

Lot Reservation System

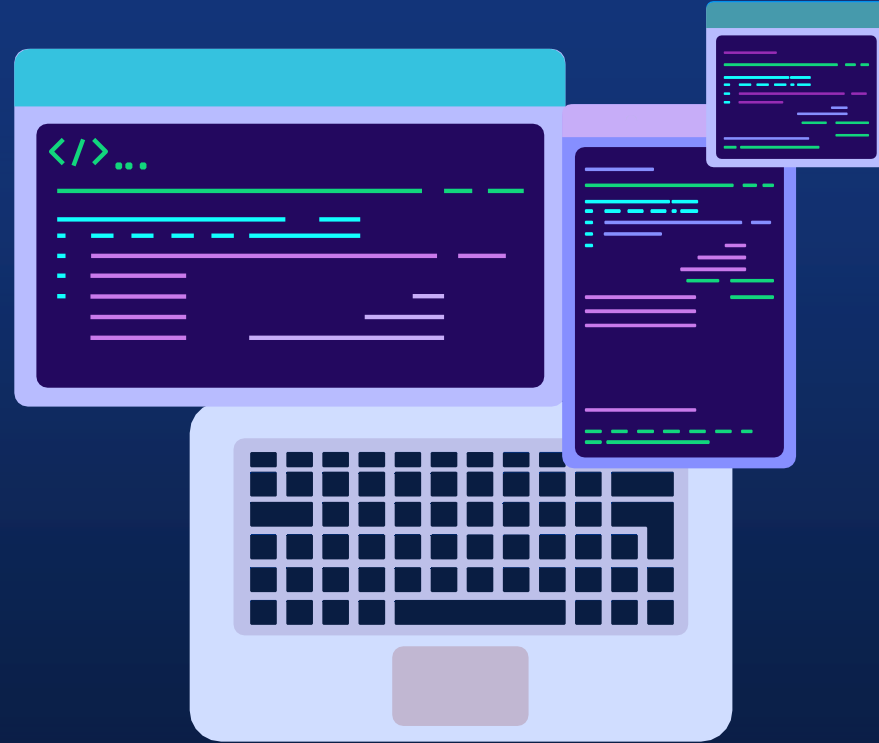
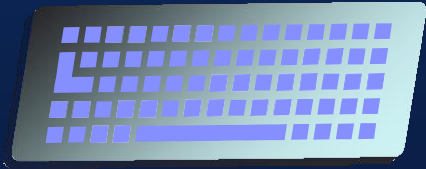


TABLE OF CONTENTS

01

Business Rules

02

Entity Relationship
Diagram

03

Flowchart

04

Database Design

05

Data Dictionary

06

CRUD Matrix

07

Wireframe

08

Database
Diagram





01

BUSINESS RULES



BUSINESS RULES

Users

- Clients must create an account to access the system.
- Each client must have a unique username and email address.
- Clients must provide a valid contact number and address.
- Clients must agree to the terms and conditions before making a reservation.
- Clients must send the reservation fee at the same time as the reservation request.
- Admins have full control over user management, lot listings, and reservation approvals.
- Admin will manually input the reservation fee for the system to track.

Lots

- Lots must be listed in the database before they can be reserved.
- Each lot must have a unique identifier and detailed information.
- Lots must have a valid price and status (Available, Reserved).
- Reserved lots will be marked as Reserved for other users.
- If a reservation expires, the lot will automatically become available again.

Reservations

- Reservations must be placed by a registered user.
- Reservations must have a valid status (Approved, Expired).
- All reservations require manual approval from an admin.
- If a reservation expires, the lot will return to "Available" status.



Payments

- Payments must be associated with a valid reservation.
- Payments must have a valid payment date.
- The amount paid must be equal to the total amount of the reservation.

Agent Commission

- Commission must be linked to an approved reservation.
- Commissions are processed only for approved reservations.

Notifications & Feedback

- Clients will receive email notifications for reservation updates.
- Clients can provide feedback on their reservation experience

Agent

- Agents assist before clients submit request/s.
- Agents receive a commission based on the reservation fee and the number of lots reserved.
- Agents cannot modify or approve reservations—only admins can approve reservations.
- An agent can handle multiple clients and reservations.



OBJECTIVES/PURPOSE

The Lot Reservation System is designed to digitize and streamline the process of reserving real estate properties, enhancing efficiency, accessibility, and transparency for agents and clients. The key objectives are:

- Provide a user-friendly platform for lot reservations.
- Enable real-time tracking of lot availability and status.
- Allow agents to assist clients in making reservations efficiently.
- Securely store transaction records and user data.
- Automate notifications for updates to the clients.
- Allow admins to manually review and approve reservations.



SCOPE

The Lot Reservation System encompasses the following features:

- **User Management:** Secure login and authentication for Admin, Agents, and Clients.
- **Reservation Process:** Clients can browse available lots, submit reservation requests, and receive confirmations.
- **Payment & Agent Commission Tracking:** The system records payments and monitors agent's commissions.
- **Notifications & Updates:** Clients receive automated email alerts for reservation updates.
- **Admin Dashboard:** A centralized interface for managing users, reservations, and settings.
- **Feedback:** Clients can submit feedback and receive updates on new lot listings.

LIMITATIONS

Despite its features, the system has the following limitations:

- **No Direct Payment Processing:** The system will track payments but will not process financial transactions (e.g., credit card or bank transfers).
- **Limited Property Types:** Initially, only lot reservations are supported, excluding houses, condominiums, and commercial properties.
- **Internet Dependency:** Users need an active internet connection to access the system.
- **Manual Approval Required:** Reservations require manual approval by admins before confirmation.
- **No Legal Documentation Handling:** The system does not generate legal contracts or manage notarization process

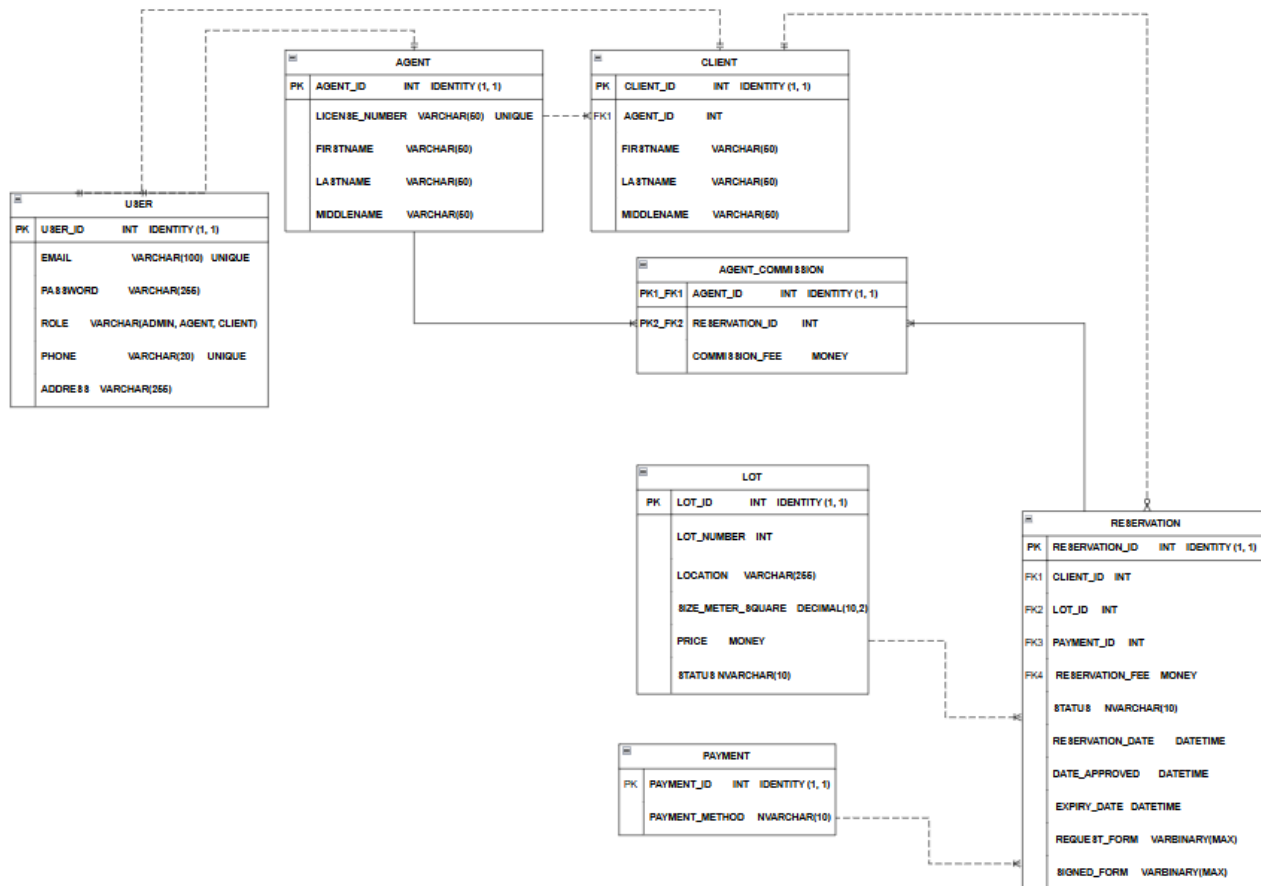


02

ENTITY
RELATIONSHIP
DIAGRAM (ERD)



ERD



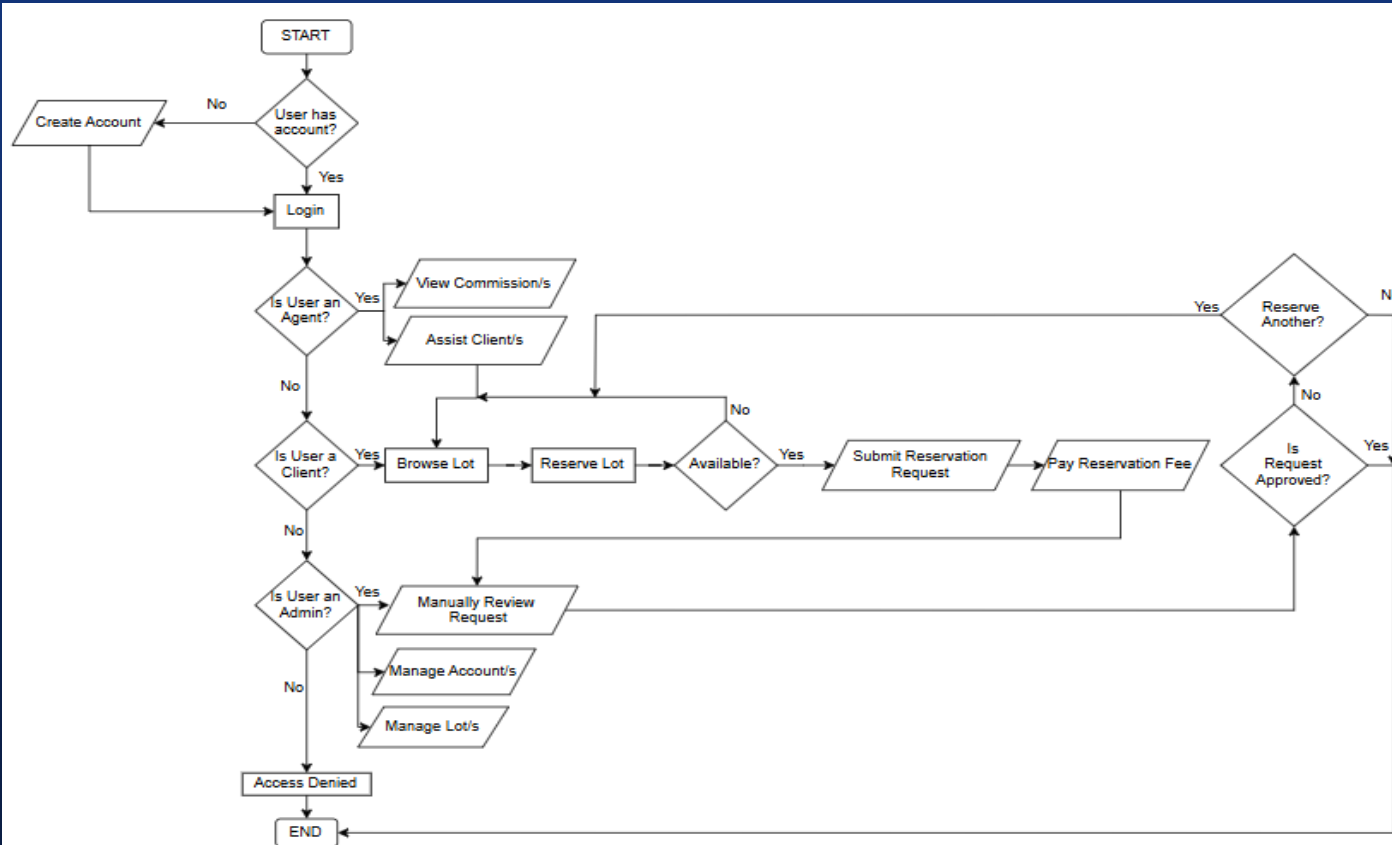


03

FLOWCHART



FLOWCHART





04

DATABASE DESIGN



DATABASE DESIGN




```
CREATE TABLE USER (  
  USER_ID INT IDENTITY (1,1) PRIMARY KEY, EMAIL  
  VARCHAR (100) UNIQUE NOT NULL, -  
  Required,Unique  
  PASSWORD VARCHAR (255) NOT NULL, -- Required  
  ROLE VARCHAR (10) CHECK (ROLE IN ('ADMIN', 'AGENT', 'CLIENT')) NOT NULL, -- Required, Limited to predefined roles  
  PHONE VARCHAR (20) UNIQUE NOT NULL, -- Required, Unique  
  ADDRESS VARCHAR (255) NULL -- Optional );  
);
```

```
CREATE TABLE AGENT (  
  AGENT_ID INT IDENTITY (1,1) PRIMARY KEY,  
  FIRSTNAME VARCHAR (50) NOT NULL, -- Required  
  LASTNAME VARCHAR (50) NOT NULL, -- Required  
  MIDDLENAME VARCHAR (50) NULL, -- Optional  
  LICENSE_NUMBER VARCHAR (50) UNIQUE NOT NULL, -- Required, Unique  
  FOREIGN KEY (USER_ID) REFERENCES USER(USER_ID) ON DELETE CASCADE  
);
```

```
CREATE TABLE CLIENT (  
  CLIENT_ID INT IDENTITY (1,1) PRIMARY KEY,  
  AGENT_ID INT NULL, -- Optional (A client may or may not have an agent)  
  FIRSTNAME VARCHAR (50) NOT NULL, -- Required  
  LASTNAME VARCHAR (50) NOT NULL, -- Required  
  MIDDLENAME VARCHAR (50) NULL, -- Optional  
  FOREIGN KEY (USER_ID) REFERENCES USER(USER_ID) ON DELETE CASCADE,  
  FOREIGN KEY (AGENT_ID) REFERENCES AGENT(AGENT_ID) ON DELETE SET NULL  
);
```









```
CREATE TABLE LOT (  
    LOT_ID INT IDENTITY (1,1) PRIMARY KEY,  
    LOT_NUMBER VARCHAR (50) NOT NULL, -- Required  
    LOCATION VARCHAR (255) NOT NULL, -- Required  
    SIZE_METER_SQUARE DECIMAL (10,2) NOT NULL, -- Required  
    PRICE MONEY NOT NULL, -- Required  
    STATUS NVARCHAR (10) CHECK NOT NULL -- Required, Limited to specific statuses  
);
```

```
CREATE TABLE PAYMENT (  
    PAYMENT_ID INT IDENTITY (1,1) PRIMARY KEY,  
    PAYMENT_METHOD NVARCHAR (10) CHECK (PAYMENT_METHOD IN ('Cash', 'Credit')) NOT NULL - - Required  
);
```

```
CREATE TABLE RESERVATION (  
    RESERVATION_ID INT IDENTITY (1,1) PRIMARY KEY,  
    CLIENT_ID INT NOT NULL, -- Required  
    LOT_ID INT NOT NULL, -- Required  
    PAYMENT_ID INT NOT NULL, -- Required  
    RESERVATION_FEE MONEY NOT NULL, -- Required  
    STATUS NVARCHAR (10) CHECK (STATUS IN ('Approved', 'Expired')) NOT NULL, -- Required  
    RESERVATION_DATE DATETIME NOT NULL DEFAULT GETDATE (), -- Required, Auto-set current date  
    DATE_APPROVED DATETIME NULL, -- Optional  
    EXPIRY_DATE DATETIME NULL, -- Optional  
    REQUEST_FORM VARBINARY(MAX) NULL,  
    SIGNED_FORM VARBINARY(MAX) NULL,  
    FOREIGN KEY (CLIENT_ID) REFERENCES CLIENT(CLIENT_ID) ON DELETE CASCADE,  
    FOREIGN KEY (LOT_ID) REFERENCES LOT(LOT_ID) ON DELETE CASCADE,  
    FOREIGN KEY (PAYMENT_ID) REFERENCES PAYMENT(PAYMENT_ID) ON DELETE CASCADE  
);
```





```
CREATE TABLE AGENT_COMMISSION (  
  AGENT_ID INT NOT NULL,  
  RESERVATION_ID INT NOT NULL,  
  COMMISSION_FEE MONEY NOT NULL, -- Required  
  PRIMARY KEY (AGENT_ID, RESERVATION_ID),  
  FOREIGN KEY (AGENT_ID) REFERENCES AGENT(AGENT_ID) ON DELETE CASCADE,  
  FOREIGN KEY (RESERVATION_ID) REFERENCES RESERVATION(RESERVATION_ID) ON DELETE CASCADE  
);
```



05

DATA
DICTIONARY



DATA DICTIONARY

For User

| TABLE NAME | ATTRIBUTE NAME | CONTENTS | TYPE | FORMAT | RANGE | REQUIRES | PK OR FK | FK REFERENCE |
|------------|----------------|-------------------|---------|----------------------|-------|----------|----------|--------------|
| USER | USER_ID | User ID | INT | 99999999 | - | - | PK | - |
| | EMAIL | User Email | VARCHAR | <u>Xxxxx@xxx.com</u> | 100 | Y | UNIQUE | - |
| | PASSWORD | User Password | VARCHAR | Xxxxxxx | 255 | Y | - | - |
| | PHONE | User Phone Number | VARCHAR | 99999999 | 20 | Y | UNIQUE | - |
| | ROLE | User Role | VARCHAR | Xxxxxxx | 10 | Y | - | - |
| | ADDRES | Client Address | VARCHAR | Xxxxxxx | 255 | Y | - | - |

For Client

| TABLE NAME | ATTRIBUTE NAME | CONTENTS | TYPE | FORMAT | RANGE | REQUIRES | PK OR FK | FK REFERENCE |
|------------|----------------|------------------|---------|----------|-------|----------|----------|-----------------|
| CLIENT | CLIENT_ID | Client ID | INT | 99999999 | - | - | PK | USER(USER_ID) |
| | AGENT_ID | Agent ID | INT | 99999999 | - | N | FK | AGENT(AGENT_ID) |
| | FIRSTNAME | User First Name | VARCHAR | Xxxxxxx | 50 | N | | |
| | LASTNAME | User Last Name | VARCHAR | Xxxxxxx | 50 | N | | |
| | MIDDLENAME | User Middle Name | VARCHAR | Xxxxxxx | 50 | N | | |

For Agent

| TABLE NAME | ATTRIBUTE NAME | CONTENTS | TYPE | FORMAT | RANGE | REQUIRES | PK OR FK | FK REFERENCE |
|------------|----------------|------------------|---------|-----------|-------|----------|----------|--------------|
| AGENT | AGENT_ID | Agent ID | INT | 99999999 | - | - | PK | |
| | LICENSE_NUMBER | License Number | VARCHAR | Xxxxxxxxx | 50 | Y | UNIQUE | - |
| | FIRSTNAME | User First Name | VARCHAR | Xxxxxxx | 50 | N | | |
| | LASTNAME | User Last Name | VARCHAR | Xxxxxxx | 50 | N | | |
| | MIDDLENAME | User Middle Name | VARCHAR | Xxxxxxx | 50 | N | | |

For Lot

| TABLE NAME | ATTRIBUTE NAME | CONTENTS | TYPE | FORMAT | RANGE | REQUIRES | PK OR FK | FK REFERENCE |
|------------|-------------------|------------------------|---------------|-----------------------------|-------|---------------------|----------|--------------|
| LOT | LOT_ID | Lot ID | INT | 99999999 | - | - | PK | - |
| | LOT_NUMBER | Lot Number | VARCHAR | Xxxxxxxx | 50 | Y | UNIQUE | - |
| | LOCATION | Lot Location | VARCHAR | Xxxxxxxx | 255 | Y | - | - |
| | SIZE_METER_SQUARE | Lot Size (sqm) | DECIMAL(10,2) | 99999999.99 | - | Y | - | - |
| | PRICE | Lot Price | Money | 99999999.99 | - | Y | - | - |
| | STATUS | Lot Status | NVARCHAR | Reserved/Sold/ Available | 10 | Y | - | - |
| | STATUS | Notification Status | VARCHAR | Xxxxxxx | 20 | Y(Default:'Unread') | - | - |

For Reservation

| TABLE NAME | ATTRIBUTE NAME | CONTENTS | TYPE | FORMAT | RANGE | REQUIRES | PK OR FK | FK REFERENCE |
|-------------|-----------------|--------------------------|-----------|-----------------------------|-------|----------|----------|---------------------|
| RESERVATION | RESERVATION_ID | Reservation ID | INT | 99999999 | - | - | PK | - |
| | CLIENT_ID | Client ID (Reference) | INT | 99999999 | - | Y | FK | CLIENT(CLIENT_ID) |
| | Payment_ID | payment ID | INT | 99999999 | - | Y | - | PAYMENT(PAYMENT_ID) |
| | LOT_ID | Lot ID (reference) | INT | 99999999 | - | Y | FK | LOT(LOT_ID) |
| | STATUS | Reservation Status | NVARCHAR | Approved/Expired | 10 | Y | - | - |
| | Reservation_FEE | Reservation fee | Money | 99999999.99 | - | Y | - | - |
| | DATE_APPROVED | Date Approved | DATETIME | YYYY-MM-DD HH:MM:SS | - | N | - | - |
| | EXPIRY_DATE | Expiry Date | DATETIME | YYYY-MM-DD HH:MM:SS | - | N | - | - |
| | REQUEST_FORM | Request Form(Binary) | VARBINARY | File Data(PDF, Image) | MAX | N | - | - |
| | SIGNED_FORM | Sign Form(Binary) | VARBINARY | File Data(PDF, Image) | MAX | N | - | - |

For Payment

| TABLE NAME | ATTRIBUTE NAME | CONTENTS | TYPE | FORMAT | RANGE | REQUIRES | PK OR FK | FK REFERENCE |
|------------|----------------|----------------|----------|-----------|-------|----------|----------|--------------|
| PAYMENT | PAYMENT_ID | Payment ID | INT | 999999999 | - | - | PK | - |
| | PAYMENT_METHOD | Payment Method | NVARCHAR | Cash/Card | 10 | Y | - | - |

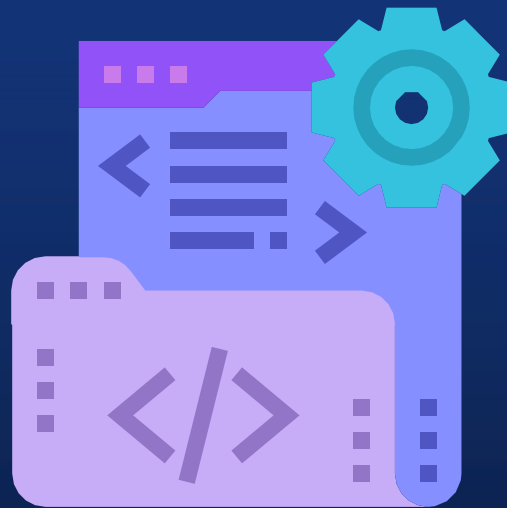
For Agent Commission

| TABLE NAME | ATTRIBUTE NAME | CONTENTS | TYPE | FORMAT | RANGE | REQUIRES | PK OR FK | FK REFERENCE |
|------------------|----------------|----------------|-------|------------|-------|----------|----------|-----------------------------|
| AGENT COMMISSION | AGENT_ID | AGENT ID | INT | 999999999 | - | - | PK,FK | AGENT(AGENT_ID) |
| | RESERVATION_ID | RESERVATION ID | INT | 999999999 | - | Y | FK,PK | RESERVATION(RESERVATION_ID) |
| | COMMISSION_FEE | COMMISSION FEE | Money | 99999999.9 | - | y | FK | - |



06

CRUD
MATRIX



CRUD MATRIX

| FUNCTIONALITIES | CREATE | READ | UPDATE | DELETE |
|------------------------------------|--------|------|--------|--------|
| user account | ✓ | ✓ | ✓ | |
| user log In | | ✓ | | |
| agent profile | | ✓ | ✓ | |
| assign role (admin, client, agent) | | ✓ | ✓ | |
| assign to client | | ✓ | ✓ | |
| view agent details | | ✓ | | |
| client registration | ✓ | ✓ | ✓ | |
| update client profile | | ✓ | ✓ | |
| view client details | | ✓ | | |
| update lot information | | ✓ | ✓ | |
| request form submission | ✓ | ✓ | | |
| signed form submission | ✓ | ✓ | | |

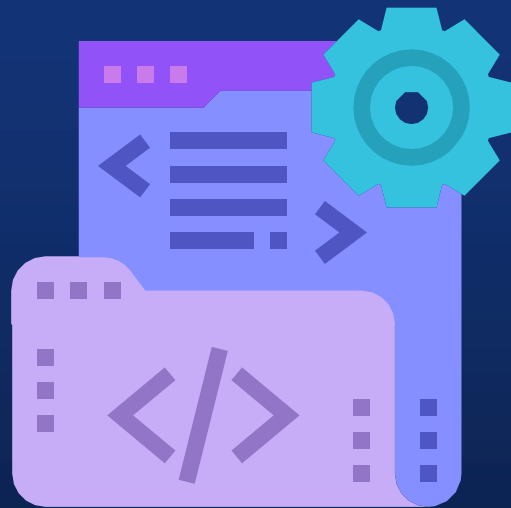
| FUNCTIONALITIES | CREATE | READ | UPDATE | DELETE |
|----------------------|--------|------|--------|--------|
| View available lots | | ✓ | | |
| Lot status | | ✓ | | |
| Payment method | | ✓ | ✓ | |
| View payment records | | ✓ | ✓ | |
| Approve reservation | | ✓ | | |
| Track reservation | | ✓ | | |
| Agent commission | ✓ | ✓ | ✓ | |





07

WIREFRAME



Client

Login

WELCOME!

Lot Reservation System

LOGIN

Email

Password

[Log In](#)

[Create Account](#)

Create Account

Create Account

Firstname Middlename

Lastname Role

Email Agent

Address Admin

Password


Phone

[Sign Up](#)


WELCOME!

Lot Reservation System

Home


 User

HomeLotsReservationsPayments




Welcome to Lot Reservation System!


Recommended For You




Lot Number: 9 Size: 150 sqm
Location: City A
Status: Available
[View](#)



Lot Number: 13 Size: 250 sqm
Location: City B
Status: Available
[View](#)




Lot Number: 28 Size: 350 sqm
Location: City C
Status: Available
[View](#)



Lot Number: 21 Size: 450 sqm
Location: City D
Status: Available
[View](#)

Lots

 User

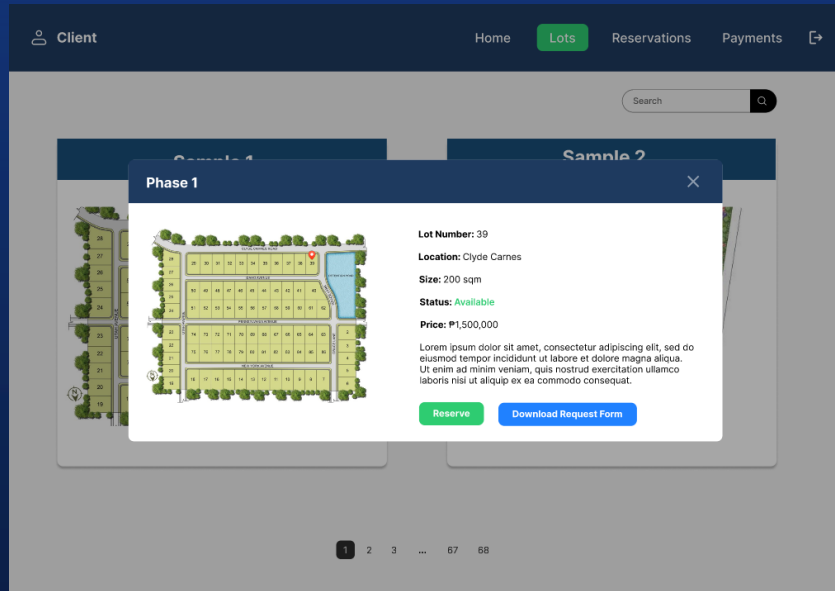
HomeLotsReservationsPayments

Sample 1

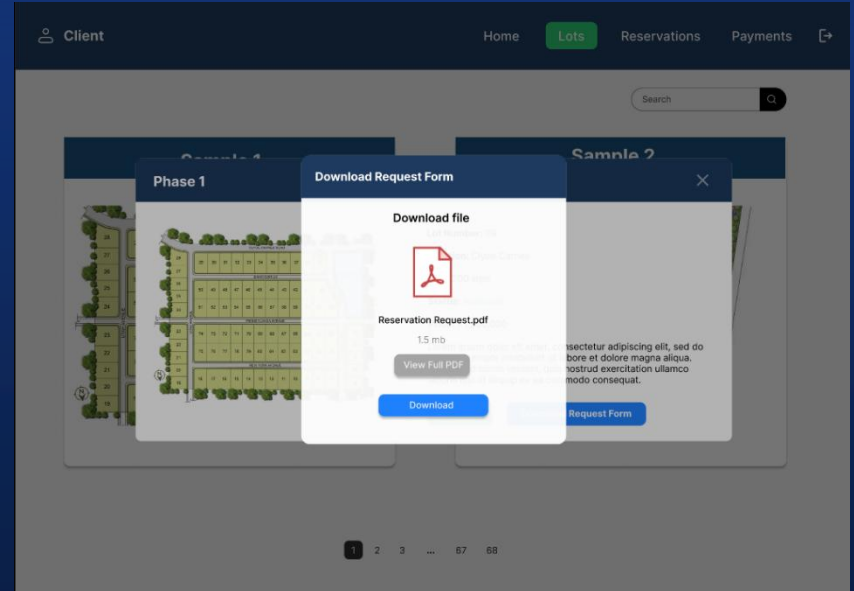
Sample 2

1 2 3 ... 67 68

Select a Lot



Download Request Form



Send Reservation Request

Client Home Lots Reservations Payments

Search

Phase 1

Reservation Request

Reservation Fee Payment

Reservation Fee: ₦2,500.00

Payment Method: Select

Upload Reservation Request

Drop & Drop files here or click to upload

Reservation Request.pdf

Confirm Cancel

Reservation

User Home Lots Reservations Payments

My Reservations

| Lot Reserved | Reservation Date | Status | Date Approved | Expiry Date | Actions |
|--------------|-------------------|----------|----------------|----------------|----------------------|
| Lot 5 | March 15, 2025 | Approved | March 16, 2025 | April 15, 2025 | View |
| Lot 10 | March 10, 2025 | Approved | March 12, 2025 | April 11, 2025 | View |
| Lot 22 | March 5, 2025 | Approved | March 19, 2025 | April 18, 2025 | View |
| Lot 8 | March 1, 2025 | Approved | March 26, 2025 | April 25, 2025 | View |
| Lot 15 | February 21, 2025 | Expired | - | - | View |

View Reservation

User

HomeLotsReservationsPayments

My Reservations

| Lot Reserved | Reservation Date | Reservation Status |
|--------------|-------------------|--------------------|
| Lot 5 | March 15, 2025 | Approved |
| Lot 10 | March 10, 2025 | Pending |
| Lot 22 | March 5, 2025 | Cancelled |
| Lot 8 | March 1, 2025 | Approved |
| Lot 15 | February 28, 2025 | Pending |

Reservation Details

Fullname

John Doe

Phone No.

123456789

Email

john@email.com

Address

123 St. Maryland

Lot Number

Lot 5

Size

150 sqm

Reservation Date

March 20, 2025

Reservation Status

Approved

Payments

User

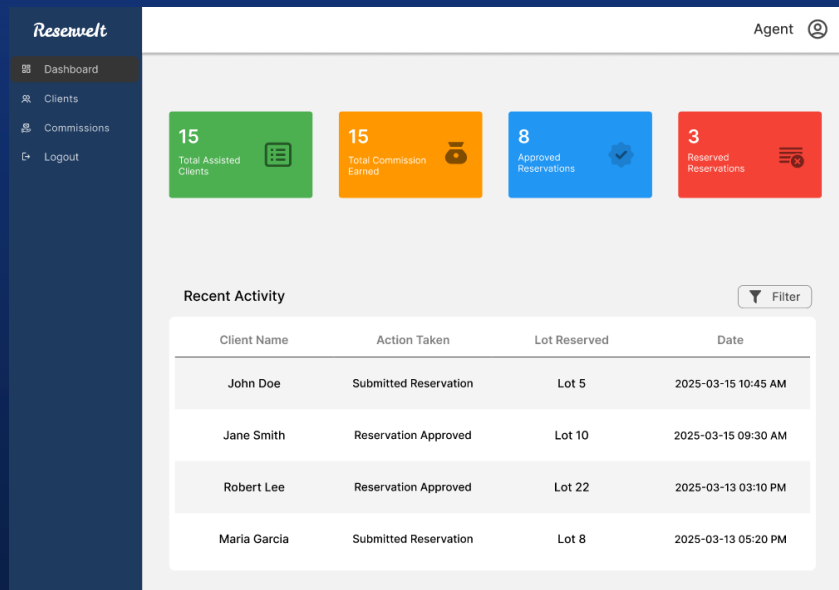
HomeLotsReservationsPayments

Payment History

| Lot Reserved | Payment Date | Amount Paid | Payment Method |
|--------------|----------------|-------------|----------------|
| Lot 6 | March 15, 2025 | ₱2,500.00 | Bank Transfer |
| Lot 11 | March 10, 2025 | ₱2,500.00 | Credit |
| Lot 23 | March 5, 2025 | ₱2,500.00 | GCash |

Agent

Dashboard



Clients

Reservelt Agent

Dashboard

- Clients
- Commissions
- Logout

| Client Name | Lot Reserved | Status | Date Reserved | Commission | Actions |
|-------------|--------------|----------|---------------|------------|----------------------|
| John Doe | Lot 5 | Approved | 2025-03-15 | ₱15,000 | View |
| Jane Smith | Lot 10 | Approved | 2025-03-16 | ₱18,000 | View |
| Robert Lee | Lot 22 | Expired | 2025-03-14 | ₱12,000 | View |

Commissions

Reservelt

Dashboard

Clients

Commissions

Logout

Agent

| Commissions | | | | |
|---|-----|-----------------|-----------------|-------------------|
| <div>Search <input type="text"/> Filter</div> | | | | |
| Client Name | Lot | Reservation Fee | Commission Rate | Earned Commission |
| John Doe | 5 | PHP 30,000 | 5% | PHP 1,500 |
| Jane Smith | 8 | PHP 25,000 | 5% | PHP 1,250 |
| Robert Lee | 2 | PHP 15,000 | 5% | PHP 750 |

View Client

Reservelt

Dashboard

Clients

Commissions

Logout

Agent

Client Name

John Doe

Jane Smith

Robert Lee

Reservation Details

Fullname

John Doe

Phone No.

123456789

Email

john@email.com

Address

123 St. Maryland

Lot Number

Lot 5

Size

150 sqm

Reservation Status

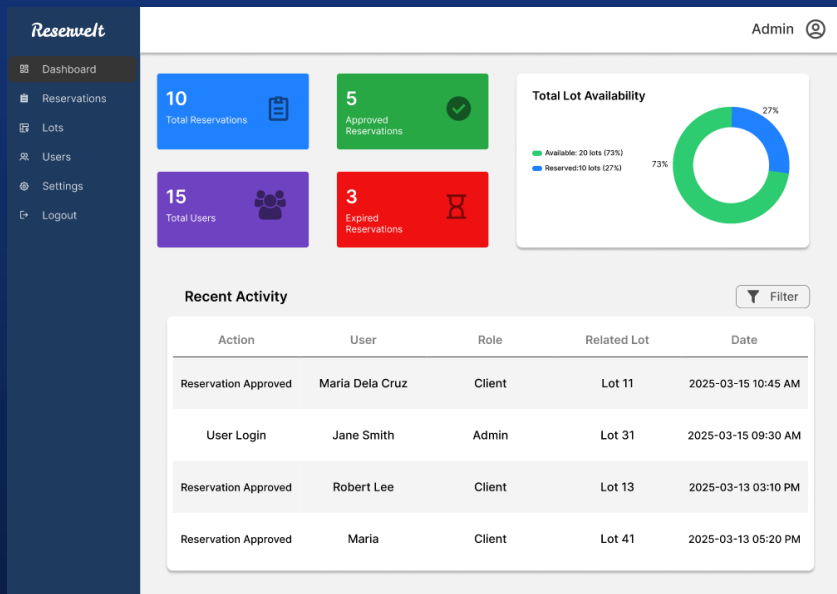
Approved

Reservation Date

2025-03-15

Admin

Dashboard



Reservations

Reservelt Admin

Dashboard

Reservations

Lots

Users

Settings

Logout

Reservations

Search

Filter

| Client Name | Lot Reserved | Date Requested | Expiry Date | Actions |
|----------------|------------------|----------------|-------------|----------------------|
| Juan Dela Cruz | Lot 101 (City A) | 2025-03-14 | 2025-04-14 | View |
| Maria Santos | Lot 103 (City C) | 2025-03-15 | 2025-04-15 | View |
| Alex Reyes | Lot 102 (City B) | 2025-03-16 | 2025-04-16 | View |

View Reservations

Reservelt

Dashboard

Reservations

Lots

Users

Payments

Settings

Logout

Admin

Reservation Details

Client Name : Juan Dela Cruz

Lot Reserved : Lot 101 (City A)

Date Requested : 2025-03-14

Expiry Date : 2025-04-14

Status : Approved

Download Request Form

Reservation Request.pdf

2025-03-14

2025-04-14

Upload Signed Form

Drop & Drop files here or click to upload

Uploaded File: signed_form.pdf

Upload

Payment Details

Payment Status : Paid

Payment Method : Cash

Filter

Actions

View

View

View

Lots

Reservelt

Dashboard

Reservations

Lots

Users

Settings

Logout

Admin

Map 1

Search

Filter

+ Add New Lot

| Lot Number | Location | Price | Size | Status | Actions |
|------------|----------|-------|---------|-----------|---------|
| 1 | City A | ₱1.5M | 150 sqm | Available | Edit |
| 2 | City B | ₱2.0M | 200 sqm | Available | Edit |
| 3 | City D | ₱1.8M | 180 sqm | Reserved | Edit |
| 4 | City E | ₱2.5M | 250 sqm | Available | Edit |
| 5 | City F | ₱1.5M | 150 sqm | Available | Edit |
| 6 | City G | ₱1.9M | 220 sqm | Available | Edit |
| 7 | City H | ₱1.1M | 190 sqm | Reserved | Edit |
| 8 | City I | ₱1.2M | 180 sqm | Reserved | Edit |
| 9 | City J | ₱2.5M | 210 sqm | Available | Edit |
| 10 | City K | ₱2.3M | 250 sqm | Reserved | Edit |

Users

Reservelt

Dashboard

Reservations

Lots

Users

Settings

Logout

Admin

Users

Search

Filter

| Name | Contact Info | Status | Role | Actions |
|----------------|------------------|----------|--------|-----------------|
| Juan Dela Cruz | juan@email.com | Active | Client | <div>View</div> |
| Maria Santos | maria@email.com | Inactive | Client | <div>View</div> |
| Alex Reyes | alex@email.com | Active | Agent | <div>View</div> |
| Jenny Lim | jenny@email.com | Active | Client | <div>View</div> |
| Robert Chua | robert@email.com | Inactive | Agent | <div>View</div> |

View Client

Reservelt

Dashboard

Reservations

Lots

Users

Settings

Logout

Admin

Users

Fullname

Juan Dela Cruz

Address

123 St. Maryland

Status

Active

Phone No.

123456789

User ID

1045

Email

juan@email.com

Agent

John Doe

Reservation History

| Lot Reserved | Reservation Date | Status | Expiry Date |
|--------------|------------------|----------|-------------|
| Lot 5 | 2025-03-10 | Approved | 2025-04-10 |
| Lot 12 | 2025-03-15 | Approved | 2025-04-15 |

View Agent

The screenshot shows the 'View Agent' modal for user Alex Reyes. The modal contains the following information:

- Fullname:** Alex Reyes
- License:** 09415345
- Phone No.:** 123456789
- Status:** Active
- Email:** alex@email.com
- Assigned Clients:**

| Client Name | Contact Info |
|----------------|-----------------|
| Juan Dela Cruz | juan@email.com |
| Maria Santos | maria@email.com |

The background shows the 'Users' table with columns for Name, License, and Actions. The 'Actions' column contains 'View' buttons for each user.

Settings

The screenshot shows the 'Settings' page with three main settings categories:

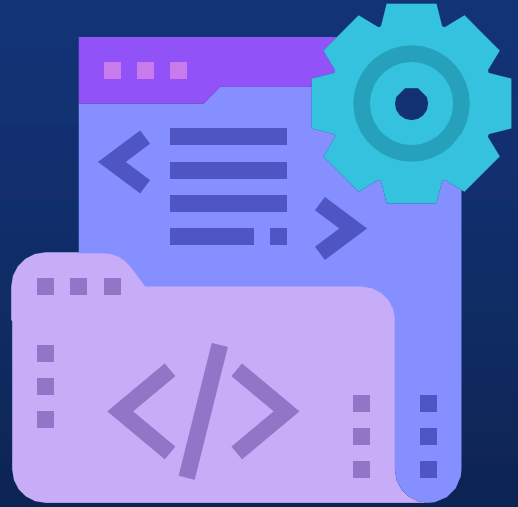
- Accounts Setting** (Icon: 4 squares)
- System Setting** (Icon: 4 squares)
- Security Setting** (Icon: Shield with lock)

The background shows the 'Settings' menu item selected in the sidebar.

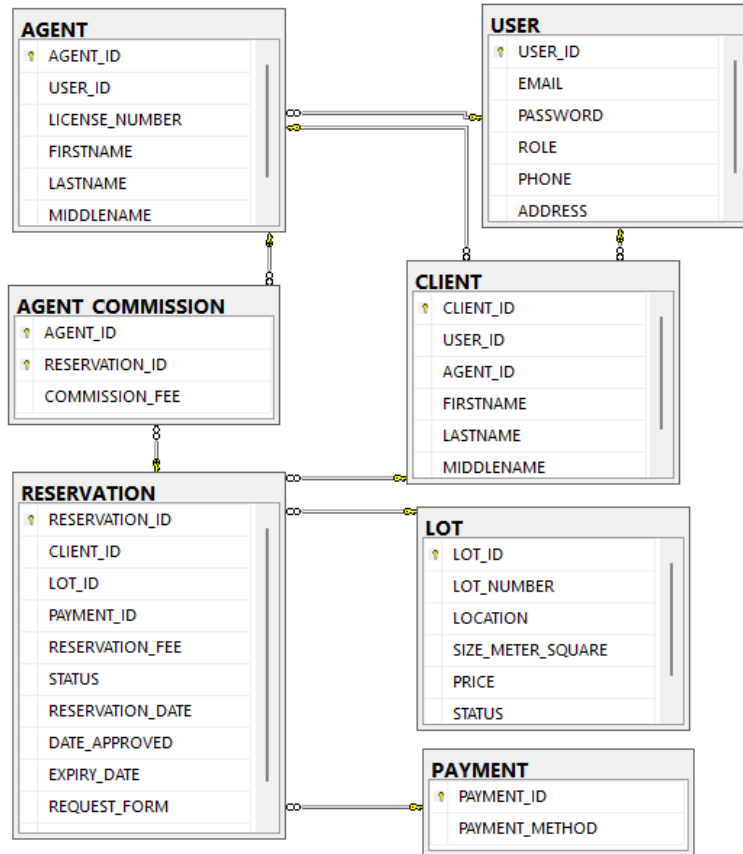


08

DATABASE DIAGRAM



Database Diagram



Group 1

John
Lester
Asenjo

Rafael Caballero

Marcelo Jr.
Cagara

Kim Dwight
Madula

Iris Tumakay

