# Real Estate Management System

A Database-Driven Solution for Property Management

Prepared By: Your Name

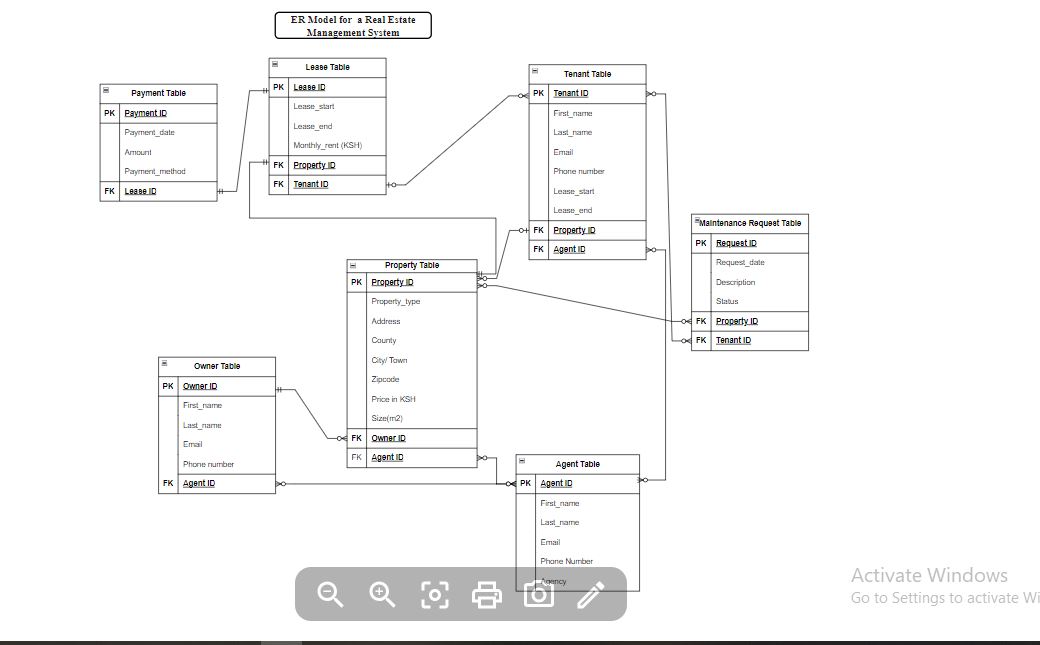
Date: [Insert Date]

## Introduction

# Real-Estate-Management-system  
Contains the database format for a real estate management system built using my sql

## ER Diagram

The following ER Diagram illustrates the relationships between the entities in the Real Estate Management System:



The diagram above shows the entities, their attributes, and the relationships between them, including primary and foreign key constraints.

## Database Schema

The following SQL scripts were used to define the database schema:

-- To add data to the agents table  
  
INSERT INTO agent (Agent\_id, Firstname, Lastname, Email, Phone, Agency) VALUES  
(1, 'David', 'Kamau', 'David.Kamau@gmail.com', '0712345678', 'Kikuyu Realty Ltd'),  
(2, 'John', 'Mwangi', 'John.Mwangi@gmail.com', '0723456789', 'Mwangi Properties'),  
(3, 'Grace', 'Njeri', 'Grace.Njeri@gmail.com', '0734567890', 'Grace Estates'),  
(4, 'James', 'Odinga', 'James.Odinga@gmail.com', '0745678901', 'Odinga Real Estate'),  
(5, 'Rose', 'Atieno', 'Rose.Atiens@gmail.com', '0756789012', 'Luo Heritage Realty'),  
(6, 'Peter', 'Ngugi', 'Peter.Ngugi@gmail.com', '0767890123', 'Ngugi & Sons Realty'),  
(7, 'Mary', 'Ochieng', 'Mary.Ochieng@gmail.com', '0778901234', 'Ochieng Premier Realty'),  
(8, 'Charles', 'Kiptoo', 'Charles.Kiptoo@gmail.com', '0789012345', 'Kalenjin Investments'),  
(9, 'Faith', 'Salma', 'Faith.Salma@gmail.com', '0790123456', 'Coastline Properties'),  
(10, 'Charity', 'Nabwire', 'Charity.Nabwire@gmail.com', '0701234567', 'Bunyasi Estates');  
  
-- To add data to the maintenance requests table  
  
INSERT INTO maintenance\_request (Request\_id, Request\_date, Description, Status, Property\_id, Tenant\_id) VALUES  
(1, '2024-01-15', 'Leaking faucet in the bathroom', 'Pending', 101, 1),  
(2, '2024-02-20', 'Broken window in the living room', 'Completed', 102, 2),  
(3, '2024-03-10', 'Clogged sink in the kitchen', 'Pending', 103, 3),  
(4, '2024-04-01', 'Air conditioning not working', 'In Progress', 104, 4),  
(5, '2024-05-05', 'Electricity outage in the building', 'Pending', 105, 5),  
(6, '2024-06-10', 'Pest infestation in the kitchen', 'Completed', 106, 6),  
(7, '2024-07-15', 'Broken door lock', 'In Progress', 107, 7),  
(8, '2024-08-01', 'Water heater malfunctioning', 'Completed', 108, 8),  
(9, '2024-09-10', 'Faulty plumbing in the bathroom', 'Pending', 109, 9),  
(10, '2024-10-05', 'Damaged floor tiles', 'In Progress', 110, 10);  
  
-- To add data to the lease table  
  
INSERT INTO lease (Lease\_id, Lease\_start, Lease\_end, Monthly\_rent, Property\_id, Tenant\_id) VALUES  
(1, '2024-01-01', '2025-01-01', 50000.00, 101, 1),  
(2, '2024-02-15', '2025-02-15', 70000.00, 102, 2),  
(3, '2024-03-01', '2025-03-01', 45000.00, 103, 3),  
(4, '2024-04-01', '2025-04-01', 60000.00, 104, 4),  
(5, '2024-05-10', '2025-05-10', 85000.00, 105, 5),  
(6, '2024-06-15', '2025-06-15', 30000.00, 106, 6),  
(7, '2024-07-01', '2025-07-01', 45000.00, 107, 7),  
(8, '2024-08-20', '2025-08-20', 75000.00, 108, 8),  
(9, '2024-09-05', '2025-09-05', 120000.00, 109, 9),  
(10, '2024-10-01', '2025-10-01', 65000.00, 110, 10);  
  
-- To add data to the owners table  
  
INSERT INTO owner (Owner\_id, Firstname, Lastname, Email, Phone\_number, Agent\_id) VALUES  
(1, 'James', 'Karanja', 'james.karanja@gmail.com', '0712345678', 1),  
(2, 'Wangari', 'Kamau', 'wangari.kamau@gmail.com', '0723456789', 2),  
(3, 'David', 'Ochieng', 'david.ochieng@gmail.com', '0734567890', 3),  
(4, 'Mary', 'Mwaniki', 'mary.mwaniki@gmail.com', '0745678901', 4),  
(5, 'Grace', 'Atieno', 'grace.atieno@gmail.com', '0756789012', 5),  
(6, 'Joseph', 'Mwangi', 'joseph.mwangi@gmail.com', '0767890123', 6),  
(7, 'Peter', 'Njiru', 'peter.njiru@gmail.com', '0778901234', 7),  
(8, 'Elizabeth', 'Mutiso', 'elizabeth.mutiso@gmail.com', '0789012345', 8),  
(9, 'Njeri', 'Gikonyo', 'njeri.gikonyo@gmail.com', '0790123456', 9),  
(10, 'John', 'Omondi', 'john.omondi@gmail.com', '0701234567', 10);  
  
-- To add data to the property table  
  
INSERT INTO property (Property\_id, Property\_type, Address, County, City, Price\_ksh, Owner\_id, Agent\_id, Zipcode, Size\_m2) VALUES  
(101, 'Apartment', '123 Riverside Drive', 'Nairobi', 'Nairobi', 50000.00, 1, 1, '00100', 120),  
(102, 'House', '456 Mountain Road', 'Nakuru', 'Nakuru', 70000.00, 2, 2, '20100', 250),  
(103, 'Apartment', '789 Lakeside Avenue', 'Kisumu', 'Kisumu', 45000.00, 3, 3, '40100', 100),  
(104, 'Townhouse', '101 Coastal Lane', 'Mombasa', 'Mombasa', 60000.00, 4, 4, '80100', 200),  
(105, 'Villa', '202 Beach Road', 'Kilifi', 'Kilifi', 85000.00, 5, 5, '90200', 350),  
(106, 'Studio', '303 High Street', 'Meru', 'Nanyuki', 30000.00, 6, 6, '60000', 50),  
(107, 'Condo', '404 Parkview Crescent', 'Machakos', 'Kangundo', 45000.00, 7, 7, '90100', 80),  
(108, 'Apartment', '505 Downtown Street', 'Nairobi', 'Nairobi', 75000.00, 8, 8, '11000', 150),  
(109, 'Mansion', '606 Forest View', 'Embu', 'Kiritiri', 120000.00, 9, 9, '70000', 500),  
(110, 'Bungalow', '707 Greenfield Road', 'Nyeri', 'Nyeri', 65000.00, 10, 10, '20000', 200);  
  
-- To add data to the tenants table  
  
INSERT INTO tenant (Tenant\_id, Firstname, Lastname, Email, Phone\_number, Lease\_start, Lease\_end, Property\_id, Agent\_id) VALUES  
(1, 'Peter', 'Njiru', 'peter.njiru@gmail.com', '0712345678', '2024-01-01', '2025-01-01', 101, 1),  
(2, 'Susan', 'Karanja', 'susan.karanja@gmail.com', '0723456789', '2024-02-15', '2025-02-15', 102, 2),  
(3, 'John', 'Ochieng', 'john.ochieng@gmail.com', '0734567890', '2024-03-01', '2025-03-01', 103, 3),  
(4, 'Mary', 'Omondi', 'mary.omondi@gmail.com', '0745678901', '2024-04-01', '2025-04-01', 104, 4),  
(5, 'Michael', 'Achieng', 'michael.achieng@gmail.com', '0756789012', '2024-05-10', '2025-05-10', 105, 5),  
(6, 'Elizabeth', 'Mutiso', 'elizabeth.mutiso@gmail.com', '0767890123', '2024-06-15', '2025-06-15', 106, 6),  
(7, 'Njeri', 'Gikonyo', 'njeri.gikonyo@gmail.com', '0778901234', '2024-07-01', '2025-07-01', 107, 7),  
(8, 'Robert', 'Kipchirchir', 'robert.kipchirchir@gmail.com', '0789012345', '2024-08-20', '2025-08-20', 108, 8),  
(9, 'Wangari', 'Nabwire', 'wangari.nabwire@gmail.com', '0790123456', '2024-09-05', '2025-09-05', 109, 9),  
(10, 'James', 'Wekesa', 'james.wekesa@gmail.com', '0701234567', '2024-10-01', '2025-10-01', 110, 10);  
  
-- To add data to the payments table  
  
INSERT INTO payment (Payment\_id, Payment\_date, Amount\_paid, Payment\_method, Lease\_id) VALUES  
(1, '2024-01-10', 50000.00, 'Bank Transfer', 1),  
(2, '2024-02-18', 70000.00, 'Mobile Payment', 2),  
(3, '2024-03-05', 45000.00, 'Cash', 3),  
(4, '2024-04-10', 60000.00, 'Cheque', 4),  
(5, '2024-05-15', 85000.00, 'Bank Transfer', 5),  
(6, '2024-06-20', 30000.00, 'Mobile Payment', 6),  
(7, '2024-07-05', 45000.00, 'Cash', 7),  
(8, '2024-08-15', 75000.00, 'Cheque', 8),  
(9, '2024-09-12', 120000.00, 'Bank Transfer', 9),  
(10, '2024-10-01', 65000.00, 'Mobile Payment', 10);  
  
-- MySQL dump 10.13 Distrib 8.0.40, for Win64 (x86\_64)  
--  
-- Host: 127.0.0.1 Database: realestate  
-- ------------------------------------------------------  
-- Server version 8.0.40  
  
/\*!40101 SET @OLD\_CHARACTER\_SET\_CLIENT=@@CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET @OLD\_CHARACTER\_SET\_RESULTS=@@CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET @OLD\_COLLATION\_CONNECTION=@@COLLATION\_CONNECTION \*/;  
/\*!50503 SET NAMES utf8 \*/;  
/\*!40103 SET @OLD\_TIME\_ZONE=@@TIME\_ZONE \*/;  
/\*!40103 SET TIME\_ZONE='+00:00' \*/;  
/\*!40014 SET @OLD\_UNIQUE\_CHECKS=@@UNIQUE\_CHECKS, UNIQUE\_CHECKS=0 \*/;  
/\*!40014 SET @OLD\_FOREIGN\_KEY\_CHECKS=@@FOREIGN\_KEY\_CHECKS, FOREIGN\_KEY\_CHECKS=0 \*/;  
/\*!40101 SET @OLD\_SQL\_MODE=@@SQL\_MODE, SQL\_MODE='NO\_AUTO\_VALUE\_ON\_ZERO' \*/;  
/\*!40111 SET @OLD\_SQL\_NOTES=@@SQL\_NOTES, SQL\_NOTES=0 \*/;  
  
--  
-- Table structure for table `owner`  
--  
  
DROP TABLE IF EXISTS `owner`;  
/\*!40101 SET @saved\_cs\_client = @@character\_set\_client \*/;  
/\*!50503 SET character\_set\_client = utf8mb4 \*/;  
CREATE TABLE `owner` (  
 `Owner\_id` int NOT NULL,  
 `Firstname` varchar(100) NOT NULL,  
 `Lastname` varchar(100) NOT NULL,  
 `Email` varchar(100) NOT NULL,  
 `Phone\_number` varchar(15) DEFAULT NULL,  
 `Agent\_id` int DEFAULT NULL,  
 PRIMARY KEY (`Owner\_id`),  
 KEY `fk\_agent` (`Agent\_id`),  
 CONSTRAINT `fk\_agent` FOREIGN KEY (`Agent\_id`) REFERENCES `agent` (`Agent\_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;  
  
--  
-- Dumping data for table `owner`  
--  
  
LOCK TABLES `owner` WRITE;  
/\*!40000 ALTER TABLE `owner` DISABLE KEYS \*/;  
/\*!40000 ALTER TABLE `owner` ENABLE KEYS \*/;  
UNLOCK TABLES;  
/\*!40103 SET TIME\_ZONE=@OLD\_TIME\_ZONE \*/;  
  
/\*!40101 SET SQL\_MODE=@OLD\_SQL\_MODE \*/;  
/\*!40014 SET FOREIGN\_KEY\_CHECKS=@OLD\_FOREIGN\_KEY\_CHECKS \*/;  
/\*!40014 SET UNIQUE\_CHECKS=@OLD\_UNIQUE\_CHECKS \*/;  
/\*!40101 SET CHARACTER\_SET\_CLIENT=@OLD\_CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET CHARACTER\_SET\_RESULTS=@OLD\_CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET COLLATION\_CONNECTION=@OLD\_COLLATION\_CONNECTION \*/;  
/\*!40111 SET SQL\_NOTES=@OLD\_SQL\_NOTES \*/;  
  
-- Dump completed on 2024-11-01 14:55:57  
  
-- MySQL dump 10.13 Distrib 8.0.40, for Win64 (x86\_64)  
--  
-- Host: 127.0.0.1 Database: realestate  
-- ------------------------------------------------------  
-- Server version 8.0.40  
  
/\*!40101 SET @OLD\_CHARACTER\_SET\_CLIENT=@@CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET @OLD\_CHARACTER\_SET\_RESULTS=@@CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET @OLD\_COLLATION\_CONNECTION=@@COLLATION\_CONNECTION \*/;  
/\*!50503 SET NAMES utf8 \*/;  
/\*!40103 SET @OLD\_TIME\_ZONE=@@TIME\_ZONE \*/;  
/\*!40103 SET TIME\_ZONE='+00:00' \*/;  
/\*!40014 SET @OLD\_UNIQUE\_CHECKS=@@UNIQUE\_CHECKS, UNIQUE\_CHECKS=0 \*/;  
/\*!40014 SET @OLD\_FOREIGN\_KEY\_CHECKS=@@FOREIGN\_KEY\_CHECKS, FOREIGN\_KEY\_CHECKS=0 \*/;  
/\*!40101 SET @OLD\_SQL\_MODE=@@SQL\_MODE, SQL\_MODE='NO\_AUTO\_VALUE\_ON\_ZERO' \*/;  
/\*!40111 SET @OLD\_SQL\_NOTES=@@SQL\_NOTES, SQL\_NOTES=0 \*/;  
  
--  
-- Table structure for table `payment`  
--  
  
DROP TABLE IF EXISTS `payment`;  
/\*!40101 SET @saved\_cs\_client = @@character\_set\_client \*/;  
/\*!50503 SET character\_set\_client = utf8mb4 \*/;  
CREATE TABLE `payment` (  
 `Payment\_id` int NOT NULL,  
 `Payment\_date` date DEFAULT NULL,  
 `Amount\_paid` decimal(10,2) DEFAULT NULL,  
 `Payment\_method` varchar(50) DEFAULT NULL,  
 `Lease\_id` int DEFAULT NULL,  
 PRIMARY KEY (`Payment\_id`),  
 KEY `Lease\_id` (`Lease\_id`),  
 CONSTRAINT `payment\_ibfk\_1` FOREIGN KEY (`Lease\_id`) REFERENCES `lease` (`Lease\_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;  
  
--  
-- Dumping data for table `payment`  
--  
  
LOCK TABLES `payment` WRITE;  
/\*!40000 ALTER TABLE `payment` DISABLE KEYS \*/;  
/\*!40000 ALTER TABLE `payment` ENABLE KEYS \*/;  
UNLOCK TABLES;  
/\*!40103 SET TIME\_ZONE=@OLD\_TIME\_ZONE \*/;  
  
/\*!40101 SET SQL\_MODE=@OLD\_SQL\_MODE \*/;  
/\*!40014 SET FOREIGN\_KEY\_CHECKS=@OLD\_FOREIGN\_KEY\_CHECKS \*/;  
/\*!40014 SET UNIQUE\_CHECKS=@OLD\_UNIQUE\_CHECKS \*/;  
/\*!40101 SET CHARACTER\_SET\_CLIENT=@OLD\_CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET CHARACTER\_SET\_RESULTS=@OLD\_CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET COLLATION\_CONNECTION=@OLD\_COLLATION\_CONNECTION \*/;  
/\*!40111 SET SQL\_NOTES=@OLD\_SQL\_NOTES \*/;  
  
-- Dump completed on 2024-11-01 14:55:58  
  
-- MySQL dump 10.13 Distrib 8.0.40, for Win64 (x86\_64)  
--  
-- Host: 127.0.0.1 Database: realestate  
-- ------------------------------------------------------  
-- Server version 8.0.40  
  
/\*!40101 SET @OLD\_CHARACTER\_SET\_CLIENT=@@CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET @OLD\_CHARACTER\_SET\_RESULTS=@@CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET @OLD\_COLLATION\_CONNECTION=@@COLLATION\_CONNECTION \*/;  
/\*!50503 SET NAMES utf8 \*/;  
/\*!40103 SET @OLD\_TIME\_ZONE=@@TIME\_ZONE \*/;  
/\*!40103 SET TIME\_ZONE='+00:00' \*/;  
/\*!40014 SET @OLD\_UNIQUE\_CHECKS=@@UNIQUE\_CHECKS, UNIQUE\_CHECKS=0 \*/;  
/\*!40014 SET @OLD\_FOREIGN\_KEY\_CHECKS=@@FOREIGN\_KEY\_CHECKS, FOREIGN\_KEY\_CHECKS=0 \*/;  
/\*!40101 SET @OLD\_SQL\_MODE=@@SQL\_MODE, SQL\_MODE='NO\_AUTO\_VALUE\_ON\_ZERO' \*/;  
/\*!40111 SET @OLD\_SQL\_NOTES=@@SQL\_NOTES, SQL\_NOTES=0 \*/;  
  
--  
-- Table structure for table `property`  
--  
  
DROP TABLE IF EXISTS `property`;  
/\*!40101 SET @saved\_cs\_client = @@character\_set\_client \*/;  
/\*!50503 SET character\_set\_client = utf8mb4 \*/;  
CREATE TABLE `property` (  
 `Property\_id` int NOT NULL,  
 `Property\_type` varchar(50) DEFAULT NULL,  
 `Address` varchar(255) NOT NULL,  
 `County` varchar(100) NOT NULL,  
 `City` varchar(100) NOT NULL,  
 `Price\_ksh` decimal(10,2) DEFAULT NULL,  
 `Owner\_id` int DEFAULT NULL,  
 `Agent\_id` int DEFAULT NULL,  
 `Zipcode` varchar(100) DEFAULT NULL,  
 `Size\_m2` int DEFAULT NULL,  
 PRIMARY KEY (`Property\_id`),  
 KEY `Owner\_id` (`Owner\_id`),  
 KEY `Agent\_id` (`Agent\_id`),  
 CONSTRAINT `Agent\_id` FOREIGN KEY (`Agent\_id`) REFERENCES `agent` (`Agent\_id`),  
 CONSTRAINT `property\_ibfk\_1` FOREIGN KEY (`Owner\_id`) REFERENCES `owner` (`Owner\_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;  
  
--  
-- Dumping data for table `property`  
--  
  
LOCK TABLES `property` WRITE;  
/\*!40000 ALTER TABLE `property` DISABLE KEYS \*/;  
/\*!40000 ALTER TABLE `property` ENABLE KEYS \*/;  
UNLOCK TABLES;  
/\*!40103 SET TIME\_ZONE=@OLD\_TIME\_ZONE \*/;  
  
/\*!40101 SET SQL\_MODE=@OLD\_SQL\_MODE \*/;  
/\*!40014 SET FOREIGN\_KEY\_CHECKS=@OLD\_FOREIGN\_KEY\_CHECKS \*/;  
/\*!40014 SET UNIQUE\_CHECKS=@OLD\_UNIQUE\_CHECKS \*/;  
/\*!40101 SET CHARACTER\_SET\_CLIENT=@OLD\_CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET CHARACTER\_SET\_RESULTS=@OLD\_CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET COLLATION\_CONNECTION=@OLD\_COLLATION\_CONNECTION \*/;  
/\*!40111 SET SQL\_NOTES=@OLD\_SQL\_NOTES \*/;  
  
-- Dump completed on 2024-11-01 14:55:56  
  
CREATE TABLE `tenant` (  
 `Tenant\_id` INT NOT NULL AUTO\_INCREMENT,  
 `Firstname` VARCHAR(100) NOT NULL,  
 `Lastname` VARCHAR(100) NOT NULL,  
 `Email` VARCHAR(100) NOT NULL,  
 `Phone\_number` VARCHAR(15) DEFAULT NULL,  
 `Lease\_start` DATE DEFAULT NULL,  
 `Lease\_end` DATE DEFAULT NULL,  
 `Property\_id` INT DEFAULT NULL,  
 `Agent\_id` INT DEFAULT NULL,  
 PRIMARY KEY (`Tenant\_id`),  
 INDEX `Property\_id` (`Property\_id`),  
 INDEX `Agent\_id` (`Agent\_id`),  
 CONSTRAINT `tenant\_ibfk\_1` FOREIGN KEY (`Property\_id`) REFERENCES `property` (`Property\_id`),  
 CONSTRAINT `tenant\_ibfk\_2` FOREIGN KEY (`Agent\_id`) REFERENCES `agent` (`Agent\_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
  
  
-- MySQL dump 10.13 Distrib 8.0.40, for Win64 (x86\_64)  
--  
-- Host: 127.0.0.1 Database: realestate  
-- ------------------------------------------------------  
-- Server version 8.0.40  
  
/\*!40101 SET @OLD\_CHARACTER\_SET\_CLIENT=@@CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET @OLD\_CHARACTER\_SET\_RESULTS=@@CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET @OLD\_COLLATION\_CONNECTION=@@COLLATION\_CONNECTION \*/;  
/\*!50503 SET NAMES utf8 \*/;  
/\*!40103 SET @OLD\_TIME\_ZONE=@@TIME\_ZONE \*/;  
/\*!40103 SET TIME\_ZONE='+00:00' \*/;  
/\*!40014 SET @OLD\_UNIQUE\_CHECKS=@@UNIQUE\_CHECKS, UNIQUE\_CHECKS=0 \*/;  
/\*!40014 SET @OLD\_FOREIGN\_KEY\_CHECKS=@@FOREIGN\_KEY\_CHECKS, FOREIGN\_KEY\_CHECKS=0 \*/;  
/\*!40101 SET @OLD\_SQL\_MODE=@@SQL\_MODE, SQL\_MODE='NO\_AUTO\_VALUE\_ON\_ZERO' \*/;  
/\*!40111 SET @OLD\_SQL\_NOTES=@@SQL\_NOTES, SQL\_NOTES=0 \*/;  
  
--  
-- Table structure for table `agent`  
--  
  
DROP TABLE IF EXISTS `agent`;  
/\*!40101 SET @saved\_cs\_client = @@character\_set\_client \*/;  
/\*!50503 SET character\_set\_client = utf8mb4 \*/;  
CREATE TABLE `agent` (  
 `Agent\_id` int NOT NULL AUTO\_INCREMENT,  
 `Firstname` varchar(100) NOT NULL,  
 `Lastname` varchar(100) NOT NULL,  
 `Email` varchar(100) NOT NULL,  
 `Phone` varchar(15) DEFAULT NULL,  
 `Agency` varchar(100) DEFAULT NULL,  
 PRIMARY KEY (`Agent\_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;  
  
--  
-- Dumping data for table `agent`  
--  
  
LOCK TABLES `agent` WRITE;  
/\*!40000 ALTER TABLE `agent` DISABLE KEYS \*/;  
/\*!40000 ALTER TABLE `agent` ENABLE KEYS \*/;  
UNLOCK TABLES;  
/\*!40103 SET TIME\_ZONE=@OLD\_TIME\_ZONE \*/;  
  
/\*!40101 SET SQL\_MODE=@OLD\_SQL\_MODE \*/;  
/\*!40014 SET FOREIGN\_KEY\_CHECKS=@OLD\_FOREIGN\_KEY\_CHECKS \*/;  
/\*!40014 SET UNIQUE\_CHECKS=@OLD\_UNIQUE\_CHECKS \*/;  
/\*!40101 SET CHARACTER\_SET\_CLIENT=@OLD\_CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET CHARACTER\_SET\_RESULTS=@OLD\_CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET COLLATION\_CONNECTION=@OLD\_COLLATION\_CONNECTION \*/;  
/\*!40111 SET SQL\_NOTES=@OLD\_SQL\_NOTES \*/;  
  
-- Dump completed on 2024-11-01 14:55:58  
  
-- MySQL dump 10.13 Distrib 8.0.40, for Win64 (x86\_64)  
--  
-- Host: 127.0.0.1 Database: realestate  
-- ------------------------------------------------------  
-- Server version 8.0.40  
  
/\*!40101 SET @OLD\_CHARACTER\_SET\_CLIENT=@@CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET @OLD\_CHARACTER\_SET\_RESULTS=@@CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET @OLD\_COLLATION\_CONNECTION=@@COLLATION\_CONNECTION \*/;  
/\*!50503 SET NAMES utf8 \*/;  
/\*!40103 SET @OLD\_TIME\_ZONE=@@TIME\_ZONE \*/;  
/\*!40103 SET TIME\_ZONE='+00:00' \*/;  
/\*!40014 SET @OLD\_UNIQUE\_CHECKS=@@UNIQUE\_CHECKS, UNIQUE\_CHECKS=0 \*/;  
/\*!40014 SET @OLD\_FOREIGN\_KEY\_CHECKS=@@FOREIGN\_KEY\_CHECKS, FOREIGN\_KEY\_CHECKS=0 \*/;  
/\*!40101 SET @OLD\_SQL\_MODE=@@SQL\_MODE, SQL\_MODE='NO\_AUTO\_VALUE\_ON\_ZERO' \*/;  
/\*!40111 SET @OLD\_SQL\_NOTES=@@SQL\_NOTES, SQL\_NOTES=0 \*/;  
  
--  
-- Table structure for table `lease`  
--  
  
DROP TABLE IF EXISTS `lease`;  
/\*!40101 SET @saved\_cs\_client = @@character\_set\_client \*/;  
/\*!50503 SET character\_set\_client = utf8mb4 \*/;  
CREATE TABLE `lease` (  
 `Lease\_id` int NOT NULL,  
 `Lease\_start` date DEFAULT NULL,  
 `Lease\_end` date DEFAULT NULL,  
 `Monthly\_rent` decimal(10,2) DEFAULT NULL,  
 `Property\_id` int DEFAULT NULL,  
 `Tenant\_id` int DEFAULT NULL,  
 PRIMARY KEY (`Lease\_id`),  
 KEY `Property\_id` (`Property\_id`),  
 KEY `Tenant\_id` (`Tenant\_id`),  
 CONSTRAINT `lease\_ibfk\_1` FOREIGN KEY (`Property\_id`) REFERENCES `property` (`Property\_id`),  
 CONSTRAINT `lease\_ibfk\_2` FOREIGN KEY (`Tenant\_id`) REFERENCES `tenant` (`Tenant\_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;  
  
--  
-- Dumping data for table `lease`  
--  
  
LOCK TABLES `lease` WRITE;  
/\*!40000 ALTER TABLE `lease` DISABLE KEYS \*/;  
/\*!40000 ALTER TABLE `lease` ENABLE KEYS \*/;  
UNLOCK TABLES;  
/\*!40103 SET TIME\_ZONE=@OLD\_TIME\_ZONE \*/;  
  
/\*!40101 SET SQL\_MODE=@OLD\_SQL\_MODE \*/;  
/\*!40014 SET FOREIGN\_KEY\_CHECKS=@OLD\_FOREIGN\_KEY\_CHECKS \*/;  
/\*!40014 SET UNIQUE\_CHECKS=@OLD\_UNIQUE\_CHECKS \*/;  
/\*!40101 SET CHARACTER\_SET\_CLIENT=@OLD\_CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET CHARACTER\_SET\_RESULTS=@OLD\_CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET COLLATION\_CONNECTION=@OLD\_COLLATION\_CONNECTION \*/;  
/\*!40111 SET SQL\_NOTES=@OLD\_SQL\_NOTES \*/;  
  
-- Dump completed on 2024-11-01 14:55:55  
  
-- MySQL dump 10.13 Distrib 8.0.40, for Win64 (x86\_64)  
--  
-- Host: 127.0.0.1 Database: realestate  
-- ------------------------------------------------------  
-- Server version 8.0.40  
  
/\*!40101 SET @OLD\_CHARACTER\_SET\_CLIENT=@@CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET @OLD\_CHARACTER\_SET\_RESULTS=@@CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET @OLD\_COLLATION\_CONNECTION=@@COLLATION\_CONNECTION \*/;  
/\*!50503 SET NAMES utf8 \*/;  
/\*!40103 SET @OLD\_TIME\_ZONE=@@TIME\_ZONE \*/;  
/\*!40103 SET TIME\_ZONE='+00:00' \*/;  
/\*!40014 SET @OLD\_UNIQUE\_CHECKS=@@UNIQUE\_CHECKS, UNIQUE\_CHECKS=0 \*/;  
/\*!40014 SET @OLD\_FOREIGN\_KEY\_CHECKS=@@FOREIGN\_KEY\_CHECKS, FOREIGN\_KEY\_CHECKS=0 \*/;  
/\*!40101 SET @OLD\_SQL\_MODE=@@SQL\_MODE, SQL\_MODE='NO\_AUTO\_VALUE\_ON\_ZERO' \*/;  
/\*!40111 SET @OLD\_SQL\_NOTES=@@SQL\_NOTES, SQL\_NOTES=0 \*/;  
  
--  
-- Table structure for table `maintenance\_request`  
--  
  
DROP TABLE IF EXISTS `maintenance\_request`;  
/\*!40101 SET @saved\_cs\_client = @@character\_set\_client \*/;  
/\*!50503 SET character\_set\_client = utf8mb4 \*/;  
CREATE TABLE `maintenance\_request` (  
 `Request\_id` int NOT NULL,  
 `Request\_date` date DEFAULT NULL,  
 `Description` varchar(255) NOT NULL,  
 `Status` varchar(100) DEFAULT NULL,  
 `Property\_id` int DEFAULT NULL,  
 `Tenant\_id` int DEFAULT NULL,  
 PRIMARY KEY (`Request\_id`),  
 KEY `Property\_id` (`Property\_id`),  
 KEY `Tenant\_id` (`Tenant\_id`),  
 CONSTRAINT `maintenance\_request\_ibfk\_1` FOREIGN KEY (`Property\_id`) REFERENCES `property` (`Property\_id`),  
 CONSTRAINT `maintenance\_request\_ibfk\_2` FOREIGN KEY (`Tenant\_id`) REFERENCES `tenant` (`Tenant\_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_0900\_ai\_ci;  
/\*!40101 SET character\_set\_client = @saved\_cs\_client \*/;  
  
--  
-- Dumping data for table `maintenance\_request`  
--  
  
LOCK TABLES `maintenance\_request` WRITE;  
/\*!40000 ALTER TABLE `maintenance\_request` DISABLE KEYS \*/;  
/\*!40000 ALTER TABLE `maintenance\_request` ENABLE KEYS \*/;  
UNLOCK TABLES;  
/\*!40103 SET TIME\_ZONE=@OLD\_TIME\_ZONE \*/;  
  
/\*!40101 SET SQL\_MODE=@OLD\_SQL\_MODE \*/;  
/\*!40014 SET FOREIGN\_KEY\_CHECKS=@OLD\_FOREIGN\_KEY\_CHECKS \*/;  
/\*!40014 SET UNIQUE\_CHECKS=@OLD\_UNIQUE\_CHECKS \*/;  
/\*!40101 SET CHARACTER\_SET\_CLIENT=@OLD\_CHARACTER\_SET\_CLIENT \*/;  
/\*!40101 SET CHARACTER\_SET\_RESULTS=@OLD\_CHARACTER\_SET\_RESULTS \*/;  
/\*!40101 SET COLLATION\_CONNECTION=@OLD\_COLLATION\_CONNECTION \*/;  
/\*!40111 SET SQL\_NOTES=@OLD\_SQL\_NOTES \*/;  
  
-- Dump completed on 2024-11-01 14:55:56

## Data Population

The database was populated with initial data using the following script:

INSERT INTO agent (Agent\_id, Firstname, Lastname, Email, Phone, Agency) VALUES  
(1, 'David', 'Kamau', 'David.Kamau@gmail.com', '0712345678', 'Kikuyu Realty Ltd'),  
(2, 'John', 'Mwangi', 'John.Mwangi@gmail.com', '0723456789', 'Mwangi Properties'),  
(3, 'Grace', 'Njeri', 'Grace.Njeri@gmail.com', '0734567890', 'Grace Estates'),  
(4, 'James', 'Odinga', 'James.Odinga@gmail.com', '0745678901', 'Odinga Real Estate'),  
(5, 'Rose', 'Atieno', 'Rose.Atiens@gmail.com', '0756789012', 'Luo Heritage Realty'),  
(6, 'Peter', 'Ngugi', 'Peter.Ngugi@gmail.com', '0767890123', 'Ngugi & Sons Realty'),  
(7, 'Mary', 'Ochieng', 'Mary.Ochieng@gmail.com', '0778901234', 'Ochieng Premier Realty'),  
(8, 'Charles', 'Kiptoo', 'Charles.Kiptoo@gmail.com', '0789012345', 'Kalenjin Investments'),  
(9, 'Faith', 'Salma', 'Faith.Salma@gmail.com', '0790123456', 'Coastline Properties'),  
(10, 'Charity', 'Nabwire', 'Charity.Nabwire@gmail.com', '0701234567', 'Bunyasi Estates');  
  
INSERT INTO maintenance\_request (Request\_id, Request\_date, Description, Status, Property\_id, Tenant\_id) VALUES  
(1, '2024-01-15', 'Leaking faucet in the bathroom', 'Pending', 101, 1),  
(2, '2024-02-20', 'Broken window in the living room', 'Completed', 102, 2),  
(3, '2024-03-10', 'Clogged sink in the kitchen', 'Pending', 103, 3),  
(4, '2024-04-01', 'Air conditioning not working', 'In Progress', 104, 4),  
(5, '2024-05-05', 'Electricity outage in the building', 'Pending', 105, 5),  
(6, '2024-06-10', 'Pest infestation in the kitchen', 'Completed', 106, 6),  
(7, '2024-07-15', 'Broken door lock', 'In Progress', 107, 7),  
(8, '2024-08-01', 'Water heater malfunctioning', 'Completed', 108, 8),  
(9, '2024-09-10', 'Faulty plumbing in the bathroom', 'Pending', 109, 9),  
(10, '2024-10-05', 'Damaged floor tiles', 'In Progress', 110, 10);  
  
INSERT INTO lease (Lease\_id, Lease\_start, Lease\_end, Monthly\_rent, Property\_id, Tenant\_id) VALUES  
(1, '2024-01-01', '2025-01-01', 50000.00, 101, 1),  
(2, '2024-02-15', '2025-02-15', 70000.00, 102, 2),  
(3, '2024-03-01', '2025-03-01', 45000.00, 103, 3),  
(4, '2024-04-01', '2025-04-01', 60000.00, 104, 4),  
(5, '2024-05-10', '2025-05-10', 85000.00, 105, 5),  
(6, '2024-06-15', '2025-06-15', 30000.00, 106, 6),  
(7, '2024-07-01', '2025-07-01', 45000.00, 107, 7),  
(8, '2024-08-20', '2025-08-20', 75000.00, 108, 8),  
(9, '2024-09-05', '2025-09-05', 120000.00, 109, 9),  
(10, '2024-10-01', '2025-10-01', 65000.00, 110, 10);  
  
INSERT INTO owner (Owner\_id, Firstname, Lastname, Email, Phone\_number, Agent\_id) VALUES  
(1, 'James', 'Karanja', 'james.karanja@gmail.com', '0712345678', 1),  
(2, 'Wangari', 'Kamau', 'wangari.kamau@gmail.com', '0723456789', 2),  
(3, 'David', 'Ochieng', 'david.ochieng@gmail.com', '0734567890', 3),  
(4, 'Mary', 'Mwaniki', 'mary.mwaniki@gmail.com', '0745678901', 4),  
(5, 'Grace', 'Atieno', 'grace.atieno@gmail.com', '0756789012', 5),  
(6, 'Joseph', 'Mwangi', 'joseph.mwangi@gmail.com', '0767890123', 6),  
(7, 'Peter', 'Njiru', 'peter.njiru@gmail.com', '0778901234', 7),  
(8, 'Elizabeth', 'Mutiso', 'elizabeth.mutiso@gmail.com', '0789012345', 8),  
(9, 'Njeri', 'Gikonyo', 'njeri.gikonyo@gmail.com', '0790123456', 9),  
(10, 'John', 'Omondi', 'john.omondi@gmail.com', '0701234567', 10);  
  
INSERT INTO property (Property\_id, Property\_type, Address, County, City, Price\_ksh, Owner\_id, Agent\_id, Zipcode, Size\_m2) VALUES  
(101, 'Apartment', '123 Riverside Drive', 'Nairobi', 'Nairobi', 50000.00, 1, 1, '00100', 120),  
(102, 'House', '456 Mountain Road', 'Nakuru', 'Nakuru', 70000.00, 2, 2, '20100', 250),  
(103, 'Apartment', '789 Lakeside Avenue', 'Kisumu', 'Kisumu', 45000.00, 3, 3, '40100', 100),  
(104, 'Townhouse', '101 Coastal Lane', 'Mombasa', 'Mombasa', 60000.00, 4, 4, '80100', 200),  
(105, 'Villa', '202 Beach Road', 'Kilifi', 'Kilifi', 85000.00, 5, 5, '90200', 350),  
(106, 'Studio', '303 High Street', 'Meru', 'Nanyuki', 30000.00, 6, 6, '60000', 50),  
(107, 'Condo', '404 Parkview Crescent', 'Machakos', 'Kangundo', 45000.00, 7, 7, '90100', 80),  
(108, 'Apartment', '505 Downtown Street', 'Nairobi', 'Nairobi', 75000.00, 8, 8, '11000', 150),  
(109, 'Mansion', '606 Forest View', 'Embu', 'Kiritiri', 120000.00, 9, 9, '70000', 500),  
(110, 'Bungalow', '707 Greenfield Road', 'Nyeri', 'Nyeri', 65000.00, 10, 10, '20000', 200);  
  
INSERT INTO tenant (Tenant\_id, Firstname, Lastname, Email, Phone\_number, Lease\_start, Lease\_end, Property\_id, Agent\_id) VALUES  
(1, 'Peter', 'Njiru', 'peter.njiru@gmail.com', '0712345678', '2024-01-01', '2025-01-01', 101, 1),  
(2, 'Susan', 'Karanja', 'susan.karanja@gmail.com', '0723456789', '2024-02-15', '2025-02-15', 102, 2),  
(3, 'John', 'Ochieng', 'john.ochieng@gmail.com', '0734567890', '2024-03-01', '2025-03-01', 103, 3),  
(4, 'Mary', 'Omondi', 'mary.omondi@gmail.com', '0745678901', '2024-04-01', '2025-04-01', 104, 4),  
(5, 'Michael', 'Achieng', 'michael.achieng@gmail.com', '0756789012', '2024-05-10', '2025-05-10', 105, 5),  
(6, 'Elizabeth', 'Mutiso', 'elizabeth.mutiso@gmail.com', '0767890123', '2024-06-15', '2025-06-15', 106, 6),  
(7, 'Njeri', 'Gikonyo', 'njeri.gikonyo@gmail.com', '0778901234', '2024-07-01', '2025-07-01', 107, 7),  
(8, 'Robert', 'Kipchirchir', 'robert.kipchirchir@gmail.com', '0789012345', '2024-08-20', '2025-08-20', 108, 8),  
(9, 'Wangari', 'Nabwire', 'wangari.nabwire@gmail.com', '0790123456', '2024-09-05', '2025-09-05', 109, 9),  
(10, 'James', 'Wekesa', 'james.wekesa@gmail.com', '0701234567', '2024-10-01', '2025-10-01', 110, 10);  
  
  
INSERT INTO payment (Payment\_id, Payment\_date, Amount\_paid, Payment\_method, Lease\_id) VALUES  
(1, '2024-01-10', 50000.00, 'Bank Transfer', 1),  
(2, '2024-02-18', 70000.00, 'Mobile Payment', 2),  
(3, '2024-03-05', 45000.00, 'Cash', 3),  
(4, '2024-04-10', 60000.00, 'Cheque', 4),  
(5, '2024-05-15', 85000.00, 'Bank Transfer', 5),  
(6, '2024-06-20', 30000.00, 'Mobile Payment', 6),  
(7, '2024-07-05', 45000.00, 'Cash', 7),  
(8, '2024-08-15', 75000.00, 'Cheque', 8),  
(9, '2024-09-12', 120000.00, 'Bank Transfer', 9),  
(10, '2024-10-01', 65000.00, 'Mobile Payment', 10);

## CRUD Operations

The database supports the following Create, Read, Update, and Delete operations:

DELETE FROM `tenant` WHERE `Tenant\_id` = 1;  
  
-- To select all properties that belong to a specific owner  
  
SELECT p.Property\_id, p.Property\_type, p.Address, p.County, p.City, p.Price\_ksh, p.Size\_m2  
FROM property p  
JOIN owner o ON p.Owner\_id = o.Owner\_id  
WHERE o.Owner\_id = 3;  
  
-- To fetch all the paymets that have been made towards a specific lease  
  
SELECT p.Payment\_id, p.Payment\_date, p.Amount\_paid, p.Payment\_method  
FROM payment p  
JOIN lease l ON p.Lease\_id = l.Lease\_id  
WHERE l.Lease\_id = 6;  
  
-- To get all the maintentance requests for a particular property  
  
SELECT mr.Request\_id, mr.Request\_date, mr.Description, mr.Status  
FROM maintenance\_request mr  
JOIN property p ON mr.Property\_id = p.Property\_id  
WHERE p.Property\_id = 107;  
  
-- To show the agents and the tenants each caters to  
  
SELECT a.Agent\_id, a.Firstname AS Agent\_Firstname, a.Lastname AS Agent\_Lastname,  
 t.Tenant\_id, t.Firstname AS Tenant\_Firstname, t.Lastname AS Tenant\_Lastname, t.Email AS Tenant\_Email  
FROM agent a  
JOIN property p ON a.Agent\_id = p.Agent\_id  
JOIN lease l ON p.Property\_id = l.Property\_id  
JOIN tenant t ON l.Tenant\_id = t.Tenant\_id;  
  
-- To update a tenants information  
  
UPDATE `tenant` SET `Phone\_number` = '0723456789' WHERE `Tenant\_id` = 1;  
  
-- To update the status of a maintenance request  
  
UPDATE maintenance\_request  
SET Status = 'Completed'  
WHERE Request\_id = 3;  
  
-- To update the monthly rent on a lease  
  
UPDATE lease  
SET Monthly\_rent = 70000.00  
WHERE Lease\_id = 4;  
  
-- To update a property if an agent is reassigned   
  
UPDATE property  
SET Agent\_id = 2  
WHERE Property\_id = 101;  
  
  
  
-- DELETE Example --  
DELETE FROM `tenant` WHERE `Tenant\_id` = 1;  
  
  
-- UPDATE Examples --  
-- To update a tenants information  
  
UPDATE `tenant` SET `Phone\_number` = '0723456789' WHERE `Tenant\_id` = 1;  
  
-- To update the status of a maintenance request  
  
UPDATE maintenance\_request  
SET Status = 'Completed'  
WHERE Request\_id = 3;  
  
-- To update the monthly rent on a lease  
  
UPDATE lease  
SET Monthly\_rent = 70000.00  
WHERE Lease\_id = 4;  
  
-- To update a property if an agent is reassigned   
  
UPDATE property  
SET Agent\_id = 2  
WHERE Property\_id = 101;

## Joins

Complex relationships between tables were queried using JOIN operations. Below is an example:

-- To get the details of a tenant, the property they're renting and the amount they paid for the lease  
  
SELECT tenant.Firstname, tenant.Lastname, property.Address, payment.Amount\_paid  
FROM tenant  
JOIN lease ON tenant.Tenant\_id = lease.Tenant\_id  
JOIN payment ON lease.Lease\_id = payment.Lease\_id  
JOIN property ON lease.Property\_id = property.Property\_id  
WHERE tenant.Tenant\_id = 1;  
  
-- To fetch all properties, their owners and the agents that manage those properties using INNER JOIN  
  
SELECT p.Property\_id, p.Property\_type, p.Address, p.City, o.Owner\_id, o.Firstname AS Owner\_Firstname,   
 o.Lastname AS Owner\_Lastname, a.Agent\_id, a.Firstname AS Agent\_Firstname, a.Lastname AS Agent\_Lastname  
FROM property p  
INNER JOIN owner o ON p.Owner\_id = o.Owner\_id  
INNER JOIN agent a ON p.Agent\_id = a.Agent\_id;  
  
-- To fetch all properties, their owners and the agents that manage those properties using OUTER JOIN  
SELECT p.Property\_id, p.Property\_type, p.Address, p.City, o.Owner\_id, o.Firstname AS Owner\_Firstname,   
 o.Lastname AS Owner\_Lastname, a.Agent\_id, a.Firstname AS Agent\_Firstname, a.Lastname AS Agent\_Lastname  
FROM property p  
LEFT JOIN owner o ON p.Owner\_id = o.Owner\_id  
LEFT JOIN agent a ON p.Agent\_id = a.Agent\_id;  
  
-- To fetch data for tenants, their leases and respective payments  
  
SELECT l.Lease\_id, t.Tenant\_id, t.Firstname AS Tenant\_Firstname, t.Lastname AS Tenant\_Lastname,   
 l.Lease\_start, l.Lease\_end, p.Payment\_id, p.Payment\_date, p.Amount\_paid  
FROM lease l  
JOIN tenant t ON l.Tenant\_id = t.Tenant\_id  
JOIN payment p ON l.Lease\_id = p.Lease\_id;

## Subqueries

Subqueries were utilized for advanced data retrieval. Below is an example:

SELECT Firstname, Lastname FROM tenant WHERE Tenant\_id IN (SELECT Tenant\_id FROM lease WHERE Property\_id = 1);

## Aggregations

Aggregations were performed to summarize data, such as calculating totals. Below is an example:

-- To calculate the total number of leases each agent manages  
  
SELECT Agent\_id, COUNT(\*) AS Total\_Leases FROM lease GROUP BY Agent\_id;  
  
-- To show the total revenue generated by an agent  
  
SELECT a.Agent\_id, a.Firstname AS Agent\_Firstname, a.Lastname AS Agent\_Lastname,   
 SUM(p.Amount\_paid) AS Total\_Revenue  
FROM agent a  
JOIN property p ON a.Agent\_id = p.Agent\_id  
JOIN lease l ON p.Property\_id = l.Property\_id  
JOIN payment p ON l.Lease\_id = p.Lease\_id  
GROUP BY a.Agent\_id;  
  
-- To show the average monthly rent for the properties in a specific area  
  
SELECT AVG(p.Price\_ksh) AS Avg\_Monthly\_Rent  
FROM property p  
WHERE p.City = 'Nairobi';

## Conclusion

The Real Estate Management System provides a comprehensive way to manage data related to properties, tenants, payments, and leases. Using advanced SQL queries, the database ensures scalability and reliability for real estate management.