## Chapter one

## Introduction

Our project is concerned on Hilton Hotel management system Hotel is a commercial establishment providing, lodging, meals and other guest services. In general, to be called a hotel, this is a Project work undertaken in context of giving solution to the problems of hotel management system. Despite the legacy of the hotel, its system is still manual. The main purpose of our exercise is perform each Employee’s activity in computerized way rather than manually which is time consuming and profitable in many circumstances. We have tried to design the software in such a way that user may not have any difficulty in using this package & further expansion is possible without much effort. Even though we cannot claim that these will solve the Hotel’s problem perfectly, but it will minimize the problems as much as possible.

The new system will provide safe and easily accessible management of customer files, give the right information to customers on time, and leaves comfortable environment for maintenance and further expansions.

## 1.2. Background/ Overview

Hilton hotel is one of the famous tourist hotels located in Addis Ababa Ethiopia. Its history extends fifty years. Most of the tourists visits Ethiopia choose Hilton Hotel due to several reasons such as the hospitality is very admirable, it has nice fresh view in all the four directions, comparably customers are asked to pay fair payment. All the rooms have shower (both hot and cold), mini fridge, wireless internet service, telephone in room dinning. At the present about fifty employees are working attached to several departments of the hotel. Both local and foreign guests reserve rooms, conduct meetings, celebrate cocktail parties, weddings, and many more other functions in the hotel.

The hotel management system we are going to implement will be covering all the basic process done in the hotel; it will handle

* Guest detail and reservation detail
* Room management service
* Staff management
* Inventory management service

## 1.3 Statement of the problem

Hilton hotel is presently using a manual system in their data processing; this involves the use of people, pens and paper in records keeping. The method of data processing reveals a number of problems, from those:

* It is difficult to search or identify whether a wanted room is available or not
* Records to be kept in the hotel are often too large, diversified and complex.
* Information can be lost when records are stolen, misplaced or vandalized.
* Inaccuracies often ensure from human error in manual record keeping.
* The difficulties of training replacement and substitute staff.
* Time wasting in both services and office management.
* Customer must come physically to report problem. This is boring and time consuming process.
* The System records documents on papers as result it needs more storage place and resources and it is difficult to manage properly.
* Guests are made to contend with time wastage involved coming to the hotel in order to make reservations.
* To achieve the specified general objective, the following specific objectives are stated:

## 1.4. Objective of the project

The project has both general and specific objectives here are the general objective and then Specific objectives.

## 1.4.1. General objective

The general objective of this project is to automate a computerized hotel management system for Hilton Hotel. That can straight forward and seek to ensure we run a professional, profitable and ethical company, building relationships with customers, suppliers and investors, driving business at Hilton Hotel and developing the business as a whole.

## 1.4.2 Specific objective

* Identifying and understanding the problem area for the system
* Planning how to construct or develop the aimed system
* Propose the solution for the problem domain
* Reviewing how the current system works and operates.
* Identifying work efficiency of the existing system
* Develop the new system by Object Oriented Process
* Identify functional and nonfunctional requirements for the new systems.
* To improve and standardize practicing of efficient and effective communication skills in the hotel.
* Forward recommendation about system implementation, direction and guidelines.
* To replace the error prone manual system with the use of computerized system for accuracy.
* The computerized system will work with great speed making clerical work at front office much faster than the manual system.

Finally implement and test the new system.

## 1.5 Project Scope and Limitation

The scope of this project is building or designing workable easy to operate and reliable software and Hotels with the available resources. However, it involves the total automation of managerial and office system in the use of better management practice. This includes the full automation of the system as only alternative selected. This project is focused on the following points:

* Online Booking of rooms
* Online Book reservation
* Online managing of available and taken rooms
* Online request services.
* Online information giving and feedback.
* Online access of list of regular customers.
* Online computing the bill.
* Generate daily report to the authorized person

**The main limitation of the project is**:

* Do not supports multiple language and currencies
* The system does not detect spy or hacking attempts
* The system doesn’t refund money
* Customer doesn’t get instant email notification for everything, like their current amount of bill.

## 1.6 Methodology

The purpose of the methodology is to give an experienced investigator to get enough information to replicate the study. For conducting our project we will use the following methodologies.

## 1.6.1. Data collection method

Observation: - To understand directly how the existing system works currently, we have used observation. We observed customer interaction with maintenance office.

Interviewing: - Most analysts use interviewing as a primary way of gathering requirement in information system projects. We have used interview to gather facts, opinions, and truths of users about the current system

Document analysis: - Using this method the team will try to analyze written documents in the organization which have importance to the project. This include the organization mission strategy, sample business forms, reports procedure manuals, Business rules, and documentation of existing systems, if any document view.

## 1.6.2Development tools

## 1.6.2.1Hardware requirement

**Hardware tools;-**

* PC (personal computer)
* HP laptop RAM-4GB, CPU-3.3 GHZ, system type 64 bit, storage capacity – 1TB
* Dell computer RAM-4GB, CPU-3.3GHz, System type-64bit, storage capacity – 560GB
* SanDisk Flash disk – 16 GB
* Tecno Mobile w3
* CD and DVD
* Printer (only for printing)
* Network cables

## 1.6.2.2 Software requirement

**Software tools:-**

* Microsoft word 13
* Adobe Reader
* C++ compiler
* Enterprise architect
* Dev C++
* Quincy 2005
* Balsamiq Mockups 3
* Window 10 operating system
* Window 8 operating system

## 1.6.3 System analysis and design methodology

For the system analysis and design part there are two models. Those are structured and object oriented .The team decides to use object –oriented methodology because of the following reasons:

* It is known by the group members.
* Easier to maintenance.
* Ease of understanding object-oriented models due to a consistent underlying representation throughout the development process.
* Ease of modification and extensibility of object-oriented models.
* No separation between data and process unlike that of structured analysis methodology that treats data and process on the data separately.

## 1.7 Feasibility Report

The feasibility is to determine quickly and has minimum expense how to solve the problem and determine how the problem is solved. The system has to be tested for feasibility in the following ways.

## 1.7.1. Economic feasibility

The proposed system will reduce the cost when it is compared to the office that the maintenance system spends to work on because the system will use new technology innovations and computerized ideas which will require low cost expenses. Also this project requires minimum amount of cost for deployment process that will be low when it is compared to the previous manual system that the maintenance system uses early. The purpose of the economic feasibility assessment is to determine the positive economic benefits to the organization that the proposed system will provide. There are two cases for benefit analysis such as tangible and intangible as well as software cost benefit and hard ware cost. The following are the tangible and intangible benefits and we will identify in this project.

A. Tangible benefit: - are those our project benefit that can convert into monetary values. For this project, we would identify the following tangible benefits.

* Reduction of paper and pen.
* Reduction of space needed to record data.
* Increased speed of service.

B. Intangible benefits: are those our project benefit that cannot convert into monetary values.

* Knowledge gain by project developer.
* Increasing the competitiveness of the individual
* Improved productivity
* Improving the morale of our team.
* Faster decision making on the team member
* Facilitating information processing of our team
* Increased customer satisfaction
* Improvement in service quality
* Improved accuracy of operation

Hardware cost

|  |  |  |
| --- | --- | --- |
| Item | Quantity | Price |
| Toshiba laptop | 1 | 13,l00 |
| HP laptop | 2 | 17,000 |
| Tecno W3 | 1 | 4500 |
| SanDisk 16 GB | 2 | 480 |
| Dell computer (used) | 1 | 14,000 |
| Printer | 1 | 2000 |
| Networking devices | 3 | 50 |
| Total | 11 | 49030 |

Software cost

|  |  |
| --- | --- |
| Item | Price |
| Microsoft window 8 | 50 |
| Microsoft window 10 | 80 |
| Microsoft word 2013 | 60 |
| Balsamiq mockups | 40 |
| Enterprise architect | 90 |
| Total | 320 |

## 1.7.2. Technical feasibility

Since the system uses easy hardware and software specifications for deployment processes it can be feasible in technical issues. So that the required person to operate and use the system is not expected to be professional. Anyone who has basic computer knowledge can use the system easily.

## 1.7.3. Operational feasibility

Now a day the previous manual working environment does not satisfy customers and not comfortable for employees. But when the proposed system is implemented customers will get fast and reliable services and information as they want. Since the feature database management system will have user friendly interface and back-end system. So that it is technically feasible to implement this system.

## 1.7.4. Schedule feasibility

It describe to estimate how long the system will take to develop and it can complete in a given time period It expresses communication plan of our project. We meet five times per a week. We contact to our advisor once per a week. It will tell in what time to perform the task of each activity and length or duration time of the project. It is determining start and finish month for project activity.

## 1.8 Significance of the project

* System gives fast service to the customer
* It increases the efficiency in the operation of Hilton hotel.
* to provide management with up to the minute report and analysis
* It involves the total automation of managerial and office system in the use of better management practices.
* Helps to avoid incorrect placement of record data.
* Unauthorized person will be out of service
* Reduce the loss of documents & human resource.
* Avoid data redundancy, which means extended data can be retrieved without affecting other data.
* To support customer application system.
* To facilitate report generation.
* To allow manager to view reports.

## 1.9 Beneficiary of the Project

Staff members:-

* Can get service easily
* Save their time
* Reduce workers load
* Decrease errors in information access of the manual system

Employees:-

* Saving their time and work loads
* Reduce complexity
* Easily access information from organized and centralized database.

Group members:-

The project has initiated our team to get knowledge of how to develop hotel management system.

While struggling with some difficulties, the team got a lot of experiences of solving problems.

## 1.10 Team configuration management

It describes the task of the group member from this project.

|  |  |  |
| --- | --- | --- |
| No | Name | Management issue |
| 1. | Kalid Bedilu | (In all activity) Requirements, design, coding, project team leader |
| 2. | Abel Tilahun | (In all activity) Requirements, design, coding, project team member |
| 3. | Million Alemu | (In all activity) Requirements, design, coding, project team member |
| 4. | Solomon Seyoum | (In all activity) Requirements, design, coding, project team member |
| 5. | Anwar yesuf | (In all activity) Requirements, design, coding, project team member |

# 

## 1.11 Organization of the project

This project has five parts:

1. Chapter one contains introduction of the project and proposal. It includes background, statement of problem, objective, Scope of the project, methodology, feasibility of the project, significance of the project and Organization of the project.
2. Chapter two contains introduction part, existing system, supplementary requirements, constraints, software requirement specification (SRS) under SRS there are a functional and nonfunctional requirements, Actors of the system, system use case diagram, use case documentation, Key abstractions with class responsibility collaborator (CRC) analysis, sequence diagram of the project, activity diagram of the of the project, and user interface prototyping of the project.
3. Chapter three contains purpose and goals of the design, class modelling diagram, current software architecture, proposed software architecture, component diagram of the project, and deployment diagram of the project.
4. This is chapter four that contains Implementation of the project, coding of the project, and testing: that the way we used for our project.
5. The last one is chapter five is that is concerned with conclusion and recommendation about our project.

## Chapter Two

## Analysis

## 2.1 Introduction

An important part in the software developments is to explore requirement for your system. A process of collecting and interpreting facts identifying the problems and decomposition of a system in to its components, System analysis is conducted for the purpose of studying a system or its parts order in order to identify its objectives. It is a problem solving technique that improves the system and ensures that all the components of the system work efficiently to accomplish their purpose.

## *2.2* Existing system

## 2.2.1 Existing system descriptions

The existing system description describes the current system of the organization as it is. The system uses paper work and direct human language communication by mouth to manage the hotel. This delays information transmission in the hotel.

This could be described the activities they perform, how they handle information, and the draw backs of the system.

Existing system

* It is complete manual system
* Due to manual process, it requires more time for completion of any work.
* In this system availability of vacant room status is to checked manually thorough the registers.
* Each and every entry has to be search manually via register.

## 2.2.2 Supplementary Requirements

## Constraints

Constraint means anything that challenges to do our project properly. We expect the following constraints may encounter while doing the project:

* Communication problems , such as language
* The unavailability of a data source (such as shortage of internet connection) on time may extend the project completion time.
* Damage on the computer that we work on, it is managed by using backup.
* Shortage of time: We managed such problem by using additional time from our rest time.
* Virus can attack our project, we used updated antivirus to manage this problem.

## 2.3 New system

## 2.3.1 Software Requirement Specification (SRS)

A requirement is a feature that the system must have or constraint that is must satisfy to be accepted by the hotel system. Once the requirement analysis is done the next step is to clearly define and document the product requirement and get them approved from the customer or the market analysis, this is done through an SRS (Software requirement specification) documents which consists of all the project requirements to be design and developed during the project life cycle.

## 2.3.1.1 Functional Requirements

Functional requirements describe the relations between the system and the user or the environment. Here the ‘relations’ means the direct or indirect interactions between the user and the system. Hence the system has the following stakeholders with different requirements

|  |  |  |
| --- | --- | --- |
| S/N | Requirements | Priority |
| 1 | The system allows the user to register in to the system | High |
| 2 | The system allows the user to login in to the system | High |
| 3 | The system allows the user view profile the system | Medium |
| 4 | The system allows the user to receive incoming message | Medium |
| 5 | The system allows the user to receive message | High |
| 6 | The system allows the user to search in the system | High |
| 7 | The system allow the admin to view users list in the system | Low |
| 8 | The system allows the admin to remove bad words | Low |
| 9 | The system allows the user to update his/her profile | Low |
| 10 | The system allows the user to add payment | High |

Table 2.1 functional requirement

## 2.3.1.2 Non Functional Requirements

Non-Functional requirement explains and describes requirements that support the main of the system that should have but they are not part of the system functionalities. Generally nonfunctional requirements describe the quality of the system. The following lists states the non-functional requirements.It is external behavior of the system.

The following table is show the some nonfunctional requirements of the system

|  |  |  |
| --- | --- | --- |
| Req. ID | Requirements | Category |
| R1 | The system shall be available during normal hotel operating hours. | Availability |
| R2 | The extent to which the hotel management system is safe from outside, non-allowed user or attack. The system does not allow unauthorized users to login. | Security |
| R3 | The client should have a valid e-mail account in order to receive reservation e-mail notifications. | Other requirements |
| R4 | The acceptable response times for system functionality. The system is expected to serve large number of concurrent user requests. | Performance |
| R5 | The system shall run in any Microsoft Window environments. The system supports every operating system. | Portability |
| R6 | Mean time between failures and mean time to recovery. And the system doesn’t failure at all. | Reliability |
| R7 | The system shall be simple for usage or access by both officers and customers. | Usability |
| R8 | The system must support commonly usable browsers. | Flexibility |
| R9 | The system operates in the shortest time with the least amount of resources. | Efficiency |

Table 2.2 nonfunctional requirements

## 2.3.1.3 Actors of the system

* Manager:-A person who manages all the activities going in the hotel.
* Officer:-A person that serves different services to customer and generate report to manager.
* Accountant: - A person financial aspects of the hotel.
* Customer:-A person who needs and uses different service and products of the hotel.
* Visitor: -A person that visits the all activates given by the hotel online system. Example: website…
* System administrator: - Direct User of the system that performs critical actions like add rooms, delete rooms, update rooms for customers that are on the web who wants to use hotel.

## 2.3.2 System use case diagram

Use case diagram is a diagram that shows use case, actors, and their relationships. This use case diagram is a graphical depiction of the hotel interaction among the elements of hotel management system. And it represents the methodology used in system analysis and use case represents the interaction between the user and the system. Use case diagram shows a group of use cases, actors their associations, a system boundary box, and packages (optional).

Use case diagram is as shown in figure below



## Figure 2.1 system use case diagram

## 2.3.2.1 Use case documentation

This is a sequential illustration of the actions performed by each use case. This contains precondition, post condition, main course of actions, and alternate course of action as it is shown in the following table:

|  |  |  |
| --- | --- | --- |
| Section | Purpose | |
| Author | Abel Tilahun | |
| Use case no | UC 1 | |
| Name | Login | |
| Description | The user enters authorized username and password in order to access the system. | |
| Precondition | The user should have username and password. | |
| Post condition | The main page of the system is displayed, that gives alternatives of services to customers ,officer and accountant | |
| Basic course of action | User action | System response |
| 1. The user opens the ‘login’ page.  3. The user enters the username and password on the form.  4. The user clicks the login button.  8. End use case. | 2. The system will display a ‘login’ form that accepts username and password from the user.  5. The system searches the username from the database and matches it with the password.  6. If correct the system opens the authorized page. |
| Alternate course of action | The username/password is invalid | |

Table 2.3 Use case documentation for login

|  |  |  |
| --- | --- | --- |
| Section | Purpose | |
| Author | Solomon seyoum | |
| Use case no | UC 2 | |
| Name | Visit website(view hotel profile) | |
| Description | The customer visits the hotel profile on its official website. | |
| Precondition | The customer should have internet access or connection. | |
| Post condition | The customer will be visited. | |
| Basic course of action | User action | System response |
| 1. The user opens a web browser.  2. The user enters the hotels official websites address on the browser’ address bar.  4. End use case. | 3. The browser displays the hotels profile on the webpage. |
| Alternate course of action | ------------------- | |

Table 2.5 visit website (view hotel profile) Use case documentation

|  |  |  |
| --- | --- | --- |
| Section | Purpose | |
| Author | Kalid Bedilu | |
| Use case no | UC 3 | |
| Name | Logout | |
| Description | When the user logouts when he/she wants to exit from the system. | |
| Precondition | The user should login first | |
| Post condition | The user will get the logout page | |
| Basic course of action | User action | System response |
| 1. The user clicks the logout button.  3. End use case. | 2. The system will display the login form for the user. |
| Alternate course of action | ---------------------------------------- | |

Table 2.6 logout use case documentation

|  |  |  |
| --- | --- | --- |
| Section | Purpose | |
| Author | Anwar Yusuf | |
| Use case no | UC 4 | |
| Name | Register | |
| Description | The customer register online | |
| Precondition | The customer should have internet access or connection | |
| Post condition | The wanted room will be booked or cancelled. | |
| Basic course of action | User action | System response |
| 1. The customer opens the home page.  2. The customer opens the Register membership page.  3. The customer files all the field required  5. The Customer Clicks the register button  9.End use case | 4. The system will display a register form that contain the following  -First name  -Last name  -Address  -Sex  -Age  -User Name  -Password  6. The system checks all the form fields have filled correctly.  7. If the form filled correctly the system display successfully register message. |
| Alternate course of action | If the form is not filled correctly, the system will display to try again the filling form correctly. | |

Table 2.7 use case documentation for register

|  |  |  |
| --- | --- | --- |
| Section | Purpose | |
| Author | Million Alemu | |
| Use case no | UC 5 | |
| Name | Add room | |
| Description | The system administrator will add new room with new attributes to the system. | |
| Precondition | The system administrator should will perform the filling forms. | |
| Post condition | The system will display the ‘add room’ form with fields such as: Room name, Room type, Room price. | |
| Basic course of action | User action | System response |
| 1. The system administrator will login to the system.  2. The system administrator will open the ‘add room’ page.  4. The system administrator will fill the form.  8. End of use case. | 3. The system will display the ‘add room’ form with fields such as:  - Room name.  - Room type.  -Room price.  5. The system will check all fields of the form are filled or not.  6. If all fields are filled correct show successful message. |
| Alternate course of action | If the form is not filled correctly the system will display message to fill the forms correctly. | |

Table 2.6 use case documentation for add room

## 2.3.3 Key abstractions with class responsibility collaborator (CRC) Analysis

A class responsibility collaborator (CRC) model is the collection of standard index cards that have been divided in to three sections; these can be shown by the following table this is a class name, responsibility and collaborator. A class represents a collection of similar objects, a responsibility

* . Task of discovering the classes that represent the things and concepts pertinent to your problem space.
* CRC models are well suited for domain modeling during requirement gathering

**Class**

* A class represents a collection of similar objects.

**Responsibility**

* A responsibility is something that a class knows or does, it represent along the left side of the card

**Collaboration**

* Collaboration is another class that a class interacts with to fulfill its responsibility.
* Collaboration are listed on the right hand side of the CRC card, next to the responsibilities that they are helping to realize.

These can be shown by the following table:

|  |  |
| --- | --- |
| Officer | |
| Officer number  Name  Sex  Address  Phone number | Report |
| Generate report  Accepting orders |

|  |  |
| --- | --- |
| Customer | |
| Customer number  Name  Sex  Address  Phone number | Profile |
| Book room  Payment  View hotel information  Give feedback |

Table 2.9 CRC for officer Table 3.0 CRC for customer

|  |  |
| --- | --- |
| Manager | |
| Name  Sex  Address  Phone number | Admin |
| Manage room  Mange client  Manage report  View comment |

|  |  |
| --- | --- |
| System administrator | |
| Name  Sex  Address  Phone number | System administrator |
| Add room  Update room  Add employee  Update employee  Terminate employee  Delete room  Change hotel profile |

Table 3.1 CRC for manager Table 3.2 CRC for system administrator

## 2.3.4 Sequence diagram

Sequence diagram will prepared for each use case to show how different objects interact with each other to achieve the functionality of the use case.

* A sequence diagram models how show the classes of the object interact with each other over time as the system runs.
* Sequence diagrams are sometimes known as event diagrams or event scenarios.
* Sequence diagram play an important role for users to analyze and design system in sequentially flow of information.
* Sequence diagrams are a great ways to validate and flash out your logic.

As shown in figure below it contains: -

* Login page
* Registration page and reservation page
* Reservation page



Figure 2.2 Sequence diagram for login page



Table 2.3 Sequence diagram for register



Figure 2.4 Sequence diagram for reservation

## 2.3.5 Activity diagram

An activity diagram is essential a flow chart, showing flow of control from activity to activity it involves.

* Modeling the sequential(and possibility concurrent) steps in a computational process
* Modeling the flow of an object as it moves from state to state at different points in the flow of control. There are an activity diagram as shown below: -



Figure2.5 Activity diagram for login page



Figure 2.6 Activity diagram for request



Figure 2.7 Activity diagram for reservation

## 2.3.6 User Interface Prototyping

This may help to gather more requirements from users or show how the system works. You can create prototype using UI prototyping tools. If she build an in effective user- interface (UI) to your system then it really does not matter how well the rest of your system.

There is Login page for manager, customer, and employee, and system flow chart as Shown in figure below

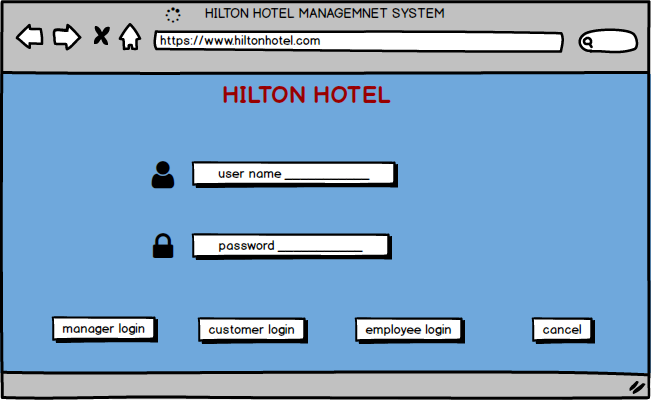


Figure 2.8 user interface prototyping login page



Figure 2.9 User interface prototyping for adding an employee

**System flow chart**

**Hotel management system**

Login

Register

Admin

Enter first name

Enter last name

Employee

Customer

Choose Sex

Age

Leave comment

Receive and deliver order

Check room availability

Generate report

Book reservation

View website

Choose title

Enter phone no/e-mail/

Enter password

## Chapter Three

## System Design

## 3.1 purpose and goals of design

The goals of the design are:-

* Reduce the complexity for establishment of the new system
* Show the best way to feasible output of the project.
* Minimize the extravagancy which is occurring due to done without design.
* Locate the necessary actor to make easy and clear system development.
* Avoid inappropriate things which will can be the obstacle of the new system.

Generally, design goals describe the qualities of the system that the developer should consider.

* **Security:-** the system should authenticate it’s user by motivating them to enter user name and password in order to get access.
* **Availability:-** the system should be available every time that the user needs to access it.
* **Usability:-**the system should have user friendly user interface to allow the user to interact with the system easily.
* **Portability:-** the system shod be able to run on any mobile that supports android environment.
* **Performance:-**the system should give fast response for users requests. The main performance measure for the project is that time.
* **Fault tolerance:-** the system should be fault tolerant to where errors happen.
* **Modifiability**:- the system should be easily modifiable for further modification and enhancement of the application.
* **Cost:-** the system should be developed with minimum cost possible.
* **End criteria:-**the system should have simple and understandable graphical Interface. All the interfaces, forms and buttons are written or design in a simple language or common language that they can access it without any difficult.

## 3.2 Class modeling diagram

Hotel management system class diagram describes the structure of a hotel management system classes, their attributes, operations (or methods), and the relationship among object. And it provides a wide variety of usages; from modeling the domain specific data structure to detailed design of the target system. With the share model facilities, you can reuse the class model in the interaction diagram for modeling the detailed design of the dynamic behavior. This diagram can be derived from one part of modeling is class responsibility collaboration (CRC).

s Figure 3.0 class modeling diagram

## 3.3 Current software architecture

The existing system of our system uses manual system and hence there is no current software architecture that will be considered. As a result, we only describe the software architecture of the newly proposed system.

## 3.4 proposed software architecture

It is the architecture that determines the type of interactions that the components are going to have. The architecture that this work uses is client/server based architecture. In this type of architecture the server is responsible to receive a request from the client and respond to the request, whereas the client is responsible to interact with that of the users of the system. The server parts of this work are of two types. The first type is a web server, which is responsible to receive browsers’ request through http protocol and responds accordingly. Whereas the second type of server is a database server, which is responsible to provide the requested database services to the web server. The proposed system is expected to replace the existing system by web based system.

**Client**

C:\Program Files\Microsoft Office\MEDIA\CAGCAT10\j0285750.wmf

**Browser**

**Internet**

**Http**



**Web server**

**Data base server**

Figure 3.1 proposed software architecture

## 3.5 Component diagram

The component diagram for hotel management system which shows components provided and required interfaces, and relationship between the services, booking rooms, hotel and customers. This type of diagram used in Component –Based Development (CBD) to describe system with Service- Oriented Architecture (SOA). Component diagram describes the organization and wiring of the physical component in a system. And is shows how object (classes) in our system will groped together and form component.



## 3.6 Deployment diagram

A Deployment Diagram depicts how the deployable units of the system applications, components, and data stores are assigned to various nodes, as well as how the nodes communicate with each other and with devices. It’s useful both as a map of your system and as a means for studying the load across your System.



## Chapter 4

## Implementation and testing

## 4.1 Implementation

Implementation is the phase where objective of physical operations of the system turned in to reality. The crucial phase in the system development life cycle is the successful implementation of the new system design. The process of the converting as new system in to an operational one is known as a system implementation. This includes all those activities that take place to convert from an old system to a new system.

To implement the project we use C++ language.

## 4.2 Coding

First phase of implementation is coding. Coding is the process whereby the physical design specification created by the designer is turned in to working computer code by the programmer. The code is made simple in such a way that another programmer can easily understand and work on that in future.

**Coding for add employee**

#include<iostream>

using namespace std;

void addemployee();

void register();

int main()

{

addemployee();

register();

return 0;

}

void addemployee()

{

char title[45];

char fname[45];

char mname[45];

char lname[45];

char pname[45];

int startdate,payrollnumber,birthdate;

double email;

cout<<"enter title\n";

cin>>title;

cout<<"enter first name\n";

cin>>fname;

cout<<"enter middle name\n";

cin>>mname;

cout<<"enter last name\n";

cin>>lname;

cout<<"enter preffered name\n";

cin>>pname;

cout<<"enter birth date\n";

cin>>birthdate;

cout<<"enter work starting date\n";

cin>>startdate;

cout<<"enter payroll number\n";

cin>>payrollnumber;

cout<<"enter email\n";

cin>>email;

cout<<title<<endl;

cout<<fname<<endl;

cout<<mname<<endl;

cout<<lname<<endl;

cout<<pname<<endl;

cout<<birthdate<<endl;

cout<<startdate<<endl;

cout<<payrollnumber<<endl;

cout<<email;

}

**Coding for register**

#include<iostream>

using namespace std;

void registr();

int main(){

registr();

}

void registr(){

char title[45];

char fname[45];

char mname[45];

char lname[45];

char pname[45];

int age,phonenumber;

double email;

double password;

cout<<"enter first name\n";

cin>>fname;

cout<<"enter middle name\n";

cin>>mname;

cout<<"enter last name\n";

cin>>lname;

cout<<"enter preferred name";

cin>>pname;

cout<<"enter age\n";

cin>>age;

cout<<"enter phonenumber\n";

cin>>phonenumber;

cout<<"enter email\n";

cin>>email;

cout<<"enter password\n";

cin>>password;

cout<<"enter title";

cin>>title;

cout<<title<<endl;

cout<<fname<<endl;

cout<<mname<<endl;

cout<<lname<<endl;

cout<<pname<<endl;

cout<<age<<endl;

cout<<phone number<<endl;

cout<<password<<endl;

cout<<email;

}

## 4.3 Testing

Testing is the process of detecting errors or the process of executing a program with the intent of finding errors. Final implementation is testing. Testing is the process to show the correctness of the program. The aim of testing is often to demonstrate that a program works by showing that is has no errors. The basic purpose of tasting phase is to detect the errors that may be present in the program. Testing is checking of the system workability in an attempt to discover errors and avoiding such errors from the system.

In order to uncover the errors present in different phases we have the concept of levels of testing. The basic levels of testing are as shown below.

## 4.3.1 Unit testing

Each module is testing individually in an attempt to discover any errors in its code.

* We undergo this process in order to isolate each part of the program and show that individual parts are correct in terms of requirements and functionality.
* However through this testing we cannot catch each and every bug in an application.

## 4.3.2 Integration testing

We run this process of testing of combined parts of an application to determine if they function correctly together is Integration testing. We perform this testing by using two methods

* Bottom-up integration**:** through this processtesting begins with unit testing, followed by tests ofprogressively higher-level combinations of units.
* Top-Down integration**:** testing, the highest-level modules are tested first andprogressively lower-level modules are tested after that.

## 4.3.3 System testing

This type of testing is performed by a specialized testing team*.* Through this testing we test the overall system, once the overall components are integrated

## Chapter five

## Conclusion and Recommendation

## 5.1 Conclusions

The conclusion of this project isa Hotel management system is a computerized management system. This system keeps the records of hardware assets besides software of this organization. The proposed system will keep a track of Workers, Residents, Accounts and generation of report regarding the present status. This project has GUI based software that will help in storing, updating and retrieving the information through various user-friendly menu-driven modules.

The project “Hotel Management System” is aimed to develop to maintain the day-to-day state of admission, List of Workers, payment details etc.

Main objective of this project is to provide solution for hotel to manage most there work using computerized process. This software application will help admin to handle customer’s information, room allocation details, payment details, billing information etc. Detailed explanation about modules and design are provided in project documentation. The existing system is a manually maintained system. All the Hotel records are to be maintained for the details of each customers, Fee details, Room Allocation, Attendance etc. All these details are entered and retrieved manually, because of this there are many disadvantages like Time Consuming, updating process, inaccuracy of data.

For avoiding this we introduced or proposed a new system in proposed system the computerized version of the existing system. Provides easy and quick access over the data.

The entire project has been developed and deployed as per the requirements stated by the

User, it is found to be bug free as per the testing standards that are implemented.

## 5.2 Recommendation

Any Specification untraced errors will be concentrated in the coming versions, which are planned to be developed in near future.

## 5.3 Reference

* [www.google.com](http://www.google.com)
* [www.hilton](http://www.hilton).com