet banking / UPI)
  2. Payment details (Card details / UPI ID/ Internet Banking ID)
  3. Payment Receipt

## 2.2 Landlord Module

### 2.2.1 Account Creation Process

- NestFind System compels you to create the account before using it. So, NestFind System should provide the function which makes landlord creates new account.
- When landlord creates new account, the function demands four information described as below.

1. Login Information
2. User Information
3. Security Question Information
4. Payment information.

- The Login information  
The Login information consists of some items described as below.

1. User ID
2. Password
3. First Name
4. Last Name
5. Email ID
6. User Type (Landlord)

➤ All items are compulsory demanded.

➤ UserID

- ✓ The UserID should be unique. If the UserID correspond with not case-sensitive to other which is previously registered, the UserID should not be registered as an account.

➤ Password

- ✓ The Password has constrains which makes the Password consists of more than or equal 8 and less than or equal 16 characteristics including characters described as below.

1. Numeric figure (at least one)
2. Capital alphabet (A-Z) (at least one)
3. Small alphabet (a-z) (at least one)
4. Special character (#, \$, %, &, etc.) (At least one)

- ✓ The Password is masked by dummy characters. The re-entering Password is demanded.
- ✓ The Password must be encrypted in NestFind System.

➤ User Type

The User Type falls into three categories described as below.

1. Renter
2. Landlord
3. Administrator

- ✓ The User Type defines also three types of user; "Renter user", "Landlord user", and "Administrator user".
- ✓ In an Account Creation Process, the user can select Landlord.
- ✓ No one could select The Administrator, because Administrator is implemented to NestFind System in advance.

- User Information

- The Contact Detail consists of some items described as below.

5. Mobile Number
6. Aadhar Number
7. PAN Number
8. Permanent Address

➤ All items are compulsory demanded.

➤ Mobile Number

- ✓ Mobile number should be filled.
- ✓ Only 10 digits number is allowed (0-9)

➤ Aadhar Card

- ✓ Aadhar number should be filled.
- ✓ It should be only 12 digits (0-9)

➤ PAN Card

- ✓ PAN number should be filled.

- Permanent Address
  - ✓ Permanent Address should be filled.
  - ✓ State and City should be selected from options.

- The Security Question information

The Security Question information is needed when Renter lost their Password. This information consists of two items described as below.

3. Selected Question
4. Answer

- All items are compulsory demanded.
  - Some questions which are difficult to answer for anyone else are prepared in advance.
    - E.g. which color do you like most?
  - A question should be selected from options by the Landlord, and the Answer is registered by the Landlord.
- Login information should be entered on one screen, and then Renter information and Security Question information should be entered on another screen.

### 2.2.2 Login Process

- NestFind System always compels Landlord authentication before using itself except when a new account is successfully created.
- The user authentication demands UserID and Password. The UserID and the Password should be checked in three ways.
  - First, The UserID and the Password should be existed and correct.
    - ✓ If The UserID and the Password are not equal to what the user has registered, the user authentication cannot be provided.
  - Second, the User Type linked to the UserID should be "user".
    - ✓ When the User Type is " Landlord ", user can be placed on "Landlord Home".

- Finally, UserID should be available.
  - ✓ The Administrator can decide whether the UserID is available or suspended - Refer to the SRS of the Admin part.
  - ✓ If user is rejected, user authentication is not provided for Landlord.
- The Landlord account should alive for as long as the duration decided by Admin.
- Only when the three checks are successfully completed, Landlord can be placed on respected page.
- The “Landlord Home” provides the some items described as below.
  1. A trigger to logout.
  2. A trigger to update Account.
  3. A trigger to Change Password.
  4. A trigger to listing property.
  5. A trigger to Update Property information.
  6. A trigger to View Requests.
  7. A trigger to Track Payment
  8. A trigger to remove property.

### 2.2.3 Forgot Password Process

- When Landlord lost their Password, the recovery method should be provided by NestFind system.

The recovery method is described below.

  - First, Landlord enters their UserID for NestFind System.
  - Next, NestFind System demands the Answer which has been registered since when the Account was created.
  - Only when the Answer is correct, NestFind get the new password by E-mail which also has been registered since when the Account was created.
  - The new password is automatically generated by NestFind System.
    - ✓ Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.

- As a consequence, The Landlord could get the user authentication using the new password.
  - Then, the Landlord had better change the new password manually.
- If the Answer is not correct, otherwise, the correct Answer is demanded for Landlord again.
  - In that case, Of course, Landlord couldn't get the new password.

#### **2.2.4 Change Password Process**

- When Landlord wants to change their Password, the measure should be provided by NestFind System.
- Therefore, NestFind System should provide the function which is available after getting the Landlord authentication.
- The function demands the current password and the new password.
  - Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.
  - The current password and the new password are masked by using dummy characters.
  - The new password is demanded to enter twice to avoid a typing error.
- Only when the current password is correct, Landlord could change their Password.
- When the current password is changed into new password, NestFind System compels Landlord authentication again.

#### **2.2.5 Listing Property**

- Property Listing information are is described as below:
  1. Property Type (Bungalow, flat, villa, etc.)
  2. Property Rent Price
  3. Photos Of Property



4. Location Of Property
5. Availability Of Date

### 2.2.6 Update Account Process

- NestFind System should provide the function which makes the account updated for Landlord.

- The information Landlord could update is described below.

1. Login information
2. User information
3. Security Question Information

- The Login information  
The updatable items as described below.

1. First Name
2. Last Name
3. E-mail address

➤ All items are compulsory demanded, but updating is optional.

- The User information  
The updatable items as described below.

1. User Name
2. User Phone No
3. E-mail address
4. Permanent address

➤ All items are compulsory demanded, but updating is optional.

- The Security Question information  
The updatable items as described below.

1. Selected Question
2. Answer

➤ All items are compulsory demanded, but updating is optional.

### 2.2.7 View Raised Request

- As the result of searching Requirements and booking of property, Landlord could see the booking of property.
  1. Property Type
  2. Renter Name
  3. Booking Date
  4. Payment Mode

### 2.2.8 Confirm Request

- **Review Applications:** Look at tenant applications.
- **Verify Information:** Check tenant details and references.
- **Finalize Lease:** Agree on and sign the lease.
- **Inspect Property:** Schedule and check inspections.
- **Confirm Payments:** Set rent terms and how payments will be made.
- **Ensure Compliance:** Follow legal rules.
- **Communicate Decision:** Tell tenants if they're approved or not.
- **Approve Tenancy:** Give final approval and sign the lease.

### 2.2.9 Track Payment

- Once the property goes on rent, Landlord should pay the commission to the Administrator (NestFind). Following are some conditions while giving the commission to the Administrator:
  1. Landlord will get the payment after the payment done by Renter.
  2. Conditions for commission payments from Landlord to Administrator

### 2.2.10 Remove property

- If a Landlord no longer wishes to give his/her property on rent then they can delete their property information and as well as their Account on NestFind.

## 2.3 Admin Module

- Administrator should be responsible for following activities,

### 2.3.1 Login Process

- NestFind System always compels user authentication before using itself except when a new account is successfully created.
- The user authentication demands UserID and Password. The UserID and the Password should be checked in three ways.
  - First, The UserID and the Password should be existed and correct.
    - ✓ If The UserID and the Password are not equal to what the admin has registered, the Admin authentication cannot be provided.
  - Second, the User Type linked to the UserID should be "Admin".
    - ✓ When the User Type is "Admin", user can be placed on "Admin Home".
  - Finally, UserID should be available.
    - ✓ The Administrator can decide whether the UserID is available or suspended - Refer to the SRS of the Admin part.
    - ✓ If user is rejected, user authentication is not provided for system user.
- The Admin account should alive for as long as the duration decided by Admin.
- Only when the three checks are successfully completed, Admin can be placed on respected page.
- The "Admin Home" provides the some items described as below.
  - A trigger to logout
  - A trigger to update Account
  - A trigger to Change Password
  - A trigger to Set Cities and Areas
  - A trigger to Update Status
  - A trigger to Generate Report
  - A trigger to Payment Tracking

### 2.3.2 Forgot Password Process

- When Admin lost their Password, the recovery method should be provided by NestFind system.

The recovery method is described as below.

- First, Admin enters their UserID for NestFind System.
- He will enter the E-mail id since when the Account was created.
- Only when the E-mail Id is correct, Admin get the new password by E-mail which also has been registered since when the Account was created.
- The new password is automatically generated by NestFind System.
  - ✓ Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.
- As a consequence, The Admin could get the Admin authentication using the new password.
  - Then, the Admin had better change the new password manually.

### 2.3.3 Change Password Process

- When Admin wants to change his Password, the measure should be provided by NestFind System.
- Therefore, NestFind System should provide the function which is available after getting the Admin authentication.
- The function demands the current password and the new password.
  - Of course, the new password should consist of more than or equal 8 and less than or equal 16 characteristics including at least a numeric figure, a capital alphabet, a small alphabet, and a special character.
  - The current password and the new password are masked by using dummy characters.
  - The new password is demanded to enter twice to avoid a typing error.

- Only when the current password is correct, Admin could change his Password.
- When the current password is changed into new password, NestFind System compels user authentication again.

#### **2.3.4 Set Cities & Areas**

Admins can manage cities and areas within the system. This helps in organizing the listings geographically.

#### **2.3.5 Status Update**

Admins can update the status of users and properties

#### **2.3.6 Generate Report**

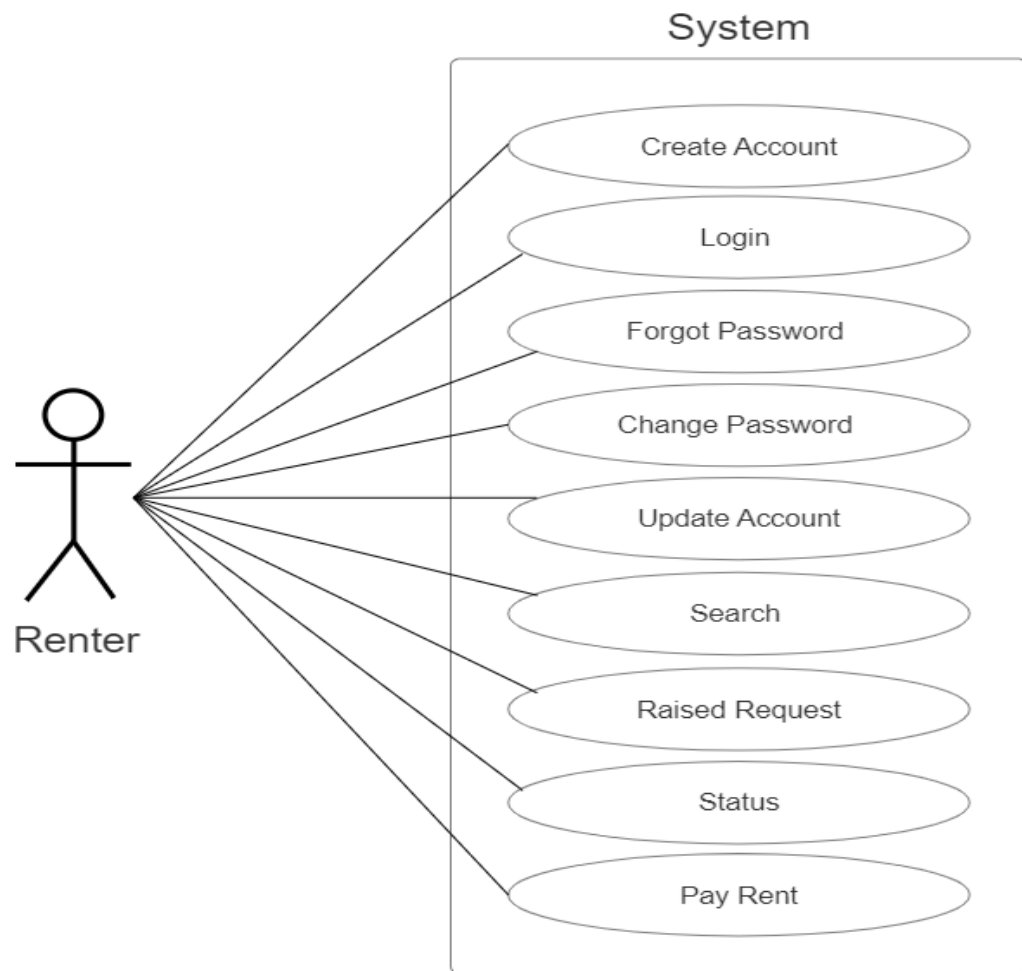
- Admin can generate daily and monthly reports.
- Reports include records of all users and enrollments per state.
- Reports also include the rent agreement which is available for both Renter and Landlord as well.

#### **2.3.7 Track Payment**

- Admin can track all payments within the system.
- The admin can monitor and track rental payments. This includes checking payment statuses, due dates, and ensuring that all financial transactions are recorded accurately.

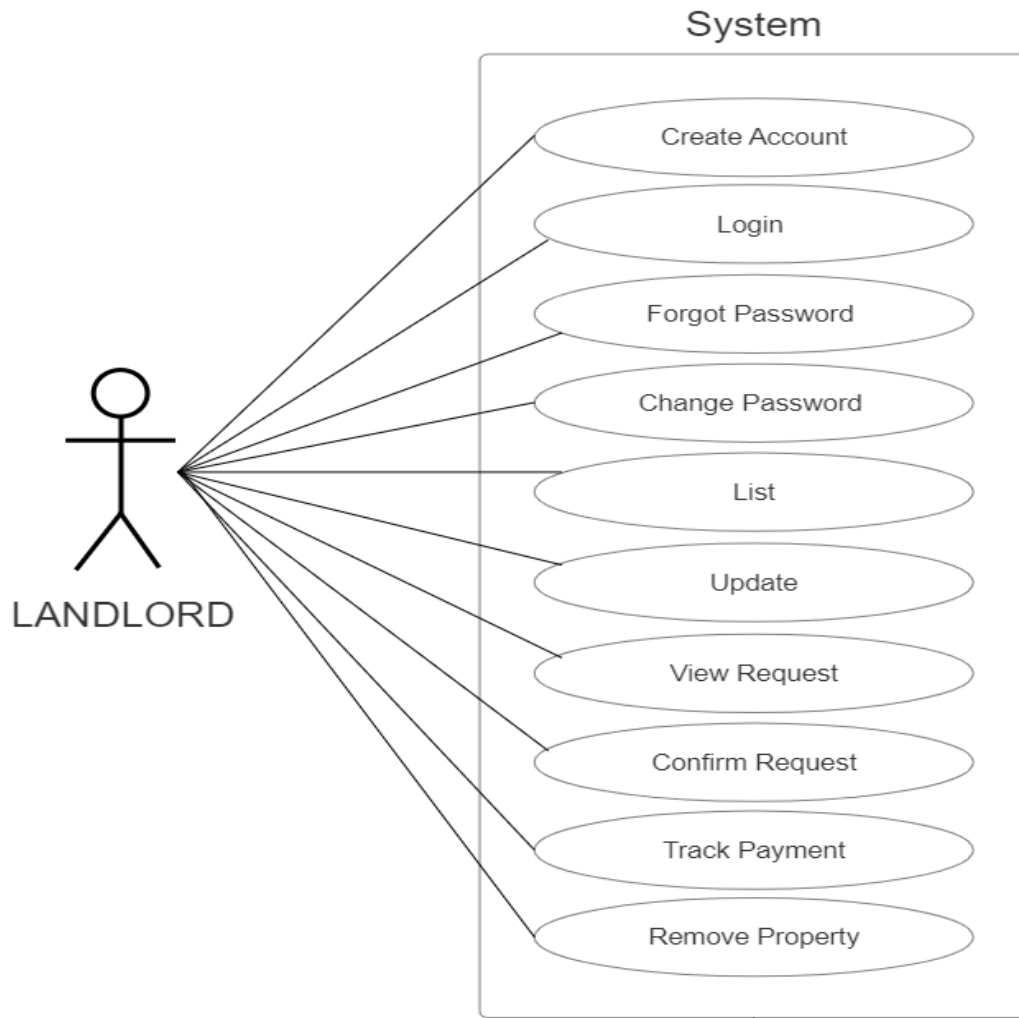
## 2.4 Use Case Diagram

**Renter:**



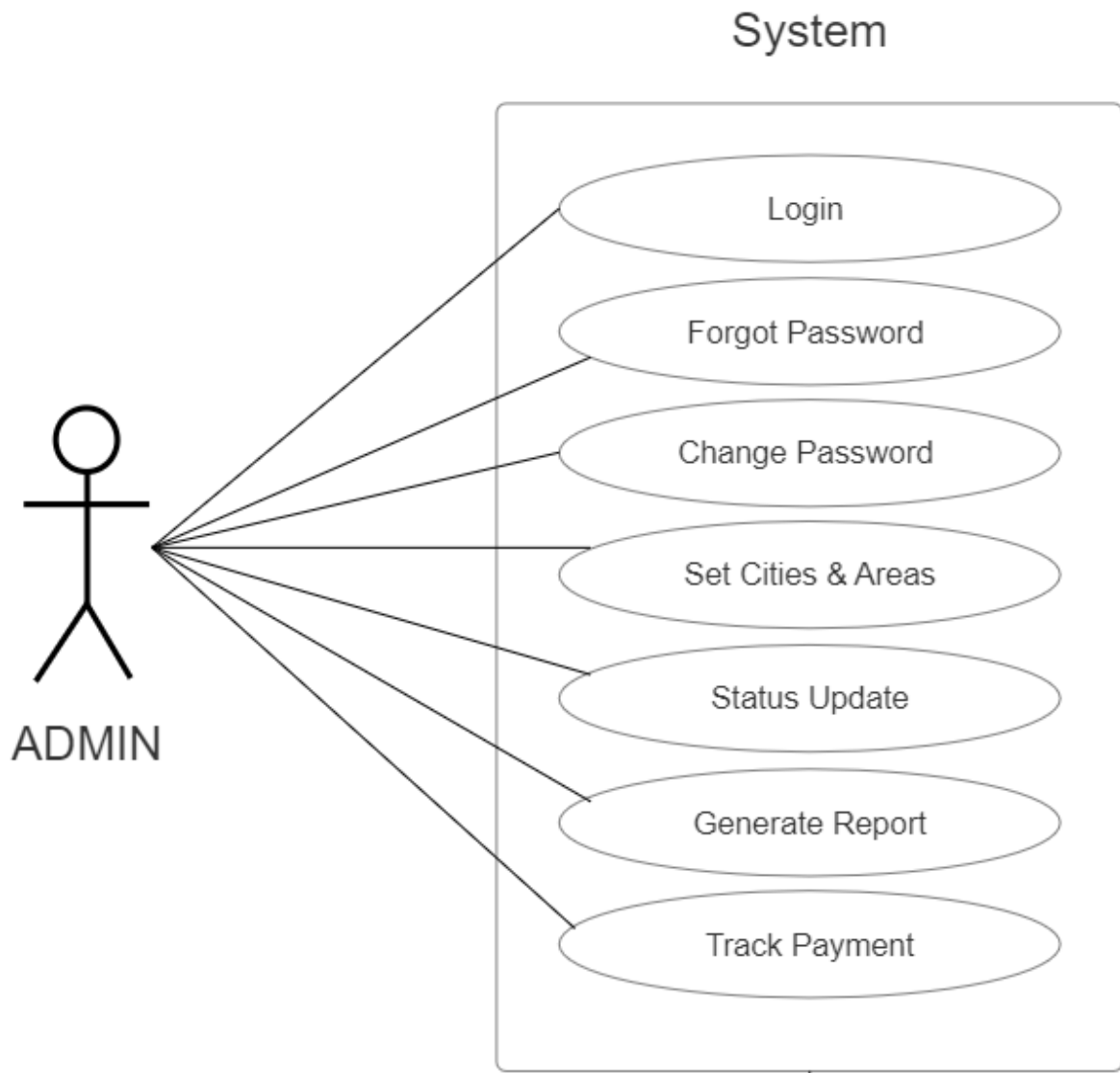
*Fig. Use case diagram for RENTER*

1. In Renter use case diagram Renter is the Actor.
2. Renter can handle following use cases:
  - a. Create Account
  - b. Login
  - c. Forgot Password
  - d. Change Password
  - e. Update Account
  - f. Search
  - g. Raised Request
  - h. Status
  - i. Pay Rent
  - j.

**Landlord:**

*Fig. Use case diagram for LANDLORD*

1. In Landlord use case diagram Landlord is the Actor.
2. Landlord can handle following use cases:
  - a. Create Account
  - b. Login
  - c. Forgot Password
  - d. Change Password
  - e. List
  - f. Update
  - g. View Request
  - h. Confirm Request
  - i. Track Payment
  - j. Remove Property

**Admin:**

***Fig. Use case diagram for ADMIN***

1. In Admin use case diagram Admin is the Actor.
2. Admin can handle following use cases:
  - a. Login
  - b. Forgot Password
  - c. Change Password
  - d. Set Cities & Areas
  - e. Status Update
  - f. Generate Report
  - g. Track Payment