

ONLINE HOTEL MANAGEMENT SYSTEM

A Case Study Ranova Hotel

By

Nyondo Godfrey

BCS/0104/62/DU

A Project Report Submitted to the Faculty of Computer Studies

In Partial Fulfillment of the Requirements for the Award of the Degree of Bachelor of Science in
Computer Science of Kampala International University.

November, 2011

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Declaration

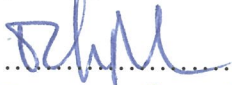
I **Nyondo Godfrey** do hereby declare that this Project Report is original and has not been published and/or submitted for any other degree award to any other University before.

Date: 27/04/2011.....

Signed : .....

Approval

This Project Report has been submitted for Examination with the approval of the supervisor.

Signed: 

Date: 

Mr. Ochen Moses

Department of Computer Studies

Faculty of Computer Studies.

Acknowledgement

We thank God for the gift of life he has given us, Special thanks go to our parents and guardians who have toiled through hardship to support us for the whole period we have spent in this university.

We also thank our supervisor Mr. Moses Ochen for his imparted knowledge, skill, close guidance and tireless support and advice to make this project a success.

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Abstract

Ranova Hotel Management System is developed to be used by hotel staff and for better management of the hotel process. It is used to- give facility to the user. It is also developed to replace the manual system that is used before. There have been many problems during use manual system, like data redundancy, lost or damage.

The scopes that exist in this system are booking online room, rent room, make payment using system, generate report for the hotel, make a checklist and make an ordering using system that provided in this hotel.

Data used in this study was collected using observation, reviewing of existing documents and interview methods. Interviews were conducted using interview guides. The tool was implemented using MySQL database software and the PHP programming language. The tool was tested and validated using sample data got from the Hotel Ranova. This tool can be useful at the Hotel in speeding up the process of determining the status of clients requests submitted.

Chapter One

Introduction

1.1 Background

Uganda is a growing tourist destination, there has been a good rise in the number of hotels and resorts in Uganda and the tourist sector is broadening thus the need for making Hotel Reservation System website. The rapid development and commercialization of Information and Communication Technologies (ICTs) for the travel and tourism industry has prompted hotels and other enterprises in this sector to increasingly adopt these technologies. The ICT based products and processes help the hotels to enhance the operating efficiency, improve the service experience as well as provide a means to access markets on a global basis. [Marine Publications Ltd]

1.2 Problem Statement

In Uganda there are more than 500 hotels which are gaining their international customers [Marine Publications Ltd] but online booking system site is implemented by some renowned hotels only so the hotel reservation system is one of the projects that will be required in the Ugandan tourist sector.

Google Maps are also not in use and we are implementing it which will help the customer to find out the location of hotel.

Customer Relationship Management is also established and we are maintaining it which will help to find out customer repository.

1.3 Main Objective

The Main Objective of this project was to develop a computerized tool that shall help in tracking clients' requests efficiently and also to assess the level of Online Reservation system usage in Ugandan Hotels and how the system can be rolled out to all the hotels and improve the level of customer service delivery.

1.4 Specific Objectives

The specific objectives of the study were;

- i. Save the client's information into the database prior to Booking or Check in.
- ii. Customize the type of Hotel rooms with prices.
- iii. Booking for the customer for specific date with advance payment.
- iv. Check in into the hotel for the duration.
- v. Checkout from the hotel after payment operation.

vi. Each time make a reservation, room status is updated and the customer details are added to your hotel database.

This website can be used by all of the hotels.

This project is web-based and is using PHP and Mysql with other web technology.

1.5 Scope

Accounts Manager

Administrators - Administrator can add / edit and manage administrator accounts.

Hotels Manager

Hotels - Administrator can manage hotels that will appear on the site with the hotel name, description, address, phone and fax.

Room Types - Administrator can define the type of rooms in the hotels, rooms' prices and upload an image for each room.

Hotel Rooms - For each hotel the administrator can define the rooms available, room's number, max occupants and remarks on the specific room.

Bookings Manager

Bookings - All bookings and reservations made on the site are displayed with all booking details: arrival date, departure date, hotel name, room type, number of passengers, price...

Available Rooms - Administrator can also search for room availability from the administrator's panel and does not have to go on the site in order to look for hotels.

Bookings History - Administrators can view all bookings ever made on the site.

Reports

Bookings Statistics - Administrator can view statistics of booking on bar charts that show the difference in bookings according to months.

Options

Languages - Define the languages that will be viewed on the site with the language code.

1.6 Significance

On completion of the study, a computerized tool that tracks clients' requests as they move through offices as their transactions are processed was developed.

The tool generates reports on the status of clients' requests which are accessible to the staff hence reducing on the time clients spend waiting for responses when they inquire about the progress made with their requests. To the staff, the tool helps in tracking the transactions being done through generation of summary reports.

Chapter Two

Literature Review

2.0 Introduction

This chapter highlights a survey of the literature about the different systems used and the problem at hand, with the intention of placing the current study in the block of research carried out.

2.1 Online Monitoring and Tracking Systems

Hotelogix Hotel Management software is a user-friendly, uncluttered and compact Hotel Management System that automates the operation and management of a hotel. Our software seamlessly integrates Online & Offline Reservations, Front Desk. Developed by Hotelogix Inc and released on Aug 01, 2007.

HotelASP is a hotel software, hotel reservation software and hotel management system for managing hotels, motels, villas, or other kind of properties. HotelASP provides reservation management, roomstay and lodging management, planning, customer management, account management, front office and back office reporting. HotelASP is also a Hotel Application Service Provider. Developed by WinSaaS and released on May 12, 2008.

ASIFD is a general purpose hotel & motel software which is can be used as a hotel maintenance software, hotel reservations software, hotel management software, hotel billing software, general purpose hospitality software, hotel accounting software, hotel accommodation software, hotel property management software (pms)and as hotel booking software and as software for online hotel reservation. Developed by Anand Systems Inc and released on Feb 05, 2006.

Free Hotel Software is a general purpose hotel & motel software which is can be used as a hotel maintenance software, hotel reservations software, hotel management software, hotel billing software, general purpose hospitality software, hotel accounting software, hotel accommodation software, hotel property management software (PMS, PM Software) and as hotel booking software and as software for online hotel reservation. Developed by Free Hotel Software an released on Oct 28, 2006.

SIMSOFTE Hotelpro 2006 hotel software offers a low-price hotel management system which has complete solution for daily hotel operations, includes front office as well as back office functions (reservation, billing, payment, reports, inventory, housekeeping, bookkeeping). Hotelpro will assist in

managing complex operation quickly, saving time & costs. Networking environment is also supported to synchronize front desk operations with all functions. Developed by SIMSOFT Indonesia.

eZee FrontDesk is a general purpose hotel and motel software which is can be used as a hotel maintenance software, hotel reservations software, hotel management software, hotel billing software, hotel property management software (pms). Developed by eZee Technologies

It is ideal solution for hotel having 10-100 Rooms.

Main Features include.

Hotel status from main screen with easy Check in Check Out

Reservation

Group Management/ Operations

Direct Billing/ City Ledger.

iMagic Hotel Reservation - reservation software is an affordable, simple to use and install hotel booking software system for guesthouses, small hotels, hostels, and bed and breakfasts. iMagic Reservation was developed for the needs of small to medium accommodation management. The program has reservation, room management, billing, accounting, and statistics capabilities.

ASI Front Desk Hotel Software is a general purpose hotel & motel software which is can be used as a hotel maintenance software, hotel reservations software, hotel management software, hotel billing software, general purpose hospitality software, hotel accounting software, hotel accommodation software, hotel property management software (pms)and as hotel booking software and as software for online hotel reservation.

ApPHP Hotel Site is a powerful hotel management and on-line reservation site script. This script is the fully functional PHP solution to manage small to medium size of hotels, holiday flats or guesthouse. Visitors of Hotel site will be able to search rooms' availability with an online booking reservation system. They also could view rooms' inventory, check availability, and book reservations in a real-time.

Joomla HBS - Joomla Hotel Booking System was designed to simplify the task of online booking in Joomla Content Management Website. Joomla HBS is Easy to install, simple to manage and reliable. Joomla HBS (Joomla Hotel Booking System) is the leading Online Hotel Booking solution for Joomla.

KingSmart Hotel Systems Suite 2005 offers Hotel Property Management Systems, hotel management software, reservation software, Restaurant, Spa and Conferences POS software and hotel back office Accounting, Stock and Payroll software to hotel, restaurant and leisure businesses. Download

KingSmart HPMS and POS Standard 2005 or visit compw.com for more products from HotelPro 2000, 3000 to KingSmart 5.0, 2003 and 2005, KingSmart Hotel Software - Hotel Management System is able to be configured to your specific requirements making it easy to use and to obtain fast, accurate information for your individual hotel.

Sai Soft Hotel Catering Software is a dynamic hotel and motel software which improve guest service while achieving profitability. This software is ideal solution for all kind of property. Main features include: Quick check-in/out, hotel status from the main menu, Direct billing, Expense management, Transaction management with insert, delete and edit features, back up and resort of data, importing and exporting of guest data and many more. It also has the facility of POS with touch screen which in result increases your sell and profit. We also have multiple rate and seasonal rate type with single stay. Requirements:

Dahlin *et al.*, (2005)[4] developed a scalable and time responsive monitoring system called INSIGHT that tracks continuous queries and efficiently gathers local information about data streams into an aggregate view. The system is a distributed monitoring framework for constructing large-scale data aggregation and continuous event monitoring applications, such as IP traffic monitoring, network anomaly detection, accounting and bandwidth provisioning, sensor monitoring and control, and grid resource monitoring.

Kane (2006) [6] describes an Online Tracking Information System (OTIS) which is a collection of search engines which enable Environmental Protection Agency (EPA) staff, state/local/tribal governments and federal agencies to access a wide range of data relating to enforcement and compliance. This Web application sends queries to the Integrated Data for Enforcement Analysis system. The Integrated Data for Enforcement Analysis system copies many EPA and non-EPA databases monthly, and organizes the information to facilitate cross-database analysis. Online Tracking Information System can be used for many functions, including planning, analysis, data quality review, and pre-inspection review.

Tunity Technology Pte Ltd (2003) [10] developed a Personnel Tracking System for Prison Security that improves the efficiency of the prison personnel management and operational processes. Tunity developed a wristband tag with an anti-tamper feature. Inmates under monitoring wear the wristband tag which transmits an alert signal if it is tampered with. The tag transmits a signal every 1.5 seconds (selected time interval), identifying the inmates and their respective zonal positions within the monitoring area.

The Internal Revenue Service of the United States Department of Treasury (2004) [7] acquired a Tax Litigation Counsel Automated Tracking System (TLCATS) for tracking all aspects of tax litigation cases. TLCATS is an on-line interactive and batch processing system used by Chief Counsel personnel to store and retrieve case data throughout all phases of the tax litigation process. TLCATS also tracks trial calendars and provides the United States court with information on the status of the cases on each trial calendar. In addition, TLCATS provides Chief Counsel Management with case statistics at various organization levels.

Ontario Environment Ministry (2007) [5] uses a web-driven application called the Provincial Groundwater Monitoring Information System (PGMIS) to monitor the state of the province's ground water resources. The information from the Provincial Groundwater Monitoring Network provides an early warning system for changes in water levels as well as changes in water quality. This information supports informed decision making on water issues, drought management and land use planning.

Main (2001) and Lim and Huang (2005) highlighted the weak position of nonaffiliated hotels vis-à-vis affiliated hotels in relation to their exploitation of Electronic Distribution Centers. This weakness will be exacerbated as the complexity of Electronic Distribution Centers continues to increase if hoteliers do not develop effective Electronic Distribution Center management strategies. An Electronic Distribution Center management model designed to address the key issues relating to Electronic Distribution Center management would be useful, a perspective supported by Hudson (2008). Furthermore, the different issues related to Electronic Distribution Center management in hotels are to be discussed and investigated.

The design of travel and tourism websites has received substantial attention by scholars (e.g. Schegg et al., 2002; Law and Leung, 2002; Law and Wong, 2003; Scharl, Wöber and Bauer, 2003; Landvogt, 2004; So and Morrison, 2004; Essawy, 2005; Jeong et al., 2005; Law and Hsu, 2006; Zafiroopoulos and Vrana, 2006; Schmidt, Cantalops, and dos Santos, 2007). Landvogt (2004) evaluates several online booking engines over 23 different criteria, like overall user friendliness, payment method, instant confirmation, reliability, and invoicing function among others. These criteria present some of system's functions and design principles discussed further in current paper.

In their study Jeong et al. (2005) find that only two characteristics of hotel websites (information completeness and ease of use) are important determinants of perceived website quality. These results are bewildering as most studies identify more dimensions of perceived service quality to be significant for website users. Law and Hsu (2006), for example, assess the dimensions of hotel websites

(information regarding the reservation, hotel facilities, contact details of the property, surrounding area and website management) and attributes in each dimension mostly valued by online users. Some of the most important website attributes are found to be the room rates, availability and security of payments (in the reservation information dimension), the location maps, hotel and room amenities (in facilities information), telephone, address and e-mail of the hotel (for contact information), transportation to the hotel, airports and sights (for surrounding area information), and up-to-date information, multilingual site and short download time (for website management). So and Morrison (2004) apply similar criteria for website evaluation as the preceding study but they group them into technical, marketing, consumer perspective and destination information perspective criteria.

Essawy (2005) focuses on website usability and shows that severe usability problems with interface quality, information quality, and service quality affect negatively the purchase and revisit intentions of website users. The author identifies some of the practical tools/activities for increasing users' perceived satisfaction, purchase intention, and potential relationship building – exchanging links with local points of interest, shorter/simpler pathways to leisure breaks, greater depth of information for room facilities and pricing, providing proactive interactions, and avoiding third-party reservation systems. In similar vein, Scharl, Wöber and Bauer (2003) assess the effectiveness of hotel websites. Authors identify personal, system and media factors that contribute to hotel website adoption. In the system factors group, that is more controllable by the hotel management compared to personal and media factors, they identify the perceived utility of the product, speed of the system, intelligence, layout, services, languages, navigation, interactivity, reliability of the system.

Research has also shown that trust is an important dimension of website development (Fam, Foscht and Collins, 2004; Chen, 2006; Wu and Chang, 2006). If consumers do not trust the website they will not visit it, or will not transform their visits into real purchases.

Although much effort has been put towards evaluating the design of tourism websites and the identification of website attributes highly valued by customers, there is a gap in the research in the OHRS design and its specific problems have not received enough attention in previous research with few notable exceptions. In series of reports Bainbridge (2002, 2003a, 2003b) discusses the practical aspects of the OHRS design (the search option in the systems, the booking process and the date format), while Ivanov (2002, 2005) discusses the types and main characteristics of OHRSs and the major marketing decisions to be taken by the marketing managers in their design.

Chapter Three

Methodology

3. Introduction

Under this chapter, a list of the tools/methods that were used during the research are indicated.

3.1 Data Collection and Requirements Identification

Data about system requirements was gathered through reviewing existing documents, observing how Hotel Management transactions are carried out, and interviewing the staff at the Hotel with the aid of an interview guide. Some of the officials interviewed included; The Hotel Administrator, Hotel Manager, Bookings Manager and the Accounts Manager.

3.1.1 Interviews

This was conducted with the official at the Ranova Hotel to gather responses from them to find out the methods used by them in processing bookings and also the different ways they advise the customers in on the bookings and reservation process. Interviewing as a data collection technique helped me to get first-hand information from the respondents and an opportunity to gather information from respondents who were knowledgeable about the current system. The Researcher interviewed some of the members of department; the Researcher was able to derive the data requirements as stated in the analysis of the findings of the interviews of this report.

3.1.2 Questionnaires

These were used to gather responses from the customers in order to assess how they carry out their harvesting of the fish and also how they determine the rooms booked or reserved and the amount. Questionnaires as a data collection technique helped me to get information from the respondents who cannot articulate their views properly they were aimed at the customers mainly. The Researcher carried out the exercise to a few selected customers that were once offered a service at the Hotel. The Researcher was able to derive the data requirements as stated in this report. The questionnaires guide used can be obtained in the appendix part of this report.

3.2 System Design

To design the database, a Relational Model was designed. This required identifying entities, attributes and relationships amongst the entities. The process design was accomplished using Context Diagrams and Data Flow Diagrams to illustrate what kind of information or data is handled by various officials in the processing of requests and what changes they make.

3.3 System Implementation

MySQL was used to implement the database since it is a free, multi platform database management system. MySQL also supports data replication, that is, two database servers can exist concurrently and changes made to one are automatically reflected in the other. PHP was the major programming language because it has a free library of functions, and is a platform independent scripting language and is good at dynamically generating web pages as well as connecting with databases. PHP is also easy to learn and work with.

JavaScript was also used mainly in displaying messages. Apache was also used because it is free and is a platform independent server.

3.4 Validation and Testing

3.4.1 Testing

This involved the testing of individual modules to ensure that they perform the required functionality. The modules were integrated together and the new system tested by allowing users to enter samples data. This helped to verify that it accepts the data and processes it, in the manner desired.

3.4.2 Validation

This involved entering sample data into the new system, so as to compare its tracking functionalities with the existing system.

Chapter Four

System Design and Implementation

4.0 Introduction:

This Hotel Reservations Management System is a dynamic web-based application that has been developed with the objectives of providing a platform for web visitors to reserve accommodation in Ranova Hotel, and for Ranova Hotel to monitor its guest history using easily generated reports. This documentation provides a description of the features that have been embedded in the system in order to achieve these objectives.

4.1 System Features:

The system has a number of modules that have been embedded in it so that it can provide the targeted services.

4.1.1 The system menu:

- **Home:** the homepage provides a welcome message to the system, and a brief overview of what services the system provides.
- **Settings:** the settings module is an admin-only module that provides an interface for the system administrator to establish the default system settings
- **Reservation form:** this is a page that provides an interface for potential clients to provide their reservation details.
- **Reports:** this module has been developed to generate a number of reports based on the data collected through the system. These reports help the hotel managers to monitor the hotel's performance in the hospitality market.
- **Contact us:** this is a page that provides the contact details of the hotel.

4.1.2 The system settings:

1. Administrator accounts:

The management of administrator accounts is performed by a user with top-level access rights. The functions that can be performed through this module include account creation, resetting account details, and dropping accounts.

There are two access levels of administrator accounts. The top-level account grants the right to manage administrator accounts, as well as performing all the other administrator functionalities. The lower-level account only grants the right to view reports, and perform functionalities besides managing administrator accounts.

2. Managing pending requests and room status:

When a reservation request is made, an email message is sent to the administrator and the status of the requested room is set to 'pending'.

This module provides an interface for the administrator to view all pending requests and either approve or deny them. An email message is then sent back to the client informing them that their request has either been approved or denied. The room status of the requested room is then reset to 'available' or 'reserved' respectively.

3. Setting room types:

The hotel has a number of categories of rooms, and this module is developed to enable the administrator to set these hotel room categories.

4. Setting rooms of each type:

Each room category has rooms belonging to it. This module enables the administrator to set unique room numbers for rooms belonging to each category, as well as providing details such as the default room status.

5. Page content:

This module will provide the means for the administrator to set the content for those pages that have text based content, such as the 'contact us' page.

4.1.3 Reserving a room:

The system has a reservation form through which the clients enter information regarding their requests. Some of the information that is required from the client is the client's name, telephone number, email address, country and city. The system also requires the client to specify the room being reserved, the check-in and check-out dates.

After submitting this information, the system sends an email message to the administrator notifying him about the request. The status of the requested room is also upgraded to 'pending' until the request is reviewed by the administrator.

When the administrator reviews the request, he can either accept or deny it. If a request is accepted, a corresponding email notification is sent to the client and the status of the requested room is upgraded to 'reserved'. However, if the request is denied, the client is notified and the status of the requested room upgraded to 'available'.

4.1.4 Generating reports:

1. Client history:

This module searches the database for clients who have reserved certain rooms between a pair of check-in dates and returns a tabular listing of the client name, email, telephone, country, city, room number, check-in date, and check-out date based on these search terms.

2. Room status:

This module searches the database using room types and generates a report that displays the room number, room type, and current status of the rooms of the specified type.

3. Reservation request reports:

This module performs a database search based on check-in dates or room type and generates a report of the requests made for rooms of a specified type between certain check-in dates. The search shows the room type, room number, check-in date, check-out date, and client name.

4.2 System Services:

1. Room types:

This is a page that lists and describes the categories of rooms available at the hotel. This is where clients get information on the rooms at the hotel before they can make the decision to request a reservation.

2. Room availability:

This is a page listing the room number, room type, and description of all the available rooms, and also gives the option to request a reservation.

3. Reservation forms:

This is a series of forms through which information regarding clients' reservation requests is collected from the client.

4.3 Contact us:

This is a page that displays the contact details of the hotel, and provides a feedback form through which a visitor may send comments to the administrators.

4.4 System security:

The system parts of the system that are not open to the public have been protected using a password encryption mechanism. The user will have to provide a valid username and password before he is allowed to access these modules.

Some of the security measures that can be taken involve performing regular php and mysql server upgrades on the server, so as to maintain the latest safeguards against the latest tricks developed by hackers.

4.5 Entity Relationship Diagram (ERD)

4.5.1 Entity – Relationship Diagram:

This depicts relationship between data objects. The attribute of each data objects noted in the entity-relationship diagram can be described using a data object description. Data flow diagram serves two purposes:

1. To provide an indication of how data are transformed as they move through the system.
2. To depict the functions that transformation the data flow.

4.5.2 Data Objects:

A data object is a representation of almost any composite information that must be understood by the software. By composite information, we mean something that has a number of different properties or attributes. A data object encapsulates data only there is no reference within a data object to operations that act on the data.

4.5.3 Attributes:

Attributes define the properties of a data object and take on one of three different characteristics. They can be used to:

Name an instance of data object.

Describe the instance.

Make reference to another instance in other table.

4.5.4 Relationships:

Data objects are connected to one another in a variety of different ways. We can define a set of object relationship pairs that define the relevant relationships.

4.6 Cardinality and Modality:

4.6.1 Cardinality:

The data model must be capable of representing the number of occurrences of objects in a given relationship. The cardinality of an object relationship pair is:

4.6.1.1 One-To-One (1:1):

An occurrence of object 'A' can relate to one and only one occurrence of object 'B' and vice versa.

4.6.1.2 One-To-Many (1:N):

One occurrence of object 'A' can relate to one or many occurrences of object 'B' but an occurrence of object 'B' can relate to only one occurrence of object 'A'.

4.6.2.3 Many-To-Many (M: N):

An occurrence of 'B' and an occurrence of 'B' can relate to one or many occurrence of 'A'.

4.6.2 Modality:

The modality of a relationship is zero if there is no explicit need for the relationship to occur or the relationship is optional. The Modality is one if the occurrence of the relationship is mandatory.

The object relationship pair can be represented graphically using the Entity Relationship Diagrams. A set of primary components are identified for the Entity Relationship Diagram, they include:

1. Attributes

2. Relationships and

3. Various Type Indicators.

The primary purpose of the Entity Relationship Diagram is to represent data objects and their relationships.

4.7 Entity Relationship Diagram:

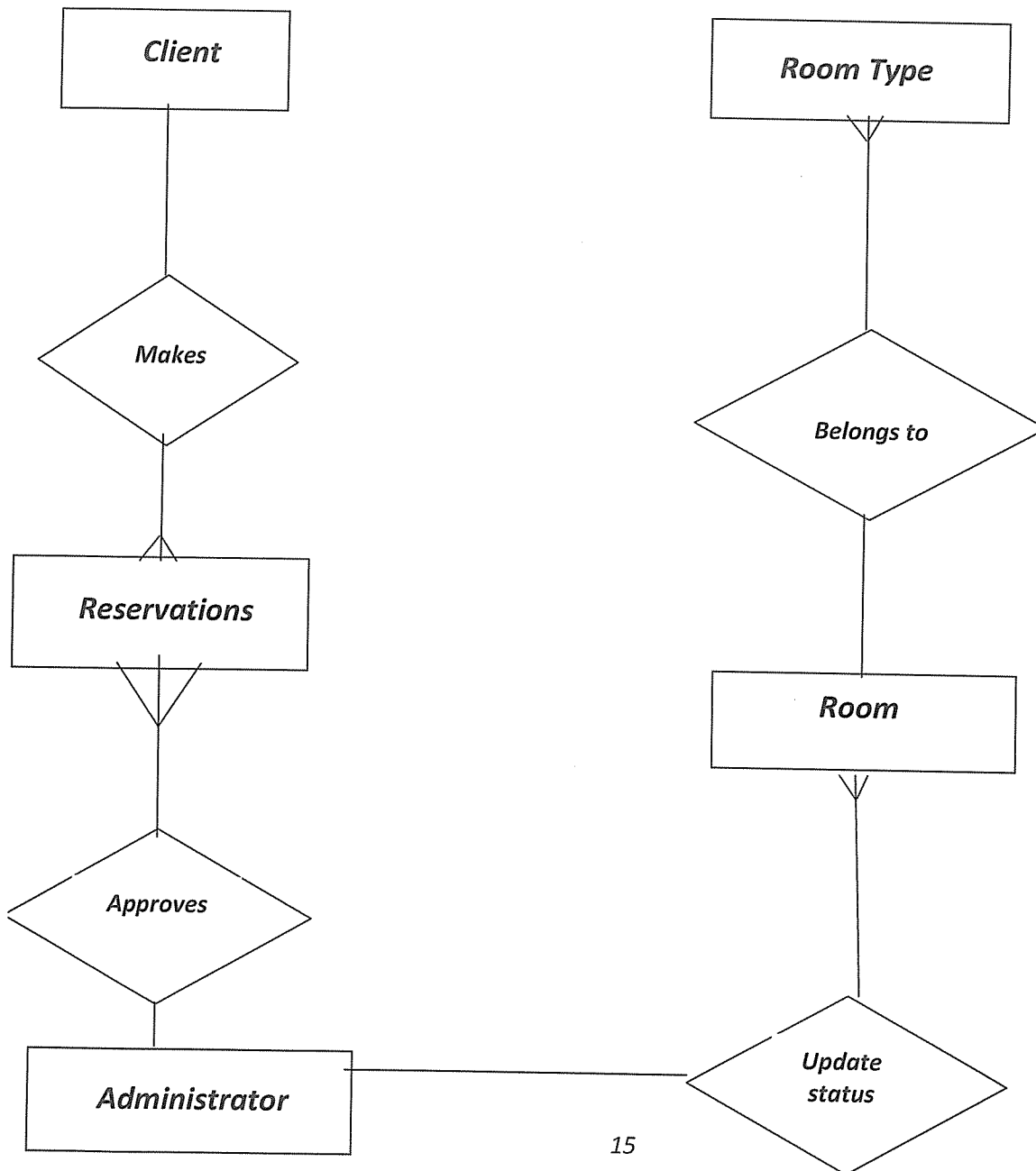


Figure 4.7.1 Entity Relationship diagram

4.7.2 Data Flow Diagram:

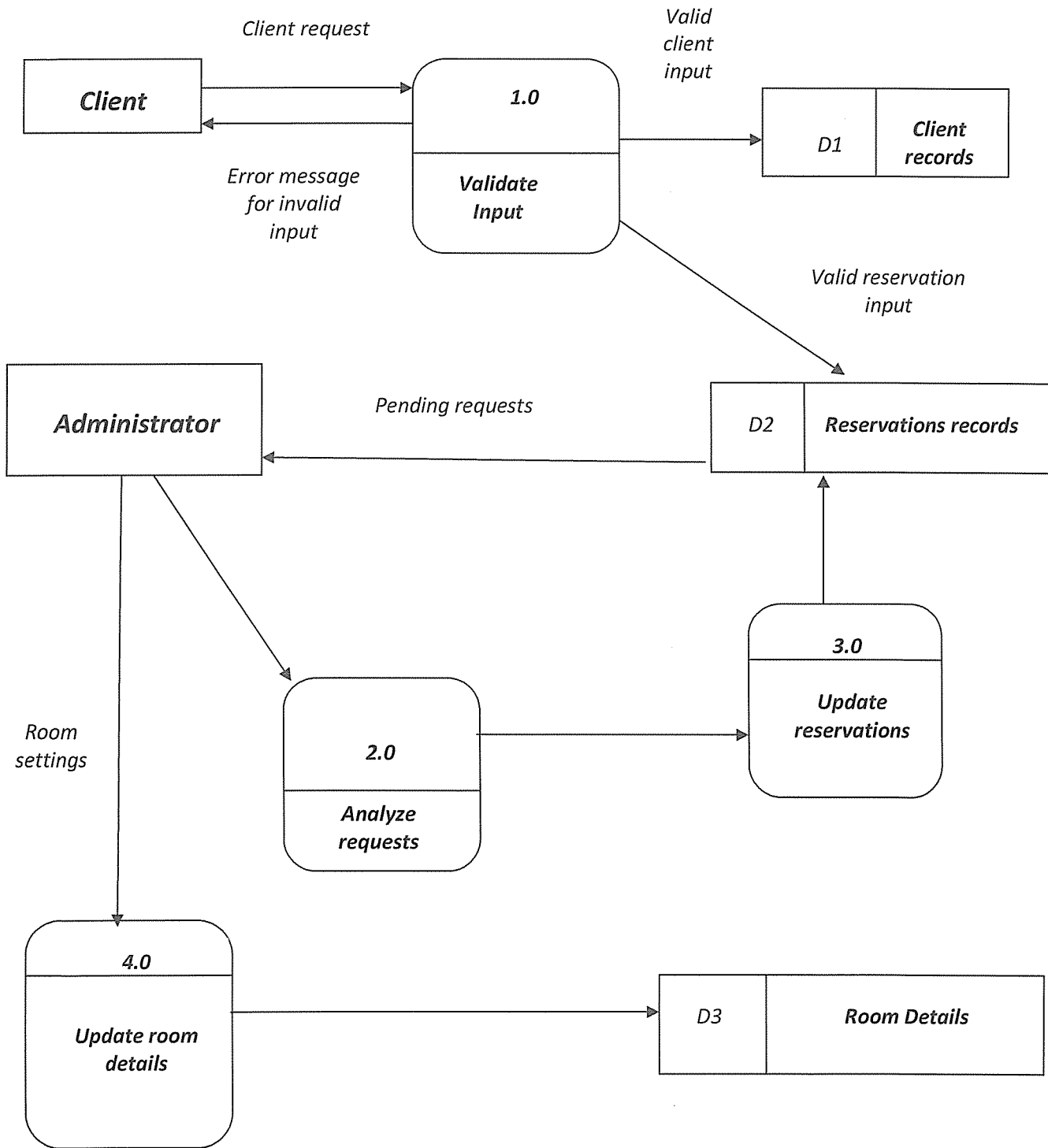
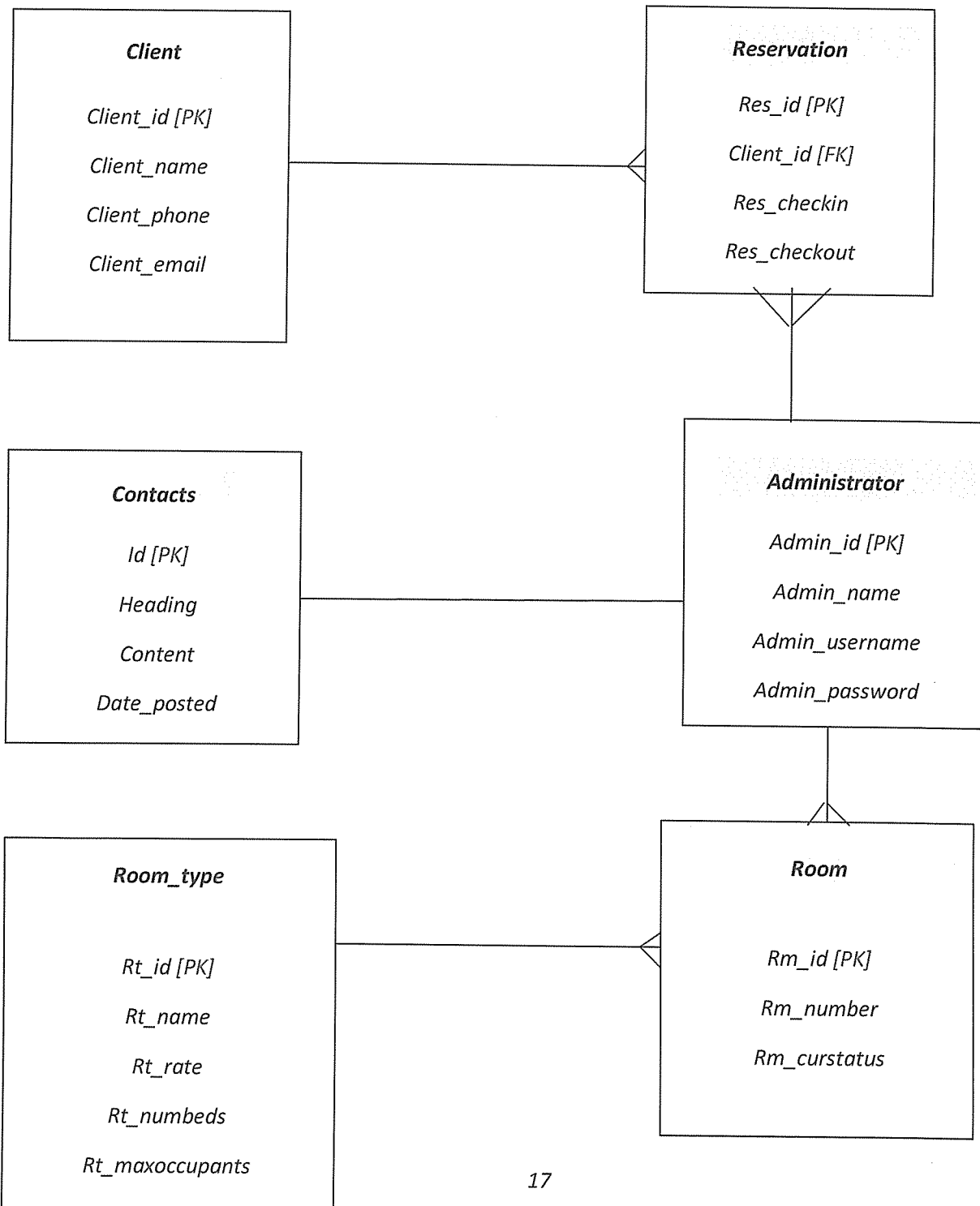


Figure 4.7.2 Data flow Diagram

4.7.3 Database Schema:

Data modeling defines primary data objects, composition of each data object, and attributes of the object, relationships between each object and other objects and between objects and the processes.

Figure 4.7.3 Database Schema



4.7.4 Data validation:

The validation phase is aimed at ensuring that the data entered into the system is of the required type and format, and that the security vulnerabilities of the system are identified and reduced.

```
If(empty(client_name) || empty(client_phone) || empty(client_email) || empty(client_country) ||  
empty(client_city) || empty(check_in_date) || empty(check_out_date))
```

```
{
```

```
    Send error message asking client to fill in all the fields.
```

```
}
```

```
Else
```

```
{
```

```
    Send client input to database.
```

```
}
```

```
If (administrator_logged in)
```

```
{
```

```
If(requested_room_available)
```

```
{
```

```
    Administrator assigns it to client, and change status to 'reserved'.
```

```
}
```

```
Else
```

```
{
```

```
    Room is not available.
```

```
}
```

```
}
```

4.8 Function Details

The basic objective of Hotel Management System is to generalize and simplify the monthly or day to day activities of Hotel like Room activities, Check in of New Customer, Check out of customer, assigning a room according to customer requirement, and finally compute the bill etc. which has to be performed repeatedly on regular basis. To provide efficient, fast, reliable and user-friendly system is the basic motto behind this exercise.

Let us now discuss how different functions handle the structure and data files:

4.8.1 Password

In this module, this website is for multiple users. If a User enters a password and the software checks its validity. If the password is valid then option is given to change the password, otherwise “Invalid User/Password” message is displayed. There is an option for password recovery, log out, login, new users sign in. The Administrator can also update changes in the site after login.

4.8.2 Creating new Entity (Hotel, Room, Customers, and Members etc.)

This is used to add a new employee details, delete entity details and view the details. In that screen, the automatic item is created. In this function, whenever a new entity is required to be added the corresponding forms are opened and the database is manipulated to check whether the data is already existing or not. If it already exists, then it prompts that “Entry already existing” and if not than the data is entered with the various validation checks.

4.8.3 Function NEW_ROOM ()

This is the function used to open a new room for a customer so that he/she can assign a separate room. In that screen, the automatic room number is created. After opening a new room for the customer, finally a room is assigned to a customer and the room records are appended in the data file.

4.8.4 Function CHECKIN_CUSTOMER ()

This function is used to admit a customer in our Hotel after entering his all personal details like Name, Address, Phone, Sex and then he/she is assigned a room from NEW_ROOM()

function.

4.8.5 Function CHECKOUT_CUSTOMER ()

This function is used to checkout the customer details from database. When the user inputs his room number, the same room number will be checked in the database, if the room number is matched in the database, then the customer will be check-out from the database and transferred the record of the checkout to another table of database so that the Hotel Management has the record of customers who have check-out to fulfill his legal liabilities.

4.8.6 Function GENERATE_BILL ()

When any customer check-out, his/her bill is generated automatically by calculated check-out date minus check-in date and getting multiplied it by daily room charge plus other charges and the bill has to be saved in the table in the database.

4.8.7 Function DISPLAY_RECORD ()

This function is used to display all the transaction including the customer name, address, phone, bed number, and doctor assigned to him/her in the screen. This is a global report to display all the transaction records in the screen.

4.8.8 Validation of Data Entered by the User & Error Handling.

In this function, the validity of data entered by the user during the various business processes is checked through various validation checks. For example, there should not be any characters entered in the numeric fields, likewise if there is any error occurs than it should handle that particular error and give the required messages.

4.8.9 Searching.

In this function, room, customer well as members can search details from the database according to their authentications.

4.8.10 Report Generation.

In this function reports are generated for the following entities:

- a) Customer Details.
- b) Requirements of the Customers
- c) Rooms Details
- d) Bill Details
- e) Check in Reports
- f) Booking Details
- g) Online Bookings
- h) Checkout Details
- i) Membership Details
- j) Packages Available.

Chapter Five

Presentation of Results/Findings

5.1 Presentation of Results

5.1.0 Introduction

Hotel Ranova handles Reservations and booking processes in a manual system. This section includes the results of how the proposed system will look like and operate as shown below.

5.1.1 Homepage:

Below is a snapshot of the homepage of the system. It includes a menu, welcome message, services and contact details.

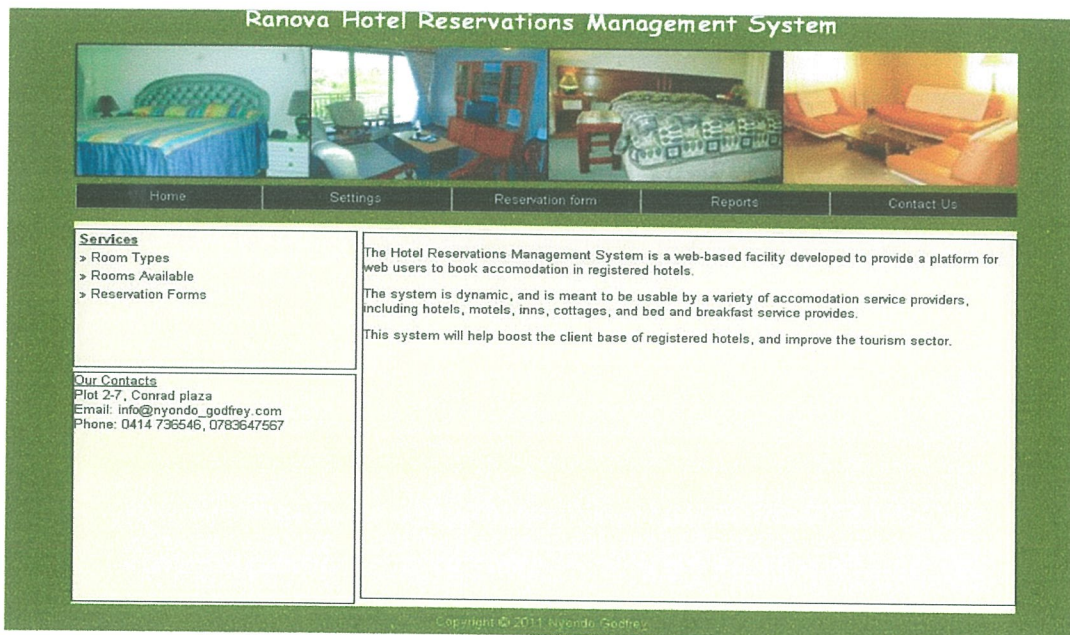


Figure 5.1.1 Homepage

5.1.2 Room Types:

The snapshot below illustrates the room types the hotel has and their description.

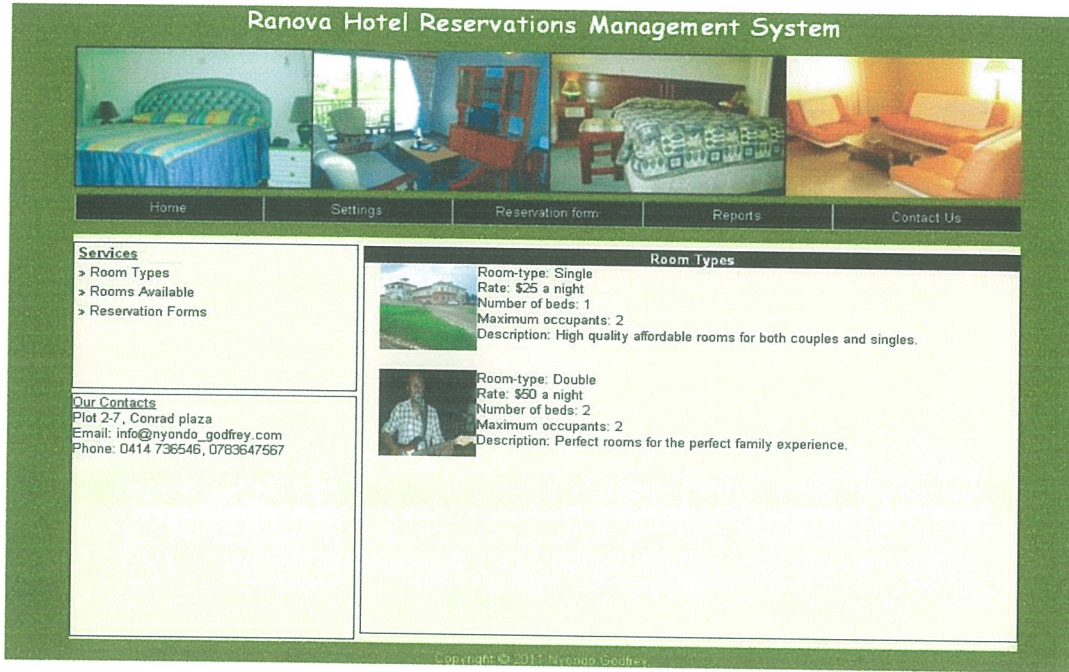


Figure 5.1.2 Room Types

5.1.3 Room Reservation Form:

The snapshot below is of the form used by a client to post a request for a room.



Figure 5.1.3 Room Reservation Form

5.1.4 Client History Report:

The page that generates a report of clients' history, based on check-in and check-out dates.

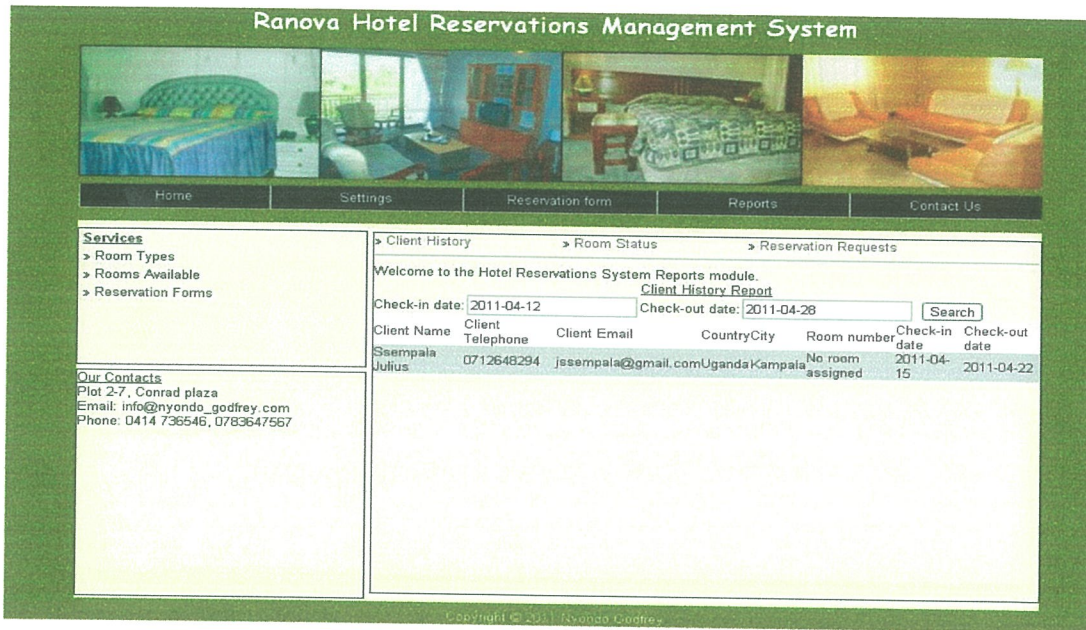


Figure 5.1.4 Client History Report

5.2 Testing and Validation

The tool was validated by entering sample data to test the tool and ensure that the correct results were output by the tool.

The login form requires the user to select the correct category, and enter his/her username, and password. If one of the three fields is not properly filled, an error message will pop up prompting the user to try again as shown below.



Figure 5.2 Login Error message Page

5.3 Problems Encountered

The following Problems were encountered during the Analysis, Design and Implementation of the tool;

- i. Access to some of the Hotel Information was not possible due to confidentiality reasons which made data collection process difficult. These included limited access to the Customer Booking and Reservation information.
- ii. Hotel Ranova is transforming from a manual to a computerized system, the tool was built from scratch since there is no existing File Tracking tool.

Chapter Six

Summary, Conclusion and Recommendations

6.1 Summary

The process of tracking the progress of a Client's request at the Hotel Ranova is lengthy and time consuming. As a file moves from one office to another one cannot quickly determine the status of a particular request and the officer working on it. In order to speed up the process of determining the status of individual requests, a computer based tool can be used to help in tracking files. The problem is solved by the use of a computerized tool that stores information about transactions at the Hotel, the tool generates reports on clients' requests reducing on the time clients spend waiting for responses when inquiries are made about the progress of their requests.

6.2 Conclusion

I have designed the given proposed system to automate the process of Hotels. This project is useful for the authorities who keep track of all the users registered in a particular state .The authority can add hotel packages, room details, availability of rooms, online booking etc.

6.3 Scope of Future Application

This project can be used in the hotel after adding some more useful modules in the project for which hotel are providing services. Utmost care and back-up procedures must be established to ensure 100% successful implementation of the computerized hotel system. In case of system failure, the organization should be in a position to process the transaction with another organization or if the worst comes to the worst, it should be in a position to complete it manually.

6.4 Recommendations

The following steps that give the detailed information of the need of proposed system are:

6.4.1 Performance:

During past several decades, the records are supposed to be manually handled for all activities. The manual handling of the record is time consuming and highly prone to error. To improve the performance of the Hotel Management System, the computerized system is to be undertaken. This project is fully computerized and user friendly even that any of the members can see the report and status of the company.

6.4.2 Efficiency:

The basic need of this website is efficiency. The website should be efficient so that whenever a new user submits his/her details the website is updated automatically. This record will be useful for other users instantly.

6.4.3 Control:

The complete control of the project is under the hands of authorized person who has the password to access this project and illegal access is not supposed to deal with. All the control is under the administrator and the other members have the rights to just see the records not to change any transaction or entry.

6.4.4 Security:

Security is the main criteria for the proposed system. Since illegal access may corrupt the database. So security has to be given in this project.

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Appendices

Appendix A

Interview Guide

The main purpose of this study is to develop a computerized tool that will help in monitoring clients' transactions efficiently as they move through various processes of their requests.

The information given to the researchers will be used for academic purposes only and will be kept with Strict Confidentially.

Title/Office of the Interviewee (Not name e.g. Hotel Administrator):

.....

1. What kind of transactions do you handle at the Hotel?

.....

.....

2. What steps/ processes are involved when handling a transaction at the Hotel, from the time a client makes a request to the time he/ she gets the required feedback?

.....

.....

3. How long do the above processes take?

.....

.....

4. What problems (if any) do you face when handling transactions at the Hotel using the current approach?

.....

.....

5. How do you think the above mentioned problems could be solved?

.....

.....

6. What steps do you take to establish the progress made in processing a particular client's request when he/she inquires about it?

Appendix B

Sample code:

The function below is used to generate the client history report. It receives the check-in date, check-out date, and a value that specifies the action to be performed, and then returns a report listing the clients who made reservations between the specified dates.

```
function client_history($checkin,$checkout,$action)
{
    $resp = new xajaxResponse();

    $report = "<div align='center' style='background-color: #FFFFCC'><font color='#000000' size='2'
face='Arial, Helvetica, sans-serif'><u>Client History Report</u></font></div>";

    $report .= "<table width='100%' border='0' cellpadding='0' cellspacing='0' align='center'>";

    $report .= "<tr><td><font size='2' face='Arial, Helvetica, sans-serif'>Check-in date:</font><input
type='text' name='checkin' id='checkin' value='$checkin'>";

    $report .= "<font size='2' face='Arial, Helvetica, sans-serif'>Check-out date:</font><input type='text'
name='checkout' id='checkout' value='$checkout'>&nbsp;";

    $report     .=     "<input     type='button'     name='search'     value='Search'
onclick=\"xajax_client_history(document.getElementById('checkin').value,document.getElementById
('checkout').value,'search');\"></td></tr>";

    $report .= "<tr><td>";

    if($action=='search')
    {

        if(empty($checkin)||empty($checkout))
        {

            $resp->AddAlert("Please set the check-in and check-out dates.");
```

```

    }

    else

    {

$report .= "<table width='100%' border='0' cellpadding='0' cellspacing='0' align='center'>";

$report .= "<tr bgcolor='#FFFFFF'><td><font size='2' face='Arial, Helvetica, sans-serif'>Client
Name</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>Client Telephone</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>Client Email</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>Country</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>City</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>Room number</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>Check-in date</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>Check-out date</font></td></tr>";

$get_reserve = mysql_query("select * from reservation where res_checkin >= '$checkin' and
res_checkout <= '$checkout'");

```

```

    $bgcolor = "#FFFFFF";

```

```

while(list($rid,$cid,$in,$out,$rtid,$status)=mysql_fetch_row($get_reserve))
{

    $get_client = mysql_query("select * from client where client_id = $cid");

    list($client_id,$cname,$cfone,$cmail,$centry,$city) = mysql_fetch_row($get_client);

    $get_room = mysql_query("select rm_id from occupation where client_id = $cid");

    if(mysql_num_rows($get_room) < 1)

```



```

        $rm_num = "No room assigned";

    else

    {

        list($rm_id) = mysql_fetch_row($get_room);

        $room = mysql_query("select rm_number from room where rm_id = $rm_id");

        list($rm_num) = mysql_fetch_row($room);

    }

$bgcolor = ($bgcolor=="#FFFFFF")? "#CCCCCC": "#FFFFFF";

$report .= "<tr bgcolor='$bgcolor'><td><font size='2' face='Arial, Helvetica, sans-serif'>$cname</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>$cfone</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>$cmail</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>$centry</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>$city</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>$rm_num</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>$in</font></td>";

$report .= "<td><font size='2' face='Arial, Helvetica, sans-serif'>$out</font></td></tr>";

}

$report .= "</table>";

}

}

```

```
$report .= "</td></tr>";  
$report .= "</table>";  
$resp->AddAssign("report_div", "innerHTML", $report);  
return $resp;  
}
```