

MINI PROJECT
(2020-2021)

On

“HOUSE RENTAL MANAGEMENT”
FINAL-REPORT



Institute of Engineering & Technology

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CERTIFICATE

This is to certify that Udit aggarwal, Mohan Agrawal, Amit kumar, Bhagat singh and Madan Mohan students of B.Tech (CSE) 3rd year has successfully Completed the MINI PROJECT named RENTAL HOUSE MANAGEMENT on Web Development under the Guidance of Ms. Harvinder kaur During 2020-21.

Signature: Ms. Harvindar kaur (Mentor)



Mini-Project Synopsis

B. Tech 3rd year

➤ **Project Group Members:**

1. Mohan Agrawal (18/181500385-D)
2. Udit Aggarwal (35/181500765-D)
3. Madan Mohan (16/181500354-D)
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5. Bhagat Singh (19/181500189-G)

➤ **Project Supervisor:** Ms. Harvinder Kaur, Senior Technical Trainer

➤ **Introduction:**

House rental management has become important factor in modern society hence the need to have rental management system. Mainly, house rental has a central importance to quality of life with considerable economic, social, cultural and personal significance. Though a country's national prosperity is usually measured in economic terms, increasing wealth is of diminished value unless all can share its benefits and if the growing wealth is not used to redress growing social deficiencies, one of which is housing. Rental plays a huge role in revitalizing economic growth in any country among key indicators of development.

The focus of this project is to managing the house for low income, medium and high incomes articles or what is commonly known as affordable housing. 'Affordable' is a term used to describe individual's capability to pay for certain products or services because their income is enough to do so.

Most families choose house based on their income and family situation; unfortunately, there may not be enough good quality houses for these families.

Bihar accounted for one third of the housing scarcity followed by Andhra Pradesh, Assam, up and west Bengal. In 2000, about 48.7 million people were living in urban slums in unhealthy conditions. According Ninth Five-year plan, 18.77 million houses are kutcha house so they are unable to face the natural disaster like cyclone and floods etc.

In area of computer science, it may be major project because it fulfills the requirement of society and give many more advantages to them relates their housing problems. I think that in future most of people live on rent due to lack of land resources. It is also different idea because we can reuse the things that become obsolete for others.

❖ **Hardware requirement**

PC with 4GB RAM, 500 GB HDD

❖ **Software requirement:**

- XAMPPweb server 1.0.0.0
- VScode editor 1.46.1.0
- GitHub Repository

➤ **Problem Definition:**

It meets the requirement of houses to the families according to their requirement. Actually, Rental has become a problem for most of the person because of growing population. People migrate from one city to other cities for finding job, but in beginning, everyone needs house that can only be available with the help of rent. It is very difficult to find well stable house in strange place. Increased number of tenants and landlords makes management difficult especially for the landlords who are losing huge sum of money through tenants who evade rent. It gives the clear declaration as to why rental house management system needs to be developed.

➤ **Objective:**

1. To produce a web-based system that allows the vendors and tenants to register and book a house for rent to effectively manage their business.
2. The owner easily maintains the data like payment of tenant that is difficult for older days.
3. To ease vendor's task whenever they give house on rent.

➤ **Technologies:**

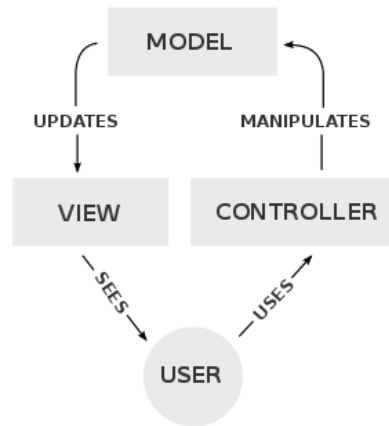
HTML5, CSS, JavaScript/jQuery, PHP7.1.33.0, MySQL database

➤ **Methodology:**

It outlines how data will be collected and tools for collecting data. Model view controller (MVC) is software design for developing web applications. It consists three parts like

1. **Model** -The lowest level of the pattern which is responsible for maintaining data.
2. **View**-It is responsible for displaying all or a portion of the data to the user.
3. **Controller**-Software code that controls the interaction between model and view.

MVC isolates the application logic from the user interface layer and supports separation of concern. Here controller receives all requests for the application and then work with model to prepare any data needed by the view. The view then uses the data prepared by the controller to generate a final presentable response. It can be understood with the following diagram.



➤ **Implementation Details:**

This project is divided into seven modules for ease of access of development.

1. Registration (signup): In this module, owner of house or user fill the registration form for using house management services.

2.Owner Details form: owner fills their house detail like no of rooms available, area of house, location, city, rent fees and also some other details.

3. Searching: This feature is used by tenant/user for finding the house as per their need. It can find house on the basis location, rent fees, no. rooms needed.

4. Tenant details form: After searching the house as per requirements. Customer fill details like username, Aadhar number, no. of rooms, contact no, Security fees, no. of people, purpose of leaving and other also may be.

5. View Information page: Owner check the information of tenants that he/she paid rent or not and show also due amount of rent. If any tenant does not pay the rent on time, then owner can give notice to him/her through Gmail.

6. Transaction: It is used by tenant for paying the rent.

7. Authentication: It is used only for security purpose of the system. Everyone enters into system only through login page.

➤ **Contribution Summary:**

To develop this project, we need two types of technologies front-end and Back-end. Front-end contains the outlook of any web page and Back-end makes pages dynamic in nature. Our Project is divided into five modules where each module created by individual member.

- **Mohan Agrawal:** Related to account information like registration and authentication pages will be developed with this.
- **Amit Kumar:** Maintains the owner details form and also its sub-modules that is related to owner.
- **Bhagat Singh:** Covers searching module that is necessary part of rental house management because it gives the filtering house information to the user.
- **Udit Aggarwal:** It maintains the tenant information's so that user information keeps safe and use properly for database.
- **Madan Mohan:** It covers the transaction system process and Rent view information pages.

➤ **References:**

Erguden, S. (2001), Low cost housing policies and constraint in developing countries.
<https://www.ehow.com>
<https://www.researchgate.net>

ACKNOWLEDGEMENT

I would like to express my thanks to the people who have helped me most throughout my project. I am grateful to my instructor Ms. Harvindar Kaur for nonstop support for the project. A special thank of mine goes to my colleague who helped me out in completing the project, where they all exchanged their own interesting ideas, thoughts and made this possible to complete my project with all accurate information. I wish to thank my college teachers for their personal support or attention who inspired me to go my own way.

Finally, I also wish to express my sincere thanks to the GLA UNIVERSITY for helping to develop this project.

Abstract

We are stuck with technology when what we really want is just stuff that works. With the current paradigm shift in technological field, there is an urgent need to embrace and appreciate the power of technology. Housing sector remains vigilant to face the challenges of change by employing a new strategy that facilitates easy management of rental houses. Hence there is need to develop a rental house management system that can simplify work for the rental managers so that all their work can be efficient and effective.

To get information about how rental houses are currently being managed, I prepared questionnaires and submitted them to a number of rental house managers and from the information I gathered I realized all work was done manually with a lot of paper work involved. Papers can easily get damaged or get lost leading to loss of data. It is also expensive to keep on buying files to store your records. A lot of files make a place look untidy and also consume a lot of space. Getting a certain file to check data from many files becomes a difficult task.

Considering those facts, I decided to develop a rental house management system that can solve all the problems experienced with the current manual system. The system was developed in such manner that it provides maximum user friendly interface. With the command buttons you can manipulate the database. If you want to add data to the database all you need to do is to click on new then input data in the textboxes provided then click save and the data will automatically be saved. If you want to view data in the database you just click next or previous and the data will be displayed for you. When you click delete you will be able to delete a record that you desire. You may enter data then decide to cancel it, it is simple click on cancel and it will be canceled.

For manager faced with management difficulties here is a perfect solution for you. The rental house management system is made for you.

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1. INTRODUCTION

1.1 General Introduction to Topic

House rental management has become important factor in modern society hence the need to have rental management system. Mainly, house rental has a central importance to quality of life with considerable economic, social, cultural and personal significance. Though a country's national prosperity is usually measured in economic terms, increasing wealth is of diminished value unless all can share its benefits and if the growing wealth is not used to redress growing social deficiencies, one of which is housing. Rental plays a huge role in revitalizing economic growth in any country among key indicators of development.

The focus of this project is to managing the house for low income, medium and high income articles or what is commonly known as affordable housing. 'Affordable' is a term used to describe individual's capability to pay for certain products or services because their income is enough to do so.

Most families choose house based on their income and family situation; unfortunately, there may not be enough good quality houses for these families.

Bihar accounted for one third of the housing scarcity followed by Andhra Pradesh, Assam, UP and West Bengal. In 2000, about 48.7 million people were living in urban slums in unhealthy conditions. According Ninth Five-year plan, 18.77 million houses are kutcha house so they are unable to face the natural disaster like cyclones and floods etc.

1.2 Motivation

Motivation behind the project is that it provides the variety of houses to needy person. In the fast-growing field of software engineering and development and even more rapidly growing sector of web development the future is hard to predict. In general software project is a project focusing on the creation of software. Consequently, Success can be measured by taking a look at the resulting software. In a rental house project, the product is a house. But here comes the point: A web is much more than just its software. Just like a web server: without content the server is useless, and the quality cannot be measured. This has an important effect on the rental house project as a whole. The software part of the project is not the only one, and it must be considered in connection to all other parts: The environment of the website, the data collected users and so on.

1.3 Scope

The project scope defines the description of the work that is required in delivering the rental house management system. The following are the scopes of work during the course of the project: Study and understand the requirement of this project.

Construct Software Requirement Specification document of the system

Construct Software Design Document of the system

1.4 EXISTING SYSTEM

Currently the most property managers manage property and tenants details on papers. Once customers finds a vacant house, they can call or email manager of the houses indicating the size of the house they would like rented to them. The property manager can email them back giving them all the details about the house they are requesting. The details include;

Rent per month

Deposit paid

Terms and conditions to follow acceptance

1.4.1 PROBLEMS OF EXISTING SYSTEM

With the current system recording the details of various activities of user is completely manual and entails a lot of paper work. Each house has a file that contains the house: number, size, rent per month, expected deposit, occupant and status. Rent payment table contains tenants: first name, last name, and Phone number, date of payment, amount and balance if any. The existing system only provides text based interface which is not as user friendly as Graphical user interface. Since the system is implemented manually, the response is very slow. The transactions are not secure as papers may get lost or damaged. Hence, there is need of reformation of the system with more advantages and flexibility. The system eliminates most of the limitations of the existing system.

2. PROBLEM DEFINITION

It meets the requirement of houses to the families according to their requirement. Actually, Rental has become a problem for most of the person because of growing population. People migrate from one city to other cities for finding job, but in beginning, everyone needs house that can only be available with the help of rent. It is very difficult to find well stable house in strange place. Increased number of tenants and landlords makes management difficult especially for the landlords who are losing huge sum of money through tenants who evade rent. It gives the clear declaration as to why house rental management system need to be developed.

Housing is a major problem in Kenya especially in Nairobi city. Millions of people are living in sprawling slums and also in other informal settlement around Nairobi (UN-Habitat, 2008). This explains why many people have shifted their focus to developing rental houses in Nairobi and other parts of the country. The demand for rental houses is extremely high and more rental houses need to be put in place.

3. OBJECTIVE

The primary object of this project to provides houses to the people without wasting a lot of time to seek the house on other places.

1. To produce a web-based system that allows the vendors and tenants to register and book a house for rent to effectively manage their business.
2. The owner easily maintains the data like payment of tenant that is difficult for older days.
3. To ease vendor's task whenever they give house on rent
4. It gives attractive interface to user to manage their information related to housing system.
5. It have dashboard where owner can easily manage the tenant information.

4. SYSTEM ANALYSIS & REQUIREMENT

4.1 INTRODUCTION

The system objectives outlined during the feasibility study served as the basis from which the work of system design was initiated. Much of the activities involved at this stage were of technical nature requiring a certain degree of experience in designing systems sound knowledge of computer related technology and through understanding of computers available in the market and the various facilities provided by the vendors. Nevertheless, a system could not be designed in isolation without the active involvement of the user. The user had a vital role to play at this stage too.

Data collected during feasibility study was utilized systematically during the system design. Designing a system is a creative process which calls for logical as well as lateral thinking. Logical approach involves systematic moves towards the end product keeping in mind the capabilities of the personnel and the equipment at each design making step.

4.2 Feasibility study

Here, I will carry out a study to gain an understanding of the customers (tenants) current system and problems experienced in this system through interviews, observations, and participations. I will use the obtained data to determine the viability of the system being proposed in terms of technical, economic and social feasibility. 3

4.3 REQUIREMENTS ANALYSIS

Requirement analysis involved defining customer needs and objectives in the context of planned customer use, environments and identified system characteristics to determine requirements for system functions.

4.3.1 User Requirements

It entailed user involvement and statements of facts and assumptions that define the expectations of the system in terms of mission objectives, environment, constraints and measures of effectiveness and suitability. Basically the users:

- i) A system that improves on the efficiency of information storage and retrieval.
- ii) A system that is easy to learn and use
- iii) A system that is fast in processing transactions
- iv) A system that is flexible, safe and convenient
- v) A system that find easily.

4.3.2 Functional Requirements

This is a necessary task, action or activity that was accomplished. The proposed system is able to:

- i) Allow owner to add a houses, tenant and defaulters details
- ii) Allow the administrator to delete houses, tenants and defaulters details
- iii) Allow the tenant to search data in the database
- iv) Allow the administrator to edit data in the database

4.4 User Interfaces:

The “Rental house Management” webpage shall permit complete navigation; including all the functionalities described above, starting from a simple login or registration to access the house information to buy the house and uploading by the owner after authentication, tenant can give messages to the owner and take the response of it . The dashboard is universally accessible on almost all PCs and smart phones.

4.5 Hardware Interfaces:

There are two external machines used by the dashboard, each related to a user interface. These is a server machine at the admin end, hosting the website on xampp,

a PC at user's end, keeping log of the registration and membership entries made to them & providing them with an interface to do their part of functionality offered, last one is a PC or a smart phone at user's end to access the dashboard. The devices at the user end behave as terminals and not for storing any type of data. Also capable of taking user input for searching the house. All house information and transaction should be stored on server.

4.5.1 Hardware and Software Requirement

❖ Hardware requirements:

- PC with 4GB RAM, 500 GB HDD
- I3 Processor

❖ Software requirements:

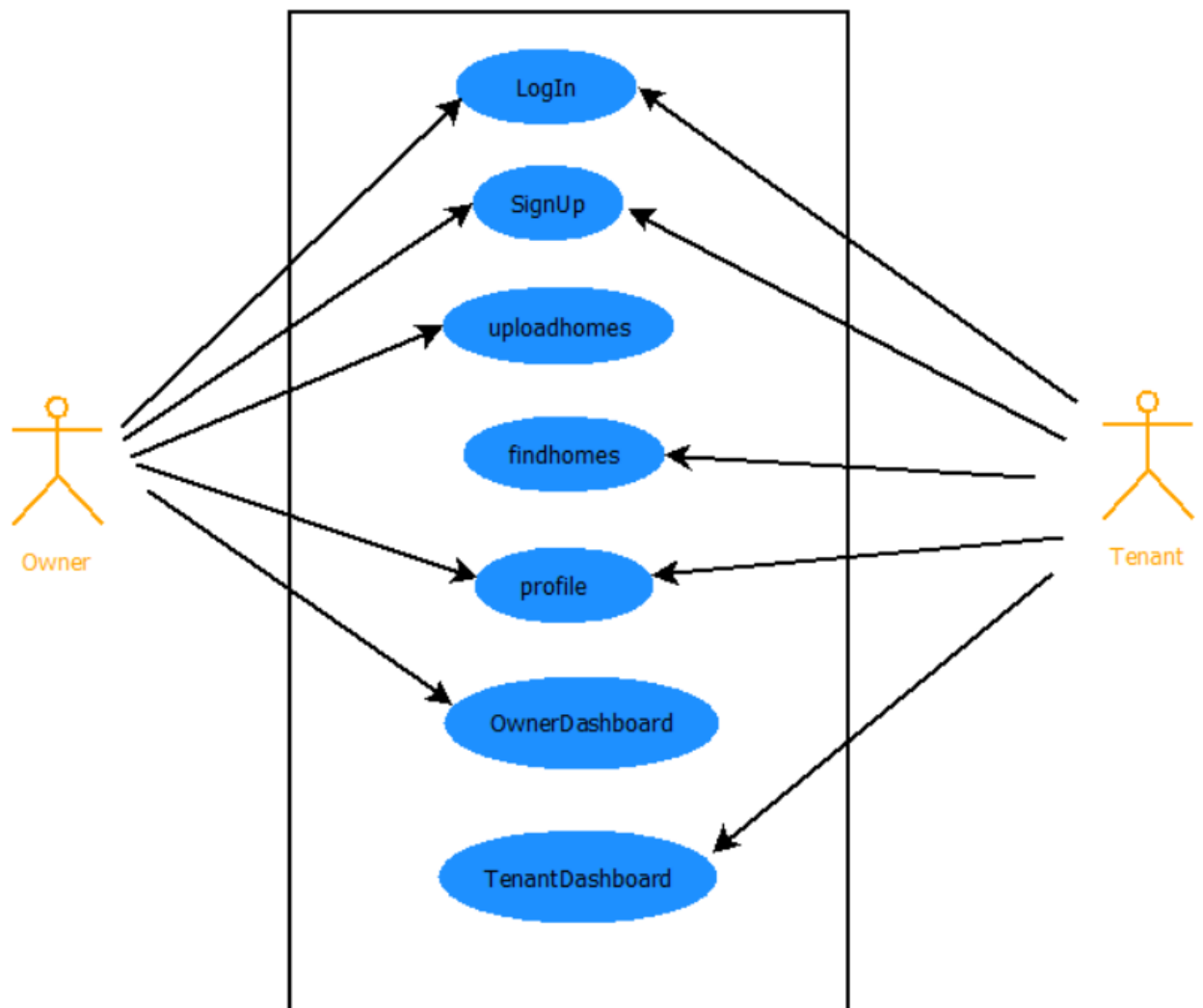
- XAMPP web server 1.0.0.0
- VS code editor 1.46.1.0
- GitHub Repository

❖ Technologies used:

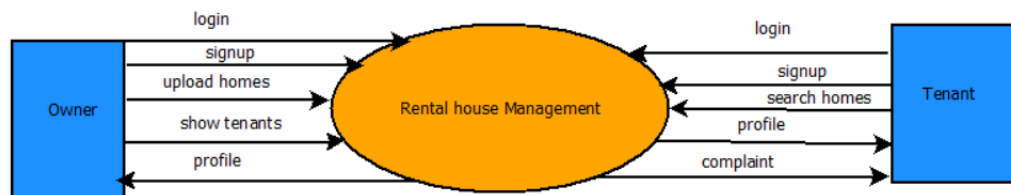
- HTML5,
- CSS3,
- PHP
- JAVASCRIPT
- BOOTSTRAP 4
- MySql3

5. SOFTWARE DESIGN

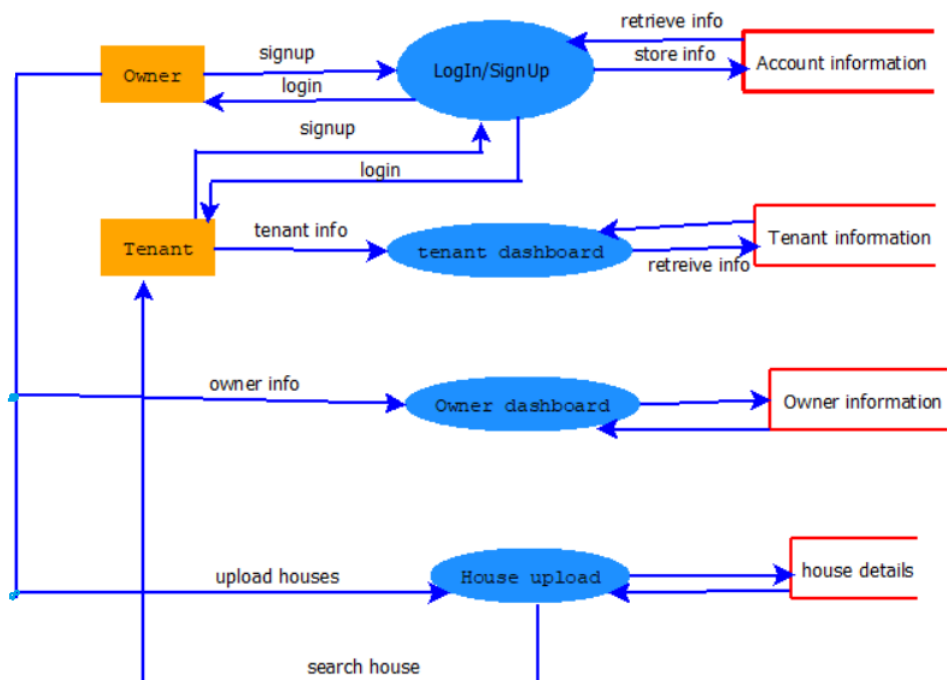
1. Use case Diagram



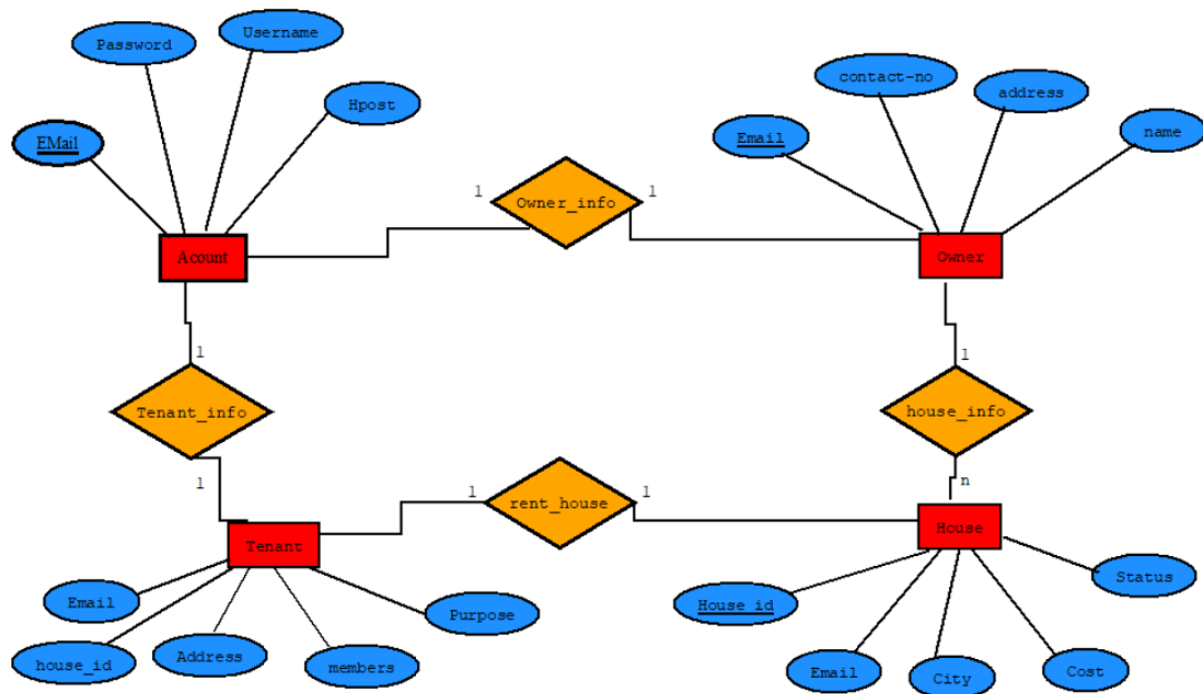
2. DFD level-0



3. DFD level-1



4. ER Diagram



6. TESTING

6.1 INTRODUCTION: At this stage, I will ensure both individual and integrated whole are methodically verified to ensure they are error free and satisfy customer requirement. I will involve both unit testing of individual code module, system testing of the integrated product and acceptance testing conducted by or on behalf of customer. I will ensure bugs found are corrected before moving to the next stage. I will also prepare, review and publish product documentation at this stage.

6.2 Installation

It is done once the product has been tested and certified as fit for use. The system is prepared for use at customer site.

6.3 Maintenance

This stage occurs after installation. It involves modifications on the system to improve performance. Such changes are user initiated or as a result of bug being discovered which were initially not known. These modifications are recorded for documentation and system update.

6.4 UNIT TESTING

It is a type of software testing where individual units or components of a software are tested. The purpose is to validate that each unit of the software code performs as expected. Unit Testing is done during the development (coding phase) of an application by the developers. Unit Tests isolate a section of code and verify its correctness. A unit may be an individual function, method, procedure, module, or object.

6.4.1 Why Unit Testing?

Unit Testing is important because software developers sometimes try saving time doing minimal unit testing and this is myth because inappropriate unit testing leads to high cost [Defect](#) fixing during [System Testing](#), [Integration Testing](#)

and even Beta Testing after application is built. If proper unit testing is done in early development, then it saves time and money in the end.

1. Unit tests help to fix bugs early in the development cycle and save costs.
2. It helps the developers to understand the code base and enables them to make changes quickly
3. Good unit tests serve as project documentation
4. Unit tests help with code re-use. Migrate both your code **and** your tests to your new project. Tweak the code until the tests run again.

6.4.2 Unit Testing Tools

There are several automated tools available to assist with unit testing. We will provide a few examples below:

1. [JUnit](#): JUnit is a free to use testing tool used for Java programming language. It provides assertions to identify test method. This tool test data first and then inserted in the piece of code.
2. [NUnit](#): NUnit is widely used unit-testing framework use for all .net languages. It is an open source tool which allows writing scripts manually. It supports data-driven tests which can run in parallel.
3. [JMockit](#): JMockit is open source Unit testing tool. It is a code coverage tool with line and path metrics. It allows mocking API with recording and verification syntax. This tool offers Line coverage, Path Coverage, and Data Coverage.
4. [EMMA](#): EMMA is an open-source toolkit for analyzing and reporting code written in Java language. Emma support coverage types like method, line, basic block. It is Java-based so it is without external library dependencies and can access the source code.
5. [PHPUnit](#): PHPUnit is a unit testing tool for PHP programmer. It takes small portions of code which is called units and test each of them separately. The tool also allows developers to use pre-define assertion methods to assert that a system behave in a certain manner.

Those are just a few of the available unit testing tools. There are lots more, especially for C languages and Java, but you are sure to find a unit testing tool for your programming needs regardless of the language you use.

6.4.3 How to do Unit Testing

In order **to do Unit Testing**, developers write a section of code to test a specific function in software application. Developers can also isolate this function to test more rigorously which reveals unnecessary dependencies between function being tested and other units so the dependencies can be eliminated. Developers generally use UnitTest framework to develop automated test cases for unit testing.

Unit Testing is of two types

- Manual
- Automated

Unit testing is commonly automated but may still be performed manually. Software Engineering does not favor one over the other but automation is preferred. A manual approach to unit testing may employ a step-by-step instructional document.

Test case 1: Test case for authentication (Owner/Tenant):

Test Procedure	Entering Email and Password.
Expected Result	Authentication successful and redirect to dashboard.
Actual Result:	Remain at login page.
Comment	Need to check Mysql query in the php file.
Conditional Test	Again, run .
Expected Result	Authentication successful and redirect to dashboard.
Actual Result	Redirect to dashboard.

Test case 2: Test case for upload house on portal (Owner):

Test Procedure	Fill apartment Form.
Expected Result	Successfully uploaded compartment.
Actual Result:	Not showing house on owner's dashboard
Comment	Need to check Mysql query in the apartment php file.
Conditional Test	Again, run.
Expected Result	Successfully uploaded compartment.
Actual Result	House uploaded and shown on GUI.

Test case 3: Test case for searching home (Tenant):

Test Procedure	Search house by location and rooms.
Expected Result	As require flat or house shown on gui.
Actual Result:	As require flat or house shown on gui.
Comment	Test case passed.

Test case 4: Test case for edit profile (Owner/Tenant):

Test Procedure	Select picture from pc and upload.
Expected Result	Picture replaced by current uploaded picture.
Actual Result:	Current picture not uploaded.
Comment	Check again sql query for updating profile.
Conditional Test	Again, run.
Expected Result	Picture replaced by current uploaded picture
Actual Result	Current picture uploaded.

Unit Testing Advantage

- Developers looking to learn what functionality is provided by a unit and how to use it can look at the unit tests to gain a basic understanding of the unit API.
- Unit testing allows the programmer to refactor code at a later date, and make sure the module still works correctly (i.e. Regression testing). The procedure is to write test cases for all functions and methods so that whenever a change causes a fault, it can be quickly identified and fixed.
- Due to the modular nature of the unit testing, we can test parts of the project without waiting for others to be completed.

7. TABLES

We are here use xampp server for storing user information at secure place. This chapter shows the database of our project where we use mariaDB database with php at server side.

1. **Account:** This table is used for authentication purpose for each user. Every new user must have to create account for using our house management project.

Fig 7.1: Account table

The screenshot shows the phpMyAdmin interface for a database named 'rental house management'. The 'account' table is selected, and its structure and data are displayed. The table has four columns: EMAIL, USERNAME, PASSWORD, and HPOST. The data is sorted by EMAIL in ascending order. The table contains 12 rows of data, including users like Amit Kumar, Bhagat Singh, Karan, Karan, Kartik, Luv Rajpoot, Madan Mohan, Mohan Agrawal, Mohanag, Prateek dubey, Rahul Sharma, Rohan, and Udit Aggarwal.

EMAIL	USERNAME	PASSWORD	HPOST
amit@gmail.com	Amit Kumar	amit@123	Owner
bhagat@gmail.com	Bhagat Singh	bhagat@123	Tenant
karan1@gmail.com	prateek	karan@123	Owner
karan@gmail.com	Karan	karan@123	Owner
kartik@gmail.com	kartik	kartik@123	Tenant
luv@gmail.com	luv Rajpoot	luv@123	Owner
madan@gmail.com	Madan Mohan	madan@123	Owner
mohan@gmail.com	Mohan Agrawal	mohan@123	Owner
mohanag@gmail.com	mohanag	mohanag@123	Owner
prateek@gmail.com	prateek dubey	prateek@123	Tenant
rahul@gmail.com	Rahul Sharma	rahul@123	Owner
rohan@gmail.com	rohan	rohan@123	Tenant
udit@gmail.com	Udit Aggarwal	udit@123	Tenant

2. **House:** It is used for searching the house for a particular city.

Fig 7.2: house table

Showing rows 0 - 12 (13 total, Query took 0.0019 seconds) [HOUSE_ID: 1... - 25...]

SELECT * FROM 'house' ORDER BY 'HOUSE_ID' ASC

HOUSE_ID	STATUS	CITY	ROOMS	ACROOMS	ROOM_TYPE	ADDRESS	CONTACT	EMAIL	COST	PIC
1	Available	Mathura	3bhk	Yes	Local House	H N 14 Sant nagar	9876945623	madan@gmail.com	3500	h5.jpg
2	Available	Mathura	3bhk	No	Local House	H N 20 pushpanjali upvan	9876945623	madan@gmail.com	3500	h5.jpg
3	Available	Mathura	2bhk	Yes	Flat	R N 50 Radhey valley	9876945623	karan@gmail.com	3000	h5.jpg
4	Available	Mathura	2bhk	Yes	Flat	R N 202 Radhey valley	9876945623	karan@gmail.com	3000	h5.jpg
5	Available	Mathura	1bhk	Yes	Flat	R N 23 Radhey valley	9876945623	karan@gmail.com	2500	h5.jpg
6	Available	Mathura	1bhk	Yes	Flat	R N 56 Radhey valley	9876945623	karan@gmail.com	2500	h5.jpg
7	Available	Mathura	2bhk	Yes	Flat	R N 50 Radhey valley	9876945623	karan@gmail.com	3000	h5.jpg
8	Available	Vrindavan	2bhk	Yes	P.G	R N 12 H R conclave	9785785478	rahul@gmail.com	5000	h5.jpg
9	Unavailable	kanpur	2bhk	Yes	Local House	H N 25 Bypass sect 4	9876945623	mohan@gmail.com	7000	h5.jpg
10	Unavailable	kanpur	2bhk	No	Local House	H N 20 Bypass sect 4	9876945623	mohan@gmail.com	7000	h5.jpg
11	Unavailable	Mathura	2bhk	No	Girls	Chaumuha near GLA University	978587329	luv@gmail.com	1500	h5.jpg
24	Available	Agra	2bhk	Yes	Boys P.G	Bhagwan talkies	978587329	madan@gmail.com	6000	hand.jpg
25	Unavailable	Mathura	1bhk	No	P.G	chaumuha	978587345	mohanag@gmail.com	7000	1.jpg

3. **Owner:** It stores the information of Owners.

Fig 7.4: Owner table

Showing rows 0 - 6 (7 total, Query took 0.0024 seconds)

SELECT * FROM 'owner'

FIRSTNAME	LASTNAME	EMAIL	GENDER	ADDRESS	COUNTRY_CODE	PHONE	PIC	ACCOUNT_NO
Amit	Kumar	amit@gmail.com	Male	H N 12 Govardhan, Mathura	+91	6371674498	avatar2.png	12346727776
Karan	Rajput	karan@gmail.com	Male	H N 23 Etawa, near khara	+91	8883488932	avatar2.png	222245677889
Luv	Rajput	luv@gmail.com	Male	c-block 242 pushpanjali upvan mathura	+91	6395684320	promise.jpg	18765432189
Madan	Mohan	madan@gmail.com	Male	H N 90 sector-53, Delhi	+91	8881574438	IMG_20201011_200158.jpg	333345677833
Mohan	Agrawal	mohan@gmail.com	Male	H N 40 Masani Road, Mathura	+91	9791574467	avatar2.png	444445677884
Mohan	Agrawal	mohanag@gmail.com	Male	Masani	+91	9786564327	avatar2.png	1234567898
Rahul	Sharma	rahul@gmail.com	Male	H N 68 Krishna Nagar	+91	8881574456	avatar2.png	555545677885

1. **Tenant:** It stores the information of tenants.

Fig 7.3: Tenant table

The screenshot shows the phpMyAdmin interface for the 'rental house management' database. The 'tenant' table is selected, and its structure and data are displayed. The table has 11 columns: HOUSE_ID, USERNAME, MEMBERS, PURPOSE, CONTACT_NO, PROOF_ID, LEAVE_HOUSE, JOIN_HOUSE, ADDRESS, EMAIL, and PIC. The data is as follows:

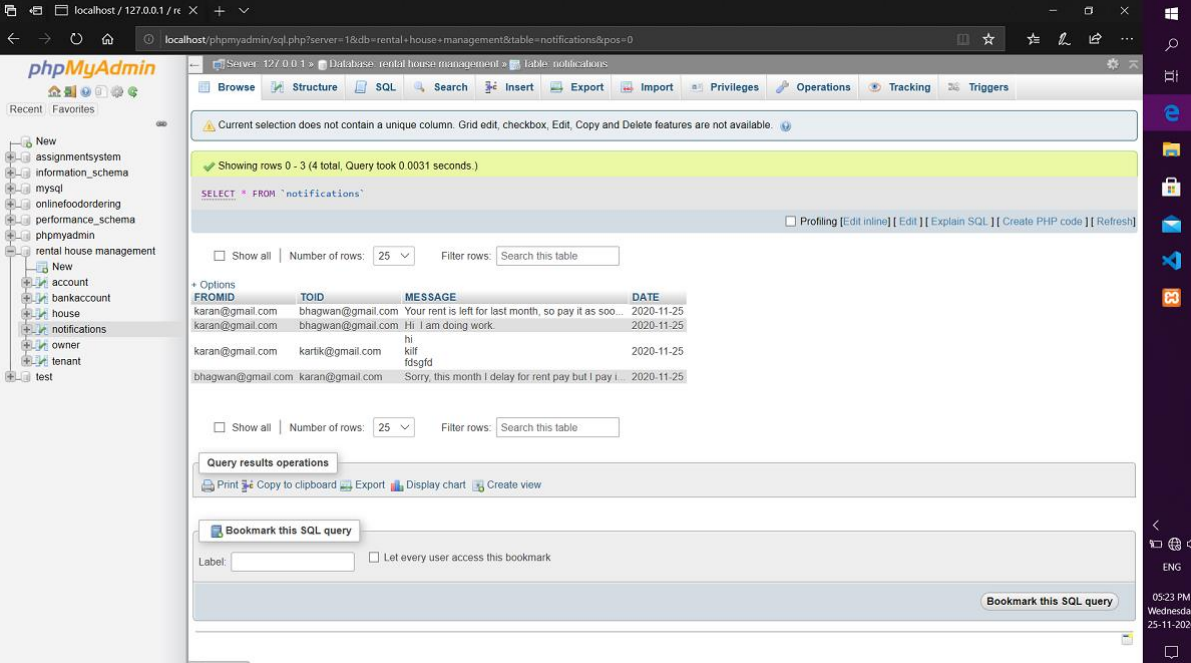
HOUSE_ID	USERNAME	MEMBERS	PURPOSE	CONTACT_NO	PROOF_ID	LEAVE_HOUSE	JOIN_HOUSE	ADDRESS	EMAIL	PIC
1	Bhagat Singh	1	Job	7856345612	7869 7854 3434 1256	12-06-20	2001-09-20	H.N. 10 sect 80, Mumbai	bhagat@gmail.com	avatar2.png
3	Udit Aggarwal	2	studing	9758587329	6372 4678 6787 6767	28-10-20	2012-12-20	C-Block 242	udit@gmail.com	Robots-conectados-wallpaper-146144.jpg
6	Prateek dubey	2	study	56256677221	1234 5678 9087 1654	2020-10-29	2020-10-29	ballabh kunj, mathura	prateek@gmail.com	avatar2.png
11	Rohan kumar	5	Job Opportunity	9758587329	9879 4567 2314 1654	2020-12-31	2020-11-08	Chaumuha near GLA Univerity	rohan@gmail.com	avatar2.png
25	Kartik	4	study	8881554478	1234567898765432	2021-11-08	2020-11-05	Pushpanjali	karik@gmail.com	avatar2.png

Fig 7.5: Bank account table

The screenshot shows the phpMyAdmin interface for the 'rental house management' database. The 'bankaccount' table is selected, and its structure and data are displayed. The table has 5 columns: Tenant_account, Owner_account, Date, Payment, and HOUSE_ID. The data is as follows:

Tenant_account	Owner_account	Date	Payment	HOUSE_ID
454545456	18765432189	2020-10-10	Rs 1500	11
12345678987	1234567898	2020-11-08	Rs 7000	25

Fig 7.6: Notifications table



Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 3 (4 total. Query took 0.0031 seconds.)

```
SELECT * FROM `notifications`
```

☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

FROMID	TOID	MESSAGE	DATE
karan@gmail.com	bhagwan@gmail.com	Your rent is left for last month, so pay it as soo...	2020-11-25
karan@gmail.com	bhagwan@gmail.com	Hi I am doing work.	2020-11-25
karan@gmail.com	kartik@gmail.com	hi fdsgfd	2020-11-25
bhagwan@gmail.com	karan@gmail.com	Sorry, this month I delay for rent pay but I pay i...	2020-11-25

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Query results operations

Bookmark this SQL query

Label: ☐ Let every user access this bookmark

Console

8. IMPLEMENTATION

Implementation is the stage in the project where the theoretical design is turned into a working system. The implementation phase constructs, installs and operates the new system. The most crucial stage in achieving a new successful system is that it will work efficiently and effectively. There are several activities involved while implementing a new project. They are -

End user training

End user Education

Training on the application software

Post implementation Review

1. End user Training:

The successful implementation of the new system will purely upon the involvement of the officers working in that department. The officers will be imparted the necessary training on the new technology

2. End User Education:

The education of the end user start after the implementation and testing is over. When the system is found to be more difficult to understand and complex, more effort is put to educate the end user to make them aware of the system, giving them lectures about the new system and providing them necessary documents and materials about how the system can do this.

3. Training of application software:

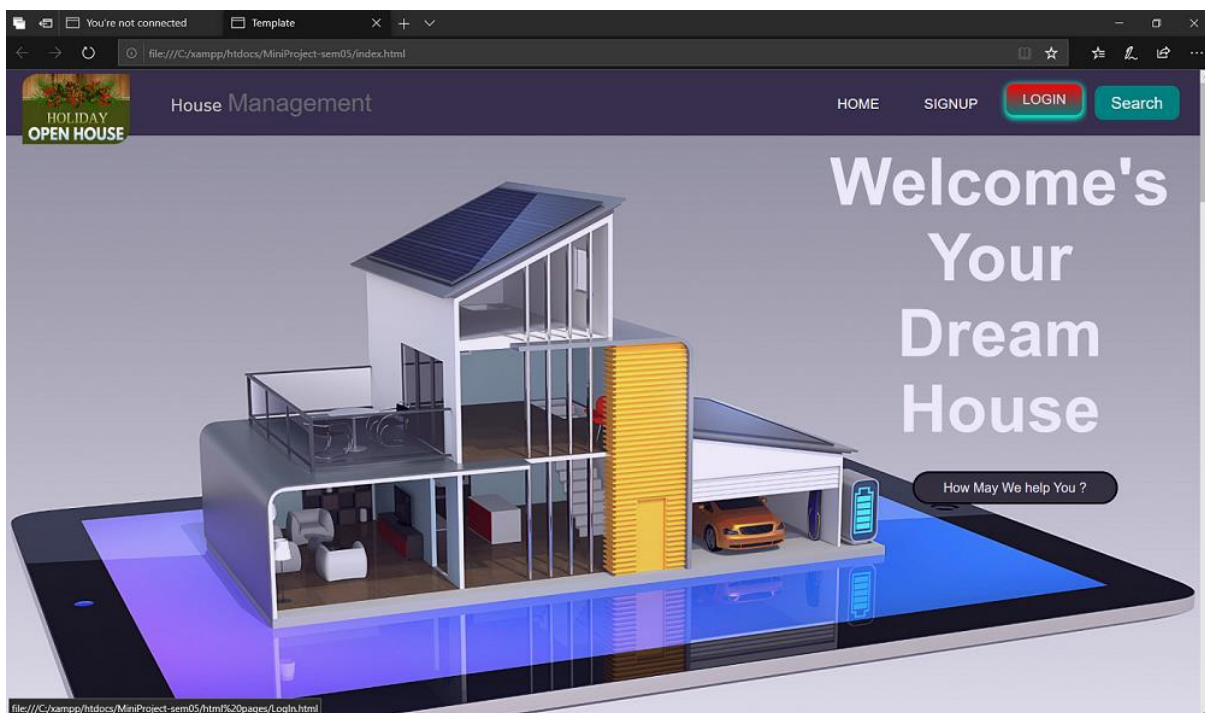
After providing the necessary basic training on the computer awareness, the users will have to be trained upon the new system such as the screen flows and screen design type of help on the screen, type of errors while entering the data, the corresponding validation check at each entry and the way to correct the data entered. It should then cover information needed by the specific user or group to use the system.

4. Post Implementation review:

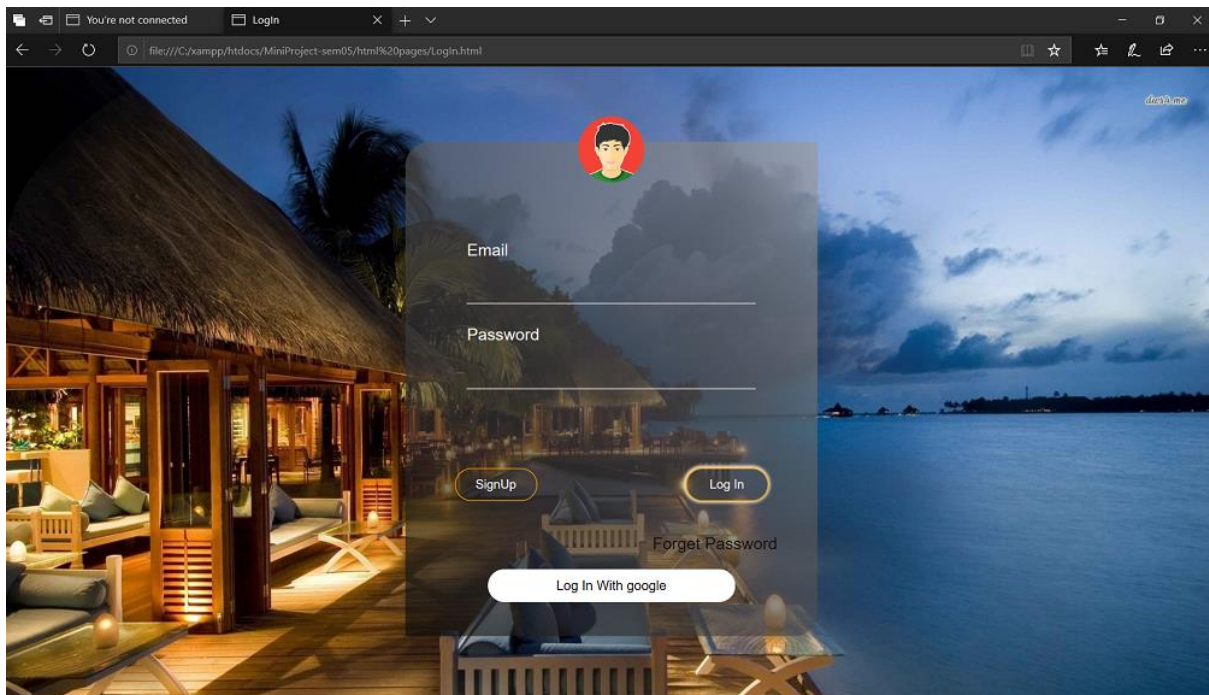
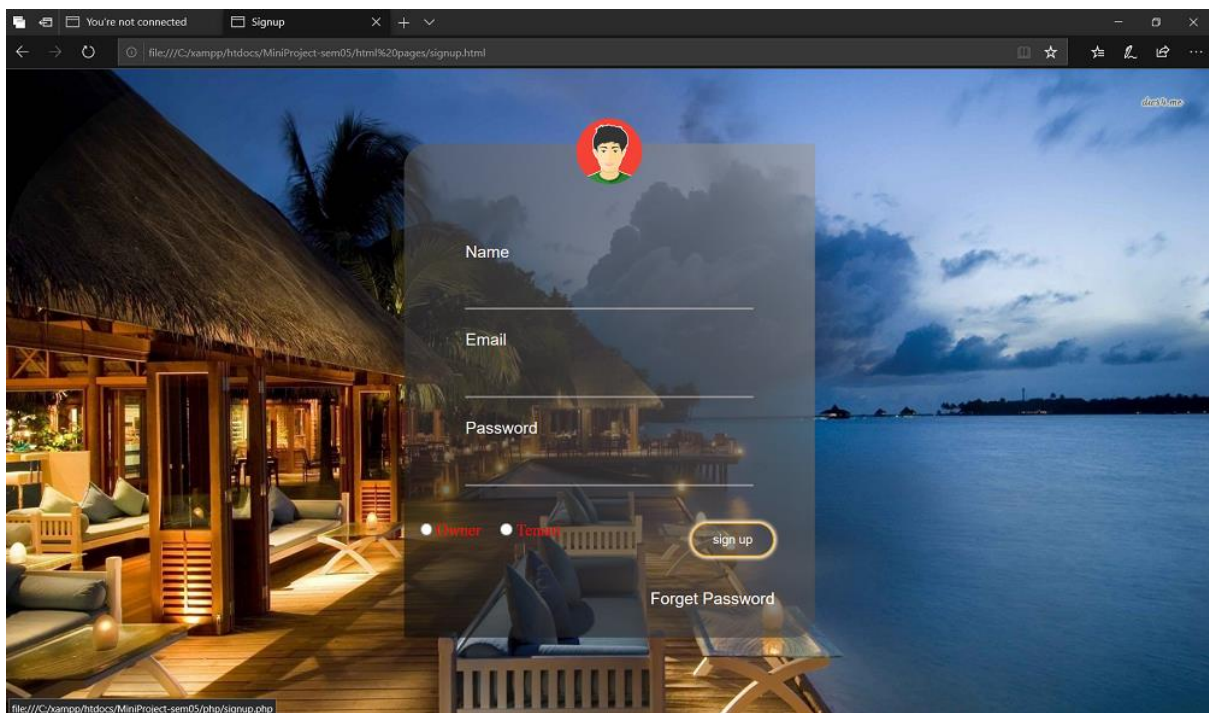
The department is planning a method to know the states of the past implementation process. For that regular meeting will be arranged by the concerned officers about the implementation problem and success .

This project divides into different modules such as searching, tenant information, maintaining database etc. we discuss each one by one.

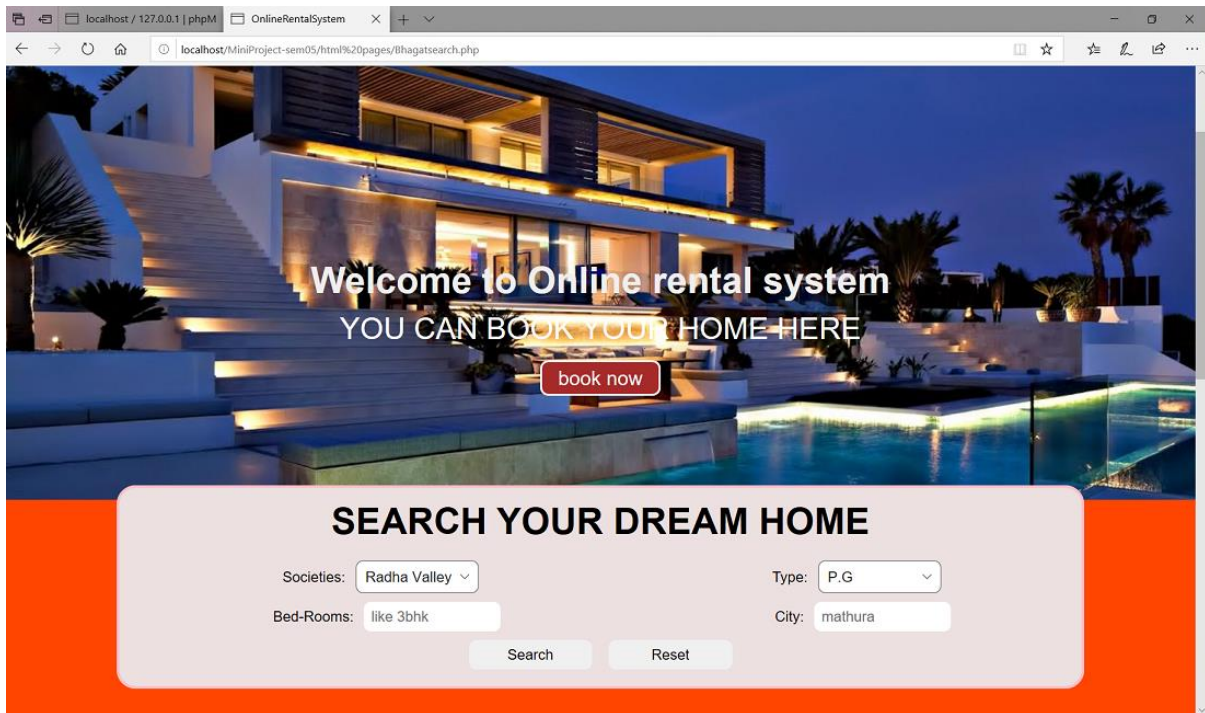
1. **Home page:** It has a home page where each user must visit for buying the house. From here, user may know the details of our websites information and privacy policy before register to itself. It gives reliability to user.



2. **Authentication:** It is only for security purpose. Registration can be done with the home page by visiting the link that given on home page. During the registration, it asks for owner or tenant. If you are owner, it redirect to owner dashboard where every detail can be managed. It has two pages for this purpose login/signup page.



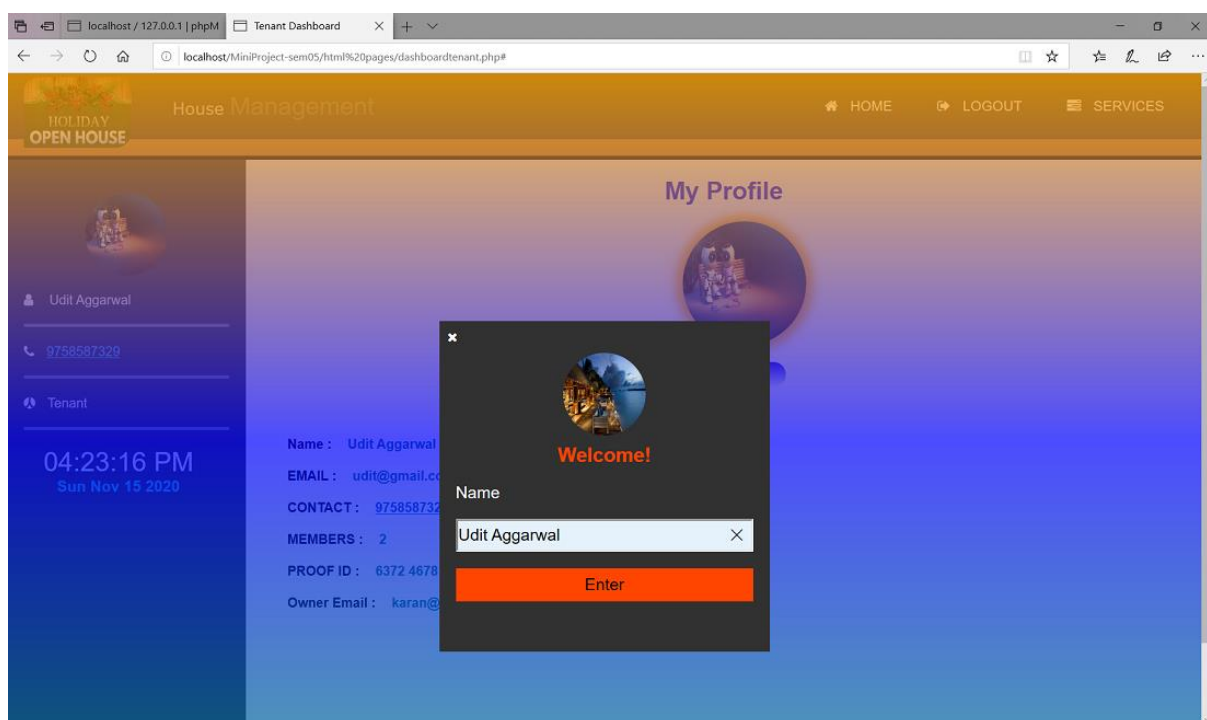
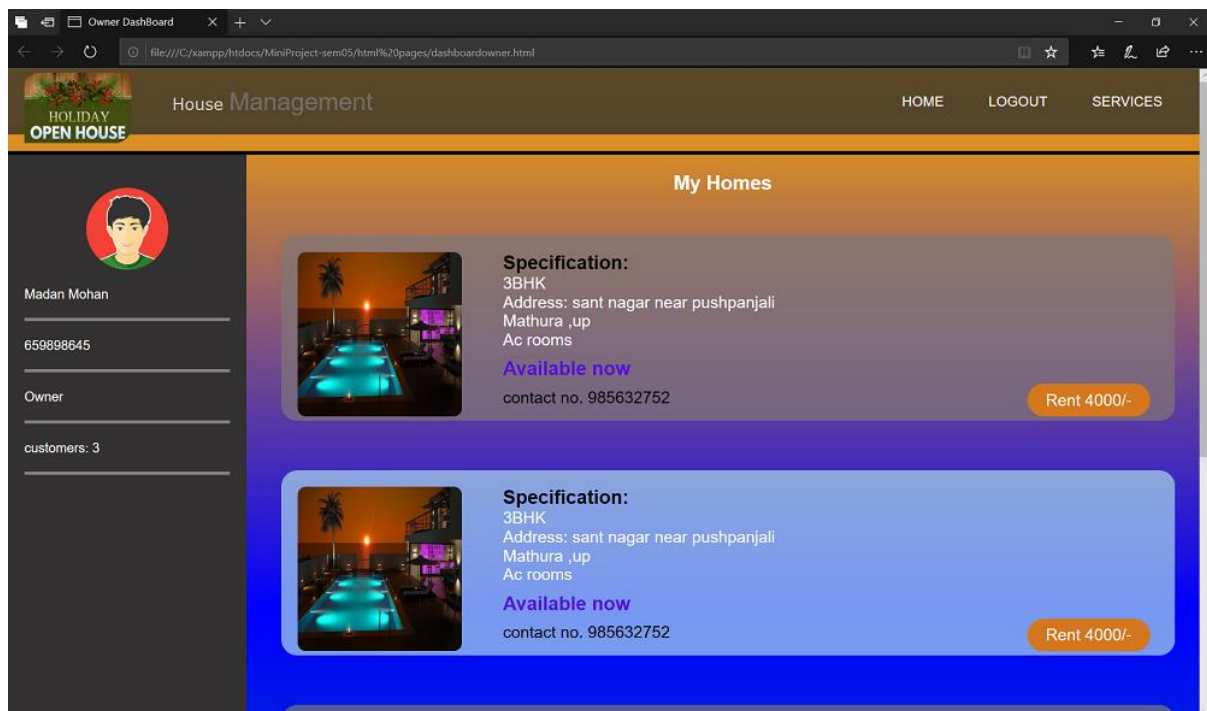
5. **Searching:** This page is most important part of this website because from here tenant find their house according to their requirement. It gives flexibility to finding home on the basis of rent, location; rooms needed and type of compartment

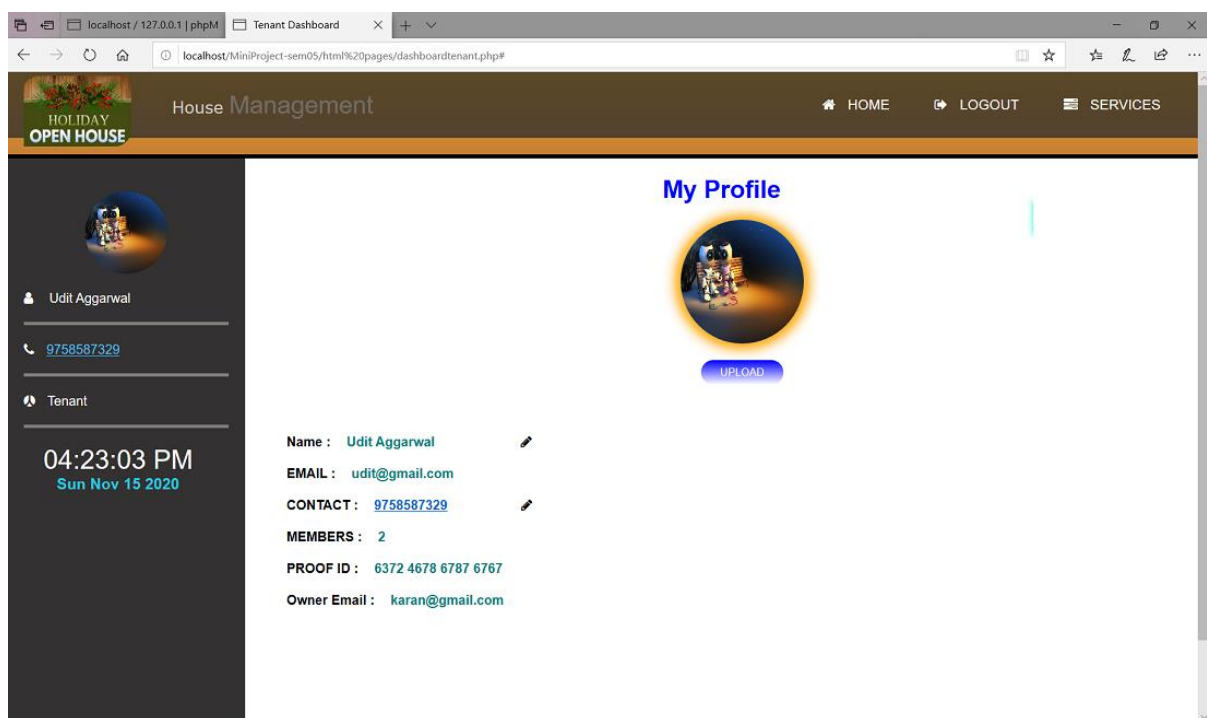
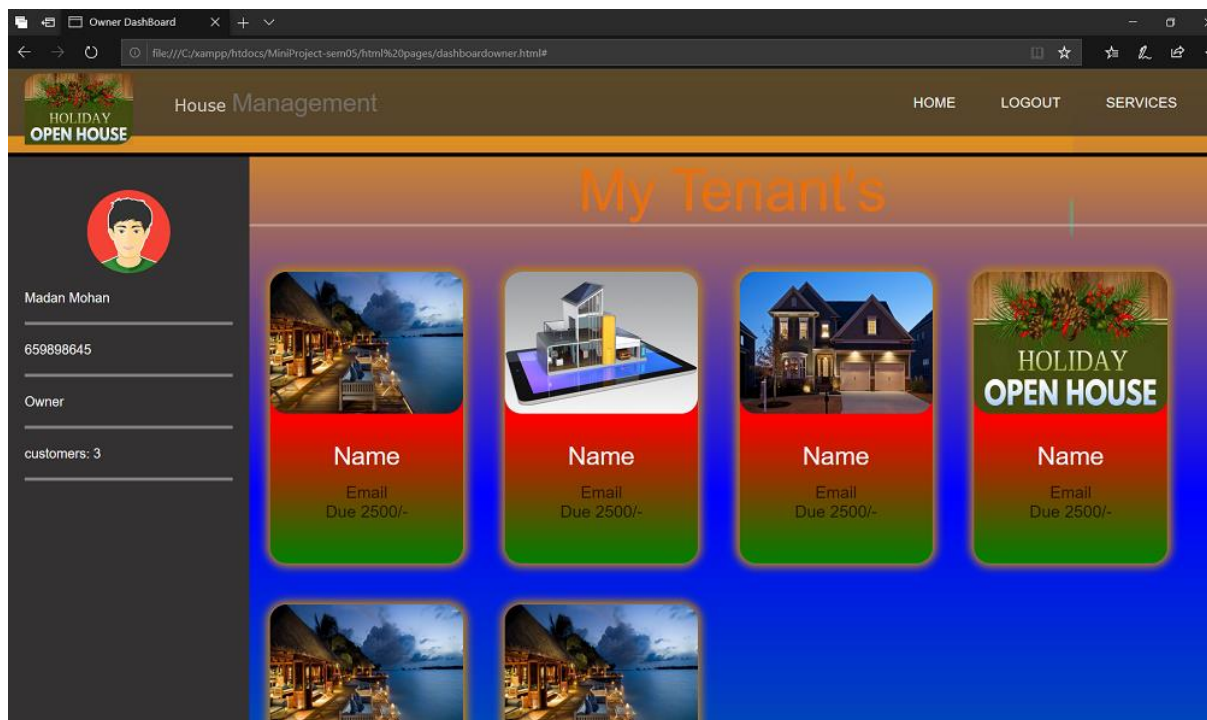


6. **Tenant form:** This form is filled by tenant when it finds the house as per requirement and click to buy. In this form tenant fill information like name, purpose, members etc. for future planning.

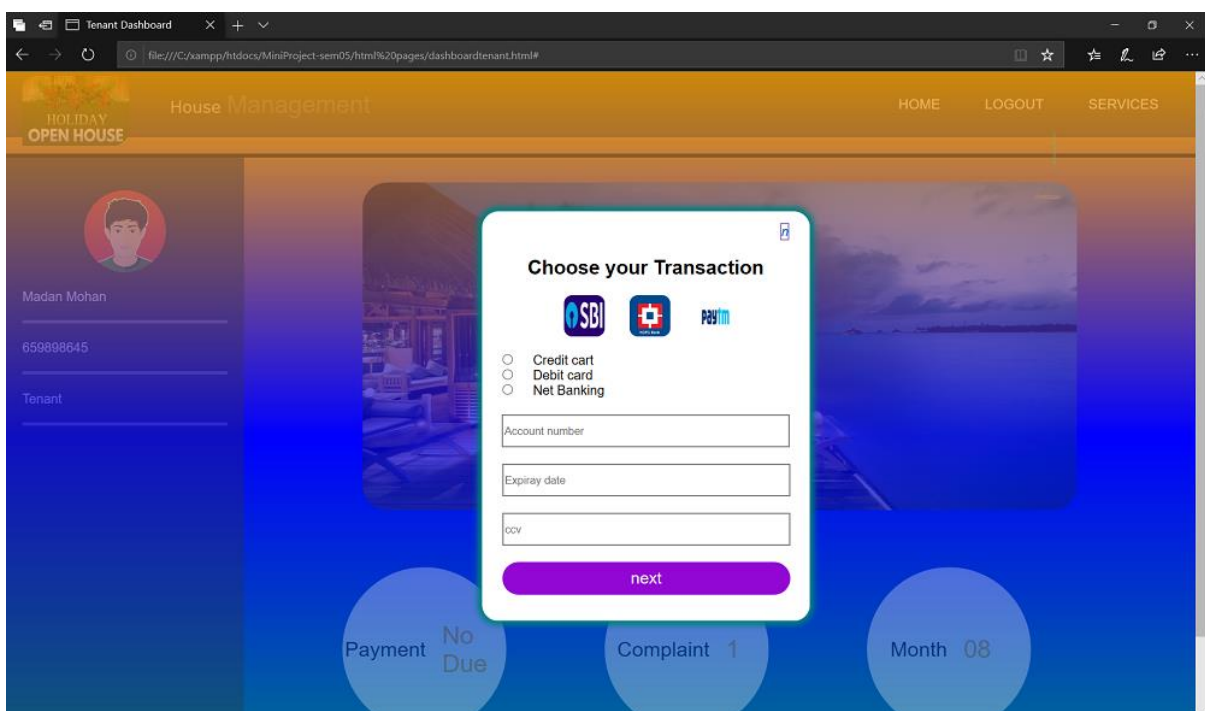
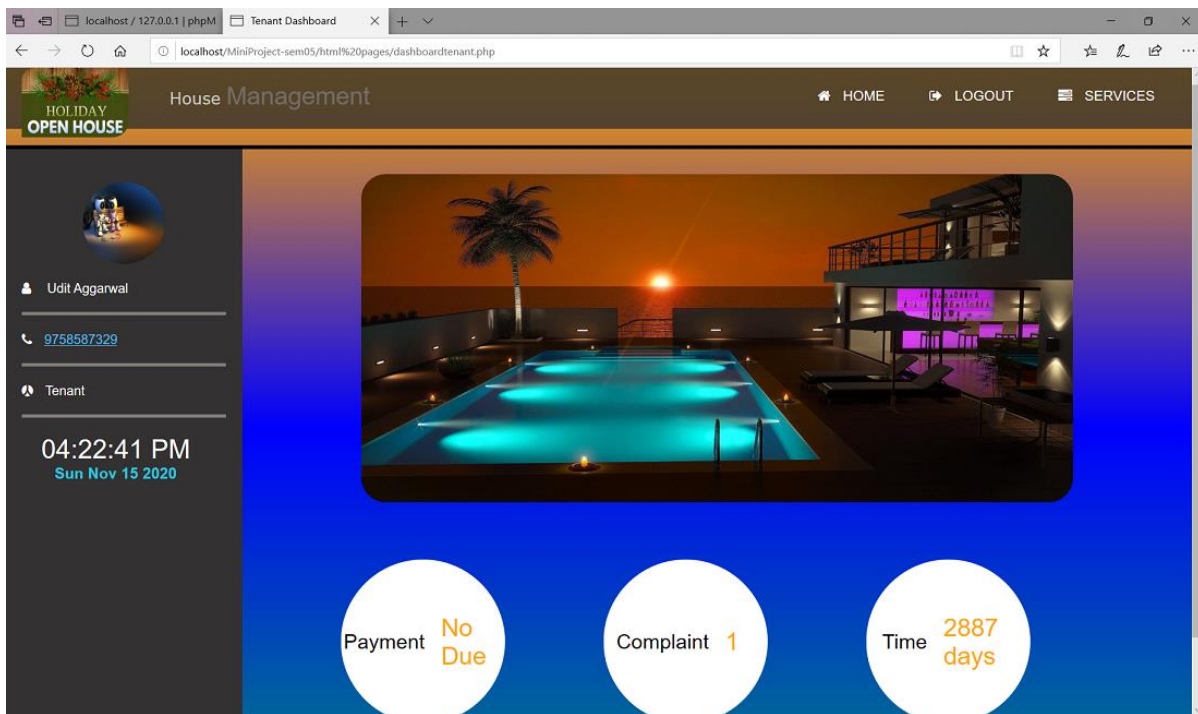
The screenshot displays a web browser window with the title 'Tenant Info'. The address bar shows the file path: `file:///C:/xampp/htdocs/MiniProject-semester05/ftml%20pages/tenant1.html`. The page header includes a logo with the text 'OPEN HOUSE', the title 'House Management', and navigation links for 'HOME', 'LOG OUT', and a 'Search' button. The main content area features a purple modal box with the heading 'You need to Fill Some Information'. Inside the modal, there are several input fields: 'Name', 'Email', 'Members', 'Rooms', 'Purpose Of Living', 'Living Time (How much you live)' (with 'From' and 'To' date pickers), 'Address', 'Proof Id', 'Contact No.', and 'Contact'. A 'Cancel' button is located in the top right corner of the modal.

5. Owner dashboard: This dashboard contains all the information of owner houses and their tenant information. Owner can upload house for rent and also remove after buying it. From here, owner can contact to tenant and can complaint to tenant, if there is any kind of problem.





6. Tenant dashboard: This dashboard helps the tenant for paying the rent in secure manner to owner. It can see the complaint that given by owner such as rent pays.



owner

file:///C:/xampp/htdocs/MiniProject-sem05/html%20pages/owner.html

House Management

HOME LOGOUT BACK

HOI IDAY OPEN HOUSE

Apartment Information

Type :
Local House

Rooms
3bhk

ACRooms
Yes

City

Address

Contact

Cost

Browse...

Submit Reset

C:\xampp\htdocs\MiniP

file:///C:/xampp/htdocs/MiniProject-sem05/html%20pages/amtowner.html

Owner Details

Firstname
Enter Firstname

Lastname:
Enter Lastname

Gender :
☒ Male ☐ Female ☐ Other

Phone :
+91

Enter phone no.

Current Address :

Email Bank Details

card no.

CONCLUSION

A software project means a lot of experience. In this section we summarize the experience gained by project team during development of “**House Rental Management**”.

It was a wonderful learning experience for us while working on this project. This project took us through the various phases of project development and gave us real insight into the world of software engineering. The joy of working and the thrill involved while tackling the various problems and challenges gave us a feel of the developers’ industry. It was completely new experience for our team members to develop the project using php and Javascript. But, now it gives vast knowledge of mysql database using php and how to interact them with programming languages.

We learned a lot through this project. This project has sharpened our concept of Mysql database and the software-hardware interface. We learned a lot about different documentation. “The piece of software we developed is intended to serve needy persons that require home in new city”. This project not only tested our technical skills but also our temperament.

6.1 The Achievements

1. Now we know much more about database, php, html5, css3, JavaScript.
2. How database interact with php application.
3. Develop technical skills.
4. Growing creative thinking and imagination capability.

6.2 Future Plan

- i. Improve GUI
- ii. Add Ajax for avoiding page reload
- iii. Add new Features

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