APARTMENT MANAGEMENT SYSTEM

Submitted By

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Under the guidance of

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Thesis submitted to

Avinashilingam Institute for Home Science and Higher Education for Woman

Coimbatore 641043

In partial fulfillment of the requirement for the award of the degree of

Master of Commerce with Computer Applications

April 2019

CERTIFICATE

This is to certify that the project work entitled **"APARTMENT MANAGEMENT SYSTEM"**, submitted to Department of Commerce, Avinashilingam Institute For Home Science and Higher Education For Women, Coimbatore, in partial fulfillment of MASTER OF COMMERCE WITH COMPUTER APPLICATIONS, is the record of the original project work done by D.JOY EBSIBA(17PCC006) during the period of her study, under my supervision and guidance.

Signature of the Dean

Signature of the Head of the Department

Signature of the Supervisor

Submitted for the viva voice examination held on _____

Internal Examiner

External Examiner

DECLARATION

I hereby declare that this project work entitled **"APARTMENT MANAGEMENT SYSTEM"** submitted to Department of Commerce, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, in partial fulfillment of the requirement for the award of the degree of MASTER OF COMMERCE WITH COMPUTER APPLICATIONS is the bonafide record of original project work done by D.JOY EBSIBA (17PCC007) during the period of her study, under the supervision and guidance of Ms.Saranya.S, M.Com (CA), M.Phil., teaching assistant, Department of Commerce.

Place: Coimbatore
Date:

(D. JOY EBSIBA)
Signature of the candidate

ACKNOWLEDGEMENT

I would like to express my sincere thanks to **God Almighty**, for his constant love and grace that he has showed upon me, which kept me in good health, and sound mind without which my project would not have reached a successful end.

I would like to express my deep sense of reverential gratitude and sincere thanks to **Padma Shri. Dr.P.R.Krishnakumar, Chancellor**, Avinashilingam Institute of Home Science and Higher Education for Women, Coimbatore - 43, for the opportunity given to me for undertaking this study and for providing the needed facility during the course of my study.

I owe my great deal of gratitude to **Dr.PremavathyVijayan, M.Sc., M.Ed., Dip.Spl.Edn., M.Phil., Ph.D.,Vice Chancellor**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for extending all resources that facilitated the conduct of the present study.

I express my gratitude to **Dr.S.Kowsalya, M.sc., M.phil., Ph.D Registrar**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for providing all facilities necessary for the study.

I would express my boundless thanks to **Dr.(Mrs).U.Jerinabi, M.Com.,Dip.Ed.,M.Phil., Ph.D., Dean, School of Commerce and Management**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for granting the facility required.

I am also thankful to **Dr.G.Santhiyavalli, M.Com, M.Phil, Dip.Ed., Ph.D,** Professor (CAS), **Department of Commerce** for encouraging me to carry the research work successfully.

I wish to place on record my deep sense of gratitude to **Dr.(Mrs).D.Geetha M.Com., Dip.Ed., M.Phil., Ph.D., Professor and Head**, Department of Commerce for providing all the facilities to complete the project.

I express my heart full gratitude to my mentor **Ms.Saranya.S., M.Com(CA)., M.Phil., Department of Commerce,** for guidance and timely suggestions shown in aiding me to consummate this project work successfully.

Finally, yet importantly, I would like to thank **my dear family members and friends** for their support, encouragement and prayers, which were instrumental in the successful completion of this project. I have great pleasure in expressing my deep sense of gratitude to all other teaching and non-teaching staff members who stood behind the screen for the completion of the project. I would extend my hearty thanks to one and all that helped me directly or indirectly for the successful completion of my project

CONTENTS

APARTMENT MANAGEMENT SYSTEM

ABSTRACT

The project entitled **"Apartment Management System"** has been developed using vb.net as front end and sql as back end is a discipline that comes under the umbrella of facility management. A building manager supervises the hard and soft services of a structure. Hard services usually relate to physical, structural services such as fire alarm systems, lifts and so on whereas soft services allude to cleaning, landscaping, security and suchlike human-sourced services.

The procedures used in the design have been discussed with the user before coding. In addition to low level validation such as number field, character field etc and higher level validation has also been incorporated. Through this software we can generate the report periodically. Finally the system will produce different types of reports .Visual Basic. NET and SQL Server 2008 as a front end tool and back end tool. The contribution of the project will eliminate the difficulties and to help the management in generating the data.

CHAPTER-I

INTRODUCTION

OVERVIEW OF THE PROJECT

The project entitled "**APARTMENT MANAGEMENT SYSTEM**" has been developed using vb.net and sql server as front end and back end for **"ABINAW BUILDERS"** which is an umbrella of facility management. The study begins with problem definition which describes the major problems associated with manual apartment management. This is followed by the research objective putting in a nutshell what is to be achieved by the study. The Research Methodology describes the procedures used in conducting the project. Scope and limitations highlights the constraints encountered during the course of this work. Finally, there is definition of terms and chapter layout which defines peculiar terms related to the study alone and summarizes the entire chapters respectively.

A building manager supervises the hard and soft services of a structure. Hard services usually relate to physical, structural services such as fire alarm systems, lifts and so on whereas soft services allude to cleaning, landscaping, security and suchlike human-sourced services.

In the apartment, a building manager will typically supervise a team of porters or concierge, cleaners, electrical and mechanical contractors and depending of the size of the development, a team of administrative staff. If the development comprises several blocks, it is common that the Building manager will report to an estate manager although both titles have become interchangeable. To a lesser extent, the term "development manager" is also used. Traditionally, this role's title was "house manager". The disparity in the job titles can reflect some differences in the job description but in essence the title that perhaps best defines the role is that of building services manager as the main aspect of the job relates to the day-to-day running of the development with particular focus on the maintenance, site staff management, health and safety and presentation of the building or residential complex. The biggest challenge in the role is to manage residents' expectations and match these up to the budget constraints and prevalent legal requirements. Apartment manager will be made to collect rents, maintaining bills for

electricity and also service taxes. Tenant will be made to pay some sort of amount for apartment welfare association that may vary according to the apartments.

MODULES

- Admin login
- Apartment details
- Allotment details
- Bill details
- Block details
- Tenant details
- Visitor details
- Report generation

ADMIN LOGIN

This is the initial module in which admin can login by entering unique username and password. Admin has to enter all the details subjected to the apartment and has the full authority to add, delete, and update information.

APARTMENT DETAILS

Apartment module is the one in which admin can add basic information regarding the apartment. This will contain the details about apartment such as facilities; no. of blocks, no. of flats in each block, expenditure faced per month, etc. will be stored. This module is meant for the over-all features of an apartment.

ALLOTMENT DETAILS

This module deals with storing the information of allotment in the apartment. Each flat numbers of each block, flat availability, and expenditure faced, etc. will be stored and maintained. This will also handle the parking area allotment for each block.

BILL DETAILS

This module is for handling the bill details of each flat. Flat details will be maintained according to each block. Bills such as electricity bill, maintenance bill, service tax, etc. will be stored and maintained. GST is also included in the bill details to calculate the total amount of bill.

BLOCK DETAILS

This module will hold the information of each block in the apartment. Flat details which come under each block will be stored. This contains information of the blocks in the apartment.

TENANT DETAILS

This module is entirely for the tenants of the apartment. This will contain unique record for each tenant who is residing at the apartment. This will contain information such as tenant id, flat no., block, and personal details of them.

VISITOR DETAILS

This module is for maintaining the visitor information who visits the flat. This module will hold information such as visitor id, visiting flat, block, contact details, etc.

REPORT GENERATION

Reports will be generated for tenant details, block details, flat details, visitor details, etc. Reports are useful which can be accessed for future references.

OBJECTIVES OF THE PROJECT

- To provide user friendly access.
- To maintain computerized data for reducing the work pressure and to overcome the manual process.
- To reduce the maintenance of the paper work and to maintain a large data base.
- Information can be fetched whenever necessary without any delay of time.
- To add and maintain apartment details which will provide quick and accurate information when ever needed.

ABOUT THE COMPANY

Abinaw Builders (Coimbatore) Limited is ardent and determined on providing such a sense of pleasure by providing corporeal formations that conform to Gem's character and nature.

Abinaw Builders was launched by Mr. J. Uttam Kumar and Mr. C. Thambikalaignan, professionally qualified civil engineers. The company stepped on the path to glory in 1997, as the leading builders and developers of properties in Coimbatore.

During the course of time, from one project a year, the company had grown to a stage of handling multiple projects at a time, thus establishing Abinaw Builders as one of the most revered developers in Coimbatore. Subsequently, it was converted into a Limited company as Abinaw Builders(Coimbatore) Limited.

India, a country of varied factions of people with invariable harmony possesses rich natural resources and cultural heritage as its exclusive asset. The commercial opportunities are plenty enough to attract investors from abroad too, to enter into various business ventures. Construction sector is one among such huge business enterprises.

Needless to say, the investors of any kind are quality conscious. And the acquirers obviously demand only the pre-eminent. Abinaw Builders(Coimbatore) Limited an ISO 9001 organisation, is one among the very few developers in Coimbatore that follow inflexible international quality standards.

Abinaw Builders(Coimbatore) Limited has also got a sister Concern, viz. M/s. Sabari Constructions and Housing Private Limited, functioning in the same office premises with the same directors engaged in similar activities as that of India Builders.

COMPANY PROFILE

CONCERN NAME	:	Abinaw Creations
ADDRESS	:	130, srivari building Maruthamalai road, Vadavalli , coimbatore
MANAGER NAME	:	Mr. Sridhar
ESTABILISHED YEAR	:	1997
PHONE NO	:	9629444242
EMAIL ID	:	Abinaw 24@gmail.com
ANNUAL TURNOVER	:	5000000 (lakhs)

CHAPTER-II

SYSTEM ANALYSIS

SYSTEM STUDY

It involves studying a procedure or business in order to identify its goals and purposes and create systems and procedures that will achieve them in an efficient way. Use cases are a widely used systems analysis modeling tool for identifying and expressing the functional requirements of a system.

EXISTING SYSTEM

The current system is a manual based which is not computerized especially for apartment outing process. The system takes lots of time for performing different activities and difficult to maintain the outing records**.** Existing system is developed manually. In the existing system all the activities that have to be taken place are done manually, which a time is consuming process and incorrect entry of apartment details, which leads to temporary disconnection and incorrect credit to the subscriber. Manual mistake may result in the duplication of data, which produce erroneous results. The limited corrective capabilities for runtime errors may generate in accurate results. It also requires more manpower to maintain all the required files. Generation of appropriate reports may also become a difficult task.

Problems of existing system:

- ✓ Maintaining register and keeping track of the entire system is very difficult.
- ✓ In the existing system it is difficult and products maintains the imports details and exports details.
- ✓ Preparing reports takes much time and it is difficult.
- ✓ Data redundancy problems are appearing the fields.
- ✓ Errors occurring frequently.

PROPOSED SYSTEM

The Proposed "APARMENT MANAGEMENT SYSTEM" is developed to automate all the trusts. The proposed system makes the job easier and more convenient. The main objective the order outflow analysis has been developed by me is to maintain its apartment details, block details, visitors details etc., the new system update all related table automatically the user friendliness of the new system makes it to be operated even by an a naive user. The information retrieval is fast needed security and privacy has been provided. The chances of inaccuracy are null. Hence, the newly developed computerize system is far better than the old manual system.

Features of proposed system:

The following benefits accrue to the company. It decides to implement the proposal system.

- ✓ The proposed system is infallible.
- ✓ Accuracy in the proposed system is very high.
- ✓ Cost of implementation and maintenance of the proposed system is very low.
- ✓ The proposed system speed of processing is very high compared to the old system of manual processing. This increases the productivity of the company manifold.
- ✓ Minimum manpower is required in the proposed system
- ✓ The proposed system is flexible so that the proposed can be adapted to various needs arising out in the future.
- ✓ Easier generation of reports makes the management plan their strategies.
- ✓ Backup facility is provided in the proposed system.

FEASIBILITY SYSTEM

A system is a feasible system only if it is feasible within limited recourse and time. In this system each and every process can be feasible for the user and also developer. It proved user friendly input such as device independent inputs and getting proper solution for the problem.

Technical Feasibility

Technical Feasibility is the assessment of the technical view of the system. The system is developed for Dot net environment; a platform independent tool is used to develop the system.The development risk concerns the probability, the function of all elements and its performance should be same in all platforms and in the system that is being developed. This system is developed according to the standards and the development software tools are selected in such a way to avoid the problems cited above.

The software used to develop this system is Windows XP, visual studio Dot net is done efficiently, and the concept of SQL helps to create the application backend. These components are also helpful in providing interactivity to Java applications.

Behavioral Feasibility

It is common knowledge that computers illustrations have something to do with turnover transfers, retraining and changes in user or developer status. The main emphasis is customer service, personal contacts with customers.

Feasibility report is directed towards management. It evaluates the impact of the proposed changes on the area in question. The report is a formal document for management use, brief enough and sufficiently non-technical to be understood.

Operational Feasibility:

Operational Feasibility deals with the study of prospects of the system. This system operationally eliminates all the tensions of the administrator and helps in effectively tracking the project progress. This kind of automation will surely reduce the time and energy, which previously consumed in manual work. Based on the study, the system proved to be operationally feasible.

CHAPTRER III

SYSTEM REQUIREMENTS

A System Requirements Specification (SRS) (also known as a Software Requirements Specification) is a document or set of documentation that describes the features and behavior of a system or software application.

HARDWARE SPECIFICATION

- Processor : Intel Dual Core
- Ram : 4 GB
- Hard disk : 500GB

SOFTWARE SPECIFICATION

- Operating System : Windows Family (xp,7,8,10)
- Environment : Visual Studio .Net 2010
- Language : Visual Basic .Net
- Backend : SQL Database File

VISUAL BASIC .NET

Visual Basic .NET, the latest version of visual basic, includes many new features. The Visual Basic supports interfaces but not implementation inheritance. Visual basic.net supports implementation inheritance, interfaces and overloading. In addition, Visual Basic .NET supports multithreading concept.

Visual Basic .NET (VB.NET) is an object-oriented computer programming language implemented on the .NET Framework. Although it is an evolution of classic Visual Basic language, it is not backwards-compatible with VB6, and any code written in the old version does not compile under VB.NET.

Like all other .NET languages, VB.NET has complete support for object-oriented concepts. Everything in VB.NET is an object, including all of the primitive types (Short, Integer,

Long, String, Boolean, etc.) and user-defined types, events, and even assemblies. All objects inherits from the base class Object.

VB.NET is implemented by Microsoft's .NET framework. Therefore, it has full access to all the libraries in the .Net Framework. It's also possible to run VB.NET programs on Mono, the open-source alternative to .NET, not only under Windows, but even Linux or Mac OSX.

The following reasons make VB.Net a widely used professional language −Modern, general purpose.

- Object oriented.
- Component oriented.
- Easy to learn.
- Structured language.
- It produces efficient programs.
- It can be compiled on a variety of computer platforms.
- Part of .Net Framework.

Features VB.Net

VB.Net has numerous strong programming features that make it endearing to multitude of programmers worldwide. Let us mention some of these features −Boolean Conditions

- Automatic Garbage Collection
- Standard Library
- Assembly Versioning
- Properties and Events
- Delegates and Events Management
- Easy-to-use Generics
- Indexers
- Conditional Compilation
- Simple Multithreading

The .Net Framework

The .Net framework is a revolutionary platform that helps you to write the following types of applications −

- Windows applications
- Web applications
- Web services

The .Net framework applications are multi-platform applications. The framework has been designed in such a way that it can be used from any of the following languages: Visual Basic, C#, C++, Jscript, and COBOL, etc.

All these languages can access the framework as well as communicate with each other.The .Net framework consists of an enormous library of codes used by the client languages like VB.Net. These languages use object-oriented methodology.

Following are some of the components of the .Net framework −Common Language Runtime (CLR)

- The .Net Framework Class Library
- Common Language Specification
- Common Type System
- Metadata and Assemblies
- Windows Forms
- ASP.Net and ASP.Net AJAX
- ADO.Net
- Windows Workflow Foundation (WF)
- Windows Presentation Foundation
- Windows Communication Foundation (WCF)
- LINQ

For the jobs each of these components perform, please see ASP.Net - Introduction, and for details of each component, please consult Microsoft's documentation.Integrated Development

Environment (IDE) For VB.NetMicrosoft provides the following development tools for VB.Net programming –Visual Studio 2010 (VS), Visual Basic 2010 Express (VBE).

OBJECTIVES OF .NET FRAMEWORK:

1. To provide a consistent object-oriented programming environment whether object codes is stored and executed locally on Internet-distributed, or executed remotely.
2. To provide a code-execution environment to minimizes software deployment and guarantees safe execution of code.
3. Eliminates the performance problems.

There are different types of application, such as Windows-based applications and Web-based applications. To make communication on distributed environment to ensure that code be accessed by the .NET Framework can integrate with any other code.

SOL SERVER:

SQL Server is a software application first launched with Microsoft SQL Server 2005 that is used for configuring, managing, and administering all components within Microsoft SQL Server. The tool includes both script editors and graphical tools which work with objects and features of the server.

A central feature of SSMS is the Object Explorer, which allows the user to browse, select, and act upon any of the objects within the server. It also shipped a separate Express edition that could be freely downloaded, however recent versions of SSMS are fully capable of connecting to and manage any SQL Server Express instance. Microsoft also incorporated backwards compatibility for older versions of SQL Server thus allowing a newer version of SSMS to connect to older versions of SQL Server instances

FEATURES OF SQL SERVER

The OLAP Services feature available in SQL Server version 7.0 is now called SQL Server 2008 Analysis Services. The term OLAP Services has been replaced with the term Analysis Services. Analysis Services also includes a new data mining component. The Repository component available in SQL Server version 7.0 is now called Microsoft SQL Server 2008 Meta

Data Services. References to the component now use the term Meta Data Services. The term repository is used only in reference to the repository engine within Meta Data Services

SQL-SERVER 2008 database consist of six type of objects,

They are,

1. Table
2. Query
3. Form
4. Report

TABLE:

A database is a collection of data about a specific topic.

VIEWS OF TABLE:

Table in two types,

1. Design View
2. Datasheet View

Design View

To build or modify the structure of a table we work in the table design view. We can specify what kind of data will be hold.

Datasheet View

To add, edit or analyses the data itself we work in tables datasheet view mode.

QUERY

A query is a question that has to be asked the data. Access gathers data that answers the question from one or more table. The data that make up the answer is either dynaset (if edit it)

or a snapshot(it cannot be edited).Each time we run query, we get latest information in the dynaset.Access either displays the dynaset or snapshot for us to view or perform an action on it ,such as deleting or updating.

FORMS

A form is used to view and edit information in the database record by record .A form displays only the information we want to see in the way we want to see it. Forms use the familiar controls such as textboxes and checkboxes. This makes viewing and entering data easy.

Views of Form:

Work with forms in several primarily there are two views are,

1. **Design View**
2. **Form View**

Design View

To build or modify the structure of a form, we work in forms design view. We can add control to the form that are bound to fields in a table or query, includes textboxes, option buttons, graphs and pictures.

Form View

The form view which display the whole design of the form.

REPORT:

A report is used to vies and print information from the database. The report can ground records into many levels and compute totals and average by checking values from many records at once. Also the report is attractive and distinctive because we have control over the size and appearance of it.

CHAPTER- IV

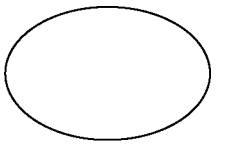
SYSTEM DESIGN

systems design is the process of defining the architecture, modules, interfaces, and data for a system to satisfy specified requirements. Systems design could be seen as the application of systems theory to product development.

DATA FLOW DIAGRAM

DFD depict hoe data interact with the system. DFD are extremely useful in modeling many aspects of a business function because they systematically subdivide a task into basic parts, helping the analyst understand the system that they trying to model data flow diagram models a system by using external entities from which data flow to a process which transmission the data and creates output data which goes to other processes on external entities of files. Data may also flow to process as inputs.

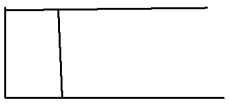
The symbols appearing in the DFD has been explained below:



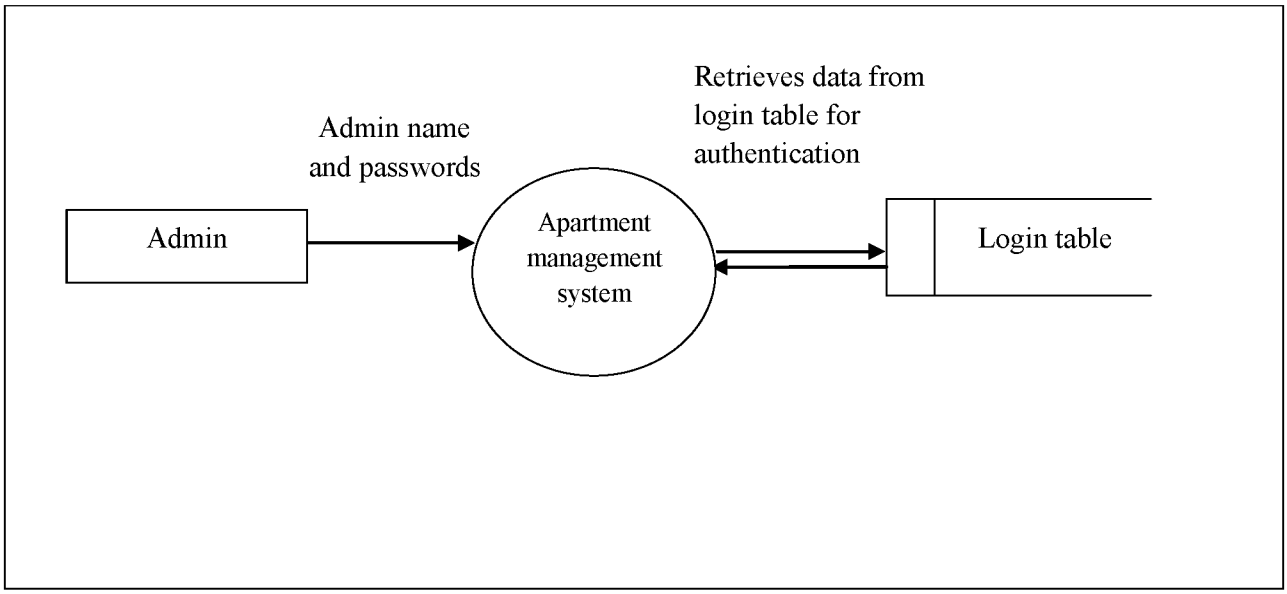
- Represents a process

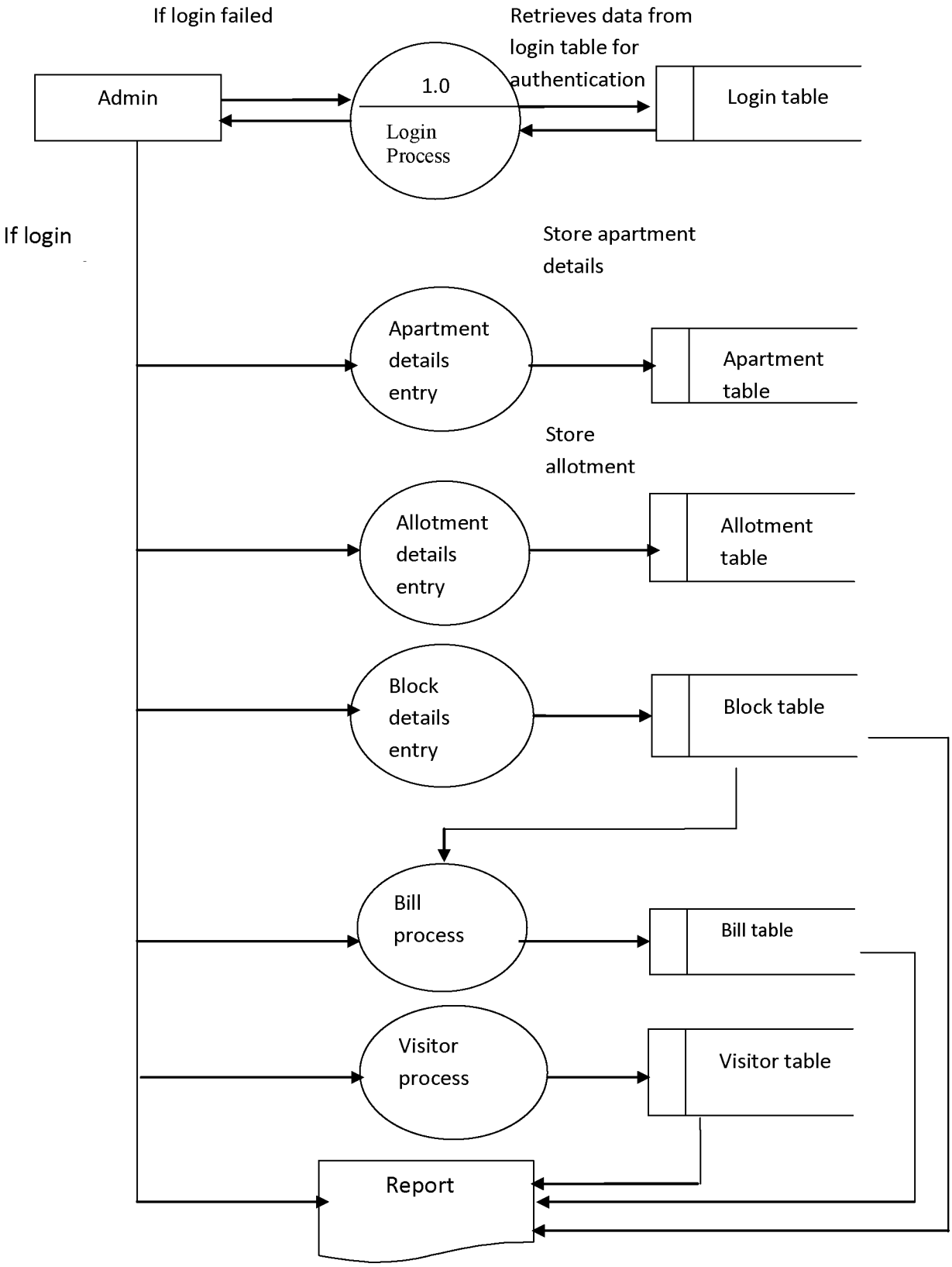
- Which shows data flow

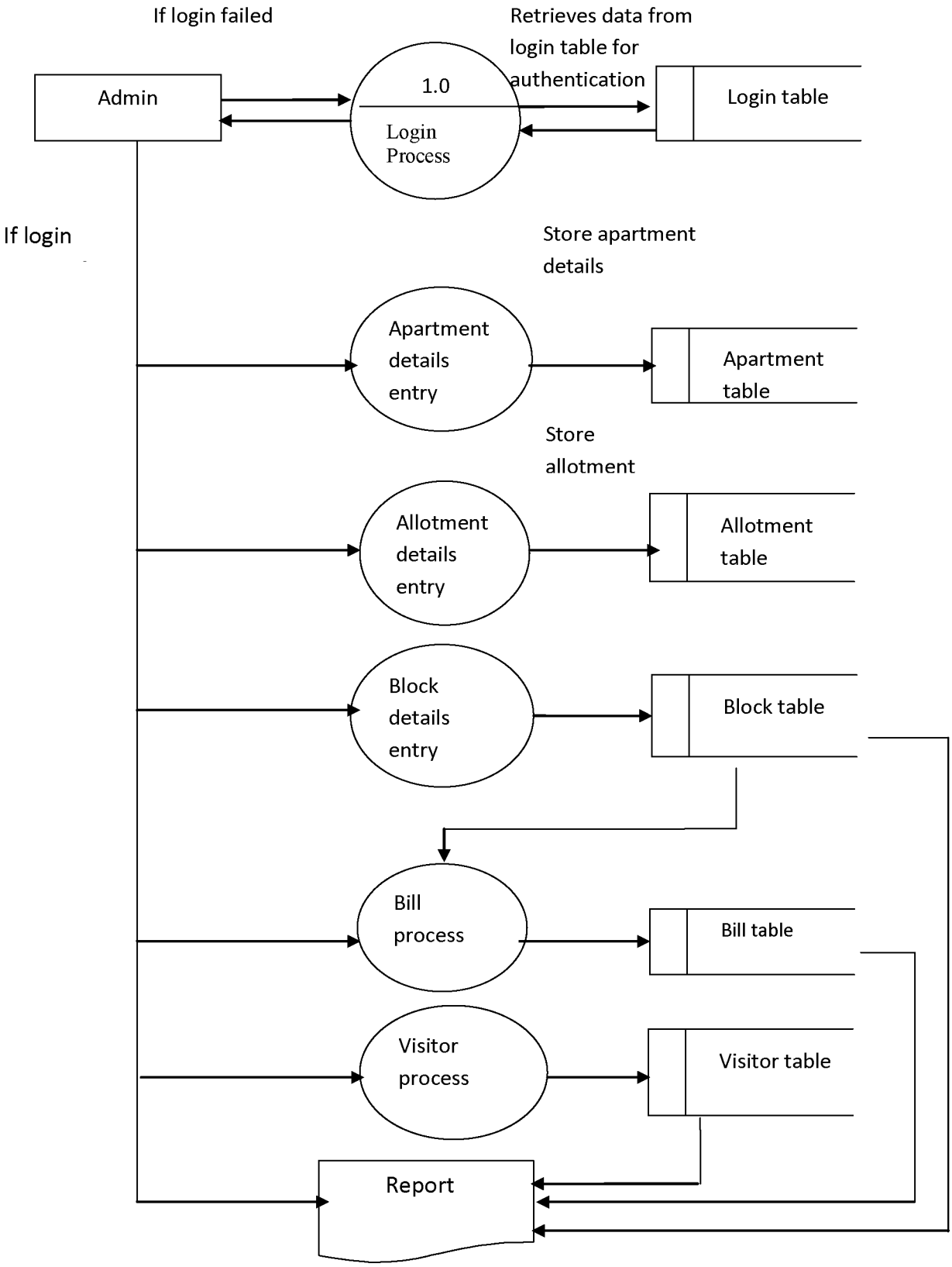
- Designation of the data



- Shows Data source


Retrieves data from
login table for
authentication
Admin name
and passwords
Admin
Apartment
management
system
Login table


If login failed
Retrieves data from login table for authentication
Admin
1.0
Login Process
Login table
If login
Store apartment details
Apartment details entry
Apartment table
Store allotment
Allotment details entry
Allotment table
Block details entry
Block table
Bill process
Bill table
Visitor process
Visitor table
Report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Allotment details entry
Allotment table
Block details entry
Block table
Bill process
Bill table
Visitor process
Visitor table
Report

ER DIAGRAM

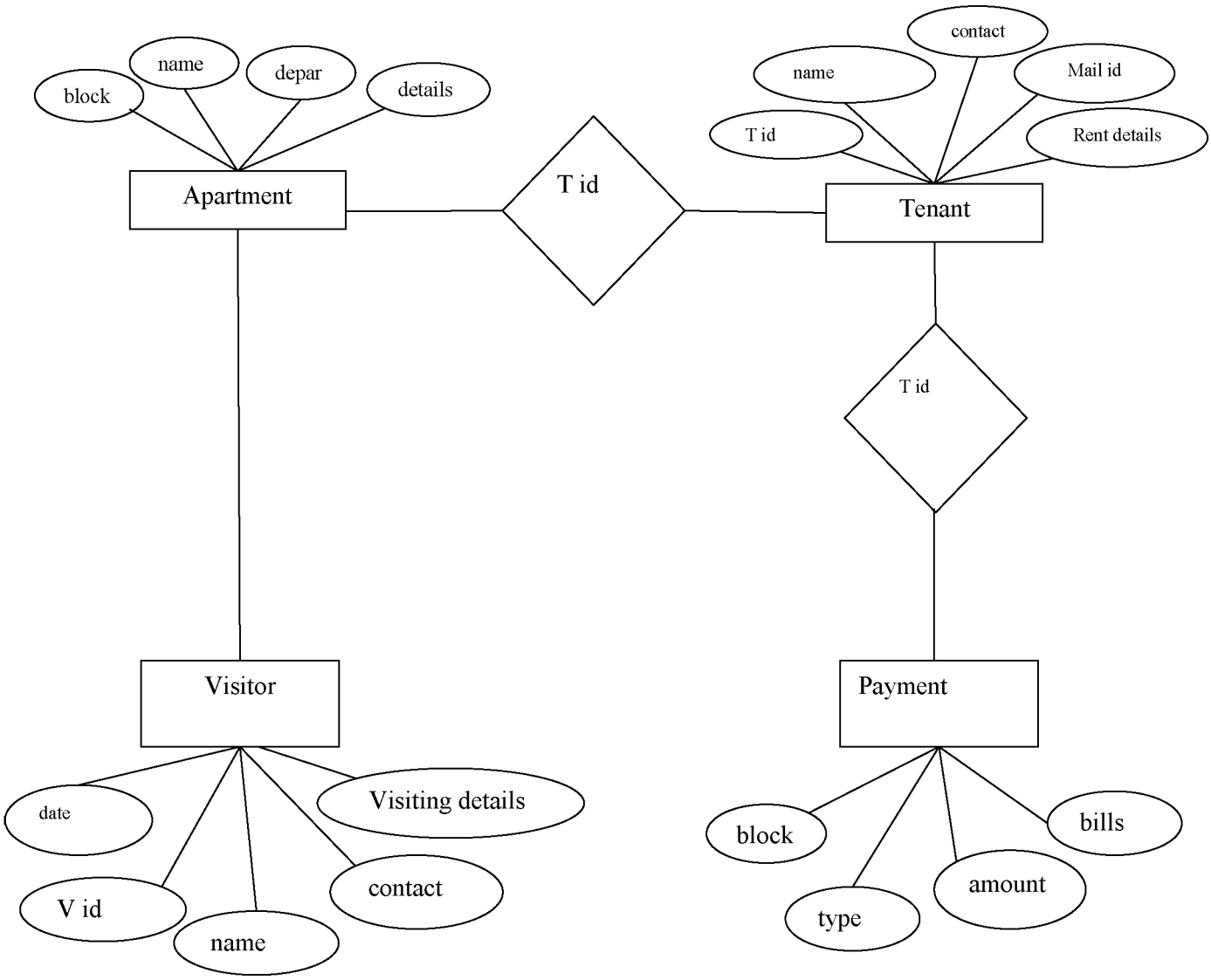

name
depar
block
details
Apartment
T id
contact
name
Mail id
T id
Rent details
Tenant
T id
Visitor
Payment
date
Visiting details
V id
contact
name
block
bills
amount
type

TABLE DESIGN

APARTMENT MANAGEMENT SYSTEM

Login table:

Field Name	Data type	Size
Username	Varchar	50
Password	Varchar	50

Appartment table:

Primary key: appartmentid

Field Name	Data type	Size
Appartmentid	Int	10
Appartmentname	Varchar	50
Noofblocks	Int	10
Noofhouses	Int	10
Areaname	Varchar	50
Houserent	Money	50
Serviceamount	Money	50
Bookingamount	Money	50
Monthlypayment	Money	50
Cancelpayment	Money	50

Allotment table:

Primary key: allotid

Field Name	Data type	Size
Allotid	Int	10
Tenantid	Int	10
Tenantname	Varchar	50
Tenanttype	Varchar	50
Contactnumber	Numeric	10
Blockid	Int	10
Advanceamount	Money	50
Facilitiestype	Varchar	50
Alotmentdate	Datetime	10
Monthlyrent	Money	50

Tenant table:

Primary key: tenantid

Field Name	Data type	Size
Tenantid	Int	10
Tenantname	Varchar	50
Tenanttype	Varchar	50
Contactnumber	Numeric(0,18)	10
Address	Varchar	200
Joineddate	Datetime	10
Blockid	Int	10
Advanceamount	Money	10
Monthlyrent	Money	10
Paymentdate	Datetime	10

Billing table:

Primary key: billno

Field Name	Data type	Size
Billno	Int	10
Blockid	Int	10
Blockname	Varchar	50
Advanceamount	Money	50
Monthlyrent	Money	50
Tenantid	Int	10
Tenantname	Varchar	50
Payment	Money	10
Balance	Money	10
Serviceamount	Money	10
Totalamount	Money	10
Gst	Money	10

Visitor table:

Primary key: visitorid

Field Name	Data type	Size
Visitingdate	Datetime	10
Visitorid	Int	10
Visitername	Varchar	50
Gender	Varchar	50
Contactnumber	Numeric(0,18)	10
Address	Varchar	200
Tenantid	Int	10
Tenantname	Varchar	50
Housenumber	Varchar	10
Visitingtype	Varchar	50

Block table:

Primary key: blockid

Field Name	Data type	Size
Blockid	Int	10
Blocktype	Varchar	50
Blocknumber	Varchar	50
Totalhouses	Int	10
Bookedblocks	Int	10
Availableblocks	Int	10
Houseamount	Money	10
Monthlyrent	Money	10
Facilitiestype	Varchar	200

INPUT DESIGN:

Input Design converts the user-oriented inputs to computer-based formats. Inaccurate input data are the most common cause of errors in data processing. Error data entered by the data operator can be controlled by the input design. The goal of designing input is to make the data entry easy, logical and as free from errors as much as possible.

The proposed system is completely menu-driven. It is a powerful tool for interactive design. It helps the user comprehend the range of alternatives available and also prevents them from making an invalid selection. All entry screens are interactive in nature. It has been designed taking into account all the constraints of the end-user.

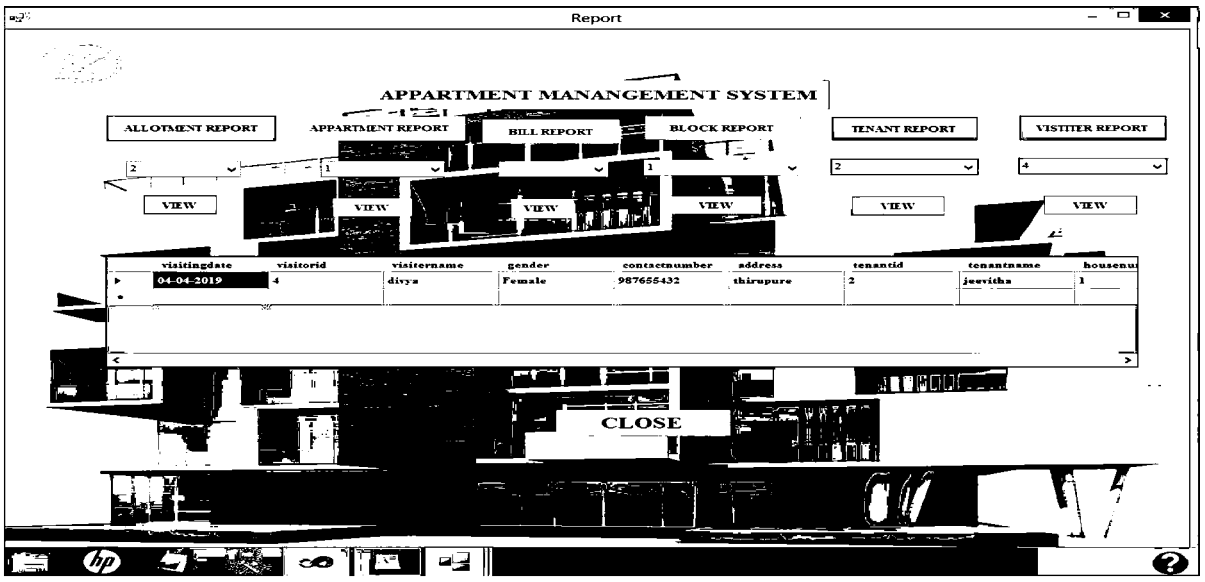
OUTPUT DESIGN:

Outputs are the most important and direct source of information to the customer and management. Intelligent output design will improve the system's relationship with the user and help in decision making. Outputs are used to make permanent hard copy of the results for later consultation. The output generated by the system is often regarded as the criteria for evaluating the performance of the system. The output design was based on the following factors.

- Usefulness determining the various outputs to be printed to the system user.
- Differentiating between the outputs to be displayed and those to be printed.
- The format for the presentation of the output.

For the proposed system, it is necessary that the output should be compatible with the existing manual reports. The outputs have been formatted with this consideration in mind. The outputs are obtained after all the phase, from the system can be displayed or can be produced in the hard copy. The hard copy is highly preferred since it can be used by the controller section for future reference and it can be used for maintaining the record.

The proposed system is a application which is related to apartment process. The proposed system overcomes the demerits of existing system. The system enables multiple visitors to access then system, request for outing simultaneously and also includes apartment tenant details, visitor details.



CHAPTER V

SYSTEM TESTING AND IMPLEMENTATION

SYSTEM TESTING

Testing objective includes:

- Testing is a process of executing a program with the intent of finding an error in the de-journal info portal.
- A good test case is one that has a probability of finding an as yet undiscovered error in total activity of De-journal info portal.
- A successful test is one that uncovers an undiscovered error.

Testing principles:

- All test should be traceable to end user requirement
- Test should be planned long before testing begins in the application
- Testing should begin on a small scale and progress towards testing in large
- Exhaustive testing is not possible
- To be most effective, testing should be conducted by an independent third party

UNIT TESTING

Unit testing focuses verification efforts on the smallest unit of software design, the module. This is also known as "Module Testing" The modules are tested separately this testing is carried out during programming stage itself. In this step each module is found to be working satisfaction as regard to the expected output from the module.

INTEGRATION TESTING

Integration testing focuses on the design and construction of the software architecture. Data can be lost across an interface, one module can have adverse effect on another sub functions and show on. Thus integration testing is a systematic technique for constructing test to uncover errors associated with in the interface. In this project, all the modules are companied and then the entire program is tested as a whole.

OUTPUT TESTING

After performing the validation testing, the next step is the output testing of the proposed system, since no system could be useful if it does not produce required output in the specific format. Tested asking the users about the format required by them, the output is considered into two ways: one is on the screen and the other is printed format.

The output format on the screen is found to be correct as the format designed according to the user needs, for the hard copy also, the output comes as specified by the user. Hence output testing does not result in correction in the system.

WHITEBOX TESTING

White box Testing is done with the project which drive test cases that do the following

- Guarantee that all the independent paths with in modules have been exercise at least once.
- Exercise all logical decision on the true and false side.
- Execute all loops at the boundaries and within their operation bounds.
- Exercise internal data structures to ensure the validity

It is aimed at ensuring that the system works accurately and efficiently before live operation command.

BLACKBOX TESTING

Black box System methods focus on the functional requirement of the software. Using the black box testing method the following errors are identified and rectified in the package.

- Incorrect or Missing functions
- Interface Errors
- Errors in data Structures or external database access.

SYSTEM IMPLEMENTATION

Implementation is the stage of the project when the theoretical design is turned out into a working system. Thus it can be considered to be the most critical stage in achieving a successful new system and in giving the user, confidence that the new system will work and be effective.

The implementation stage involves careful planning, investigation of the existing system and it's constraints on implementation, designing of methods to achieve changeover and evaluation of changeover methods. Implementation is the process of converting a new system design into operation.

It is the phase that focuses on user training, site preparation and file conversion for installing a candidate system. The important factor that should be considered here is that the conversion should not disrupt the functioning of the organization.

The application is implemented in Microsoft Visual basic 6.0 as front end and Microsoft SQL Server 2008.

An analysis of user training focuses on two factors

- User capabilities
- Nature of the system

Users range from the native to highly sophisticated. Hence they should be trained about the usage of software. The user should takes care to see that in the event of interruption due to power failure.

CHAPTER VI

CONCLUSION & FUTURE ENHANCEMENTS

CONCLUSION

This apartment management system application was successfully created and stored the entire Admin login, Apartment, Allotment, Bill details, Block details, Tenant details, Visitor details, Report generation, t details into the database using this application. The application was tested very well and the errors were properly debugged. Testing also concluded that the performance of the system is satisfactory. All the necessary output is generated. This system thus provides an easy way to automate all the functionalities of consumption. If this application is implemented in few consumption, it will be helpful. Further enhancements can be made to the project, so that the website functions in a very attractive and useful manner than the present one. It is concluded that the application works well and satisfy the needs. The application is tested very well and errors are properly debugged. It also acts as the sharing of files to the valuable resources.

SCOPE OF FUTURE ENHANCEMENTS

Every application has its own merits and demerits. The project has covered almost all the requirements. Further requirements and improvements can easily be done since the coding is mainly structured or modular in nature. Changing the existing modules or adding new modules scan append improvements. The project has a very vast scope in future. The project can be implemented on intranet in future. Project can be updated in near future as and when requirement for the same arises, as it is very flexible in terms of expansion. With the proposed software of database Space Manager ready and fully functional the client is now able to manage and hence run the entire work in a much better, accurate and error free manner.

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- www.msdn.microsoft.com
- www.vbcity.com
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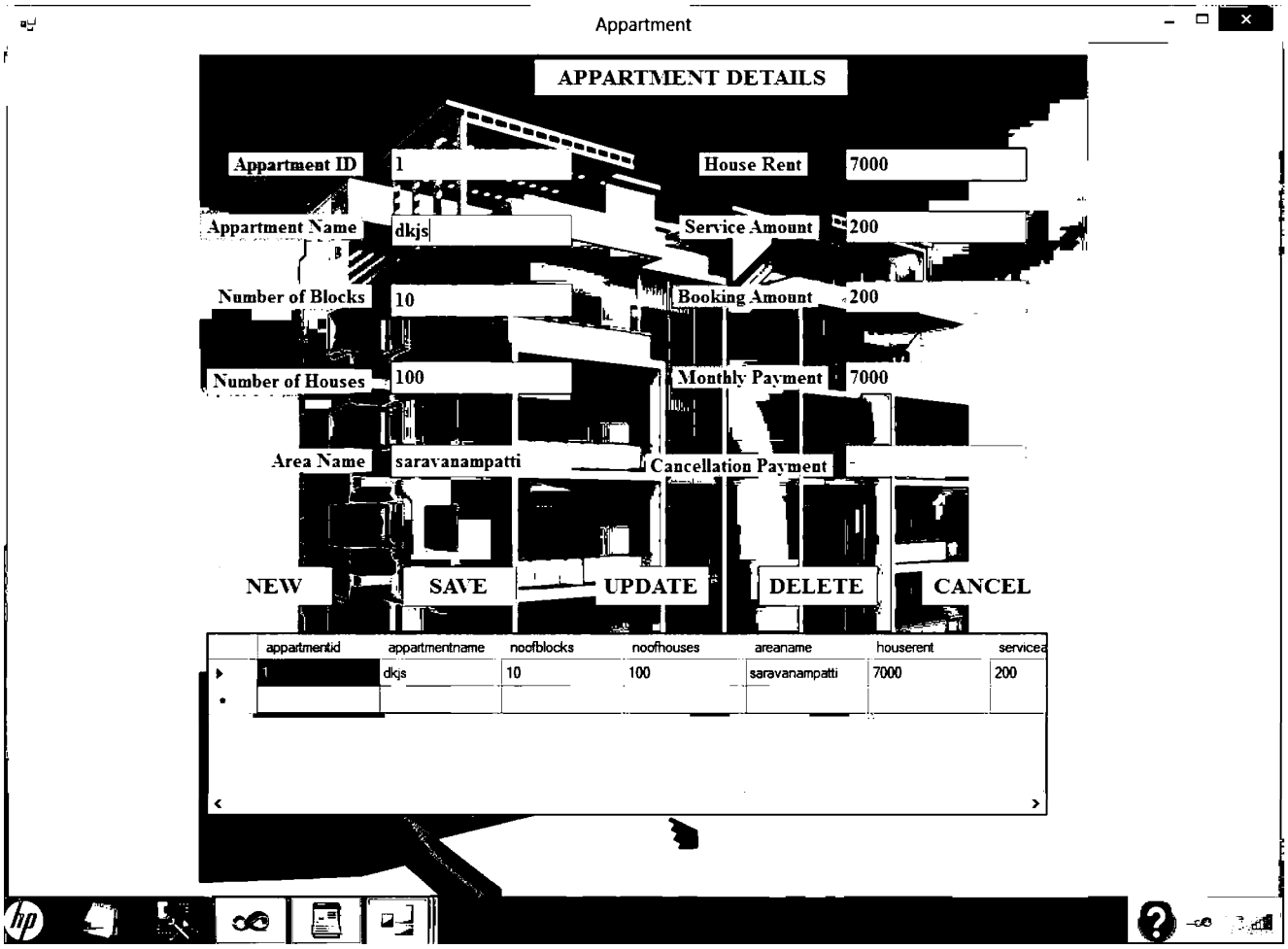
MIDI FORM:

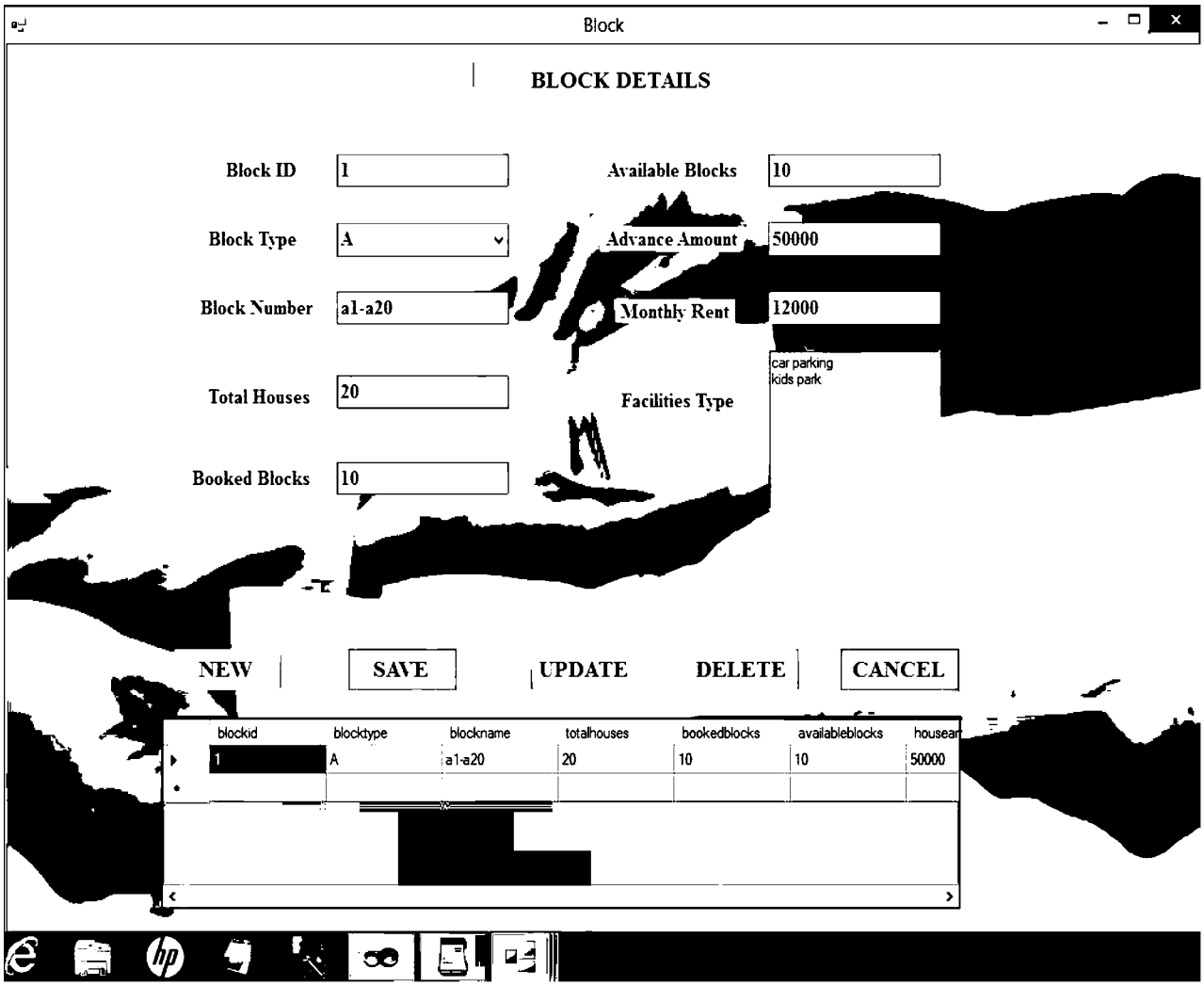
LOGIN FORM:


APPARTMENT MANAGEMENT SYSTEM
USER NAME
Admin
PASSWORD
.....
LOGIN
CANCEL
Login Success
OK

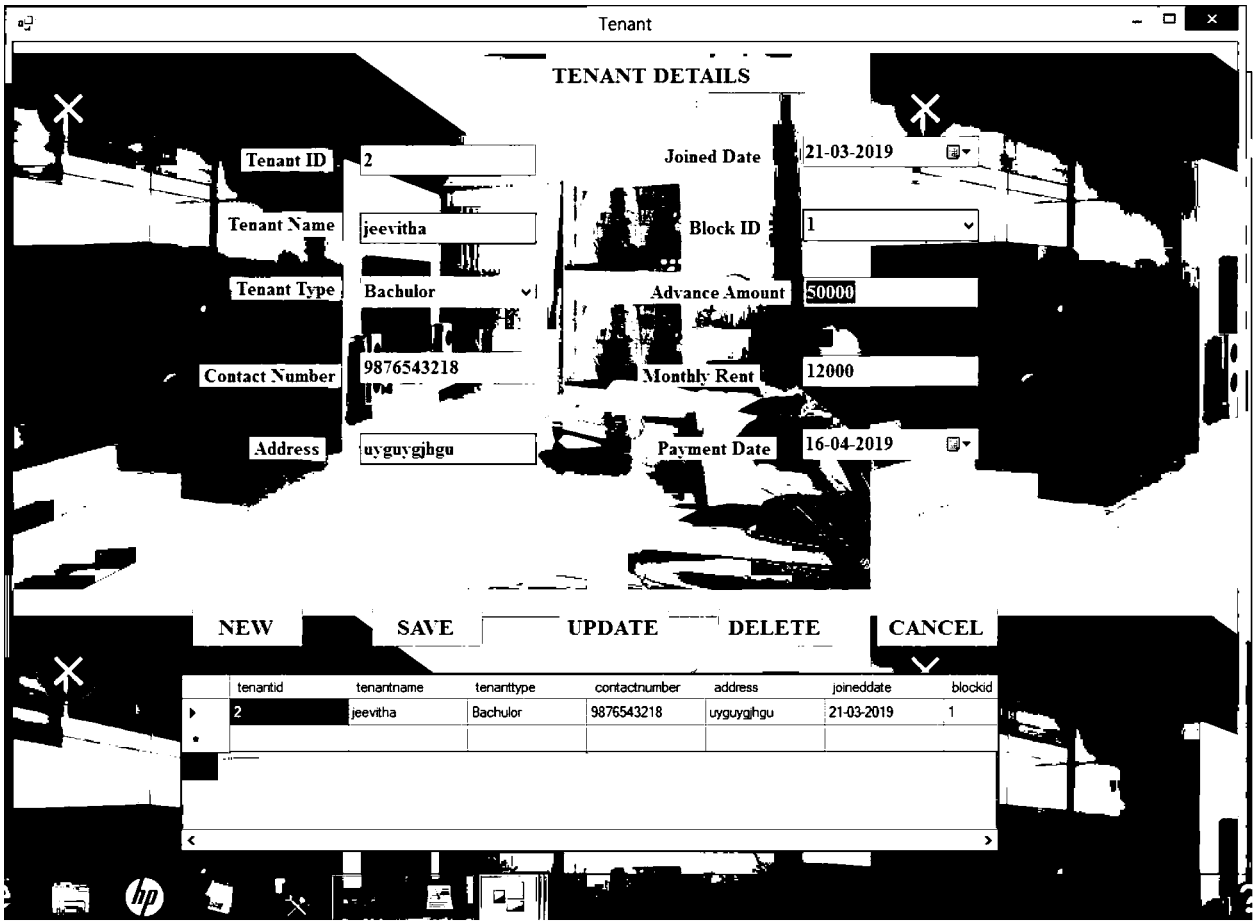
APPARTMENT DETAILS FORM :



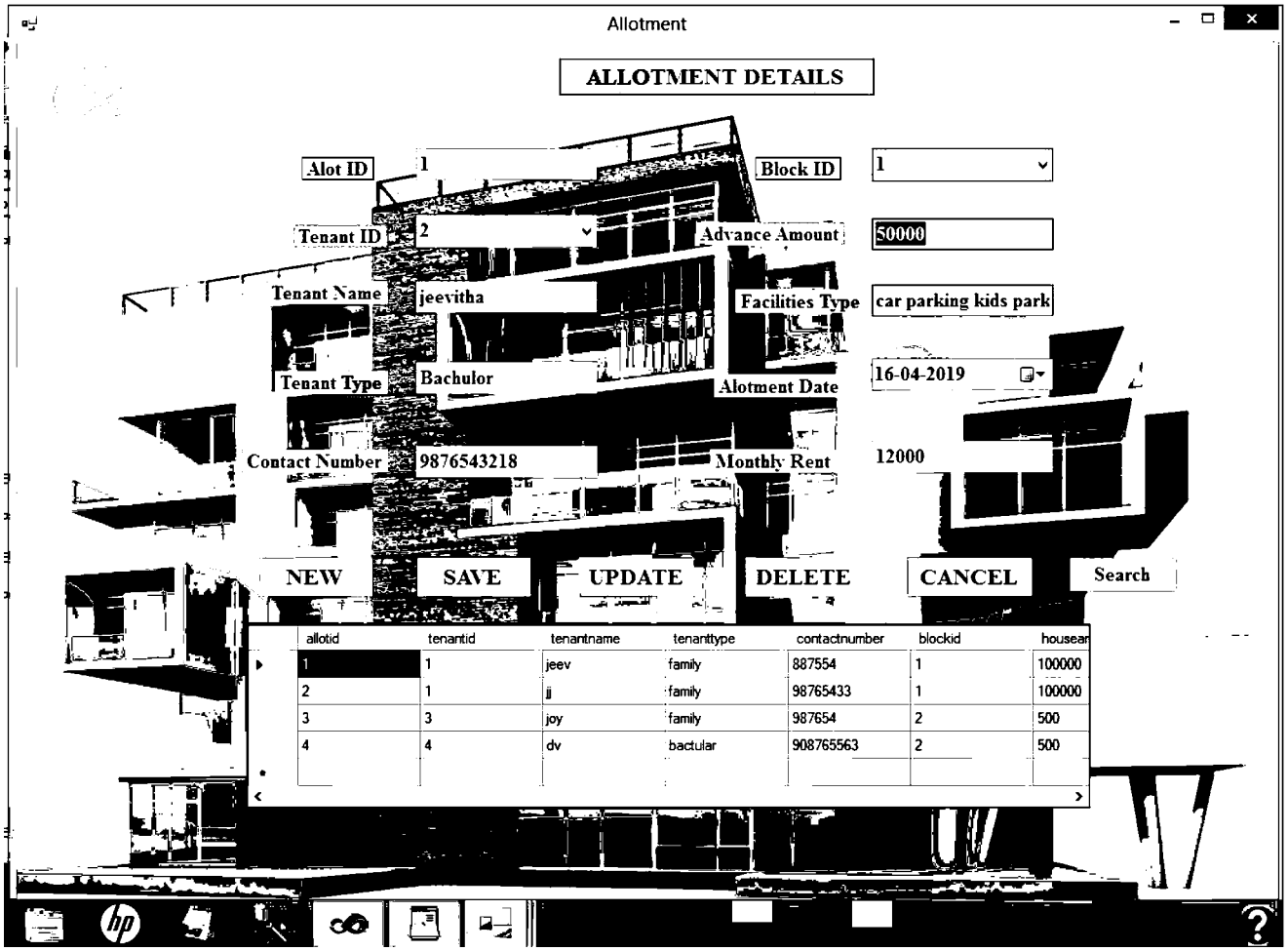
BLOCK DETAILS FORM:



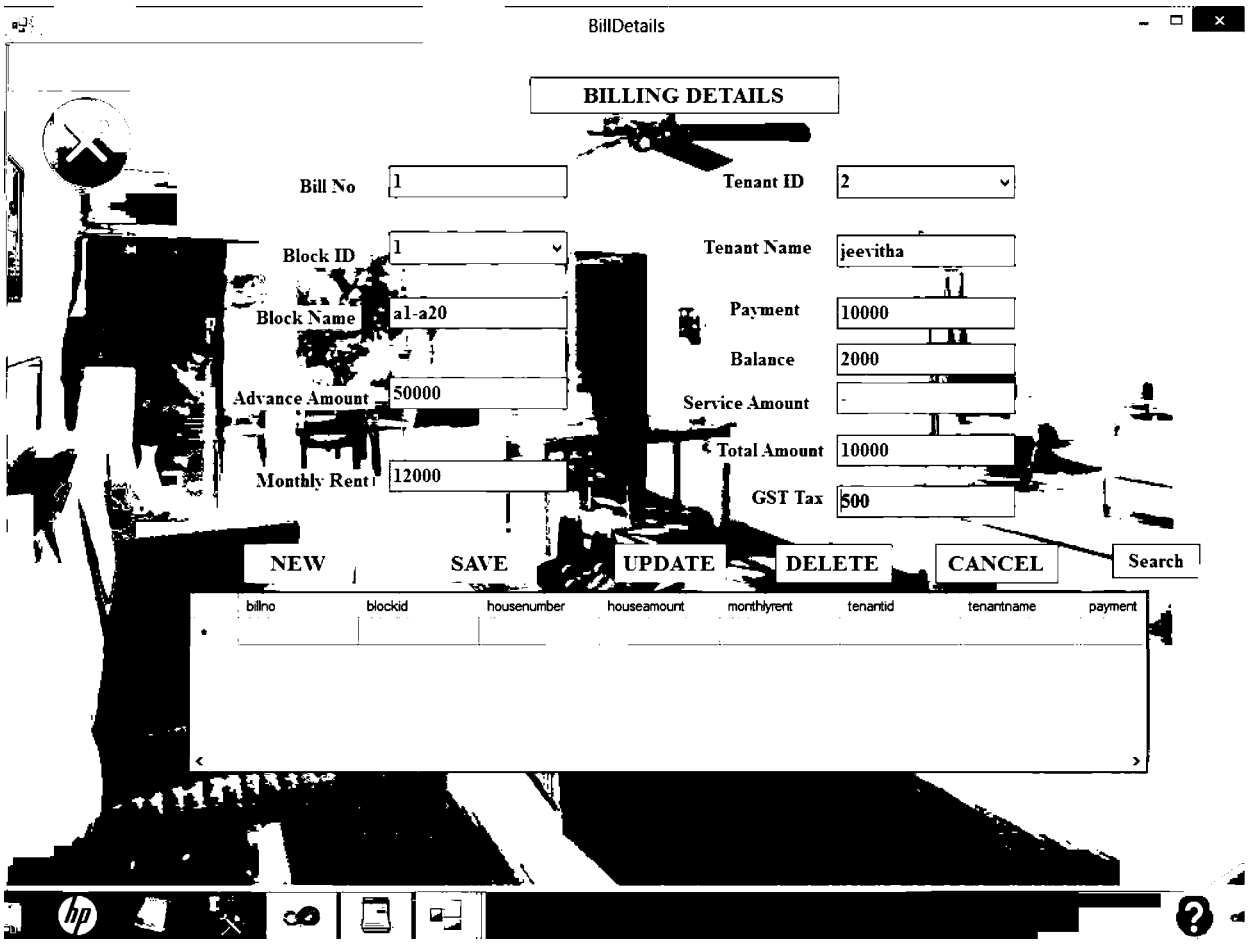
TENANT DETAILS FORM:



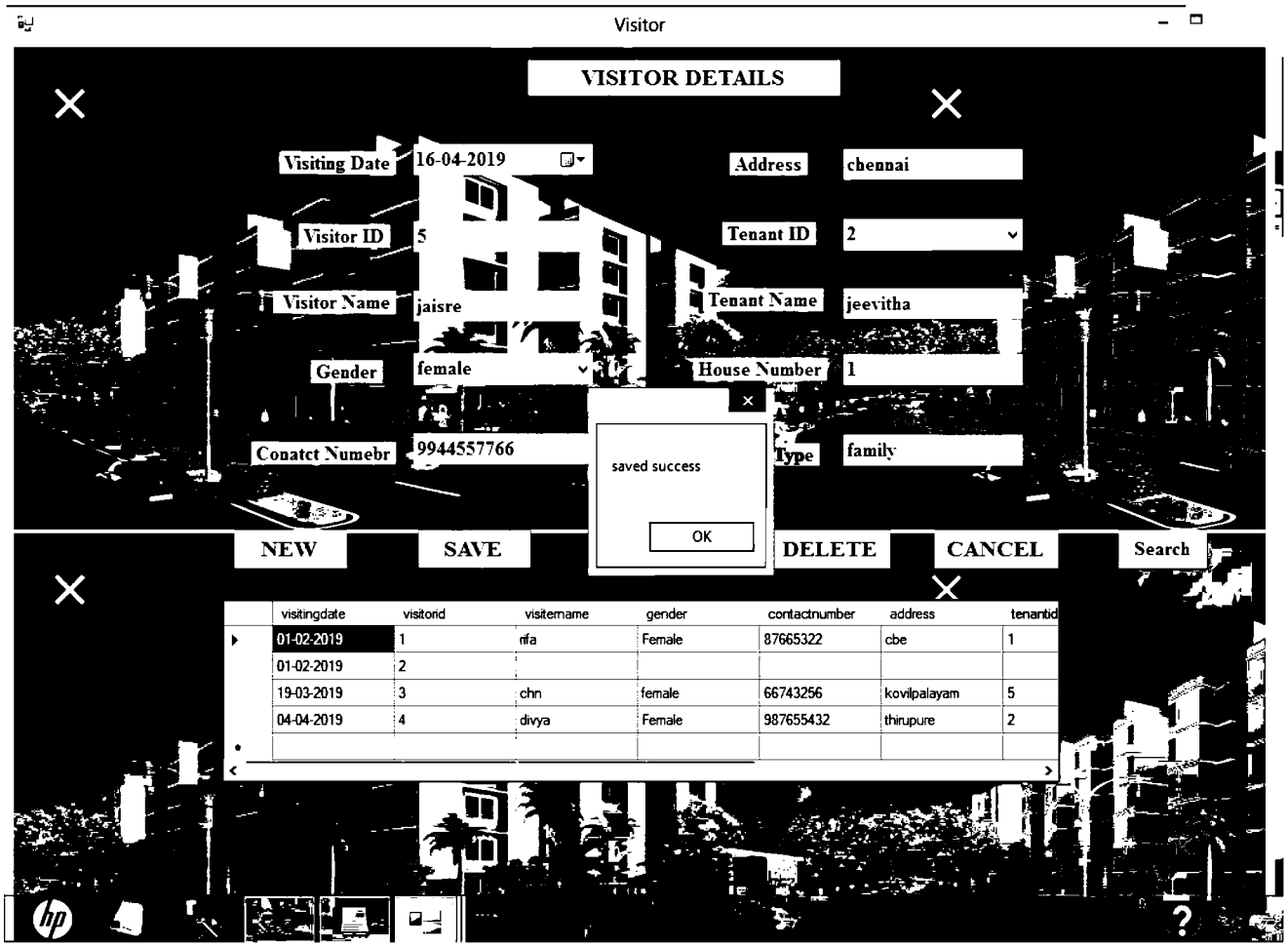
ALLOMEMENT DETAILS FORM:



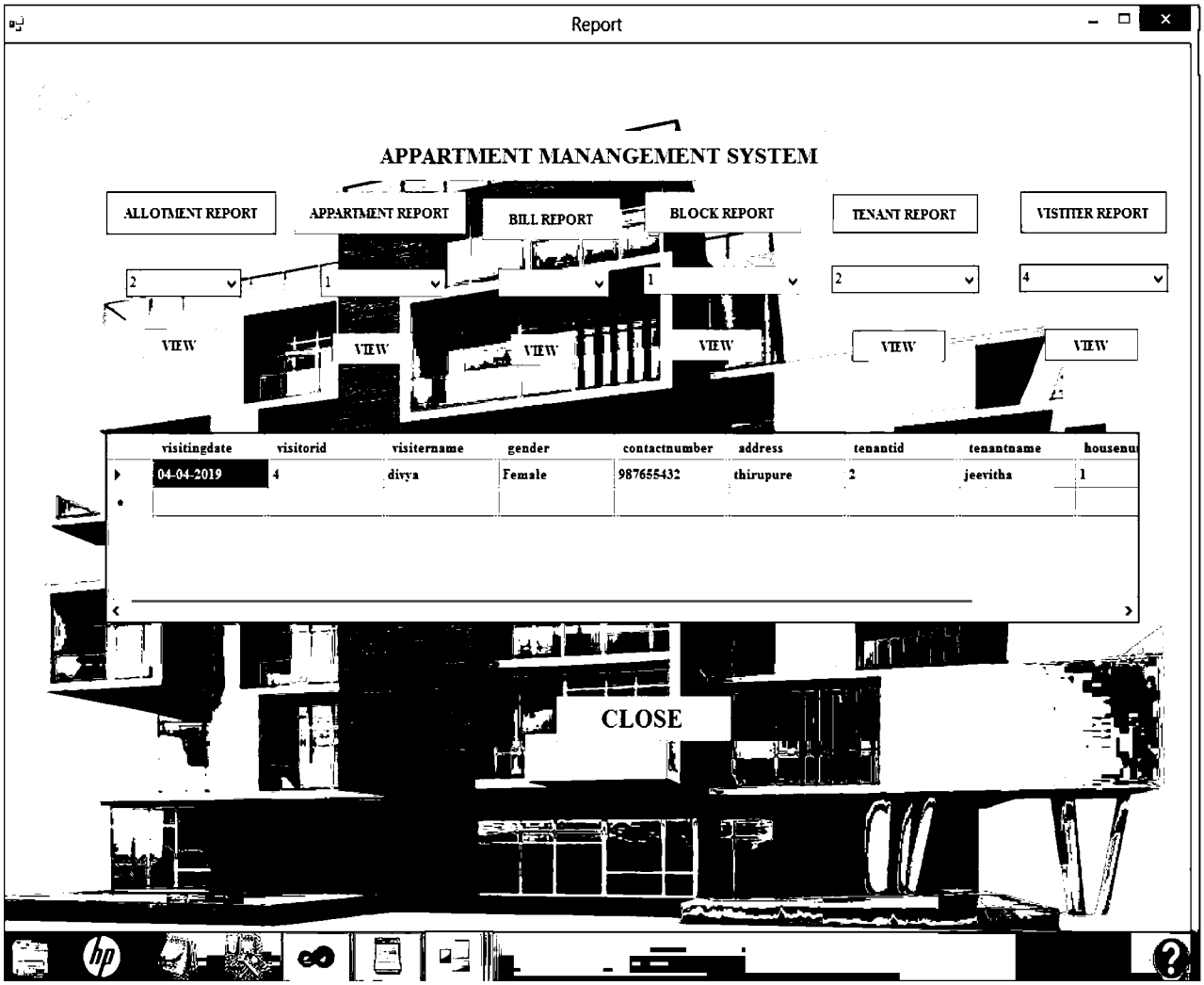
BILLING DETAILS FORM



VISTORS DETAILS FORM:



REPOR FORM:


Report
APPARTMENT MANANGEMENT SYSTEM
ALLOTMENT REPORT
APPARTMENT REPORT
BILL REPORT
BLOCK REPORT
TENANT REPORT
VISITTER REPORT
VIEW
VIEW
VIEW
VIEW
VIEW
VIEW
visitingdate
visitorid
visitername
gender
contactnumber
address
tenantid
tenantname
04-04-2019
4
divya
Female
987655432
thirupure
2
jeevitha
1
CLOSE

Coding:

```
Public Class Login

Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button2.Click

If (TextBox1.Text = "Admin" And TextBox2.Text = "Admin") Then

MessageBox.Show("Login Success")

Masterpage.Show()

Else

MessageBox.Show("Invalid Username and Password")

End If

End Sub


Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button3.Click

End

End Sub

End Class

Imports System.Data.SqlClient

Public Class Appartment


Private Sub Button4_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button4.Click
```

```
con.Close()

con.Open()

Dim cmd As New SqlCommand("insert into appartment values('" + TextBox1.Text + "','" + TextBox2.Text + "','" + TextBox10.Text + "','" + TextBox3.Text + "','" + TextBox4.Text + "','" + TextBox5.Text + "','" + TextBox6.Text + "','" + TextBox7.Text + "','" + TextBox8.Text + "','" + TextBox9.Text + "')", con)

cmd.ExecuteNonQuery()

MessageBox.Show("saved successfully")

clear()

grid()

con.Close()

End Sub


Private Sub Button5_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button5.Click

con.Close()

con.Open()

Dim cmd As New SqlCommand("update appartment set appartmentid='" + TextBox1.Text + "',appartmentname='" + TextBox2.Text + "',noofblocks='" + TextBox10.Text + "',noofhouses='" + TextBox3.Text + "',areaname='" + TextBox4.Text + "',houserent='" + TextBox5.Text + "',serviceamount='" + TextBox6.Text + "',bookingamount='" + TextBox7.Text + "',monthlypayment='" + TextBox8.Text + "',cancelpayment='" + TextBox9.Text + "'where appartmentid='" + TextBox1.Text + "'", con)

cmd.ExecuteNonQuery()
```

```
MessageBox.Show("updated successfully")

clear()

grid()

con.Close()

End Sub


Private Sub Button6_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button6.Click

con.Close()

con.Open()

Dim cmd As New SqlCommand("delete from appartment where appartmentid='" + TextBox1.Text + "'", con)

cmd.ExecuteNonQuery()

MessageBox.Show("deleted successfully")

clear()

grid()

con.Close()

End Sub

Private Sub Button7_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button7.Click

Me.Close()

End Sub
```

```
Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button3.Click

clear()

autonum()

TextBox1.Text = ss + 1

End Sub


Private Sub Appartment_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load

clear()

autonum()

TextBox1.Text = ss + 1

grid()

End Sub

Private Sub grid()

con.Close()

con.Open()

Dim cmd As New SqlCommand("select * from appartment ", con)

Dim da As New SqlDataAdapter(cmd)

Dim ds As New DataSet

da.Fill(ds)

DataGridView1.DataSource = ds.Tables(0)
```

```
con.Close()

End Sub

Dim ss As Integer

Private Sub autonum()

con.Close()

con.Open()

Dim cmd As New SqlCommand("select max(appartmentid) from appartment", con)

Dim dr As SqlDataReader

dr = cmd.ExecuteReader

If (dr.Read) Then

If IsDBNull(dr.Item(0)) Then

ss = 0

Else

ss = dr.Item(0)

ss = ss + 0

End If

End If

con.Close()

End Sub

Private Sub clear()

TextBox10.Text = ""
```

```
TextBox2.Text = ""

TextBox3.Text = ""

TextBox4.Text = ""

TextBox5.Text = ""

TextBox6.Text = ""

TextBox7.Text = ""

TextBox8.Text = ""

TextBox9.Text = ""

End Sub


Private Sub TextBox2_MouseDoubleClick(ByVal sender As Object, ByVal e As System.Windows.Forms.MouseEventArgs) Handles TextBox2.MouseDoubleClick

con.Close()

con.Open()

Dim da As New SqlCommand("select * from appartment where appartmentid='" + TextBox1.Text + "' ", con)

Dim ds As SqlDataReader

ds = da.ExecuteReader

While (ds.Read())

TextBox2.Text = ds.Item(1)

TextBox10.Text = ds.Item(2)

TextBox3.Text = ds.Item(3)
```

```
TextBox4.Text = ds.Item(4)

TextBox5.Text = ds.Item(5)

TextBox6.Text = ds.Item(6)

TextBox7.Text = ds.Item(7)

TextBox8.Text = ds.Item(8)

TextBox9.Text = ds.Item(9)

End While

con.Close()

End Sub


Private Sub TextBox2_TextChanged(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles TextBox2.TextChanged

End Sub


Private Sub Label2_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Label2.Click

End Sub

End Class

Imports System.Data.SqlClient

Public Class Report


Private Sub ComboBox1_MouseClick(ByVal sender As Object, ByVal e As
```

```
System.Windows.Forms.MouseEventArgs) Handles ComboBox1.MouseClick

ComboBox1.Items.Clear()

con.Close()

con.Open()

Dim da As New SqlDataAdapter("select allotid from allotment", con)

Dim dt As New DataTable

Dim dr As DataRow

da.Fill(dt)

For Each dr In dt.Rows

ComboBox1.Items.Add(dr.Item(0))

Next

con.Close()

End Sub


Private Sub ComboBox1_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles ComboBox1.SelectedIndexChanged

End Sub


Private Sub ComboBox2_MouseClick(ByVal sender As Object, ByVal e As System.Windows.Forms.MouseEventArgs) Handles ComboBox2.MouseClick

ComboBox2.Items.Clear()

con.Close()
```

```
con.Open()

Dim da As New SqlDataAdapter("select appartmentid from appartment", con)

Dim dt As New DataTable

Dim dr As DataRow

da.Fill(dt)

For Each dr In dt.Rows

ComboBox2.Items.Add(dr.Item(0))

Next

con.Close()

End Sub


Private Sub ComboBox2_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles ComboBox2.SelectedIndexChanged

End Sub


Private Sub Button6_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button6.Click

con.Close()

con.Open()

Dim cmd As New SqlCommand("select * from allotment where allotid='" + ComboBox1.Text + "'", con)

Dim da As New SqlDataAdapter(cmd)
```

```
Dim ds As New DataSet

da.Fill(ds)

DataGridView1.DataSource = ds.Tables(0)

DataGridView1.Visible = True

con.Close()

End Sub


Private Sub Button7_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button7.Click

con.Close()

con.Open()

Dim cmd As New SqlCommand("select *from appartment where appartmentid='" + ComboBox2.Text + "'", con)

Dim da As New SqlDataAdapter(cmd)

Dim ds As New DataSet

da.Fill(ds)

DataGridView1.DataSource = ds.Tables(0)

DataGridView1.Visible = True

con.Close()

End Sub


Private Sub ComboBox3_MouseClick(ByVal sender As Object, ByVal e As
```

```
System.Windows.Forms.MouseEventArgs) Handles ComboBox3.MouseClick

ComboBox3.Items.Clear()

con.Close()

con.Open()

Dim da As New SqlDataAdapter("select billno from billing", con)

Dim dt As New DataTable

Dim dr As DataRow

da.Fill(dt)

For Each dr In dt.Rows

ComboBox3.Items.Add(dr.Item(0))

Next

con.Close()

End Sub


Private Sub ComboBox3_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles ComboBox3.SelectedIndexChanged

End Sub


Private Sub ComboBox4_MouseClick(ByVal sender As Object, ByVal e As System.Windows.Forms.MouseEventArgs) Handles ComboBox4.MouseClick

ComboBox4.Items.Clear()

con.Close()
```

```
con.Open()

Dim da As New SqlDataAdapter("select blockid from block", con)

Dim dt As New DataTable

Dim dr As DataRow

da.Fill(dt)

For Each dr In dt.Rows

ComboBox4.Items.Add(dr.Item(0))

Next

con.Close()

End Sub


Private Sub ComboBox4_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles ComboBox4.SelectedIndexChanged

End Sub


Private Sub Button8_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button8.Click

con.Close()

con.Open()

Dim cmd As New SqlCommand("select *from billing where billno='" + ComboBox3.Text + "'", con)

Dim da As New SqlDataAdapter(cmd)
```

```
Dim ds As New DataSet

da.Fill(ds)

DataGridView1.DataSource = ds.Tables(0)

DataGridView1.Visible = True

con.Close()

End Sub


Private Sub Button9_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles Button9.Click

con.Close()

con.Open()

Dim cmd As New SqlCommand("select *from block where blockid='" + ComboBox4.Text + "'",
con)

Dim da As New SqlDataAdapter(cmd)

Dim ds As New DataSet

da.Fill(ds)

DataGridView1.DataSource = ds.Tables(0)

DataGridView1.Visible = True

con.Close()

End Sub


Private Sub ComboBox5_MouseClick(ByVal sender As Object, ByVal e As
```

```
System.Windows.Forms.MouseEventArgs) Handles ComboBox5.MouseClick

ComboBox5.Items.Clear()

con.Close()

con.Open()

Dim da As New SqlDataAdapter("select tenantid from tenant", con)

Dim dt As New DataTable

Dim dr As DataRow

da.Fill(dt)

For Each dr In dt.Rows

ComboBox5.Items.Add(dr.Item(0))

Next

con.Close()

End Sub


Private Sub ComboBox5_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles ComboBox5.SelectedIndexChanged

End Sub


Private Sub Button10_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button10.Click

con.Close()

con.Open()
```

```
Dim cmd As New SqlCommand("select *from tenant where tenantid='" + ComboBox5.Text + "'", con)

Dim da As New SqlDataAdapter(cmd)

Dim ds As New DataSet

da.Fill(ds)

DataGridView1.DataSource = ds.Tables(0)

DataGridView1.Visible = True

con.Close()

End Sub


Private Sub ComboBox6_MouseClick(ByVal sender As Object, ByVal e As System.Windows.Forms.MouseEventArgs) Handles ComboBox6.MouseClick

ComboBox6.Items.Clear()

con.Close()

con.Open()

Dim da As New SqlDataAdapter("select visitorid from visitor", con)

Dim dt As New DataTable

Dim dr As DataRow

da.Fill(dt)

For Each dr In dt.Rows

ComboBox6.Items.Add(dr.Item(0))

Next
```

```
con.Close()

End Sub


Private Sub ComboBox6_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles ComboBox6.SelectedIndexChanged

End Sub


Private Sub Button13_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button13.Click

con.Close()

con.Open()

Dim cmd As New SqlCommand("select *from visitor where visitorid='" + ComboBox6.Text + "'", con)

Dim da As New SqlDataAdapter(cmd)

Dim ds As New DataSet

da.Fill(ds)

DataGridView1.DataSource = ds.Tables(0)

DataGridView1.Visible = True

con.Close()

End Sub

Private Sub Report_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
```

```
End Sub

Private Sub Button11_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles Button11.Click

Me.Close()

End Sub

End Class
```