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House Rental System

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Abstract

Science and Technology has changed this world into a small, secure and easy to manage every activities of the individual and organization. Everything is more secure, easy to use and easily accessible in this modern world. Thus, the use of house rental system is needed to manage, search and book the housing system easily. In order to give easy access to find the houses as per the users need, the web application has been developed in this documentation. And it includes all the detail information about the project respectively.

Table of Contents

Chapter 1 4
1. INTRODUCTION 4
1.1. BACKGROUND OF THE STUDY 4
1.2. STATEMENT OF THE PROBLEM 5
1.3. PROJECT OBJECTIVES 5
1.4. PROJECT SCOPE 6
1.5. PROJECT DELIVERABLES 6
1.6. TIME SCHEDULE 6
2. LITERATURE REVIEW 7
2.1. THE ROLE OF OBJECT ORIENTED PROGRAMMING (OOP) 7
2.2. THE ROLE OF RELATIONAL DATABASE MANAGEMENT SYSTEM (RDBMS) 7
3. METHODOLOGY USED 8
3.1. FACTS FINDING TECHNIQUES 8
3.1.1. Objectives 8
3.1.2. Questionnaires 8
3.1.3. Secondary Data Collection 9
3.2. SYSTEM DEVELOPMENT AND METHODOLOGY 9
3.2.1. Waterfall Model 9
4. SYSTEM ANALYSIS AND REQUIREMENT MODELING 17
4.1. INTRODUCTION 17
4.2. EXISTING SYSTEM 17
4.3. PROBLEMS OF EXISTING SYSTEM 17
4.4. REQUIREMENTS ANALYSIS 18
4.4.1. User Requirements 18
4.4.2. Functional Requirements 18
4.4.3. Hardware Requirements 18
4.4.4 Software Requirements 18
Chapter 5 19
5. SYSTEM DESIGN 19
5.1 DESIGN PHASES 19
5.1.1 Conceptual Design 19
5.1.2 Database Design 20

5.2 Website Interface 20
6. SYSTEM IMPLEMENTATION 27
6.1 SOFTWARE TESTING 28
7. Recommendations 30
8. CONCLUSION 31

Chapter 1

1. INTRODUCTION

Rental house management has turned out to be critical figure current society subsequently the need a rental house administration system.

This section will give a short comprehension about foundation of study, meaning of the venture issue explanation, its destinations, scopes, extend support, dangers, extend deliverables and venture spending plan and calendar.

1.1.BACKGROUND OF THE STUDY

Housing has a focal significance to personal satisfaction with extensive financial, social, cultural and individual significance. In spite of the fact that a nation'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. Housing assumes a tremendous part in rejuvenating monetary development in any nation, with safe house being among key markers of improvement.

“The universal declaration of human rights gives one of the basic human rights as the right to a decent standard of living, central to which is the access to adequate housing” (United Nations, The Human Rights-article 25, 1948).

“Housing as a basic human right demands that urban dwellers should have access to a decent housing, defined as one that provides a foundation for rather than being a barrier to good physical and mental health, personal development and fulfillment of life objectives” (Seedhouse, 1986).

The concentration of this exploration venture is essentially overseeing lodging for low pay, medium and high wages families or what is normally known as moderate lodging. „Affordable‟ is a term used to depict individuals‟ ability to pay for specific items or administrations in light of the fact that their wage is sufficient to do as such. In spite of the fact that the term „affordable housing‟ is frequently connected to rental lodging; that is inside the monetary methods for those in the lower pay scopes of a topographical range, the idea is pertinent to both center and high salary people. Most families lease houses in view of their salary and family circumstances; lamentably, there may not be sufficient great quality rental lodging for these families.

Creating rental houses accompanies many points of interest particularly to the Landlords who can expand their benefits through lease paid by the occupants.

Expanded number of occupants and Landlords makes administration troublesome particularly for the proprietors who are losing immense entirety of cash through inhabitants who sidestep lease. The above explanation gives an unmistakable statement in the matter of why rental house administration framework should be created.

1.2. STATEMENT OF THE PROBLEM

Throughout the years landlords/property managers have had an issue in keeping up and dealing with their clients and their own particular records.

Administration has turned out to be troublesome in light of issues that include:

i. Data Growth: Data increase day to day. Putting away and keeping up all information physically is extremely troublesome
ii. Lack of electronic System: Currently most landlords/property managers utilize the manual system in recording and keeping up their property and clients information
iii. Data security is not guaranteed: In a manual manner, information is recorded on books/papers which may effectively get harmed prompting loss of information.
iv. There is no database to store data: Potential of information misfortune or harm is high since information is put away on substantial documents.

Absence of these urgent necessities makes administration of the occupants and houses extremely troublesome as approximately inhabitants may wind up not paying rent.

1.3. PROJECT OBJECTIVES

The following are the project objectives:

To build up a rental house administration system that permits the client to see customers‟ information and houses record, see the description of the house and book the house in the event that they enjoyed it. Also, the administrator will have the capacity to deal with the houses (include, refresh and erase), deal with the appointments and clients as well.

1.4. PROJECT SCOPE

The project scope characterizes the portrayal of the work that is required in conveying the rental house administration framework. The accompanying are the extents of work over the span of the venture:

i. Study and comprehend the necessity of this venture
ii. Construct Software Requirement Specification record of the framework
iii. Construct Software Design Document of the framework

1.5. PROJECT DELIVERABLES

The main deliverables of this project will be the complete software system and the software engineering document that include:

i. Software Requirement and Specification
ii. Software Design Document
iii. Final working web application for house rental framework

1.6.TIME SCHEDULE

i. To build up a framework that permits the clients to include, alter, look and erase information (house, clients, appointments, and so forth.) from the database
ii. To consider and dissect the prerequisite determinations of the rental house administration framework
iii. To deliver the Software Requirement Specification of the framework
iv. To create the Software Design Document of the framework

Chapter 2

2. LITERATURE REVIEW

"Literature review is a text written by someone to consider the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic. Main goals are to situate the current study within the body of literature and to provide context for the particular reader" (Cooper, 1998).

2.1.THE ROLE OF OBJECT ORIENTED PROGRAMMING (OOP)

(Levin, 1999) Database Management System (DBMS) has replaced the file system data management by having a pool of data that can be shared by multiple application programs and users concurrently. DBMS also provide logical and physical data independence, so that changing of data structure or application program will not affect one another.

2.2.THE ROLE OF RELATIONAL DATABASE MANAGEMENT SYSTEM (RDBMS)

(Levin, 1999) "Database Management System (DBMS) has supplanted the record framework information administration by having a pool of information that can be shared by different application projects and clients simultaneously. DBMS additionally give sensible and physical information autonomy, so that changing of information structure or application program won't influence each other".

Chapter 3

3. METHODOLOGY USED

The term system implies the method and strategy embraced by directing an exploration examine. It plots how information will be gathered and the devices for gathering information, framework approach, the proposed framework info and yield, clients and frameworks advancement devices.

3.1.FACTS FINDING TECHNIQUES

It indicates how information will be gathered from the clients of the framework. The information gathering systems to be utilized include:

3.1.1. Objectives

i. It will utilize this method to gather data about how the present framework works and its procedures. This includes methodically watching and recording the conduct and qualities of operations and procedures.

ii. It gives more itemized and setting related data and can adjust to occasion as they happen however the strategy might be tedious.

3.1.2. Questionnaires

I will set up various surveys whereby I will submit them to entrepreneurs (Landlords) to get a more profound understanding of how the framework will function. I lean toward this technique since it gives more data from different people and offers more noteworthy adaptability as the chance to rebuild questions.

This procedure is favored in light of the fact that it will give a nearer contact between the clients and the engineer subsequently dissipating the likelihood of the finished framework being rejected by user(s).

This method too:

i. Permits elucidation

ii. Has high reaction rate than meetings.

iii. Helps get full range and profundity of data

3.1.3. Secondary Data Collection

This information I will gather from existing sources e.g. books, web, diaries and magazines that was gathered by different analysts and examination was finished. It is from that information that I will then contrast and the essential information and settle on a choice and conclusion.

3.2. SYSTEM DEVELOPMENT AND METHODOLOGY

Framework advancement approach is a strategy that is utilized to show how the proposed framework will be created. For this situation, the strategy utilized will be a waterfall demonstrate.

3.2.1. Waterfall Model

It is included the phases that the designer will utilize when building up the framework. It is a successive model thus, the name waterfall. The designer needs to complete with one phase before heading off to the following one. It includes the achievability examine, examination stage, plan stage, coding stage, testing stage, execution stage lastly the support stage. It is a straightforward model and simple to utilize and get it.

With waterfall improvement based systems, the examiners and clients continue successively starting with one stage then onto the next. The deliverables from each stage are voluminous and are exhibited to the venture patron for endorsement as the venture moves from stage to stage. Once the stage is endorsed by the support it closes and the following stage starts.

Figure

Chart of waterfall model

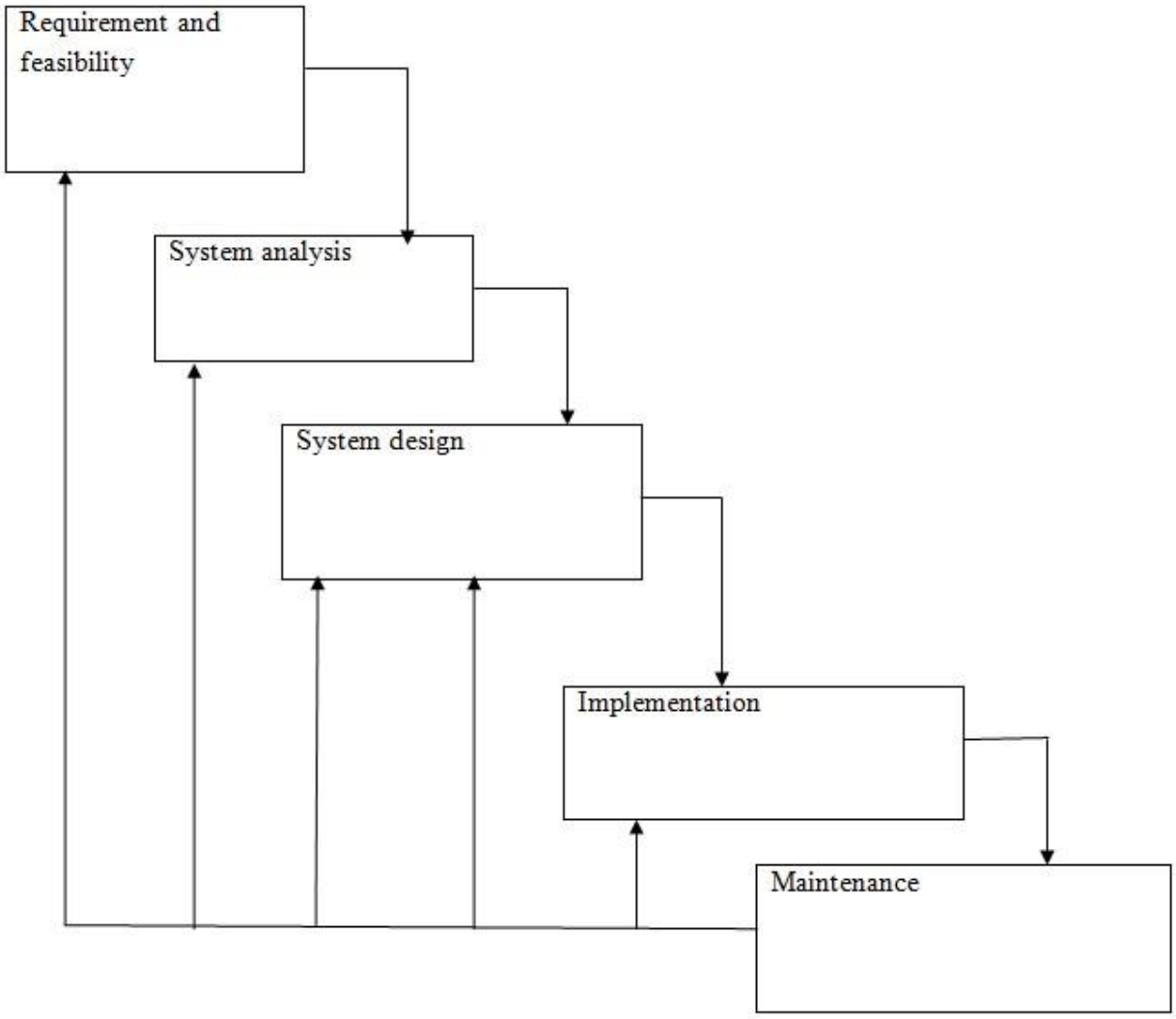


Figure 3.0 waterfall graph

3.2.1.1. Feasibility Study

Here, I will complete a review to pick up a comprehension of the clients (inhabitants) current framework and issues experienced in this framework through meetings, perceptions, and interests. I will utilize the got information to decide the suitability of the framework being proposed as far as specialized, monetary and social practicality.

3.2.1.2. Requirement and Analysis

At this stage, I will assemble data about what the client needs and characterize the issues the framework is required to fathom. I will likewise incorporate customers‟ business setting, items capacities and its similarity. I will accumulate prerequisite, for example, programming like the programming dialect to utilize, database model and equipment required, for example, portable workstation, printers and so on.

3.2.1.3. Design

At this stage, I will make a general outline of the framework engineering and physical plan which incorporates User Interface and Database outline. It is at this phase I will recognize any deficiencies before moving onto the following stage. The yield of this stage is the plan determination which is utilized as a part of the following phase of usage.

3.2.1.4. Coding/Implementation

At this stage, I will start coding according to the outline specification(s). The yield of this progression is at least one item parts worked by a pre-characterized coding standard and repaired, tried and coordinated to fulfill the framework design prerequisite.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;

namespace HouseRentalSystem.classes
{
    public class bookinClass
    {
        public int booking_id { get; set; }
        public int house_id { get; set; }
        public string house_name { get; set; }
        public string first_name { get; set; }
        public string last_name { get; set; }
        public string email { get; set; }
        public string contact { get; set; }
        public string address { get; set; }
        public DateTime booked_date { get; set; }
    }
}
```

Fig: Code for Booking Class

```
using HouseRentalSystem.classes;
using System;
using System.Collections.Generic;
using System.Configuration;
using System.Data;
```

```
using System.Data.SqlClient;
using System.Linq;
using System.Web;

namespace HouseRentalSystem.dal
{
    public class bookingDAL
    {
        // ConnectionString to connect to the Database
        static string myconnstr =
ConfigurationManager.ConnectionStrings["HouseBookingSystemConnection"].ConnectionString;

        #region Add Booking
        public bool AddBooking(bookinClass booking)
        {
            //SEt Return Value and set its default value to false
            bool isSuccess = false;

            //Step 1: Databse Connection
            SqlConnection conn = new SqlConnection(myconnstr);

            try
            {
                //STep 2: Writing T-SQL
                string sql = "INSERT INTO tbl_booking
(house_id,first_name,last_name,email,contact,address,booked_date) VALUES
(@house_id,@first_name,@last_name,@email,@contact,@address,@booked_date);";

                //STep 3: SQL Command using sql and conn
                SqlCommand cmd = new SqlCommand(sql, conn);

                //Step 4: Pass value to parameters
                cmd.Parameters.AddWithValue("@house_id", booking.house_id);
                cmd.Parameters.AddWithValue("@first_name", booking.first_name);
                cmd.Parameters.AddWithValue("@last_name", booking.last_name);
                cmd.Parameters.AddWithValue("@email", booking.email);
                cmd.Parameters.AddWithValue("@contact", booking.contact);
                cmd.Parameters.AddWithValue("@address", booking.address);
                cmd.Parameters.AddWithValue("@booked_date", booking.booked_date);

                //Step 5: Open Connection
                conn.Open();

                //Step 6: Execute Query
                int rows = cmd.ExecuteNonQuery();

                //If the booking is added then the value of rows will be greater than 1
else the value of rows will be less than 1
                if (rows > 0)
                {
                    isSuccess = true;
                }
                else
                {
                    isSuccess = false;
                }
            }
            catch (Exception ex)
```

```
            {

            }
            finally
            {
                //Step 7: Close Connection
                conn.Close();
            }
            return isSuccess;
        }
        #endregion
        #region Get Total Bookings
        public int TotalBookings()
        {
            //STep 1: Create SQL Connection
            SqlConnection conn = new SqlConnection(myconnstr);

            //Create an Integer to return Stock
            int Bookings = 0;
            DataTable dt = new DataTable();

            try
            {
                //Write TSQL to get all users
                string sql = "SELECT booking_id FROM tbl_booking";
                //Create SQL Command using sql and conn
                SqlCommand cmd = new SqlCommand(sql, conn);

                //Create SQL Data Adapter using cmd
                SqlDataAdapter adapter = new SqlDataAdapter(cmd);

                //Open Connection
                conn.Open();

                //FIll dt using adapter
                adapter.Fill(dt);
                //Get Total Number of Users from datatable dt
                if (dt.Rows.Count > 0)
                {
                    Bookings = dt.Rows.Count;
                }
            }
            catch (Exception ex)
            {}
            finally
            {
                //Close Connection
                conn.Close();
            }

            return Bookings;
        }
        #endregion
    }
}
```

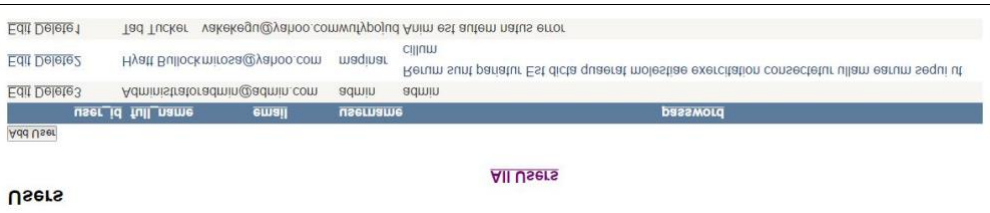
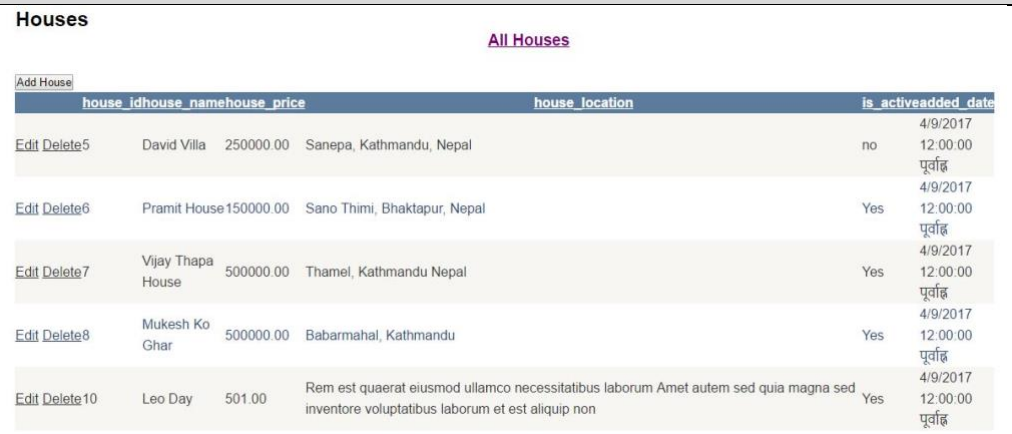
Code for Booking DAL

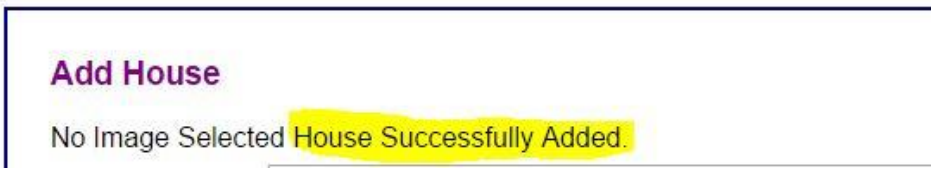
3.2.1.5 Testing

At this stage, I will guarantee both individual and coordinated entire are systematically confirmed to guarantee they are without mistake and fulfill client prerequisite. I will include both unit testing of individual code module, framework testing of the coordinated item and acknowledgment testing directed by or in the interest of client. I will guarantee bugs found are redressed before moving to the following stage. I will likewise get ready, survey and distribute item documentation at this stage.

Test Plan

<table>
<tr><th>Tested On</th><th>What was tested</th><th>Expected Output</th><th>Remarks</th></tr>
<tr><td>20 Feb, 2017</td><td>Login Button was clicked after entering username and password</td><td>Should login and show dashboard.</td><td>Passed [Dashboard was shown as expected]</td></tr>
<tr><td></td><td colspan="2">Expected Output</td><td></td></tr>
<tr><td></td><td colspan="2">
</td><td></td></tr>
<tr><td>20 Feb, 2017</td><td>View All Button Users Tab Was clicked</td><td>Should go to users manager page and show all the users list</td><td>Passed [All users were listed as expected]</td></tr>
<tr><td></td><td colspan="2">Expected Output</td><td></td></tr>
</table>

			
20 Feb, 2017	View All Button Houses Tab Was clicked	Should go to Houses manager page and show all the users list	Passed [All Houses were listed as expected]
	Expected Output		
			
20 Feb, 2017	View All Button Booking Tab Was clicked	Should go to Bookings manager page and show all the users list	Passed [All Bookings were listed as expected]
	Expected Output		
20 Feb, 2017	All the details were inserted and add button was clicked on add house page	Should add house and display the message	Passed [House was added and

			the message was successfully displayed]
	Expected Output		
			
20 Feb, 2017	All the details were inserted and add button was clicked on add user page	Should add user and display the message	Passed [User was added and the message was successfully displayed]
	Expected Output		

3.2.1.6 Installation

It is done once the item has been tried and ensured as fit for utilize. The framework is set up for use at client site.

3.2.1.7 Maintenance

This stage happens after establishment. It includes alterations on the framework to enhance execution. Such changes are client started or therefore of bug being found which were at first not known. These changes are recorded for documentation and framework refresh.

Chapter 4

4. SYSTEM ANALYSIS AND REQUIREMENT MODELING

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.

Information gathered amid achievability study was used deliberately amid the framework plan. Outlining a framework is an imaginative procedure which calls for consistent and in addition horizontal speculation Logical approach includes deliberate moves towards the finished result remembering the abilities of the faculty and the gear at each plan making step.

4.2. EXISTING SYSTEM

Right now the most property directors oversee property and inhabitants points of interest on papers. When clients finds an empty house, they can call or email director of the houses showing the extent of the house they might want leased to them.

The property director can email them back giving them every one of the insights about the house they are asking. The subtle elements incorporate;

i. Rent every month
ii. Deposit paid
iii. Terms and conditions to take after acknowledgment

4.3. PROBLEMS OF EXISTING SYSTEM

With the present system recording the subtle elements of different exercises of client is totally manual and involves a great deal of printed material. Each house has a record that contains the house: number, estimate, lease every month, expected store, tenant and status. Lease installment table contains occupants: first name, last name, and Phone number, date of installment, sum and adjust assuming any. The current framework just gives content based interface which is not as easy to understand as Graphical UI. Since the framework is executed physically, the reaction is moderate. The exchanges are not secure as papers may get lost or harmed. Thus, there is need of

transformation of the framework with more points of interest and adaptability. The framework dispenses with the majority of the impediments of the current framework.

4.4. REQUIREMENTS ANALYSIS

Prerequisite examination included characterizing client needs and destinations with regards to arranged client utilize, conditions and distinguished framework attributes to decide necessities for framework capacities.

4.4.1. User Requirements

It involved client association and proclamations of certainties and suppositions that characterize the desires of the framework as far as mission goals, condition, requirements and measures of viability and appropriateness. Fundamentally the clients:

i) A framework that enhances the proficiency of data stockpiling and recovery.
ii) A framework that is anything but difficult to learn and utilize
iii) A framework that is quick in preparing exchanges
iv) A framework that is adaptable, sheltered and helpful

4.4.2. Functional Requirements

This is a vital errand, activity or action that was expert. The proposed framework can:

i. Allow chairman to include a houses, occupant and defaulters points of interest
ii. Allow the chairman to erase houses, occupants and defaulters points of interest
iii. Allow the chairman to pursuit information in the database
iv. Allow the chairman to alter information in the database

4.4.3. Hardware Requirements

i. Processor 2.0 Ghz processor speed
ii. Memory 2GB RAM
iii. Visual Display Unit 800*600 hues

4.4.4 Software Requirements

i. Operating System-windows 7
ii. Microsoft Office Power point-Used amid introduction
iii. Microsoft visual essential 6

Chapter 5

5. SYSTEM DESIGN

5.1 DESIGN PHASES

The user's necessities record was examined for better comprehension of what was required of the framework. Methods for actualizing these necessities were broke down. Physical modules of the framework were planned and recognizing of the working condition in which they were to chip away at. The framework was a visual essential framework/application. The database was refreshed each time the director; include, erases or erases information the framework.

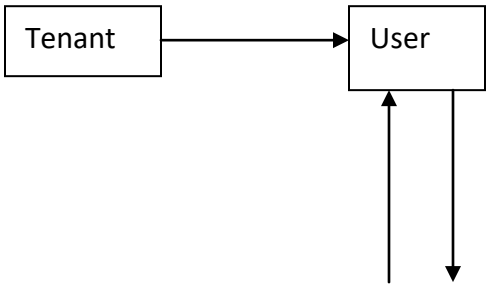
It's just the overseer who has entry to the framework to view or roll out improvements when vital. The framework was intended to permit the head to see, alter, erase and add information to the database

Each time a client comes, he/she is enrolled in the occupant enlistment table of the database with other pertinent insights about the inhabitant.

Framework configuration included changing the product prerequisites into an engineering that portrayed its top-level structure and distinguished the product parts and built up a nitty gritty plan for every product segments. For every prerequisite, an arrangement of at least one outline components was created.

5.1.1 Conceptual Design

Applied plan was the primary period of outline in which drawings or strong models were the overwhelming instruments and items. The calculated outline stage gave a portrayal of the proposed framework as far as an arrangement of coordinated thoughts and ideas about what it was to do, carry on and resemble, that was reasonable by the clients in the way planned.



System

5.1.2 Database Design

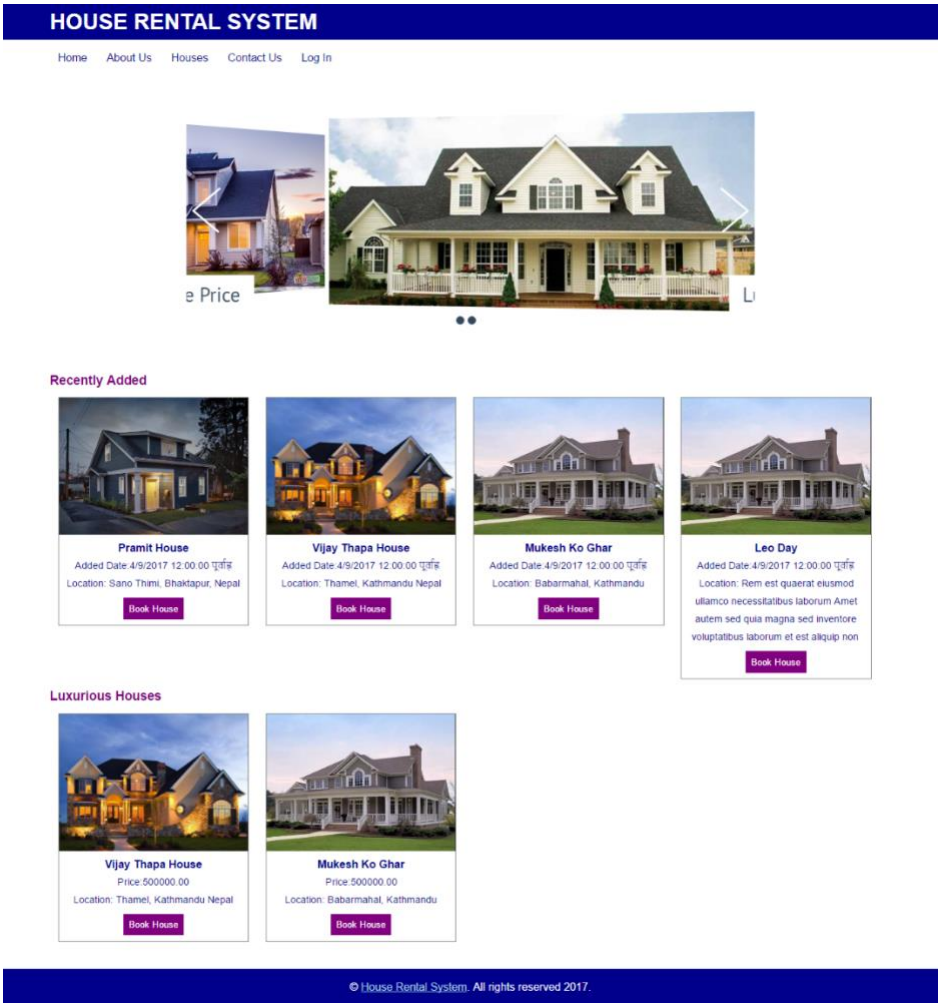
The general subject behind a database is to deal with data as an incorporated entirety. A database is a gathering of interrelated information put away with least repetition to serve the clients rapidly and adequately. In the wake of planning information and yield,

Tables utilized

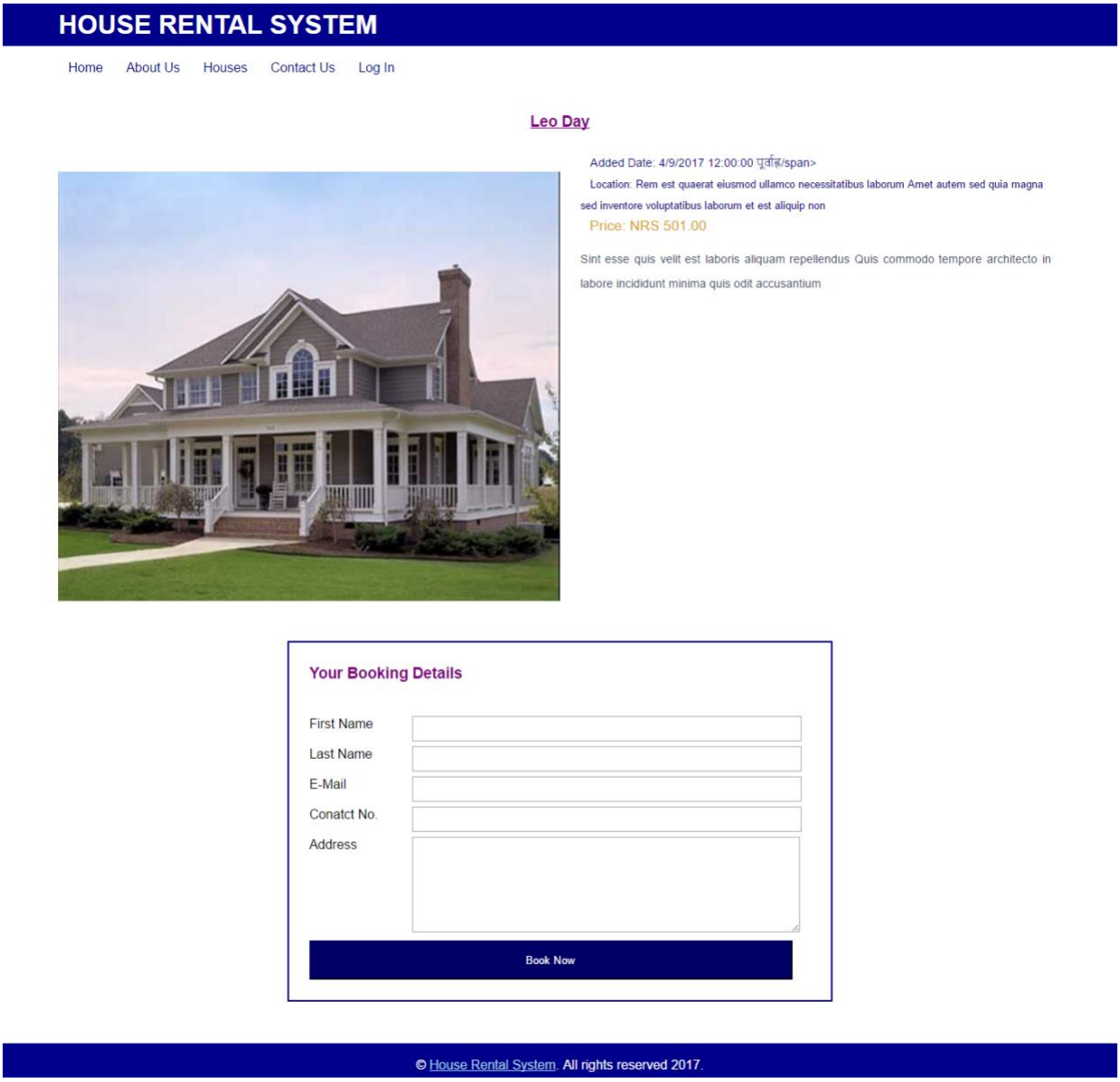
The expert must focus on database plan or how information ought to be composed around client prerequisite. The general goal is to make data get to, simple, brisk and adaptable for different clients.

5.2 Website Interface

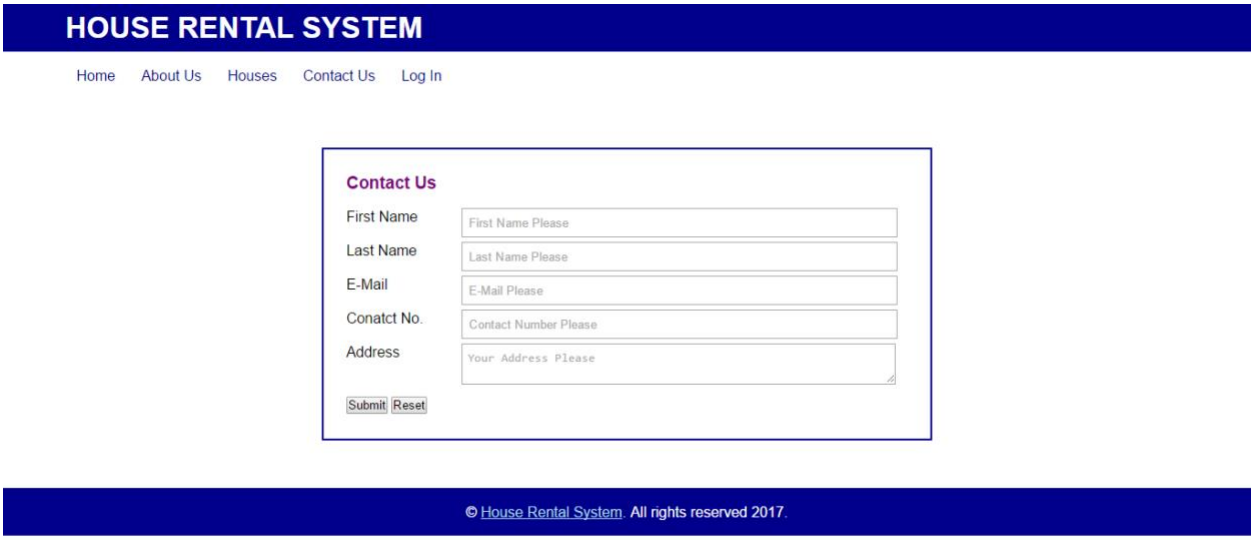
1. Home page



2. Home Detail and Booking Page

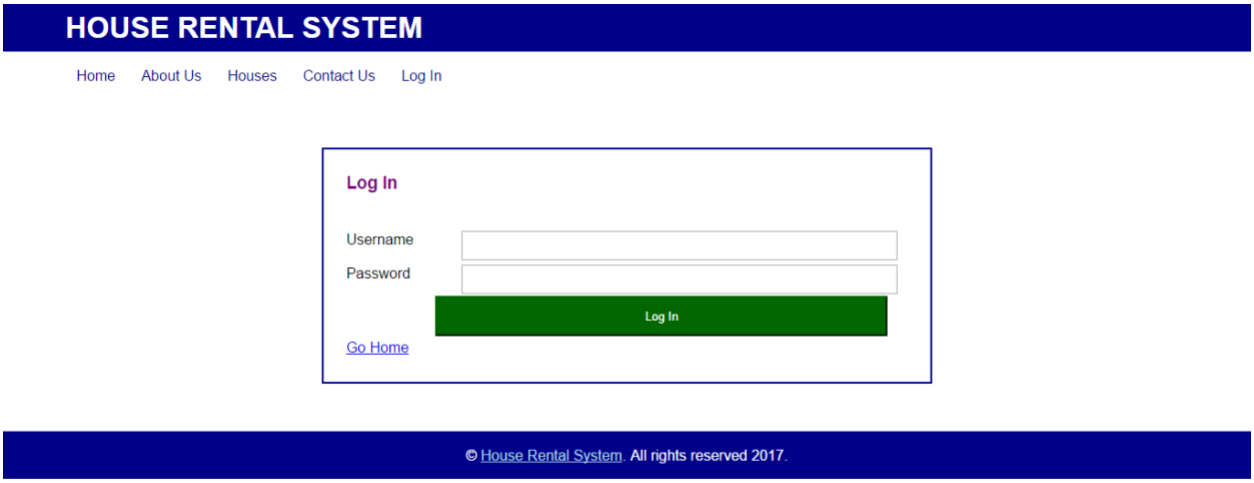


3. Contact us Page



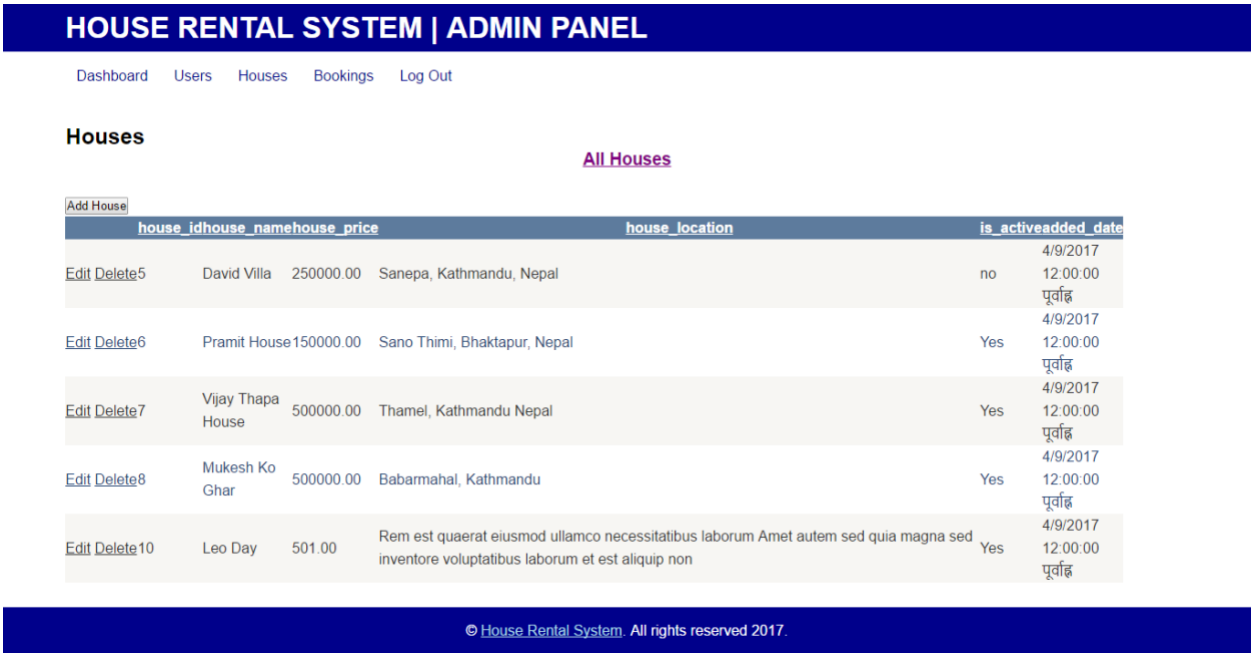
4. About Us Page

5. Login Page

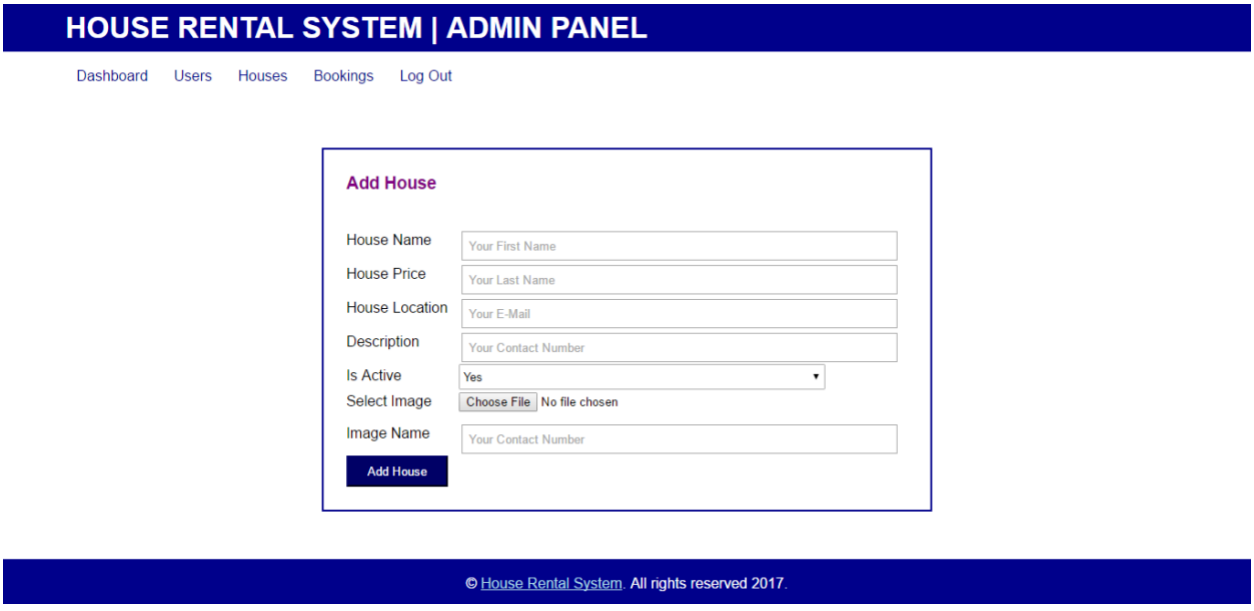


6. Administrator Dashboard

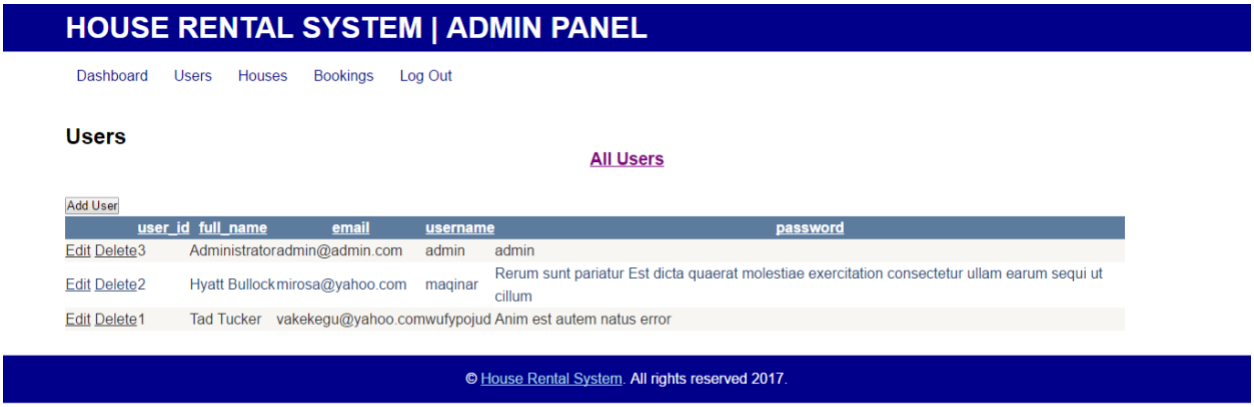
7. Houses Page



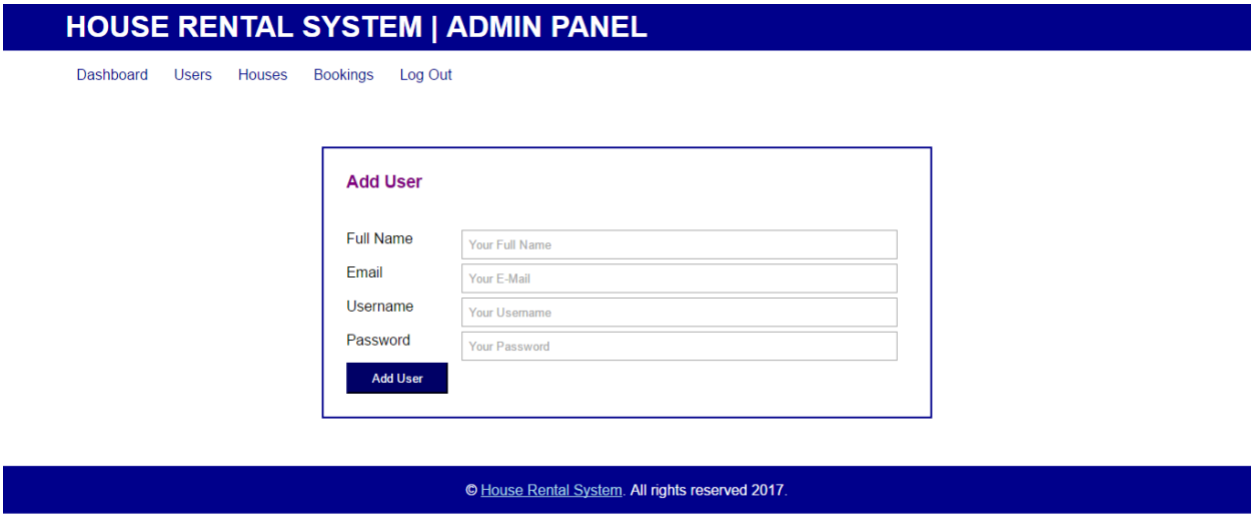
8. Add House Page



9. Users Page



10. Ad User Page



11. Bookings Manager Page

Chapter 6

6. SYSTEM IMPLEMENTATION

Execution is the phase in the venture where the hypothetical plan is transformed into a working framework. The usage stage builds, introduces and works the new framework. The most vital stage in accomplishing another fruitful framework is that it will work productively and successfully. There are a few exercises included while actualizing another venture. They are

1. End user training
2. End user Education
3. Training on the application software
4. Post implementation Review

1. End user Training: The effective usage of the new framework will absolutely upon the association of the officers working in that office. The officers will be conferred the fundamental preparing on the new innovation

2. End User Education: The instruction of the end client begin after the usage and testing is over. At the point when the framework is observed to be more hard to comprehend and perplexing, more exertion is put to teach the end client to make them mindful of the framework, giving them addresses about the new framework and giving them vital reports and materials about how the framework can do this.

3. Training of application software: After giving the vital essential preparing on the PC mindfulness, the clients should be prepared upon the new framework, for example, the screen streams and screen configuration kind of assistance on the screen, sort of mistakes while entering the information, the comparing approval check at every section and the best approach to remedy the information entered. It ought to then cover data required by the particular client or gathering to utilize the framework.

4. Post Implementation review: The office is arranging a technique to know the conditions of the past execution prepare. For that normal meeting will be orchestrated by the concerned officers about the usage issue and achievement

6.1 SOFTWARE TESTING

Is it possible to invoke each menu function using logical assumptions that if all parts of the system are correct, the goal will be successfully achieved? In adequate testing or non-testing will leads to errors that may appear few months later. That's why it is very important to always test the new software. This make two issues

The motivation behind the framework testing is to consider all the feasible varieties to which it will be recommended and push the frameworks to limits.

The testing procedure concentrates on the intelligent interims of the product guaranteeing that the sum total of what proclamations have been tried and on utilitarian interim is directing tests to reveal blunders and guarantee that characterized info will create real outcomes that concur with the required outcomes. Program level testing, modules level testing incorporated and did.

There are two noteworthy sort of testing they are

1. White Box Testing.

2. Discovery Testing.

White Box Testing

White box now and again called "Glass box testing" is an experiment plan that uses the control structure of the procedural outline to drive experiment.

Utilizing white box testing strategies, the accompanying tests were made on the framework

a) All autonomous ways inside a module have been practiced once. In our framework, guaranteeing that case was chosen and executed checked all case structures. The bugs that were winning in some piece of the code where settled

b) All legitimate choices were checked for reality and misrepresentation of the qualities.

Black Box Testing

Black Box Testing centers around the utilitarian prerequisites of the product. This is discovery trying empowers the product designing to determine an arrangement of info conditions that will completely practice every useful necessity for a program. Discovery testing is not an other option

to white box testing rather it is reciprocal approach that is probably going to reveal an alternate class of mistakes that white box techniques like..

1) Interface errors

2) Performance in data structure

3) Performance errors

4) Initializing and termination errors

Chapter 7

7. Recommendations

Our project is intended to fulfill the requirements of rental house proprietors. A few easy to understand interfaces have likewise been received. This bundle should end up being an effective in fulfilling every one of the prerequisites of the clients

It is with most extreme confidence that I exhibit this product to you trusting that it will tackle your issues and urge you to keep acknowledging innovation since it is intended to change and facilitate all our work that is by all accounts exceptionally troublesome. I don't imply that my venture is the best or that I have utilized the best innovation accessible it only a straightforward and an unassuming endeavor that is straightforward.

Be that as it may, I would support any individual who can propel it utilizing propelled innovations to expand its abilities.

Chapter 8

8. CONCLUSION

All in all, the product can be utilized as a stock framework to give a casing work that empowers the troughs to make sensible exchanges set aside a few minutes outline. Every exchange made on the framework run as an inseparable unit with the information being refreshed in the database for our situation it is Microsoft Access 2007 which is the back end. To wrap things up it is not the work that played the approaches to achievement however ALMIGHTY GOD.