

Final Report

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FINAL YEAR PROJECT REPORT SUBMITTED TO THE FACULTY OF
COMPUTING, MOHAMMAD ALI JINNAH UNIVERSITY, IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
BACHELOR OF COMPUTER SCIENCE/SOFTWARE ENGINEERING
SPRING 2023

[Rently]

FALL – 2019

DEPARTMENT OF COMPUTER SCIENCE
Mohammad Ali Jinnah University. Karachi
June 2023

ACKNOWLEDGMENT

First of all, we thank Almighty Allah who praise us with the ability to think, work and deliver what we are assigned to do. Secondly, we must be grateful to our internal Mr. / Ms _____ who help us in this project. We also acknowledge our teachers that throughout our studies helps us and guides us, departmental staff, university staff or other then this.

INTRODUCTION TO GROUP MEMBERS



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CERTIFICATE OF COMPLETION

This is to certify that the following students of BS (CS) of FALL-2019

ABDUL MOIZ	(FA19-BSCS-0024).
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AHMED RAZA	(SP19-BSCS-0008).

have successfully completed their final year project titled

RENTLY

in the partial fulfillment for the Degree of Bachelor of Science in Computer Science.

MUNTAHA MEHBOOB
Mohammad Ali Jinnah University

Abstract

The proposed AI-based house rental system aims to revolutionize the traditional rental process through the integration of Artificial Intelligence and Machine Learning technologies. The system will employ a predictive model, trained on historical rental data, to accurately estimate the rental price of houses based on various factors such as location, size, and amenities. In addition to price prediction, the system will also include advanced features such as tenant screening, automated lease agreements, and smart home technology integration to enhance the overall rental experience for landlords and tenants alike. The goal of this project is to create a streamlined and efficient rental process that utilizes the power of AI to make informed decisions and improve the overall rental experience.

1. Introduction

1.1 Purpose

Rently's primary goal is to Every day, urban living gets busier, making it challenging to find ToLets while wandering the streets. Online rentals are a godsend for those in this situation. Here, anyone sitting down can simply obtain information on rooms, flats, or homes by using their smartphone or laptop. Numerous characteristics of the technology we're developing will make life easier for city people. Renters in this area have a large range of suitable properties to choose from. Additionally, landlords can swiftly rent out or sell their homes or apartments using this internet method.

1.2 Intended Audience

The SRS document is created with the goal of offering all those involved and connected with this project help and accurate information about the defined project. The customer, the project manager, the developers, the testing team, the database administrator, the marketing team, the management officials, and the end users are a few examples of these people. The paper is set up so that readers may quickly comprehend the project logistically thanks to the way it is organised.

1.3 Project Overview

The Rently seeks to create an effective and user-friendly platform for streamlining the leasing of residential properties. Property owners can use this web-based tool to market their vacant homes, and interested tenants can search and explore the listings depending on their preferences. For both landlords and tenants, the system will offer features like user registration, real-time chat, and a rating/review system. The project's goals are to improve user experience, simplify the renting process, and develop a solid platform for successfully bringing together tenants and property owners.

1.4 Scope

To develop an internet system that will let customers manage their home rentals without directly contacting a rental company or landlord. The main objective of the system is to provide a system that enables users to insert, alter, find, and delete data from databases in order to provide an online system for managing holiday rentals.

For individuals looking for a home or a room as well as for an administrative management system, to make home record keeping simpler.

Create an online system for renting out properties to those looking for housing, and forecast prices based on various places.

2. Design Considerations

Security:

Due to the sensitive user data that Rently, a web application, handles, higher levels of security are required to uphold the required safety requirements. User information will comprise information like name, home address, phone number, and perhaps credit card information. To prevent data from being compromised, suitable security standards must be followed. Each user's data must be flawlessly and safely protected by the application.

Privacy:

The intended market for this application, who will both save information in the AppFolio databases, is property management and tenants. This raises the potential issue of other system users gaining access to information.

To prevent inadvertent interactions between user data and the system and its database, the application must adhere to strict security standards.

Learning New Technologies:

- Since the team has limited experience with the majority of the technologies, Rently must be developed using those technologies. The tools utilized to build a safe and solid product for release are Ruby on Rails, HTML5, Coffee Script, Backbone.js, and MongoDB.

2.1 Assumptions and Dependencies

Before designing and building the system, we made the following assumptions:

- We assume that the house owners & house finders only use our application.
- We have to give Tips to house owner about how to upload adds.
- If the Customer sends a request to the house owner and the house owner accepts the request then Add will Automatically remove from the application.

2.2 Risks and Volatile Areas

1. Data security: refers to the dangers of data leaks, unauthorised access, or data loss brought on by holes in the system's security framework.
2. Platform Stability: Potential technological problems that could affect the availability and dependability of the house renting system, such as server outages, system crashes, or scaling issues.
3. Fraudulent Activities: Threats to the platform's reputation and trust connected to false listings, identity theft, payment scams, and fraudulent transactions.

2.3 Classes and Characteristics of User

Users of various skill levels and age groups may use the Rently Web application effectively thanks to its user-friendly design. These users range from expert users to novice users because it has a wonderful instructional and a lovely user interface. The client's needs are our top focus because they will be the program's major users after or throughout the development phase of this rental Web application. It is believed that meeting the requirements or requests of the customer will necessarily result in the satisfaction of the end users.

2.4 Operating Environment

- The system is built to work on a variety of mobile devices both as an application and within a web browser. Instead of using a platform's native language to build the system, HTML5, CSS3, and JavaScript will be used to create this cross-platform portability. This implies that in order for the programme to function, a web browser must be able to support HTML5, CSS, and JavaScript. This cross-platform portability ought to scale to device specs and be device portable. The system ought to be able to recognise the device's screen size and adjust the interface accordingly.

3. Requirements of Interface

3.1 Hardware Interfaces

Hardware: Processor Pentium-II or higher core Speed 533 MHZ. **Hard**

Disk Space: 20 GB (min.)

Ram Memory: 32 MB (64 MB recommended).

Must have Ethernet/WIFI

3.2 Software Interfaces

Software: Operating System Windows 95/98/NT/2000 /10/7/8/11.

Database Server: MySql /XAMP/WAMP.

Text Editor Notepad++.

Must have web based application e.g: Google Chrome, Opera, Firefox etc.

4. System Features

4.1 System Feature:

- Registration.
- property owner/Customer login.
- Property upload.
- Property details modification.
- Property deletion.
- Admin profile management (names, emails, phone numbers).
- Price predictor according to different location.
- Additional features that add to the enjoyment of using this system.

4.2 Dashboard For House Owner:

- Upload Adds.
- Delete Adds.
- Manage Profile.
- Modify Adds.

4.3 Dashboard For Customers:

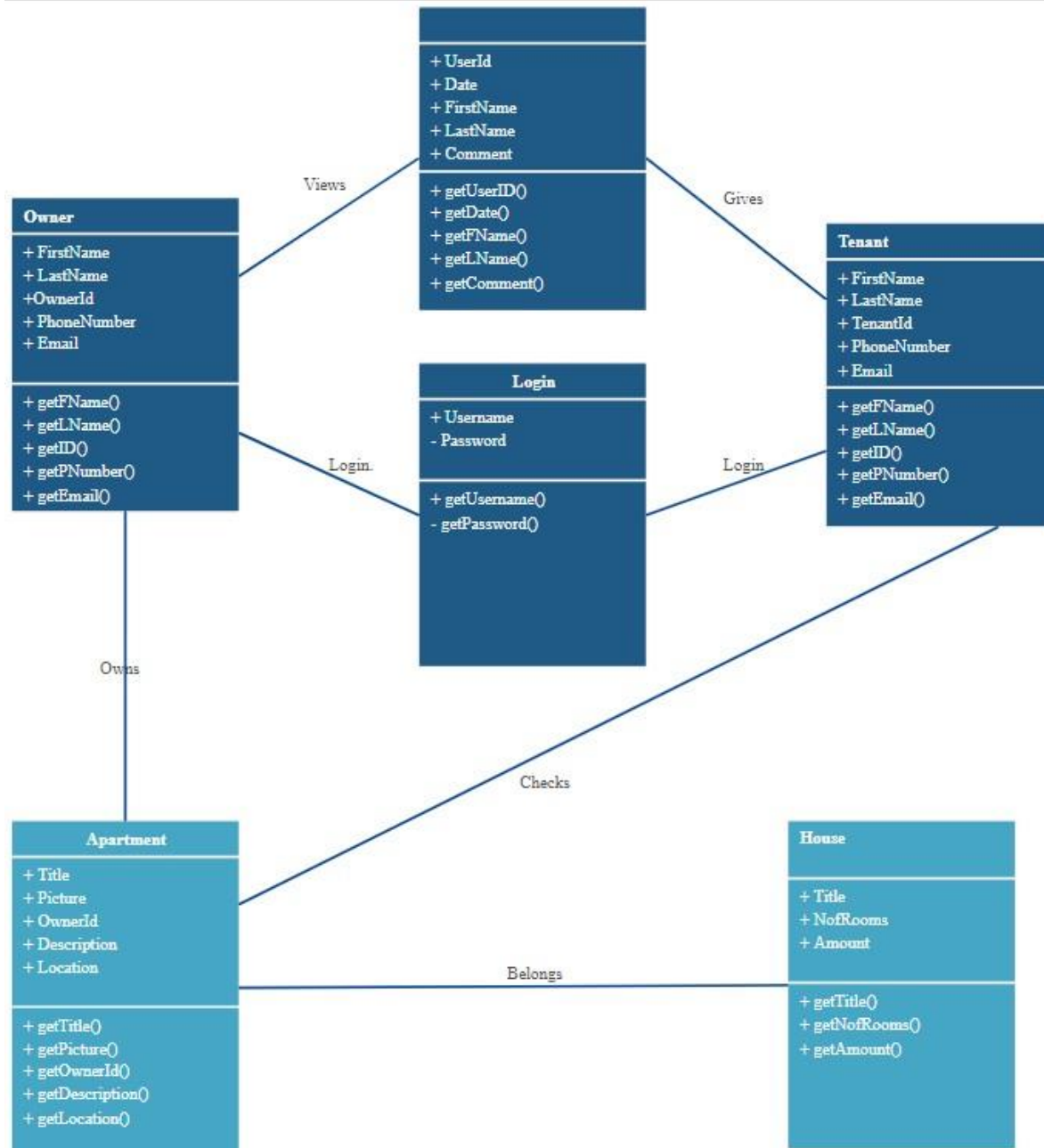
- Favorite Adds.
- Manage Profile.
- Chats.

5. Design Strategy

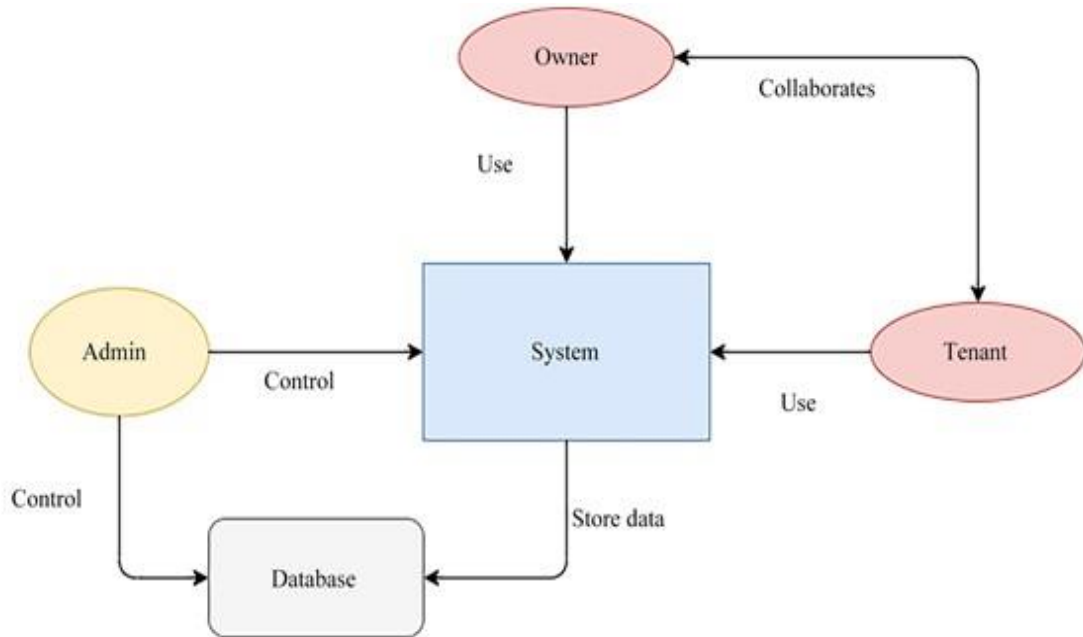
1. **User-Centric Design:** Adopt a user-centric strategy by being aware of the requirements, preferences, and problems that both landlords and tenants face. Create a user-friendly interface by conducting user research, getting feedback, and incorporating user-centered design concepts.
2. **Responsive and Mobile-First Design:** Design the system to be responsive in order to ensure the best user experience on a variety of devices and screen sizes. Make mobilefirst design a top priority to support the rising number of people using mobile devices to access rental platforms.
3. **Smooth Property Search and Filtering:** Implement powerful search and filtering capabilities to let consumers identify pertinent properties based on location, price, size, amenities, and other factors. To make the property search process simpler, offer sophisticated search options and clear criteria.
4. **Clear and Comprehensive Property Listing Information:** Include details on the property, high-quality photos, rental terms, availability, and contact information on your property listing pages. Include maps and location information to aid users in determining how close the property is to amenities.
5. **Smooth Rental Application procedure:** Create a rental application procedure that is simple to follow and has obvious prompts. Allow users to conveniently contact with property owners and agents through the platform, upload required documents, and submit applications online.

6. Detailed System Design

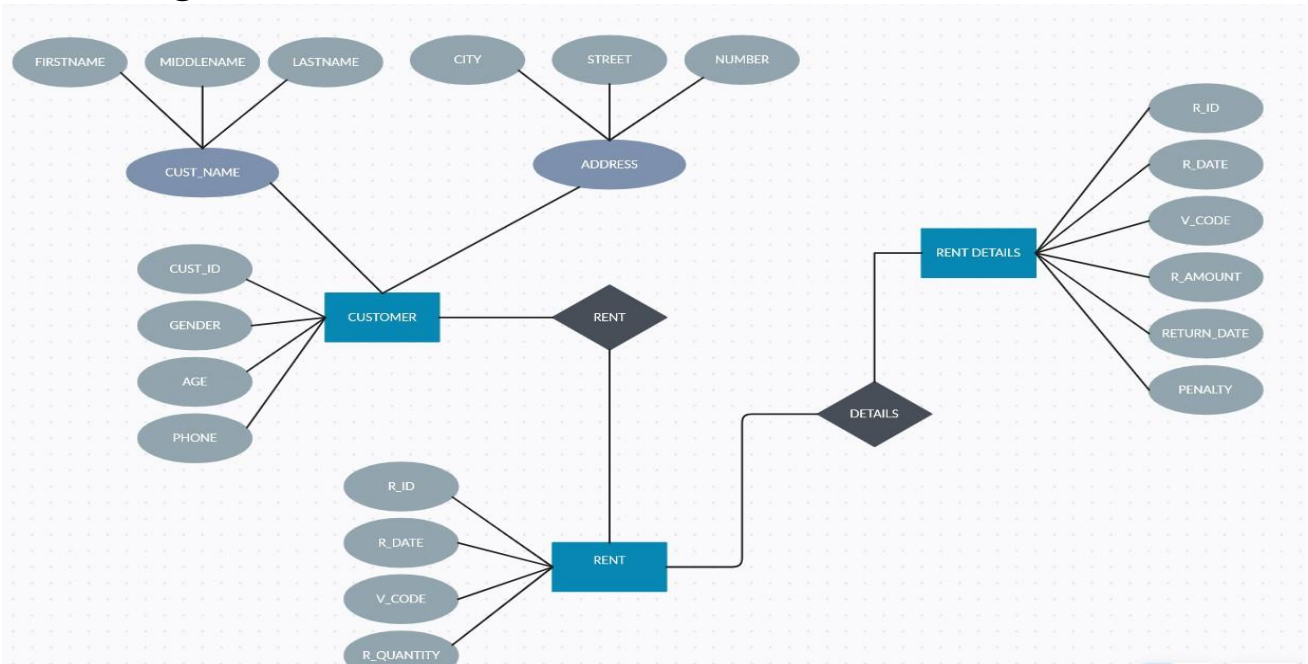
6.1 Class Diagram



6.2 System design



6.3 ER Diagram



7. System Implementation

7.1 Login Portal

RENTLY

[Home](#) [About](#) [Property](#) [Contact](#) [Prediction](#)

LoginRegister

Sign in to your account

Your email

bruce@gmail.com

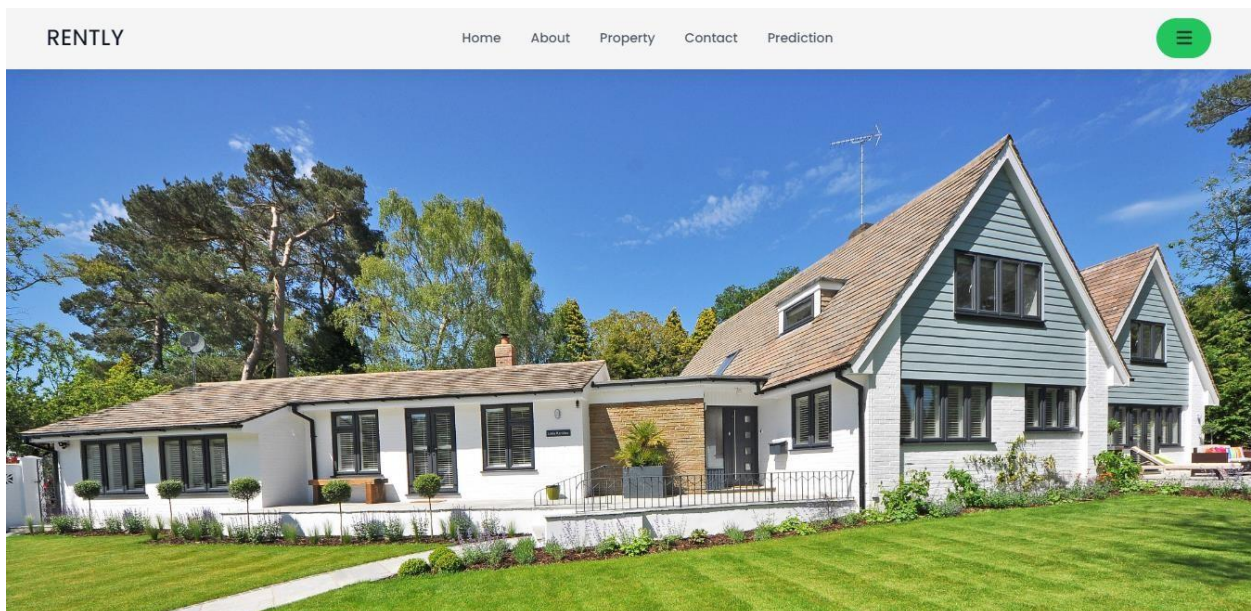
Password

.....

Sign in

Don't have an account yet? [Sign Up](#)


7.2 Home Page




7.3 Featured Property Types

Featured Property Types


Find All Type of Property.




Family House




House & Villa



Apartment



Office & Studio




Villa & Condo

7.4 Find/ Search Adds

RENTLY

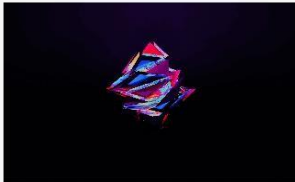
HomeAboutPropertyContactPrediction

Properties




Apartment
DHA Phase II
Luxury House

Type: Apartment Size: 250 Sqft
Price: 5.75 Cr




Apartment
Malir 2 No Ajao
Malir

Type: Apartment Size: 250 Sqft
Price: 340000 Cr




Apartment
Malir 2 No Ajao
Cute House

Type: Apartment Size: 250 Sqft
Price: 340000 Cr




Apartment
DHA Phase II
Cute Housses

Type: Apartment Size: 250 Sqft
Price: 5.75 Cr



Villa
Teen Talwar ,Clifton
Luxury Villa

Type: Villa Size: 500
Price: 85000000



House
Teen Talwar ,Clifton
Luxury House

Type: House Size: 600 Yards
Price: 1.3 Lac

7.5 Details & Description Of Add

RENTLY

[Home](#) [About](#) [Property](#) [Contact](#) [Prediction](#)



Title: Luxury House



Price : 1.3 lac

Property Type : House

Size : 600 yards

Address : Teen Talwar ,Clifton Street 6 , Near Cabin , Karachi

Address : Teen Talwar ,Clifton Street 6 , Near Cabin , Karachi

Description:

500 Yards Residential Plot Prime Location of Clifton
Phase 8 on Kh-e-Shujaat
Best For Home Makers in Reasonable Price

AN OVERVIEW OF VILLA:

This brand-new House is everything that vertical living enthusiasts might seek in the development. Adorned with top-of-the-line features, the apartment units of this project are tastefully designed and elegant in a way that's sure to facilitate a fulfilling life. It is a large-scale development that spans over 1,234,266 sq yds and has 11 storeys. Interested buyers can choose an apartment based on space and design layouts. The project features 2, 3, 4, and 5-bedroom apartments.



As for the amenities available in the vertical residence, the dwellers will enjoy:
Spacious reception area
Waiting room with a TV
Footproof security arrangements with CCTV surveillance
Covered car parking
Spacious, high-speed elevators
Prayer hall

Further Details

Amenities

Plot Features	Possession	File	Balloted
	Sewerage	Electricity	Water Supply
	Sul Gas		
Nearby Locations and Other Facilities	Nearby Schools	Nearby Hospitals	Nearby Shopping Malls
	Nearby Restaurants	Distance From Airport (kms)	Nearby Public Transport Service
	*** Other Nearby Places		
Other Facilities	*** Other Facilities		

Query Form

Name: Karan Kishore

Email: abc@gmail.com

Phone: 024546565

Your message

What do you want to ask.

Submit

7.6 Dashboard

Add Property

Messages


Name: Bruce
Email: bruce@gmail.com
Phone: 213123
Message: asdasdasdasdasdaasd

Name: John wick
Email: john@gmail.com
Phone: 34543434
Message: Haan bhai kese diya?

Name: moiz
Email: moiz@gmail.com
Phone: 34543434
Message: Mehnga le liya ustad 🤔

Name: Abdul Moiz
Email: moiz@gmail.com
Phone: 03002579672
Message: Final Kiya hojaengy ?

YOUR ADDS




For Apartment

DHA Phase II
Luxury House

Type: Apartment

Size: 250 sqft

Price: 5.75 cr




For Villa

Teen Talwar ,Clifton
Luxury Villa

Type: Villa

Size: 500

Price: 85000000



For House

Teen Talwar ,Clifton
Luxury House

Type: House

Size: 600 yards

Price: 1.3 lac

7.7 Price Predictor

Price Predictor

152

House

Dha Defence

Secondary Inputs

Baths

4

Beds

3

Bathrooms

4

Floors

1

Kitchens

1

Price Per Sq Yard

121710

Optional Inputs

dining room

distance from airport

drawing room

electricity backup

flooring

kids play area

lounge or sitting room

study room

waste disposal

RENT

36,635 PKR/month

PREDICTED PRICE

1,83,17,312 (1.83 Cr)

Reset

References

<https://www.scribd.com/document/428244636/House-Rental-ManagementSystem-Report-1-pdf>

<https://www.ijsrp.org/research-paper-1114/ijsrp-p35101.pdf>

https://www.w3schools.com/howto/howto_js_slideshow.asp

<https://www.sourcecodester.com/blog/14103/rental-house-management-systemthesis-documentation-chapter-one.html>