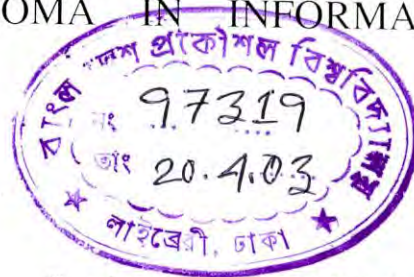# DESIGN OF A WEBSITE FOR ONLINE HOTEL RESERVATION

A PROJECT
SUBMITTED TO THE INSTITUTE OF INFORMATION AND
COMMUNICATION TECHNOLOGY, BUET, IN PARTIAL
FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE
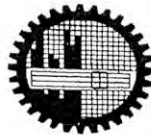OF POST GRADUATE DIPLOMA IN INFORMATION
TECHNOLOGY.

By

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Under the Supervision of

Dr. Md. Kamrul Hasan

INSTITUTE OF INFORMATION AND COMMUNICATION
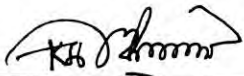TECHNOLOGY, BUET
OCTOBER 2000

CERTIFICATE
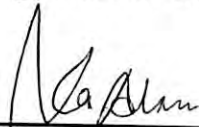
This is to certify that this work has been done by us and is has not been submitted elsewhere for the award of any degree or diploma.

Countersigned

Signature of the Students

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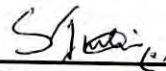BUET

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Table of Contents

List of figures

ACKNOWLEDGEMENT

ABSTRACT

The Online Hotel Reservation System will allow managing all reservations for a hotel or hotel-chain through the Internet, acting as a link in the communication between customers and Hotel. It provides its clients a state of the art an Internet browsing and call center, allowing real-time on-line booking capability worldwide. Travelers can search the hotel with one click and browse all the available facilities in the hotel. The Design of a Website for Online Hotel Reservation (DWOHR) allows fast and complete look and feel of the site throughout the booking and cancellation process, with many messages and booking/cancellation options.

This powerful on-line booking application incorporates all facets of a central reservation system. The flexibility of the site is adaptable to the tour, packaging, cruise and any other travel-related industry requiring a date and rate based database. DWOHR is comprised of Hypersonic SQL database based integrated with platform independent JAVA programming language. It is fully scalable to larger platforms (which support Oracle). All user interfaces are written in Microsoft Front Page, further enhancing portability/scalability.

Chapter One
INTRODUCTION

1.1   Short Term Objective

1.2   Long Term Objective

1.3   URL

1.4   Scope and Limitations

1.5   Philosophy Statement

    1.5.1 Why hotels need information system

    1.5.2 Existing hotel reservation systems in Bangladesh

    1.5.3 Problems in existing system

    1.5.4 Proposed and developed system

Chapter One
INTRODUCTION

1.1 Short Term Objective

To release the application in the web.

1.2 Long Term Objective

Integration of the developed system with a "Hotel Management System". The system will interact with the hotel management application, which we will commercialize.

1.3 URL

http://www.mycgiserver.com/~hotelabc/

1.4 Scope and Limitations

The scope of the system is huge. It represents the hotel as a whole. Every information about the hotel is integrated with the system. The scope is also vast from the customer side also. A customer having a credit card can make his booking from anywhere at any time. Before booking he gets a profound knowledge about the hotel.
The limitation of the system is that

     i) It does not check the validity of the credit card during online booking, validity is checked afterward the initial booking.

     ii) The system for local booking is not integrated with this system.

1.5 Philosophy Statement

Our goal is to be regarded as the best (not necessarily the biggest) in the accommodation, conference and business travel procurement sector by its clients.

1.5.1 Why hotels need information system

a) Meeting global challenges

    The competition faced by a hotel business is no longer limited by regional or national boundaries. Local business groups as well as overseas hotel-businessman arrived in Bangladesh. Each hotel has to compete with other hotels. Again, the customers are

not constrained to a region, a large number of overseas customers are distributed throughout the world. So the management of hotels strive to produce and offer high quality services that can compete in world market.

b) **Capturing opportunities in the marketplace**

This is the time of competition in everywhere, in every business. So if one wants to go forward fast from their competitors, he must incorporate a new and as well as an effective system in his business. By implementing such type reservation system such as Design of a Website for Online Hotel Reservation (DWOHR), there is great opportunity to capture market with little effort (remain other facilities constant). This systems will have enabled hotel companies to the top of their organizations, leaving their competitors far behind.

c) **Enhancing worker productivity**

Computers and information system become essential tools in managing the hotel. By implementing the DWOHR, workers need not to reply to their customers about the available facilities, confirmation about booking or cancellation booking. All relevant information about the hotel as well as prompt reply for each booking and canceling is served to the customer by the system itself. This has significant impact on the workers productivity and efficiency of the organization.

d) **Increasing the quality of services**

Quality oriented efforts and decisions are highly information intensive, so computer help a company achieve its quality goals by providing right information to the right people at the right time. A traveler or a company executive who looks for a space in a hotel may have different queries, he may have different demands; but all questions are not always asked and answered. This site is developed with all types of information about the hotel.

1.5.2 Existing hotel reservation systems in Bangladesh

The reservation systems now working in most of the hotels in Bangladesh are manual. The hotel management has to maintain a ledger that contains, in most of the cases, merely the customer's name, address and contact number.

1.5.3 Problems in existing system

Travelers want to make the reservation prior to their arrival in the hotel. But existing system does not support it. Again in the existing system, an organization cannot reserve a meeting space as fast as they can. Even they cannot make a idea about the space.

1.5.4 Proposed and developed system

Our proposed as well as developed system offers a plethora of hotel related services. Customer can book room(s) for residential purpose and book meeting space at any time from anywhere with little effort. This powerful on-line booking system incorporates all facets of a central hotel reservation system.

Chapter Two
SOFTWARE DESIGN

2.1   Requirements Engineering of the Proposed System

    2.1.1 Requirements elicitation

    2.1.2 Requirements analysis and negotiation

    2.1.3 System modeling

    2.1.4 Requirements validation

2.2   Software Testing

Chapter Two
SOFTWARE DESIGN

2.1 Requirements Engineering of the Proposed System

Requirements engineering provides the appropriate mechanism for understanding what the customer wants, analyzing need, assessing feasibility, negotiating a reasonable solution, specifying the solution unambiguously, validating the specification and managing the requirements as they are transformed into an operational system. The requirements engineering process of the system can be described in four distinct steps:

ξ   Requirements Elicitation
ξ   Requirements Analysis and Negotiation
ξ   System Modeling
ξ   Requirements Validation

2.1.1 Requirements Elicitation

For requirement elicitation of the site, we have asked the customer what they want to see in the site. We have also asked the hotel management what they likely to incorporate in the site, what to be accomplished, how the system or product fits into the needs of the business, and finally, how the system or product is to be used on a day-to-day basis. Solicit participation from many people who may be the potential customers of the hotel have been taken so that the requirements are defined from different points of view.

The technical feasibility of the system is quite good enough. The technical support needed for the system is available in the country. The administrative executives and their business ideology as well as the employee are quite smart enough to be accustomed with the new system, in fact they deserve it. Hotel customer demands the facility; even they treat it to be a need rather than a facility.

2.1.2 Requirements analysis and negotiation

When requirements have been gathered we worked from the basis for *requirement analysis*. After analyzing we categorized requirements and organized them into related subsets; explored each requirement in relationship to others; examined requirements for consistency, omission of ambiguity on the needs of users.

In the requirements analysis and negotiation method, the requirements are reviewed so that

- Any requirement does not conflict with other requirements.
- Each requirement is bounded and unambiguous.
- All requirements have been specified at the proper level of abstraction.
- Each system is consistent with the overall objective for the system.

2.1.3 System modeling

Every computer-based system can be modeled as information using an input-processing-output template and two additional system features- user interface processing and maintenance and self-testing processing.

User Interface		
Input processing	Process and control functions	Output processing
	Maintenance and self-test	
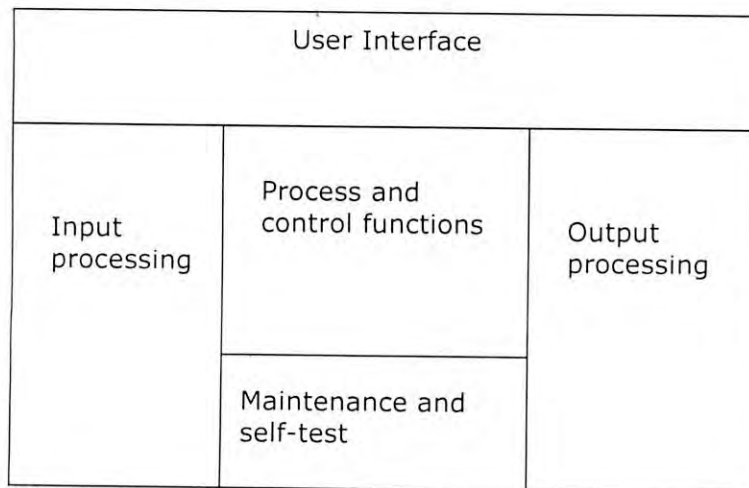
Figure: System model template

2.1.4 Requirements validation

The first validation that has been checked the check-in date should be equal or greater than the date of booking.

Then the check out date must be equal to the date of booking or the day following booking.

To cancel a booking the customer code (supplied earlier to the customer after booking) must match with the email address, from which he placed the booking. That means if a customer book from his yahoo account, for example, will not be able to cancel the booking if he then request from his hotmail account.

2.2 Software Testing

During testing the application, we have followed the basic testing principles. Such as-

1) To be most effective, testing have been conducted by several independent third parties. We have supplied the web address to some of our friends and they were asked to find any shortcoming of the web. According to their requirements, as a customer of that hotel, and suggestions, we have modified and corrected the application.

2) All tests are traceable to customer requirements. We have given the customer supreme power. We liked to work in the way, as they liked. For example, as some person (who would be a potential customer of that hotel) proposed to enlarge the room interior view if they want, we placed an option to enlarge the view with a single click.

3) Tests have been planned before testing begins. During developing the application, we have kept trace where and under what conditions we will test that phase.

Chapter Three
DEVELOPMENT BACKGROUND

3.1   The System and Its Elements

       3.1.1 Database

       3.1.2 Programming language

3.2   Technology Used

3.3   Implementation Plan

Chapter Three
DEVELOPMENT BACKGROUND

3.1 The System and Its Elements

Generally, a system is a set or arrangement of elements that are organized to accomplish some predefined goal by processing information. The proposed system thus will organize the system elements and will perform according to our requirements. And again, our requirement is to maintain a database and access the database from any branch. So the goal is to support the business purpose and business function. To accomplish the goal, the proposed computer-based system makes use of a variety of system elements:

3.1.1 Database

To develop the site, requirement analysis was done first. Data needed to reserve a room in a hotel or convention hall for meeting was gathered. After analyzing, the data were structured. Normalization of hotel information like customer data, room data, booking data was done and the database was designed. Tables were designed to store room data, customer data, booking data, cancellation data, meeting planner data in separate tables.

As per the design of the database any standard relational database will meet our purpose. But as our hosting server only supports Hypersonic SQL in the free hosting category, we had to use that for our purpose.

3.1.2 Programming language

After designing the database, now it was the time to choose the programming language for this online reservation system. Perl, CGI, ASP, PHP, Servlet, JSP, Tcl all are there which can be used for this project. But Java was preferred and Java Servlet has been chosen to insert dynamicity into our site.

3.2 Technology Used

Various software, language and database used for development of this project are:

- Java server technology (JSP, Java Servlet)
- Hypersonic SQL
- HTML
- JavaScript

3.3 Implementation plan

To install this site, a server with web server and SQL based database is required. A UNIX or Linux server is best for this job. Server configuration depends on the load of users on the site.

The web server must support Java Server Technology, i.e. JSP and servlet support is required. Ideally, Apache web server configured with Tomcat is the best. Any relational database like Oracle, mySQL, SQL server, postgreSQL can be used.

To upload our application we searched for a server on the Internet with our required criteria, i.e. web server with Java servlet and relational database support. Also, a site with free hosting offer was needed. Only a few sites were found, which met our criteria. From them we have chosen mycgiserver.com for our job.

Any client with an Intranet connection can use the reservation system (DWOHR) through a web browser. So, for client access we don't have to provide any extra facilities.

Chapter Four
DESCRIPTION OF THE SITE

Chapter Four

DESCRIPTION OF THE SITE

4.1 Home

It is an in-general description of the hotel. Some facilities are pointed in short.
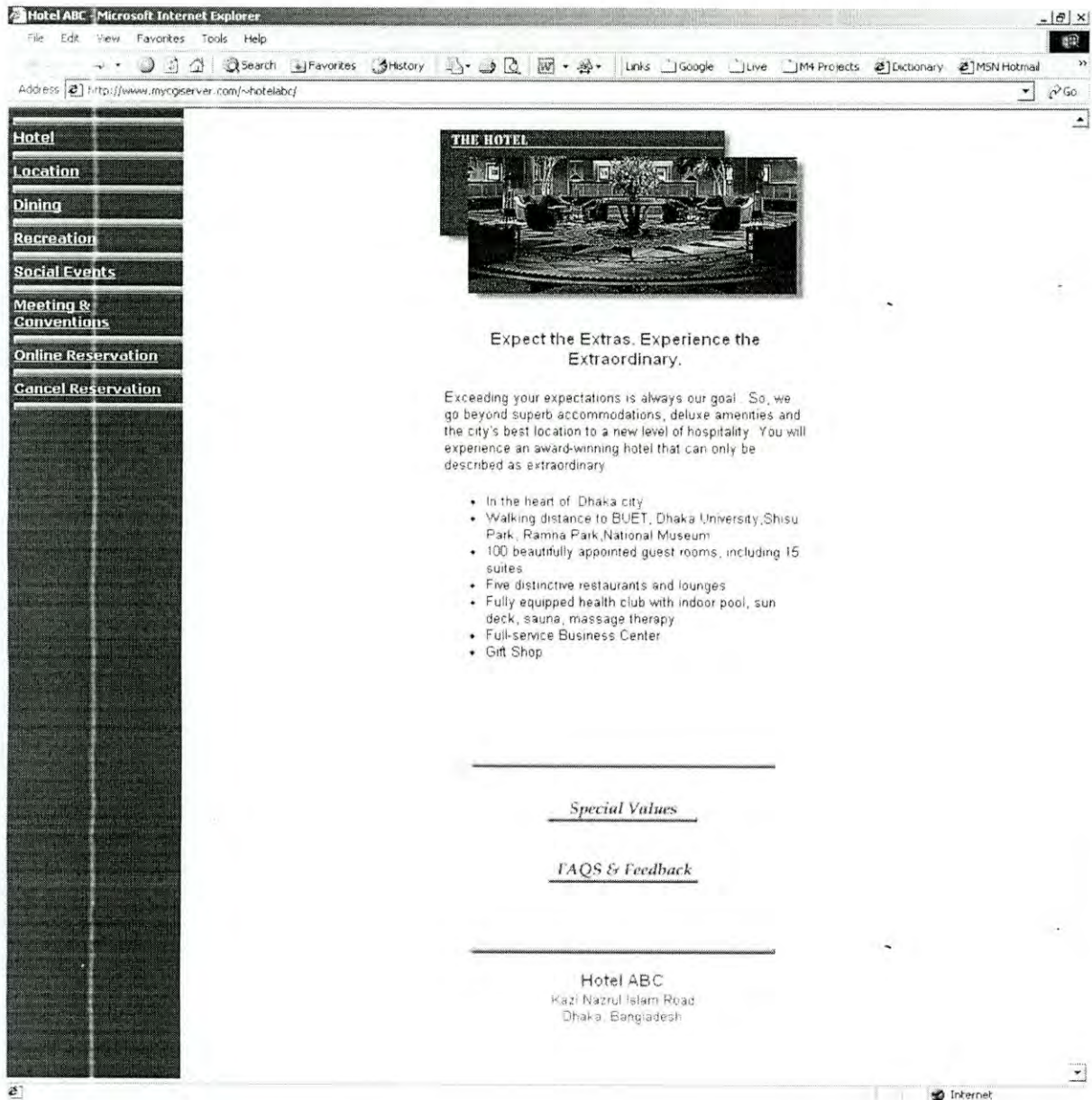
Figure 4.1: Home page

4.2 Location

Describes briefly about the location of the hotel. A location map is also available to guide the customer.
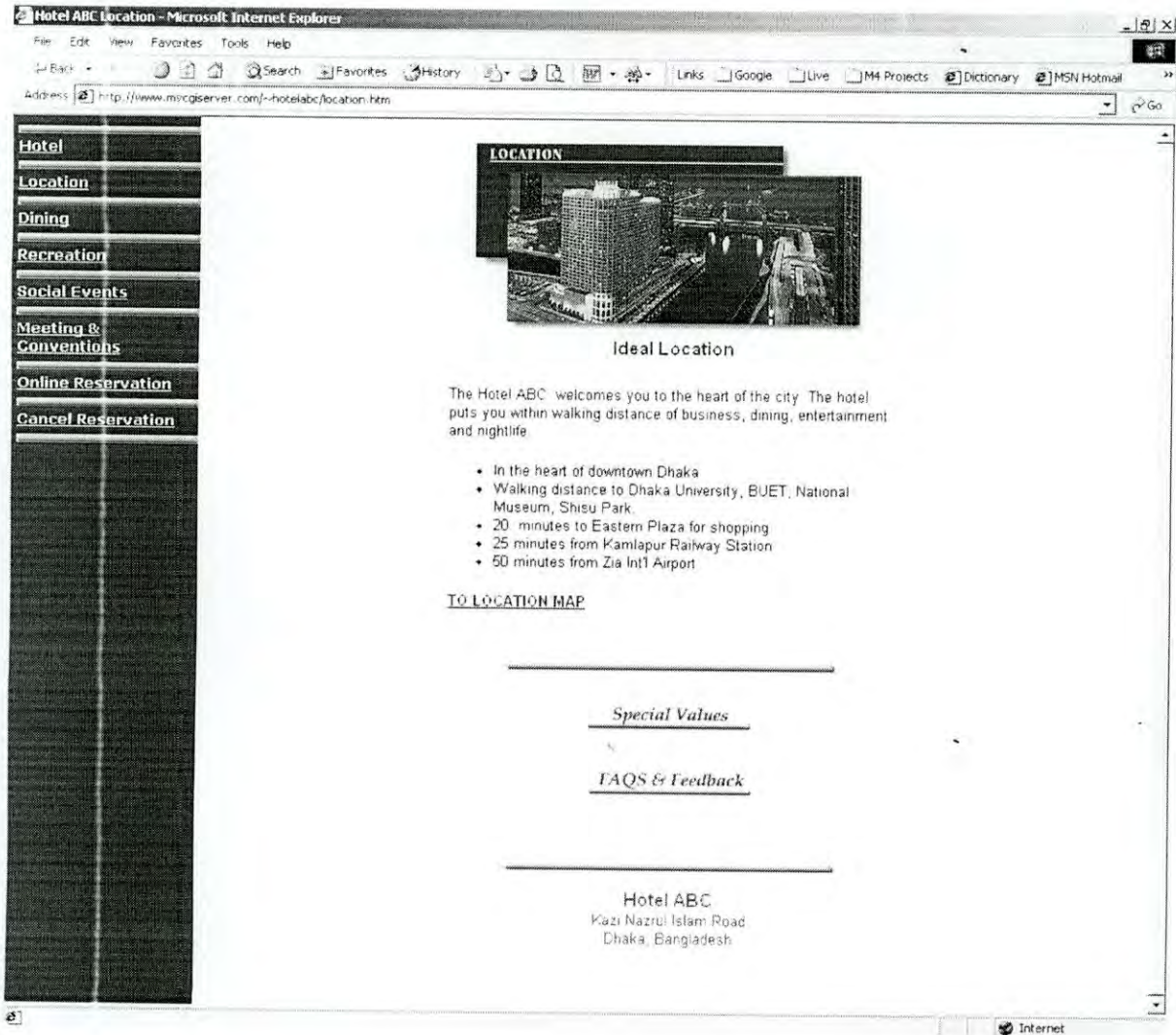
Figure 4.2: Location page reveals hotel location

4.3 Dining

Brief description about five distinct restaurants and bar.

Figure 4.3: Dining & entertainment facility

4.4 Recreation

Health center, swimming pool, dry sauna, message therapy, sun deck, fitness center etc. facilities are offered.

Figure 4.4: Recreation facility

4.5 Social Events

Some clients to the hotel may not need residential accommodations but a party house. They are offered to celebrate any type of social functions such as Social Galas, Weddings Anniversaries, Office Parties etc. The facilities like bar, holiday-retirements, luxurious accommodations are offered. To celebrate different party in different environment some distinct accommodation such as ballroom, Mayfair room, Wedding Room etc. are offered. Except 'Special Values' and 'FAQ & Feedback', there are four more links (to Ballroom, Mayfair room, Social/catering Menus and Weeding Packages) in this page.

- The links 'Ballroom' and 'Mayfair room' forward to two individual pages where the capacity, floor map and photographs of the rooms are displayed.
- The link 'Social /catering menus' forward to a page where five more links ('Reception', 'Breakfast', 'Luncheon', 'Dinner', 'Breaks') are available. Each link forwards to an individual page, which shows the menu of foods and drinks at the relevant time.
- The link 'Weeding Package' forwards to a page where the menu of the offered foods and drinks are listed.
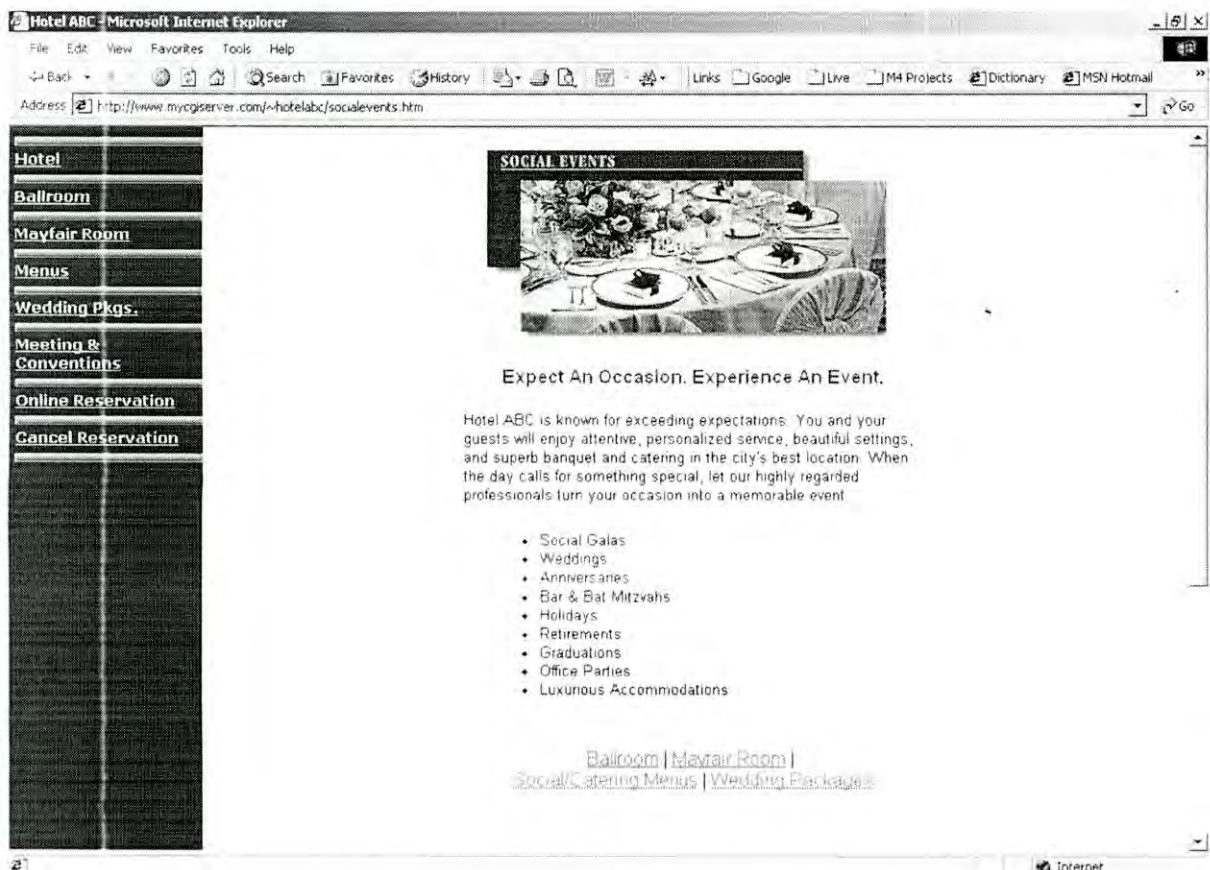
Figure 4.5: Social events

17

4.6 Meeting and Conventions

This page is designed from the insights of meeting professionals. Features and benefits of the meeting space of the Hotel ABC are briefly described here.

On clicking on the menu Meeting and Conventions, four menus are presented; these are Function Space, Banquets & Catering, Special Values and online proposal.

Online proposal: this is an information request (from user) form for meeting purpose. There is no scope about confirming the booking, but said that the hotel's meeting specialists will call the user for detail information about the booing of the meeting space.

Some information such as customer's name, title, organization address, contact phone number, fax number, email address is seek for the booking. Except these the customer has to supply some other addition but necessary information such as the preferred meeting date(s), preferred pattern of the meeting room(s), number of guest rooms needed, approximate number of attendees etc.

There are four links in this page

- Hotel ABC Ballroom forwards to ballroom's capacity and floor plan page.
- River Exhibition Hall forwards to river exhibition hall's capacity and floor plan page.
- Banquets and catering forwards to menu of food and beverage page.
- Accommodations points features and advantages of the guest rooms and suits. It has five more links
    - Presidential Suites
    - Hospitality Suites
    - Illinois Suites
    - Ogden Suites
    - Special Suites

Each link forwards to the respective pages and shows the features of the relevant suite.
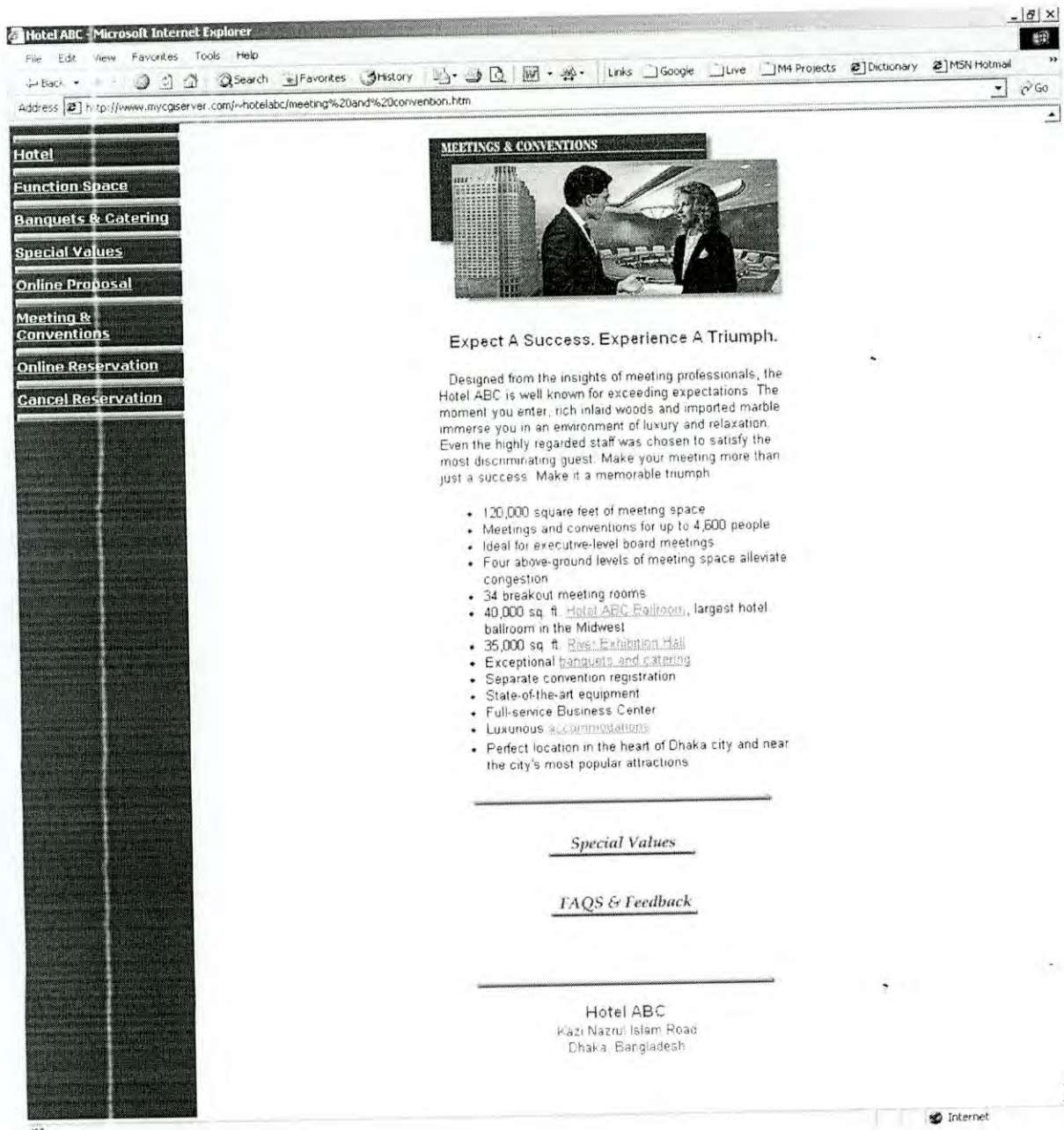
Figure 4.6.1: Meeting & convention facility

Hotel

Location

Dining

Recreation

Social Events

Meeting & Conventions

Online Reservation

Cancel Reservation

PROPOSALS

Meeting Planner
Information Request Form

We are very interested in speaking with you about your meeting needs. Please complete the information below and one of our meeting specialists will call to provide you all the details about Hotel ABC.

☐ Click here to receive additional information.

Full Name	
Title	
Organization	
Address	
Address (cont)	
City	
State	
Zip	
Telephone	
Fax	
E-mail	

Preferred Meeting Dates:
Month ▼ Day ▼ Year ▼
to
Month ▼ Day ▼ Year ▼

Preferred Pattern:
Arrival   Departure
Day of the Week ▼   Day of the Week ▼

Approximate Number of Guest Rooms Required:
Peak Nights ____

Total Nights ____

Approximate Number of Attendees: ____

☐ Please send a brochure.

How did you find out about our web site?
____

Submit Query   Reset

THANK YOU

Hotel ABC
Kazi Nazrul Islam Road
Dhaka, Bangladesh

⟳ Done   ⟳ Internet

Figure 4.6.2: Meeting planner

4.7 Online Reservation

Three types of room (deluxe, economy (AC), economy) with bed type (single/double) and their respective rates and pictures are available. Customers may enlarge the pictures if they want. If they are satisfied with the room features and the rate and wish to reserve the room(s), then, have to supply the information about check-in date, check out date, room type and bed type (single/double). The check in date must be equal or following the date of reservation. Again, the checkout date must be equal or greater than the check-in date. If the validations are not fulfilled, the customer gets an error message. If everything is okay then all of information provided goes to the server. Then server programs are activated. Server programs, with the entire information search database whether on that particular date(s), room(s) are available or not. If the room(s) is/are already occupied, user gets a message that the room(s) is/are already occupied and subsequently cannot make the order. On the contrary, if the room(s) is/are available user gets a page, which tells about: room type, room features, selected room's picture, check-in date, check-out date, no. of rooms and the total amount payable for booking the room(s) only. If the customer is not pleased with this specification, he has a 'change' option, which returns him to the previous page of booking. If everything is okay, the following page is arrived where the customer has to supply the following informations.

Client name: 20-characters customer's last and first name.

Client's address:

Client's e-mail address: Client has to supply his/her email account number. He will get a mail when reservation is primarily accepted. He will get a mail when he cancels a booking as well.

Client's credit card information: Client has to supply his/her credit card type, card number and expire date. For the convenience of the client, there are dropdown lists to input credit card type and expire date. But he must enter the credit card number manually. We do not provide any validation on credit card. It will be checked by another application.

Some of the fields above are mandatory to be filled up by user. A user is not being able to escape these fields unfilled. When he does so he gets an error message.

After completing and submitting the form, user gets a message that his booking is temporarily made and gets an email about the booking. The automatic mail from the

server includes a customer number with all of the features of the room(s) he/she booked.

Customer number: Client will get an auto-generated customer number. It is unique. The customer number with his email address will work as his identification number. The number will be needed for cancellation purpose.

Figure 4.7.1: Online reservation form – room specification

Figure 4.7.2: Online reservation form – customer info

4.8 Cancel Reservation

To cancel a reservation, a customer has to supply his/her customer ID (provided from the reply mail from the hotel) and his/her email address. If one forget the customer ID, for user-friendly purpose, has to supply his/her first name, last name and email address and then asked to check his email account. Then the user will get a mail, which supplies his customer ID, and other reservation information. Then the user returns to the cancellation page and serves the customer ID. If a customer has more than one reservation, he may cancel all the reservations.
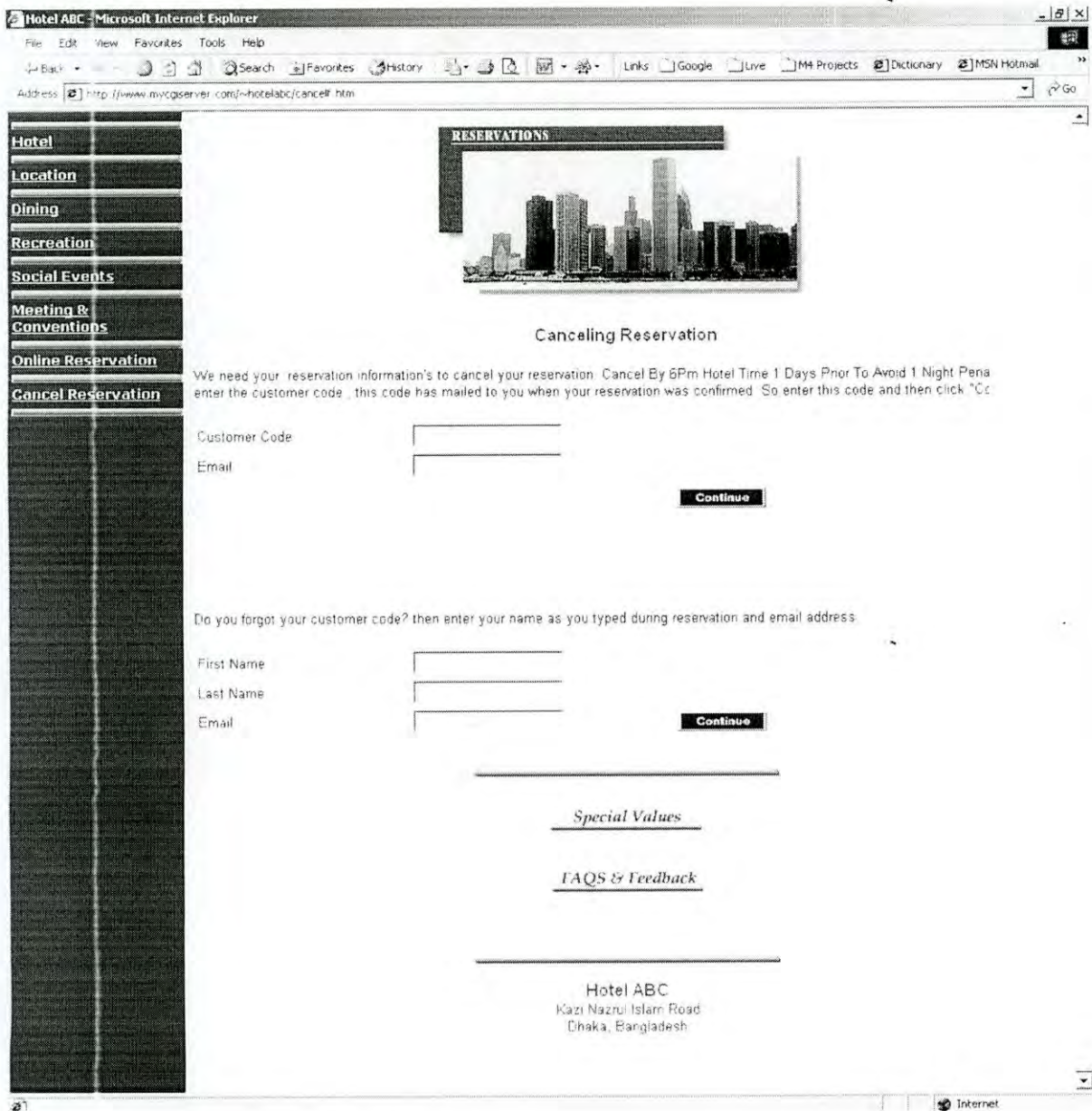
Figure 4.8: Cancel Reservation

Each page contains two special links:

1) Special values and
2) FAQ & Feedback

4.9 Special Values

This link places customer to a page where three more links are available for customer's convenience.

- Holiday Celebrations

  Some special offers in holidays are offered here. Holidays with their valid date and rate are categorized. For telephone booking, there is a contact number.

- Meetings and Conventions
- Restaurants

4.10 FAQ & Feedback

Room Reservations

Special Room Requests

Restaurants

Health Club

Meeting

If the client has any special question that is not answered in the site, a form is supplied where he can select a choice or can write himself about any query.
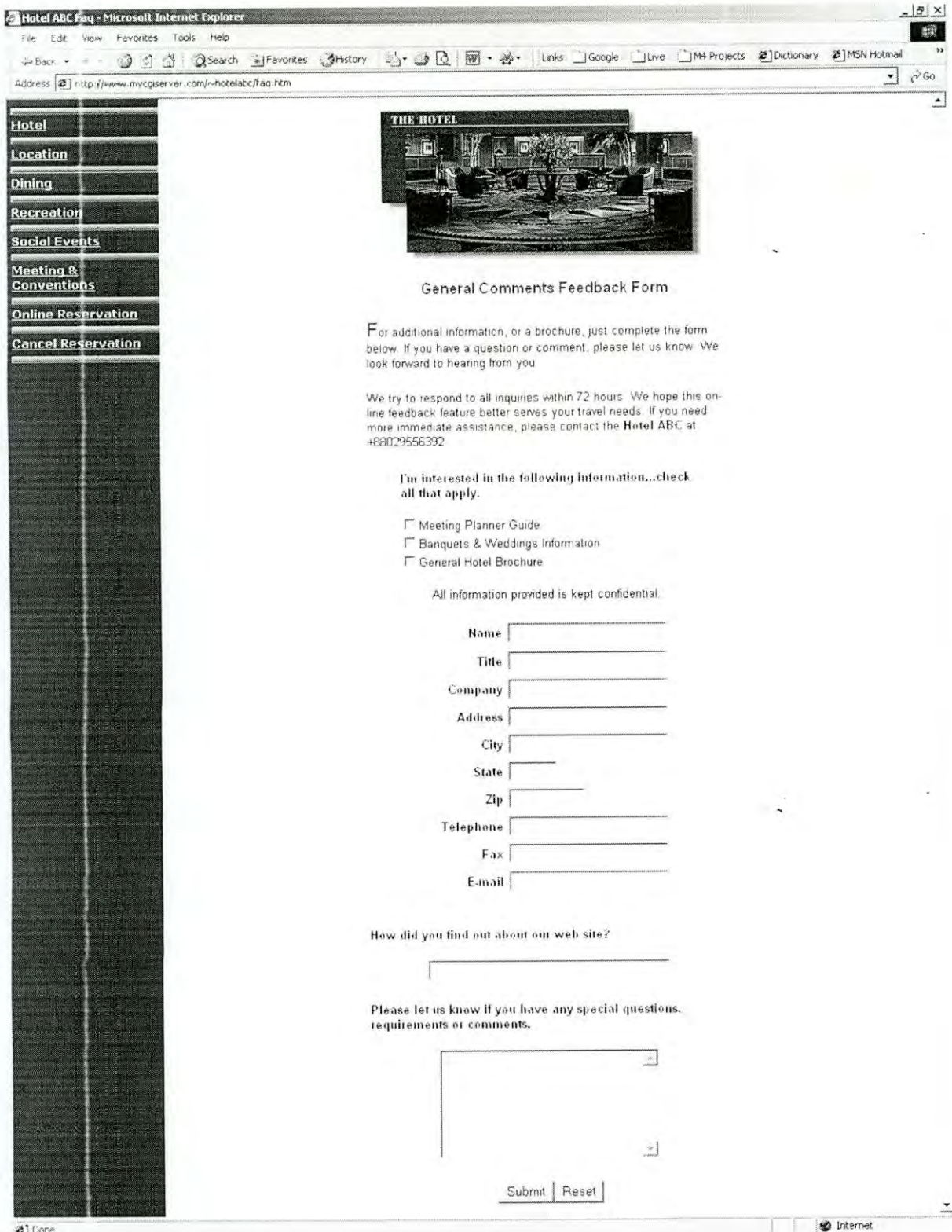
Figure 4.10: feedback form

Chapter Five
FEATURES AND BENEFITS OF THE APPLICATION AND THE SYSTEM

5.1   Features and Benefits of the Site

   5.1.1 Benefits to hotel

   5.1.2 Benefits to customers

5.2   Features and Benefits of the System

Chapter Five

BENEFITS AND FEATURES OF THE APPLICATION AND THE SYSTEM

5.1 feature and Benefits of the Site

Some of the **benefits** we offer to hotels and customers as well include:

5.1.1 Benefits to hotel

The website -with photos, detailed amenities and location information, along with real-time, confirmed reservation capabilities. Hotel management may upgrade their site at any time from anywhere in the world.

Online Reservations - Accept real-time online bookings and/or cancel reservations online.

Worldwide distribution that is managed and promoted will increase revenue without additional operational costs.

The hotel collects payment from the guest upon arrival. There is a penalty if the customer does not cancel his booking before 24 hours. The system verifies and provides customer with his/her credit card to guarantee their reservation. This ensures and controls the reservation process.

The site's personal service and customer-friendly interface makes it a snap: combine the convenience of online planning, with the security of having a support and reservation call center standing by to help the traveler seven days a week, 24 hours a day.

Images - upload images to create a "photo gallery" of their property displayed on your website — now demanded by travelers.

Online Bookings - accepts real-time Internet bookings and allow hotel guests to add or cancel their bookings online.

Better managed customer relationships.

Client receives an email automatically for every booking and/or cancellation made. There is no need of drafting manual letter to inform client each time he makes a reservation or cancel the reservation. Increases efficiency of the hotel.

Send and receive reservation inquiries, confirmations and other correspondence automatically by email.

5.1.2 Benefits to customers

Ultimately, the travelers are everyone's customers - with this in mind, the site has created a simple, direct, and accurate service - no membership required - that quickly and efficiently allows travelers to:

ξ   View hotel availability with one click!

ξ   View photos, maps, and amenities offered by participating hotels.

ξ   Confirm reservations instantly without pre-payment

ξ   Access to customer service personnel for help in booking and confirming reservations.

ξ   The system also honor one's right to cancel reservation with penalties less than 24 hours.

ξ   Flexible Room Rates – Pricing based on a combination of Seasons, Weekday, Weekend, Room type and Bed type.

5.2 Features and Benefits of the System

Applications: DWOHR is ideal for use in small to medium-sized properties such as hotels, motels, vacation rentals, inns, lodges, hostels, time-share condominiums, and resorts.

Easy Installation & Setup: Get started easily and quickly. If one's existing records are available as a text file, date file and pictures, they can be imported directly into DWOHR.

Easy to Use: Everything is available with just a click of mouse in the DWOHR Home Window. Instantly check room availability.

Group Bookings: Group together a number of standard bookings and charge a single account.

Flexible Rates: Automatically let customer know about pricing of rooms based on the season, day of the week, and room type.

Full integration with bookings made on the Internet

Add-on Modules

Group Bookings - Book multiple guests on a single account, allowing individual, group, or mixed numbers with different choices in bed type.

Customer Management – Manage customer accounts with email, contact number and mailing address. If any uncertainty arises, hotel management will be able to contact to the customer and let him know the about present situation and shortcomings.

Chapter Six
CONCLUSION AND FUTURE WORK

6.1   Conclusion

6.2   Future Work

Chapter Six
CONCLUSION AND FUTURE WORK

6.1 Conclusion

DWOHR produces an eye catching, user-friendly website with complete features of the Hotel ABC. To choose and reserve room(s) the customer doesn't need to go to the hotel physically but will get a complete idea about the hotel. The system is ready to install (with little modifications) to any hotel, which wants to present them in the Internet, before the eye of the world. So, we want to conclude with a single sentence:
"The system is ready to serve hotels so that they can serve their customers".

6.2 Future work

Future work includes development of a site for the hotel staffs to manage the bookings (e.g. update, delete) and manage other things regarding hotel. That will also be another web-based application, which will be used mainly through Intranet.

Enhancements to the existing booking application like addition of customer registration through site and add facility for them to view their bookings online will be important for the hotels. By providing this, the hotels can provide additional facilities to the potential customers who use the hotel frequently. To build this an additional database will be maintained and a user name and a password will be served to he customer.

This newly developed system can be integrated with day-to-day hotel management procedures from which management will get a complete overview of their inventory management, employee's information and feedback and customers' information as well. Management will be able to print the reports with a single click.

Credit card validation will be added to the online booking procedure. That will save time and decrease customer's tension about the booking.

Special tours and travels such as river cruise, mountain seeing etc. may be offered by the hotel. One may enjoy the tours without being a residential border.

APPENDICES

Appendix A

The JAVA sources are shown in this appendix.

InsertTableDemo3.java: used to process new FAQ asked by the customers

```java
package hotelabc;

import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.util.*;
import java.sql.*;

public class InsertTableDemo3 extends HttpServlet {

    static String Meeting_Planner_Guide, Banquets_Weddings_Information,
        General_Hotel_Brochure, Name, Title, Company, Address, City, State,
        Zip, Telephone, Fax, email, How_did_you_find_us,
        Special_questions_or_requirements;
    Statement s;

public String getSurvletInfo() {
        return "Servlet returning myservlet world to client brower";
}

public void doPost(HttpServletRequest req,HttpServletResponse rs)throws
ServletException,IOException {

    PrintWriter pw=rs.getWriter();
    rs.setContentType("text/html");
    pw.println("<html>");
    pw.println("<head>");
    pw.println("<title>Hotel ABC</title>");
    pw.println("</head>");

    Meeting_Planner_Guide =
                    req.getParameter("Meeting_Planner_Guide");
    Banquets_Weddings_Information =
                    req.getParameter("Banquets_Weddings_Information");
    General_Hotel_Brochure =
                    req.getParameter("General_Hotel_Brochure");
    How_did_you_find_us = req.getParameter("How_did_you_find_us");
    Special_questions_or_requirements =
                    req.getParameter("Special_questions_or_requirements");

    Name =     req.getParameter("Name");
    Title =    req.getParameter("Title");
    Company = req.getParameter("Company");
    Address = req.getParameter("Address");
```

```
City =      req.getParameter("City");
State =     req.getParameter("State");
Zip =       req.getParameter("Zip");
Telephone=req.getParameter("Telephone");
Fax =       req.getParameter("Fax");
Email =     req.getParameter("email");

Connection c=null;
InsertTableDemo3 id=new InsertTableDemo3();
try {
  Class.forName("org.hsqldb.jdbcDriver");
  C = DriverManager.getConnection("jdbc:hsqldb:" +
            getServletContext().getRealPath("/~hotelabc/hotel"),
                                      "hotelabc","mahmed");

  id.s = c.createStatement();
  id.s.executeUpdate("insert into form values(
    '"+Meeting_Planner_Guide+"','"+Banquets_Weddings_Information+"',
    '"+General_Hotel_Brochure+"','"+Name+"','"+Title+"','"+Company+"',
    '"+Address+"','"+City+"','"+State+"','"+Zip+"','"+Telephone+"',
    '"+Fax+"','"+email+"','"+How_did_you_find_us+"',
    '"+Special_questions_or_requirements+"') ");
} catch(Exception ex) {
  pw.println("error");
  ex.printStackTrace();
}

pw.println("<body>");
pw.println("<p><b>Thank you for submitting the form</p>");
pw.println("<p>You will receive a mail
            within 72 hours about your  enquiry</p>");
pw.println("<p> We hope this on-line feedback feature better serves your
    travel needs. If you need more immediate assistance, please contact
    the Hotel ABC at +88029556392</p>");
pw.println("</body>");
pw.println("</html>");

}//end of dopost method

}//end of class
```

InsertTableDemoDS.java: searches whether a customer can book a room

```java
package hotelabc;

import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.util.*;
import java.sql.*;

public class InsertTableDemoDS extends HttpServlet {
    static int ccode,nod,am,ta;
    static String rt,es,exs,rn;
    Statement s;

public String getSurvletInfo() {
        return "Servlet returning myservlet world to client brower";
}

public void doPost(HttpServletRequest req,HttpServletResponse rs)throws
ServletException,IOException {
  try {
    Enumeration e = req.getParameterNames();
    String name = null;
    PrintWriter pw = rs.getWriter();
    rs.setContentType("text/html");

    pw.println("<html>");
    pw.println("<head>");
    pw.println("<title>Room Information</title>");
    pw.println("<style>");
    pw.println("</style>");
    pw.println("</head>");
    pw.println("<body>");

    es = req.getParameter("arrivalDateYear")+"-"+
        req.getParameter("arrivalDateMonth")+"-"+
        req.getParameter("arrivalDateDay");

    exs = req.getParameter("departureDateYear")+"-"+
        req.getParameter("departureDateMonth")+"-"+
        req.getParameter("departureDateDay");

    rt = req.getParameter("roomBedCode")+req.getParameter("bedType");
    rn = req.getParameter("numberOfRooms");

    int rooms = Integer.parseInt(rn);

    InsertTableDemoDS id = new InsertTableDemoDS();
    Class.forName("org.hsqldb.jdbcDriver");

    Connection c=null;
```

```java
try {
  String url = "jdbc:hsqldb:" +
                getServletContext().getRealPath("/~hotelabc/hotel");
  c = DriverManager.getConnection(url,"hotelabc","mahmed");
} catch (
  Exception ex){ex.printStackTrace();
}

id.s = c.createStatement();
java.sql.Date edate = java.sql.Date.valueOf(es);
java.sql.Date exdate= java.sql.Date.valueOf(exs);
id.s.executeUpdate("delete from temp");

ccode = id.custCode(id.s);
id.s.executeUpdate("insert into temp values(
      "+ccode+",'"+edate+"','"+exdate+"',"+rn+",'"+rt+"')");

long el = edate.getTime();
long exl= exdate.getTime();
long ld = 24*60*60*1000;
long dd = exl-el;
nod = (int)(dd/ld);
if(nod==0)
  nod=1;
long nd = 0;

ResultSet rsb1 = id.s.executeQuery(
                "Select * from roomtype where roomtype='"+rt+"';");

if (rsb1.next()==true) {
      ta=Integer.parseInt(rsb1.getString("fare"));
}
am = ta*nod*rooms;

ResultSet rsb = id.s.executeQuery(
                "Select * from booked where roomtype='"+rt+"';");
if (rsb.next() == false && rooms<=10) {
      id.roomInformation(pw,es,exs,rn,rt,nod,am,ta);
} else {
      Vector vd=new Vector();
      Vector va=new Vector();

      java.sql.Date bd=rsb.getDate("date");
      vd.addElement(bd);

      va.addElement(new Integer(rsb.getInt("amount")));
      while(rsb.next()) {
            bd=rsb.getDate("date");
            vd.addElement(bd);
            va.addElement(new Integer(rsb.getInt("amount")));

      }//end of while

      if(!id.is_multiple(edate,exdate)) {
```

```java
            if(id.canBookS(edate,vd,va,rooms)) {
                  id.roomInformation(pw,es,exs,rn,rt,nod,am,ta);
            } else {
                  pw.println(
                       "<h2><b>Sorry your booking is not
                       possible in the folling date</h2>");
                  pw.println("<p>Check In Date :"+es+" </p>");
                  pw.println("<p>Check Out Date :"+exs+" </p>");
                  pw.println("<p>No.of Rooms :"+rn+" </p>");
                  pw.println(
                       "<a href=http://www.mycgiserver.com/~hotelabc/
                       onlreservations.htm>Try another date</a>");
            }//end of else
       } else {
            if(id.canBookD(edate,exdate,vd,va,rooms)) {
                  id.roomInformation(pw,es,exs,rn,rt,nod,am,ta);
            } else {
                  pw.println(
                       "<h2><b>Sorry your booking is not possible
                       in the folling date</h2>");
                  pw.println("<p>Check In Date :"+es+" </p>");
                  pw.println("<p>Check Out Date :"+exs+" </p>");
                  pw.println("<p>No.of Rooms :"+rn+" </p>");
                  pw.println(
                       "<a href=http://www.mycgiserver.com/~hotelabc/
                       onlreservations.htm>Try another date</a>");
            }//end of else
       }//end of else
}//end of else

  pw.println("</body>");
  pw.println("</html>");
  pw.close();
} catch(Exception e){}

}//end of main


/* data entry in database for single booking */
void dataEntryS(java.sql.Date edate,java.sql.Date exdate,Vector v,Vector
aa,Statement s,int rooms)throws Exception {

  if(v.contains(edate)) {
    int a=amount(edate,v,aa);
    s.executeUpdate("update booked set amount=" + (a+rooms) +
                    " where date=#"+edate+"#");
    s.executeQuery("select * from booked");
  } else {
    s.executeUpdate("insert into booked values (
                    "+rooms+",#"+edate+"#,'"+rt+"')");
    s.executeQuery("select * from booked");
  }
}//end of dataEntryS
```

```java
/* data entry in database for multiple booking */
void dataEntryM(java.sql.Date edate,java.sql.Date exdate,Vector v,Vector
a,Statement s,int rooms)throws Exception {

  long el = edate.getTime();
  long exl= exdate.getTime();
  long ld = 24*60*60*1000;
  java.sql.Date temp=null;
  Vector vd = new Vector();
  for(long i=el;i<exl;i+=ld) {
    temp=new java.sql.Date(i);
    vd.addElement(temp);
  }
  Enumeration enum = vd.elements();
  while(enum.hasMoreElements()) {
      java.sql.Date dd=(java.sql.Date)enum.nextElement();
      dataEntryS(dd,exdate,v,a,s,rooms);
  }
}//end of dataEntryD


/* checking whether he can book for a single day */
boolean canBookS(java.sql.Date ed,Vector v,Vector aa,int rooms) {

  if(v.contains(ed)) {
    int a=amount(ed,v,aa)+rooms;
    if(a<=10) {
      return true;
    } else {
      return false;
    }
  } else {
      return true;
  }
}


/* checking whether he can book for multiple days */
boolean canBookD(java.sql.Date ed,java.sql.Date exd,Vector v,Vector a,int
rooms) {
  long el = ed.getTime();
  long exl= exd.getTime();
  long ld = 24*60*60*1000;
  java.sql.Date temp = null;
  Vector vd = new Vector();

  for(long i=el;i<=exl;i+=ld) {
    temp=new java.sql.Date(el);
    vd.addElement(temp);
  }

  Enumeration enum=vd.elements();
```

```java
  while(enum.hasMoreElements()) {
    java.sql.Date dd=(java.sql.Date)enum.nextElement();
    boolean bool=canBookS(dd,v,a,rooms);
    if(bool==false)
      return false;
  }
  return true;
}


/* extracting no. of booked rooms for a particular date */
int amount(java.sql.Date ed,Vector d,Vector a) {

  int in = d.indexOf(ed);
  Integer ii = (Integer)a.elementAt(in);
  int aa=ii.intValue();
  return aa;
}


/*
checking the booking whether it is single booking or multiple booking
*/
boolean  is_multiple(java.sql.Date ed,java.sql.Date exd) {
  long el = ed.getTime();        //milisecond of entry date
  long exl= exd.getTime();       //milisecond of exit date
  long ld = 24*60*60*1000;       //milisecond of a day
  long dd = exl-el;              //deff betwwen entry and exit date
  if(dd>ld) //if difference is greater that a day then multiple booking
    return true;
  else
    return false;
}


/* for generating a customer code betwwen 1-1000 */
int custCode(Statement s)throws Exception {
  ResultSet rsc = s.executeQuery("select ccode from customer");
  Vector cc=new Vector();
  while(rsc.next()) {
      cc.addElement(new Integer(rsc.getInt("ccode")));//storing
  }
  int ccode=0;
  while(true) {
    double c = Math.random()*(1000+1);     //genereting a random value
    ccode = (int)c;
    Integer cust = new Integer(ccode);
    if(cc.contains(cust))                  //if it exists in table then
      continue;                            //generate a new value
    else
     break;
  }
  return ccode;
}
```

```
void roomInformationDS(PrintWriter pw,String es,String exs,String
rn,String rt,int nod,int amount,int ta)
{
        pw.println("<form name=reserve method=post
action=http://www.mycgiserver.com/~hotelabc/book.htm>");
        pw.println("<input type=hidden name=es value="+es+">");
        pw.println("<input type=hidden name=exs value="+exs+">");
        pw.println("<input type=hidden name=rt value="+rt+">");
        pw.println("<input type=hidden name=rn value="+rn+">");
        pw.println("<div align=\"center\">");
        pw.println("<center>");
        pw.println("<table border=\"0\" width=\"640\" height=\"716\">");
        pw.println("<tr>");
        pw.println("<td height=\"243\" width=\"90\"></td>");
        pw.println("<td colspan=\"2\" height=\"243\" width=\"440\"><img
border=\"0\" src=http://www.mycgiserver.com/~hotelabc/hotelroom3.jpg
width=\"300\" height=\"197\"></td>");
        pw.println(" <td height=\"243\" width=\"90\"></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println(" <td height=\"28\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"28\" width=\"530\"><b><font
size=\"5\" color=\"#18605A\">Your Reservation
Information's</font></b></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");

        pw.println("<td colspan=\"3\" height=\"21\" widht=\"536\">Check In:
"+es+"  </td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">Check Out:   "+exs+"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">No of Rooms: "+rn +"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td></td>");
        pw.println("<td colspan=\"6\">No of Days: "+nod +"</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"><font
face=\"Arial\" color=\"#18605A\">You may able to<a
href=http://www.mycgiserver.com/~hotelabc/onlreservations.htm >Change</a>
your room preference</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
```

```
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"78\" width=\"90\">Bed Type</td>");
        pw.println("<td height=\"78\" width=\"321\">Room Features</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"82\">");
        pw.println("</td>");
        pw.println("<td height=\"78\" width=\"330\">");
        pw.println("<p align=\"right\"> Daily Rate Per Room
(Tk.)</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"216\"></td>");
        pw.println("<td height=\"78\" width=\"216\">Total For Stay
(Tk.)</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"115\" width=\"90\">Deluxe Single</td>");
        pw.println("<td height=\"115\" width=\"321\" align=\"left\">Club
Room Non-Smoking,"+
                      "Continental Brkfst, Marble Bathroom, Robes And
Slippers, Free Access To Health Club</td>");
        pw.println("<td height=\"115\" width=\"82\"></td>");
        pw.println("<td height=\"115\" width=\"330\"><p
align=\"center\">"+ta+"</td>");
        pw.println("<td height=\"115\" width=\"216\"></td>");
        pw.println("<td height=\"115\" width=\"216\"><p
align=\"center\">"+amount+"</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"115\" width=\"90\"></td>");
        pw.println("<td height=\"115\" width=\"321\" align=\"left\"><a
href=\"onlreservations.htm\" target=\"_self\"><img alt=\"New Search\"
border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/sh_btn_newsearch_bot.gif
width=\"114\" height=\"28\"></a></td>");
        pw.println("<td height=\"115\" width=\"82\"></td>");
        pw.println("<td colspan=\"3\" height=\"115\" width=\"762\"><input
type=image src=http://www.mycgiserver.com/~hotelabc/sh_btn_reserve_mid.gif
width=\"100\" height=\"22\"></td>");
        pw.println("</tr>");
        pw.println("</table>");
        pw.println("</center>");
        pw.println("</div>");
        pw.println("<p> </p>");
        pw.println("<center><font color=\"#18605A\"><img align=\"bottom\"
src=http://www.mycgiserver.com/~hotelabc/divider.gif width=\"292\"
height=\"7\">");
        pw.println("</font>");
        pw.println("<p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a
href=\"http://www.mycgiserver.com/~hotelabc/special%20values.htm\"
target=\"_top\"><img align=\"middle\" alt=\"Special Values\" border=\"0\"
```

```
src=http://www.mycgiserver.com/~hotelabc/svbuttontest.gif width=\"210\"
height=\"39\"></a></b></font></p>");
        pw.println(" <p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a href=\"http://www.mycgi.com/~hotelabc/faq.htm\"
target=\"_top\"><img alt=\"Frequently Asked Questions\" border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/faqbutton.gif align=\"center\"
width=\"210\" height=\"39\"></a></b></font></p>");
        pw.println("<p align=\"center\"><font color=\"#18605A\"><img
align=\"bottom\" src=http://www.mycgiserver.com/~hotelabc/divider.gif
width=\"292\" height=\"7\"><br>");
        pw.println("<font color=\"#18605a\" face=\"Arial,Helvetica\"
size=\"4\"><b>Hotel ABC</b></font><br>");
        pw.println("<font color=\"#18605a\" face=\"arial,helvetica\">Kazi
Nazrul Islam      Road<br>");
        pw.println("Dhaka,Bangladesh</font>");
        pw.println("</font>");
        pw.println("</center>");
        pw.println("</form>");
}


void roomInformationDD(PrintWriter pw,String es,String exs,String
rn,String rt,int nod,int amount,int ta) {

        pw.println("<form name=reserve method=post
action=http://www.mycgiserver.com/~hotelabc/book.htm>");
        pw.println("<input type=hidden name=es value="+es+">");
        pw.println("<input type=hidden name=exs value="+exs+">");
        pw.println("<input type=hidden name=rt value="+rt+">");
        pw.println("<input type=hidden name=rn value="+rn+">");
        pw.println("<div align=\"center\">");
        pw.println("<center>");
        pw.println("<table border=\"0\" width=\"640\" height=\"716\">");
        pw.println("<tr>");
        pw.println("<td height=\"243\" width=\"90\"></td>");
        pw.println("<td colspan=\"2\" height=\"243\" width=\"440\"><img
border=\"0\" src=http://www.mycgiserver.com/~hotelabc/sh_na430gr1.jpg
width=\"300\" height=\"197\"></td>");
        pw.println(" <td height=\"243\" width=\"90\"></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println(" <td height=\"28\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"28\" width=\"530\"><b><font
size=\"5\" color=\"#18605A\">Your Reservation
Information's</font></b></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" widht=\"536\">Check In:
"+es+"  </td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
```

```
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">Check Out:  "+exs+"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">No of Rooms: "+rn +"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td></td>");
        pw.println("<td colspan=\"6\">No of Days: "+nod +"</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"><font
face=\"Arial\" color=\"#18605A\">You may able to<a
href=http://www.mycgiserver.com/~hotelabc/onlreservations.htm >Change</a>
your room preference</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"78\" width=\"90\">Bed Type</td>");
        pw.println("<td height=\"78\" width=\"321\">Room Features</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"82\">");
        pw.println("</td>");
        pw.println("<td height=\"78\" width=\"330\">");
        pw.println("<p align=\"right\"> Daily Rate Per Room
(Tk.)</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"216\"></td>");
        pw.println("<td height=\"78\" width=\"216\">Total For Stay
(Tk.)</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"115\" width=\"90\">Deluxe Double</td>");
        pw.println("<td height=\"115\" width=\"321\" align=\"left\">Smart
Non-Smoking, Continental Brkfst, Marble Bathroom, Robes And Slippers, Free
Access To Health Club</td>");
        pw.println("<td height=\"115\" width=\"82\"></td>");
        pw.println("<td height=\"115\" width=\"330\"><p
align=\"center\">"+ta+"</td>");
        pw.println("<td height=\"115\" width=\"216\"></td>");
        pw.println("<td height=\"115\" width=\"216\"><p
align=\"center\">"+amount+"</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"115\" width=\"90\"></td>");
        pw.println("<td height=\"115\" width=\"321\" align=\"left\"><a
href=\"onlreservations.htm\" target=\"_self\"><img alt=\"New Search\"
border=\"0\"
```

```
src=http://www.mycgiserver.com/~hotelabc/sh_btn_newsearch_bot.gif
width=\"114\" height=\"28\"></a></td>");
        pw.println("<td height=\"115\" width=\"82\"></td>");
        pw.println("<td colspan=\"3\" height=\"115\" width=\"762\"><input
type=image src=http://www.mycgiserver.com/~hotelabc/sh_btn_reserve_mid.gif
width=\"100\" height=\"22\"></td>");
        pw.println("</tr>");
        pw.println("</table>");
          pw.println("</center>");
        pw.println("</div>");
        pw.println("<p> </p>");
        pw.println("<center><font color=\"#18605A\"><img align=\"bottom\"
src=http://www.mycgiserver.com/~hotelabc/divider.gif width=\"292\"
height=\"7\">");
        pw.println("</font>");
        pw.println("<p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a
href=\"http://www.mycgiserver.com/~hotelabc/special%20values.htm\"
target=\"_top\"><img align=\"middle\" alt=\"Special Values\" border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/svbuttontest.gif width=\"210\"
height=\"39\"></a></b></font></p>");
        pw.println(" <p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a href=\"http://www.mycgi.com/~hotelabc/faq.htm\"
target=\"_top\"><img alt=\"Frequently Asked Questions\" border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/faqbutton.gif align=\"center\"
width=\"210\" height=\"39\"></a></b></font></p>");
        pw.println("<p align=\"center\"><font color=\"#18605A\"><img
align=\"bottom\" src=http://www.mycgiserver.com/~hotelabc/divider.gif
width=\"292\" height=\"7\"><br>");
        pw.println("<font color=\"#18605a\" face=\"Arial,Helvetica\"
size=\"4\"><b>Hotel ABC</b></font><br>");
        pw.println("<font color=\"#18605a\" face=\"arial,helvetica\">Kazi
Nazrul Islam      Road<br>");
        pw.println("Dhaka,Bangladesh</font>");
        pw.println("</font>");
        pw.println("</center>");
        pw.println("</form>");
}


void roomInformationEAS(PrintWriter pw,String es,String exs,String
rn,String rt,int nod,int amount,int ta) {
        pw.println("<form name=reserve method=post
action=http://www.mycgiserver.com/~hotelabc/book.htm");
        pw.println("<input type=hidden name=es value="+es+">");
        pw.println("<input type=hidden name=exs value="+exs+">");
        pw.println("<input type=hidden name=rt value="+rt+">");
        pw.println("<input type=hidden name=rn value="+rn+">");
        pw.println("<div align=\"center\">");
        pw.println("<center>");
        pw.println("<table border=\"0\" width=\"640\" height=\"716\">");
        pw.println("<tr>");
        pw.println("<td height=\"243\" width=\"90\"></td>");
```

```
        pw.println("<td colspan=\"2\" height=\"243\" width=\"440\"><img
border=\"0\" src=http://www.mycgiserver.com/~hotelabc/room9.gif
width=\"300\" height=\"197\"></td>");
        pw.println(" <td height=\"243\" width=\"90\"></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println(" <td height=\"28\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"28\" width=\"530\"><b><font
size=\"5\" color=\"#18605A\">Your Reservation
Information's</font></b></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");

        pw.println("<td colspan=\"3\" height=\"21\" widht=\"536\">Check In:
"+es+"   </td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">Check Out:   "+exs+"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">No of Rooms: "+rn +"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td></td>");
        pw.println("<td colspan=\"6\">No of Days: "+nod +"</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"><font
face=\"Arial\" color=\"#18605A\">You may able to<a
href=http://www.mycgiserver.com/~hotelabc/onlreservations.htm >Change</a>
your room preference</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"78\" width=\"90\">Bed Type</td>");
        pw.println("<td height=\"78\" width=\"321\">Room Features</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"82\">");
        pw.println("</td>");
        pw.println("<td height=\"78\" width=\"330\">");
        pw.println("<p align=\"right\"> Daily Rate Per Room
(Tk.)</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"216\"></td>");
```

```
      pw.println("<td height=\"78\" width=\"216\">Total For Stay
(Tk.)</td>");
      pw.println("</tr>");
      pw.println("<tr>");
      pw.println("<td height=\"115\" width=\"90\">Economy(AC)
Single</td>");
      pw.println("<td height=\"115\" width=\"321\"
align=\"left\">Traditional Non-Smoking, Armoire/Tv/Stocked Minibar, Rich
Wood Interior, Full Bathroom, Spacious</td>");
      pw.println("<td height=\"115\" width=\"82\"></td>");
      pw.println("<td height=\"115\" width=\"330\"><p
align=\"center\">"+ta+"</td>");
      pw.println("<td height=\"115\" width=\"216\"></td>");
      pw.println("<td height=\"115\" width=\"216\"><p
align=\"center\">"+amount+"</td>");
      pw.println("</tr>");
      pw.println("<tr>");
      pw.println("<td height=\"115\" width=\"90\"></td>");
      pw.println("<td height=\"115\" width=\"321\" align=\"left\"><a
href=\"onlreservations.htm\" target=\"_self\"><img alt=\"New Search\"
border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/sh_btn_newsearch_bot.gif
width=\"114\" height=\"28\"></a></td>");
      pw.println("<td height=\"115\" width=\"82\"></td>");
      pw.println("<td colspan=\"3\" height=\"115\" width=\"762\"><input
type=image src=http://www.mycgiserver.com/~hotelabc/sh_btn_reserve_mid.gif
width=\"100\" height=\"22\"></td>");
      pw.println("</tr>");
      pw.println("</table>");
      pw.println("</center>");
      pw.println("</div>");
      pw.println("<p> </p>");
      pw.println("<center><font color=\"#18605A\"><img align=\"bottom\"
src=http://www.mycgiserver.com/~hotelabc/divider.gif width=\"292\"
height=\"7\">");
      pw.println("</font>");
      pw.println("<p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a
href=\"http://www.mycgiserver.com/~hotelabc/special%20values.htm\"
target=\"_top\"><img align=\"middle\" alt=\"Special Values\" border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/svbuttontest.gif width=\"210\"
height=\"39\"></a></b></font></p>");
      pw.println(" <p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a href=\"http://www.mycgi.com/~hotelabc/faq.htm\"
target=\"_top\"><img alt=\"Frequently Asked Questions\" border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/faqbutton.gif align=\"center\"
width=\"210\" height=\"39\"></a></b></font></p>");
      pw.println("<p align=\"center\"><font color=\"#18605A\"><img
align=\"bottom\" src=http://www.mycgiserver.com/~hotelabc/divider.gif
width=\"292\" height=\"7\"><br>");
      pw.println("<font color=\"#18605a\" face=\"Arial,Helvetica\"
size=\"4\"><b>Hotel ABC</b></font><br>");
      pw.println("<font color=\"#18605a\" face=\"arial,helvetica\">Kazi
Nazrul Islam    Road<br>");
```

```java
        pw.println("Dhaka,Bangladesh</font>");
        pw.println("</font>");
        pw.println("</center>");
        pw.println("</form>");
}


void roomInformationEAD(PrintWriter pw,String es,String exs,String
rn,String rt,int nod,int amount,int ta) {
        pw.println("<form name=reserve method=post
action=http://www.mycgiserver.com/~hotelabc/book.htm>");
        pw.println("<input type=hidden name=es value="+es+">");
        pw.println("<input type=hidden name=exs value="+exs+">");
        pw.println("<input type=hidden name=rt value="+rt+">");
        pw.println("<input type=hidden name=rn value="+rn+">");
        pw.println("<div align=\"center\">");
        pw.println("<center>");
        pw.println("<table border=\"0\" width=\"640\" height=\"716\">");
        pw.println("<tr>");
        pw.println("<td height=\"243\" width=\"90\"></td>");
        pw.println("<td colspan=\"2\" height=\"243\" width=\"440\"><img
border=\"0\" src=http://www.mycgiserver.com/~hotelabc/room7.jpg
width=\"300\" height=\"197\"></td>");
        pw.println(" <td height=\"243\" width=\"90\"></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println(" <td height=\"28\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"28\" width=\"530\"><b><font
size=\"5\" color=\"#18605A\">Your Reservation
Information's</font></b></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" widht=\"536\">Check In:
"+es+"  </td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">Check Out:   "+exs+"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">No of Rooms: "+rn +"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td></td>");
        pw.println("<td colspan=\"6\">No of Days: "+nod +"</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
```

```
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"><font
face=\"Arial\" color=\"#18605A\">You may able to<a
href=http://www.mycgiserver.com/~hotelabc/onlreservations.htm >Change</a>
your room preference</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"78\" width=\"90\">Bed Type</td>");
        pw.println("<td height=\"78\" width=\"321\">Room Features</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"82\">");
        pw.println("</td>");
        pw.println("<td height=\"78\" width=\"330\">");
        pw.println("<p align=\"right\"> Daily Rate Per Room
(Tk.)</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"216\"></td>");
        pw.println("<td height=\"78\" width=\"216\">Total For Stay
(Tk.)</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"115\" width=\"90\">Economy(AC)
Double</td>");
        pw.println("<td height=\"115\" width=\"321\"
align=\"left\">Traditional Non-Smoking, Armoire/Tv/Stocked Minibar, Rich
Wood Interior, Full Bathroom, Spacious</td>");
        pw.println("<td height=\"115\" width=\"82\"></td>");
        pw.println("<td height=\"115\" width=\"330\"><p
align=\"center\">"+ta+"</td>");
        pw.println("<td height=\"115\" width=\"216\"></td>");
        pw.println("<td height=\"115\" width=\"216\"><p
align=\"center\">"+amount+"</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"115\" width=\"90\"></td>");
        pw.println("<td height=\"115\" width=\"321\" align=\"left\"><a
href=\"onlreservations.htm\" target=\"_self\"><img alt=\"New Search\"
border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/sh_btn_newsearch_bot.gif
width=\"114\" height=\"28\"></a></td>");
        pw.println("<td height=\"115\" width=\"82\"></td>");
        pw.println("<td colspan=\"3\" height=\"115\" width=\"762\"><input
type=image src=http://www.mycgiserver.com/~hotelabc/sh_btn_reserve_mid.gif
width=\"100\" height=\"22\"></td>");
        pw.println("</tr>");
        pw.println("</table>");
        pw.println("</center>");
        pw.println("</div>");
        pw.println("<p> </p>");
```

```
        pw.println("<center><font color=\"#18605A\"><img align=\"bottom\"
src=http://www.mycgiserver.com/~hotelabc/divider.gif width=\"292\"
height=\"7\">");
        pw.println("</font>");
        pw.println("<p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a
href=\"http://www.mycgiserver.com/~hotelabc/special%20values.htm\"
target=\"_top\"><img align=\"middle\" alt=\"Special Values\" border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/svbuttontest.gif width=\"210\"
height=\"39\"></a></b></font></p>");
        pw.println(" <p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a href=\"http://www.mycgi.com/~hotelabc/faq.htm\"
target=\"_top\"><img alt=\"Frequently Asked Questions\" border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/faqbutton.gif align=\"center\"
width=\"210\" height=\"39\"></a></b></font></p>");
        pw.println("<p align=\"center\"><font color=\"#18605A\"><img
align=\"bottom\" src=http://www.mycgiserver.com/~hotelabc/divider.gif
width=\"292\" height=\"7\"><br>");
        pw.println("<font color=\"#18605a\" face=\"Arial,Helvetica\"
size=\"4\"><b>Hotel ABC</b></font><br>");
        pw.println("<font color=\"#18605a\" face=\"arial,helvetica\">Kazi
Nazrul Islam      Road<br>");
        pw.println("Dhaka,Bangladesh</font>");
        pw.println("</font>");
        pw.println("</center>");
        pw.println("</form>");
}


void roomInformationES(PrintWriter pw,String es,String exs,String
rn,String rt,int nod,int amount,int ta)
{
        pw.println("<form name=reserve method=post
action=http://www.mycgiserver.com/~hotelabc/book.htm>");
        pw.println("<input type=hidden name=es value="+es+">");
        pw.println("<input type=hidden name=exs value="+exs+">");
        pw.println("<input type=hidden name=rt value="+rt+">");
        pw.println("<input type=hidden name=rn value="+rn+">");
        pw.println("<div align=\"center\">");
        pw.println("<center>");
        pw.println("<table border=\"0\" width=\"640\" height=\"716\">");
        pw.println("<tr>");
        pw.println("<td height=\"243\" width=\"90\"></td>");
        pw.println("<td colspan=\"2\" height=\"243\" width=\"440\"><img
border=\"0\" src=http://www.mycgiserver.com/~hotelabc/room8.jpg
width=\"300\" height=\"197\"></td>");
        pw.println(" <td height=\"243\" width=\"90\"></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println(" <td height=\"28\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"28\" width=\"530\"><b><font
size=\"5\" color=\"#18605A\">Your Reservation
Information's</font></b></td>");
        pw.println("</tr>");
```

```
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" widht=\"536\">Check In:
"+es+"   </td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">Check Out:   "+exs+"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">No of Rooms: "+rn +"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td></td>");
        pw.println("<td colspan=\"6\">No of Days: "+nod +"</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"><font
face=\"Arial\" color=\"#18605A\">You may able to<a
href=http://www.mycgiserver.com/~hotelabc/onlreservations.htm >Change</a>
your room preference</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"78\" width=\"90\">Bed Type</td>");
        pw.println("<td height=\"78\" width=\"321\">Room Features</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"82\">");
        pw.println("</td>");
        pw.println("<td height=\"78\" width=\"330\">");
        pw.println("<p align=\"right\"> Daily Rate Per Room
(Tk.)</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"216\"></td>");
        pw.println("<td height=\"78\" width=\"216\">Total For Stay
(Tk.)</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"115\" width=\"90\">Economy Single</td>");
        pw.println("<td height=\"115\" width=\"321\"
align=\"left\">Traditional Non-Smoking, Armoire/Tv/Stocked Minibar, Rich
Wood Interior, Full Bathroom, Spacious</td>");
        pw.println("<td height=\"115\" width=\"82\"></td>");
        pw.println("<td height=\"115\" width=\"330\"><p
align=\"center\">"+ta+"</td>");
        pw.println("<td height=\"115\" width=\"216\"></td>");
```

```
        pw.println("<td height=\"115\" width=\"216\"><p
align=\"center\">"+amount+"</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"115\" width=\"90\"></td>");
        pw.println("<td height=\"115\" width=\"321\" align=\"left\"><a
href=\"onlreservations.htm\" target=\"_self\"><img alt=\"New Search\"
border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/sh_btn_newsearch_bot.gif
width=\"114\" height=\"28\"></a></td>");
        pw.println("<td height=\"115\" width=\"82\"></td>");
        pw.println("<td colspan=\"3\" height=\"115\" width=\"762\"><input
type=image src=http://www.mycgiserver.com/~hotelabc/sh_btn_reserve_mid.gif
width=\"100\" height=\"22\"></td>");
        pw.println("</tr>");
        pw.println("</table>");
        pw.println("</center>");
        pw.println("</div>");
        pw.println("<p> </p>");
        pw.println("<center><font color=\"#18605A\"><img align=\"bottom\"
src=http://www.mycgiserver.com/~hotelabc/divider.gif width=\"292\"
height=\"7\">");
        pw.println("</font>");
        pw.println("<p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a
href=\"http://www.mycgiserver.com/~hotelabc/special%20values.htm\"
target=\"_top\"><img align=\"middle\" alt=\"Special Values\" border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/svbuttontest.gif width=\"210\"
height=\"39\"></a></b></font></p>");
        pw.println(" <p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a href=\"http://www.mycgi.com/~hotelabc/faq.htm\"
target=\"_top\"><img alt=\"Frequently Asked Questions\" border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/faqbutton.gif align=\"center\"
width=\"210\" height=\"39\"></a></b></font></p>");
        pw.println("<p align=\"center\"><font color=\"#18605A\"><img
align=\"bottom\" src=http://www.mycgiserver.com/~hotelabc/divider.gif
width=\"292\" height=\"7\"><br>");
        pw.println("<font color=\"#18605a\" face=\"Arial,Helvetica\"
size=\"4\"><b>Hotel ABC</b></font><br>");
        pw.println("<font color=\"#18605a\" face=\"arial,helvetica\">Kazi
Nazrul Islam    Road<br>");
        pw.println("Dhaka,Bangladesh</font>");
        pw.println("</font>");
        pw.println("</center>");
        pw.println("</form>");
}
```

```java
void roomInformationED(PrintWriter pw,String es,String exs,String
rn,String rt,int nod,int amount,int ta) {
        pw.println("<form name=reserve method=post
action=http://www.mycgiserver.com/~hotelabc/book.htm>");
        pw.println("<input type=hidden name=es value="+es+">");
        pw.println("<input type=hidden name=exs value="+exs+">");
        pw.println("<input type=hidden name=rt value="+rt+">");
        pw.println("<input type=hidden name=rn value="+rn+">");
        pw.println("<div align=\"center\">");
        pw.println("<center>");
        pw.println("<table border=\"0\" width=\"640\" height=\"716\">");
        pw.println("<tr>");
        pw.println("<td height=\"243\" width=\"90\"></td>");
        pw.println("<td colspan=\"2\" height=\"243\" width=\"440\"><img
border=\"0\" src=http://www.mycgiserver.com/~hotelabc/room10.gif
width=\"300\" height=\"197\"></td>");
        pw.println(" <td height=\"243\" width=\"90\"></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println(" <td height=\"28\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"28\" width=\"530\"><b><font
size=\"5\" color=\"#18605A\">Your Reservation
Information's</font></b></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" widht=\"536\">Check In:
"+es+"  </td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">Check Out:  "+exs+"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"6\"><font face=\"Arial\"
color=\"#18605A\">No of Rooms: "+rn +"</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td></td>");
        pw.println("<td colspan=\"6\">No of Days: "+nod +"</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"><font
face=\"Arial\" color=\"#18605A\">You may able to<a
href=http://www.mycgiserver.com/~hotelabc/onlreservations.htm >Change</a>
your room preference</font></td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"21\" width=\"90\"></td>");
        pw.println("<td colspan=\"3\" height=\"21\" width=\"536\"></td>");
        pw.println("</tr>");
```

```
        pw.println("<tr>");
        pw.println("<td height=\"78\" width=\"90\">Bed Type</td>");
        pw.println("<td height=\"78\" width=\"321\">Room Features</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"82\">");
        pw.println("</td>");
        pw.println("<td height=\"78\" width=\"330\">");
        pw.println("<p align=\"right\"> Daily Rate Per Room
(Tk.)</td>");
        pw.println("<center>");
        pw.println("<td height=\"78\" width=\"216\"></td>");
        pw.println("<td height=\"78\" width=\"216\">Total For Stay
(Tk.)</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"115\" width=\"90\">Economy Double</td>");
        pw.println("<td height=\"115\" width=\"321\"
align=\"left\">Traditional Non-Smoking, Armoire/Tv/Stocked Minibar, Rich
Wood Interior, Full Bathroom, Spacious</td>");
        pw.println("<td height=\"115\" width=\"82\"></td>");
        pw.println("<td height=\"115\" width=\"330\"><p
align=\"center\">"+ta+"</td>");
        pw.println("<td height=\"115\" width=\"216\"></td>");
        pw.println("<td height=\"115\" width=\"216\"><p
align=\"center\">"+amount+"</td>");
        pw.println("</tr>");
        pw.println("<tr>");
        pw.println("<td height=\"115\" width=\"90\"></td>");
        pw.println("<td height=\"115\" width=\"321\" align=\"left\"><a
href=\"onlreservations.htm\" target=\"_self\"><img alt=\"New Search\"
border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/sh_btn_newsearch_bot.gif
width=\"114\" height=\"28\"></a></td>");
        pw.println("<td height=\"115\" width=\"82\"></td>");
        pw.println("<td colspan=\"3\" height=\"115\" width=\"762\"><input
type=image src=http://www.mycgiserver.com/~hotelabc/sh_btn_reserve_mid.gif
width=\"100\" height=\"22\"></td>");
        pw.println("</tr>");
        pw.println("</table>");
        pw.println("</center>");
        pw.println("</div>");
        pw.println("<p> </p>");
        pw.println("<center><font color=\"#18605A\"><img align=\"bottom\"
src=http://www.mycgiserver.com/~hotelabc/divider.gif width=\"292\"
height=\"7\">");
        pw.println("</font>");
        pw.println("<p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a
href=\"http://www.mycgiserver.com/~hotelabc/special%20values.htm\"
target=\"_top\"><img align=\"middle\" alt=\"Special Values\" border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/svbuttontest.gif width=\"210\"
height=\"39\"></a></b></font></p>");
        pw.println(" <p><font color=\"#18605a\" face=\"arial,helvetica\"
size=\"4\"><b><a href=\"http://www.mycgi.com/~hotelabc/faq.htm\"
```

```
target=\"_top\"><img alt=\"Frequently Asked Questions\" border=\"0\"
src=http://www.mycgiserver.com/~hotelabc/faqbutton.gif align=\"center\"
width=\"210\" height=\"39\"></a></b></font></p>");
        pw.println("<p align=\"center\"><font color=\"#18605A\"><img
align=\"bottom\" src=http://www.mycgiserver.com/~hotelabc/divider.gif
width=\"292\" height=\"7\"><br>");
        pw.println("<font color=\"#18605a\" face=\"Arial,Helvetica\"
size=\"4\"><b>Hotel ABC</b></font><br>");
        pw.println("<font color=\"#18605a\" face=\"arial,helvetica\">Kazi
Nazrul Islam Road<br>");
        pw.println("Dhaka,Bangladesh</font>");
        pw.println("</font>");
        pw.println("</center>");
        pw.println("</form>");
}

void roomInformation(PrintWriter pw,String es,String exs,String rn,String
rt,int nod,int amount,int ta) {

  if(rt.equals("DeluxS"))
    roomInformationDS(pw,es,exs,rn,rt,nod,amount,ta);
  else if(rt.equals("DeluxD"))
    roomInformationDD(pw,es,exs,rn,rt,nod,amount,ta);
  else if(rt.equals("Economy(AC)S"))
    roomInformationEAS(pw,es,exs,rn,rt,nod,amount,ta);
  else if(rt.equals("Economy(AC)D"))
    roomInformationEAD(pw,es,exs,rn,rt,nod,amount,ta);
  else if(rt.equals("EconomyS"))
    roomInformationES(pw,es,exs,rn,rt,nod,amount,ta);
  else if(rt.equals("EconomyD"))
    roomInformationED(pw,es,exs,rn,rt,nod,amount,ta);
}

}//end of class
```

InsertTableDemo2.java: stores user booking information into database at the same time an auto mail will be sent to client about his booking information

```java
package hotelabc;

import java.io.*;
import javax.mail.*;
import javax.mail.internet.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.util.*;
import java.sql.*;

public class InsertTableDemo2 extends HttpServlet {
  private String smtpHost,from,text,subject,status;
  static int ccode,rn;
  static String rt,es,exs;
  static String name,address,city,zipcode,country,telephone,email,
                creditcard,cardnumber,expair,request;
  Statement s;
  public void init(ServletConfig config)throws ServletException {
    super.init(config);
    smtpHost="mycgiserver.com";
  }

  public String getSurvletInfo() {
    return "Servlet returning myservlet world to client brower";
  }

  public void doPost(HttpServletRequest req,HttpServletResponse rs)throws
ServletException,IOException {
    try {
      from="ahmed_monsur@hotmail.com";
      subject="Your booking information";
      text=" ";
      status="";
      Enumeration e=req.getParameterNames();
      String name=null;
      PrintWriter pw=rs.getWriter();
      rs.setContentType("text/html");
      pw.println("<html>");
      pw.println("<head>");
      pw.println("<title>Room Information</title>");
      pw.println("</head>");

      name=req.getParameter("fname")+" "+req.getParameter("lname");

      name=name.trim();
      name=name.toUpperCase();

      address = req.getParameter("address1")+" "
                +req.getParameter("address2");
```

```
city =      req.getParameter("city");
zipcode = req.getParameter("pcode");
country = req.getParameter("country");
telephone=req.getParameter("telephone");
email =     req.getParameter("email");
email = email.trim();
creditcard = req.getParameter("ccardtype");
cardnumber = req.getParameter("ccardnumber");
expair =      req.getParameter("ccardexpmonth")+"-"
              +req.getParameter("ccardexpyear");
request =     req.getParameter("srequests");

text = "Booking information of "+name +" are as follows\n" ;
text += "\nName: " + name + "\nAddress : " + address;
text += "\nCity : " + city + "\nZipcode : " + zipcode;
text += "\nCountry : " + country + "\nTelephone : " + telephone;
text += "\nEmail : " + email + "\nCreditCard : " + creditcard;
text += "\nCardNumber : "+cardnumber;
text += "\nCard Expires : "+expair;
text += "\nSpecial request : "+request;

InsertTableDemo2 id = new InsertTableDemo2();
Class.forName("org.hsqldb.jdbcDriver");
Connection c=null;
try {
      c=DriverManager.getConnection("jdbc:hsqldb:" +
      getServletContext().getRealPath("/~hotelabc/hotel"
       ,"hotelabc","mahmed");

} catch(Exception ex) {
  ex.printStackTrace();
}

id.s = c.createStatement();
ResultSet rsb2 = id.s.executeQuery("select * from temp");
while(rsb2.next()) {
  ccode = rsb2.getInt("ccode");
  text += "\nCustomer code : "+ccode;
  es = rsb2.getString("edate");
  text += "\nEntry Date : "+es;
  exs = rsb2.getString("exdate");
  text += "\nExit Date : "+exs;
  rn = rsb2.getInt("rn");
  text += "\nNo. of rooms : "+rn;
  rt = rsb2.getString("rt");
  text += "\nRoom type : "+rt;
}

java.sql.Date edate = java.sql.Date.valueOf(es);
java.sql.Date exdate = java.sql.Date.valueOf(exs);

id.s.executeUpdate("insert into customer
values("+ccode+",'"+name+"','"+address+"','"+city+"','"+zipcode+"','"+coun
```

```
try+"','"+telephone+"','"+email+"','"+creditcard+"','"+cardnumber+"','"+ex
pair+"','"+request+"') ");

    id.s.executeUpdate("insert into
booking_info(ccode,entrydate,exitdate,roomtype,rooms) values (
"+ccode+"','"+edate+"'" +",'"+exdate+"'"+",'"+rt+"',"+rn+")");

    long el = edate.getTime();
    long exl = exdate.getTime();
    long ld = 24*60*60*1000;
    long dd = exl-el , nd = 0;
    ResultSet rsb = id.s.executeQuery(
       "Select * from booked where roomtype='" + rt + "';");

    if(rsb.next()==false && rn<=10) {
       id.s.executeUpdate("insert into booked values
("+rn+",'"+edate+"','"+rt+"')");

       pw.println("<p><b>you booked the room</p>");
       pw.println("<p>You will receive a mail immediately which contains
all of your booking information</p>");
       pw.println("<p>You will receive another mail within few
hours</p>");
       pw.println("<p>This email will finally confirm your booking</p>");
       pw.println("<p>You can Cancel your boooking By 6Pm Hotel Time 1
Days Prior To Avoid 1 Night Penalty</p>");
       pw.println("<p>Thank you very much for choosing our hotel</p>");
       pw.println("<p>We hope that you will enjoy your stay in our
hotel</p>");
       pw.println("<p>We are always at your service</p>");
       if(dd>ld) {
          nd=el;
          for(int i=0;i<dd/ld;i++) {
             nd=nd+ld;
          java.sql.Date ss=new java.sql.Date(nd);
          id.s.executeUpdate("insert into booked values
("+rn+",'"+ss+"','"+rt+"')");
          id.s.executeQuery("select * from booked");
          }
       }
    } else {
       Vector vd = new Vector();
       Vector va = new Vector();
       java.sql.Date bd = rsb.getDate("date");
       vd.addElement(bd);
       va.addElement(new Integer(rsb.getInt("amount")));
       while(rsb.next()) {
          bd = rsb.getDate("date");
          vd.addElement(bd);
          va.addElement(new Integer(rsb.getInt("amount")));
       }
       if(!id.is_multiple(edate,exdate)) {
          id.dataEntryS(edate,exdate,vd,va,id.s,rn);
          pw.println("<p><b>you booked the room</p>");
```

```java
        pw.println("<p>You will receive a mail immediately which
contains all of your booking information</p>");
        pw.println("<p>You will receive another mail within few
hours</p>");
        pw.println("<p>This email will finally confirm your
booking</p>");
        pw.println("<p>You can Cancel your boooking By 6Pm Hotel Time 1
Days Prior To Avoid 1 Night Penalty</p>");
        pw.println("<p>Thank you very much for choosing our hotel</p>");
        pw.println("<p>We hope that you will enjoy your stay in our
hotel</p>");
        pw.println("<p>We are always at your service</p>");
    } else {
        id.dataEntryM(edate,exdate,vd,va,id.s,rn);
        pw.println("<p><b>you booked the room</p>");
        pw.println("<p>You will receive a mail immediately which
contains all of your booking information</p>");
        pw.println("<p>You will receive another mail within few
hours</p>");
        pw.println("<p>This email will finally confirm your
booking</p>");
        pw.println("<p>You can Cancel your boooking By 6Pm Hotel Time
1 Days Prior To Avoid 1 Night Penalty</p>");
        pw.println("<p>Thank you very much for choosing our
hotel</p>");
        pw.println("<p>We hope that you will enjoy your stay in our
hotel</p>");
        pw.println("<p>We are always at your service</p>");

    }
  }
  try {
    java.util.Properties properties = System.getProperties();
    properties.put("mail.smtp.host",smtpHost);
    Session session = Session.getInstance(properties,null);
    MimeMessage msg = new MimeMessage(session);
    Address frmAddress = new InternetAddress(from);
    msg.setFrom(frmAddress);
    Address []toAddress = InternetAddress.parse(email);
    msg.setRecipients(Message.RecipientType.TO,toAddress);
    msg.setSubject(subject);

    text += "\nYou have temporarily booked the rooms";
    text += "\nYou will receive final confirmation mesage within few
hours";
    text += "\nYour Customer Code will be needed during your booking
cancelation";
    text += "\nFor any further enquiry feel free to contact us.";
    text+="\n\n Manager";
    text+="\nHotel ABC";
    text+="\nKazi Nazrul Islam Road";
    text+="\nDhaka,Bangladesh";
    text+="\nEmail:hotelabc@hotmail.com";
    text+="\nPhone:+88029125864";
    text+="\nFax:+88029128569";
```

```
            text+="\n\nhttp://www.mycgiserver.com/~hotelabc";
            msg.setText(text);

            Transport.send(msg);
            status = "Message is sent\n";
            status+="Now check your email and then come to cancel page\n";
            status+="and enter your exact customer code and email to cancel
your booking";
        } catch(AddressException ae) {
            status="There was an error parsing address";
        } catch(MessagingException me) {
            status="There was an unexpected error";
        } catch(Exception eee) {
            status="exception occur";
        }
        pw.println("</body>");
        pw.println("</html>");
        pw.close();
    } catch(Exception ee) {}
}


    /* data entry in database for single booking */
    void dataEntryS(java.sql.Date edate,java.sql.Date exdate,Vector v,Vector
aa,Statement s,int rooms)throws Exception {

        if(v.contains(edate)) {
            int a=amount(edate,v,aa);
            s.executeUpdate("update booked set amount="+(a+rn)+" where
date='"+edate+"'");
            s.executeQuery("select * from booked");
        } else {
            s.executeUpdate("insert into booked values
("+rn+",'"+edate+"','"+rt+"')");
            s.executeQuery("select * from booked");
        }
    }//end of dataEntryS


    /* data entry in database for multiple booking */
    void dataEntryM(java.sql.Date edate,java.sql.Date exdate,Vector v,Vector
a,Statement s,int rooms)throws Exception {

        System.out.println("inside dataentry");
        long el = edate.getTime();
        long exl = exdate.getTime();
        long ld = 24*60*60*1000;
        java.sql.Date temp = null;
        Vector vd = new Vector();
        for(long i=el;i<exl;i+=ld) {
            temp=new java.sql.Date(i);
            vd.addElement(temp);
        }
        Enumeration enum = vd.elements();
```

```java
      System.out.println("before dataentry");
      while(enum.hasMoreElements()) {
        java.sql.Date dd=(java.sql.Date)enum.nextElement();
        dataEntryS(dd,exdate,v,a,s,rooms);
      }
  }//end of dataEntryM


  /* extracting no. of booked rooms for a particular date */
  int amount(java.sql.Date ed,Vector d,Vector a) {
      int in = d.indexOf(ed);
      Integer ii = (Integer)a.elementAt(in);
      int aa = ii.intValue();
      return aa;
  }


  /*
    checking the booking whether it is single booking or multiple booking
  */
  boolean  is_multiple(java.sql.Date ed,java.sql.Date exd) {
      long el = ed.getTime();      //milisecond of entry date
      long exl = exd.getTime();    //milisecond of exit date
      long ld = 24*60*60*1000;     //milisecond of a day
      long dd = exl-el;            //diff between entry and exit date

      //if difference is greater that a day then multiple booking
      if(dd>ld)
        return true;
      else
        return false;
  }

}     //end of class
```

InsertTableDemoMeeting.java: stores customer meeting place booking request into database

```java
package hotelabc;

import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.util.*;
import java.sql.*;

public class InsertTableDemoMeeting extends HttpServlet {

  static String Checkbox,Name,Title,Organization,Address,Address2,City,
                State,Zip,Telephone,Fax,email,sdate,edate,
                Preferred_pattern_arrival,Preferred_pattern_departure,
                Number_of_guest_rooms_peak,Total_nights,
                Number_of_attendees,Checkbox2,How_did_you_find_us;
  Statement s;

  public String getSurvletInfo() {
    return "Servlet returning myservlet world to client brower";
  }


  public void doPost(HttpServletRequest req,HttpServletResponse rs)throws
ServletException,IOException {

    PrintWriter pw = rs.getWriter();
    rs.setContentType("text/html");
    pw.println("<html>");
    pw.println("<head>");
    pw.println("<title>Hotel ABC</title>");
    pw.println("</head>");

    Checkbox = req.getParameter("Checkbox");
    Name =     req.getParameter("Name");
    Title =    req.getParameter("Title");
    Organization=req.getParameter("Organization");
    Address =  req.getParameter("Address");
    Address2=  req.getParameter("Address2");
    City =     req.getParameter("City");
    State =    req.getParameter("State");
    Zip =      req.getParameter("Zip");
    Telephone= req.getParameter("Telephone");
    Fax =      req.getParameter("Fax");
    email =    req.getParameter("email");
    sdate =     req.getParameter("Meeting_month")+"-"
              +req.getParameter("Meeting_dates")+"-"
              +req.getParameter("Meeting_year");
    edate =     req.getParameter("Meeting_month_to")+"-"
              +req.getParameter("Meeting_dates_to")+"-"
              +req.getParameter("Meeting_year_to");
```

```java
     Preferred_pattern_arrival =
             req.getParameter("Preferred_pattern_arrival");
     Preferred_pattern_departure =
             req.getParameter("Preferred_pattern_departure");
     Number_of_guest_rooms_peak =
             req.getParameter("Number_of_guest_rooms_peak");
     Total_nights = req.getParameter("Total_nights");
     Number_of_attendees = req.getParameter("Number_of_attendees");
     Checkbox2 = req.getParameter("Checkbox2");
     How_did_you_find_us = req.getParameter("How_did_you_find_us");

     Connection c=null;
     InsertTableDemoMeeting id = new InsertTableDemoMeeting();
     try {
       Class.forName("org.hsqldb.jdbcDriver");
       c = DriverManager.getConnection("jdbc:hsqldb:" +
             getServletContext().getRealPath("/~hotelabc/hotel")
             ,"hotelabc","mahmed");

       id.s = c.createStatement();
       id.s.executeUpdate(
         "insert into Meeting values('" + Checkbox + "','" + Name + "','"
         + Title + "','" + Organization + "','" + Address + "','"
         + Address2 + "','" + City + "','" + State + "','" + Zip + "','"
         + Telephone + "','" + Fax + "','" + email + "','" + sdate
         + "','" + edate + "','" + Preferred_pattern_arrival + "','"
         + Preferred_pattern_departure + "','"
         + Number_of_guest_rooms_peak + "','" + Total_nights + "','"
         + Number_of_attendees + "','" + Checkbox2 + "','"
         + How_did_you_find_us + "') ");
     } catch(Exception ex) {
       pw.println("error");
       ex.printStackTrace();
     }

             pw.println("<body>");
             pw.println("<p><b>Thank you for submitting the form</p>");
             pw.println("<p>You will receive a mail within 72 hours about
your enquiry</p>");
             pw.println("<p> For reservations call your "+
         "travel consultant <BR>or register <A"+
         "href=http://www.mycgiserver.com/~hotelabc/finding_rooms.htm"+
         "target=_top>online.</A></p>");
             pw.println("</body>");
             pw.println("</html>");
   }//end of dopost

}//end of class
```

SendMailC.java: sends booking information to client if he forgot customer code

```java
package hotelabc;

import javax.mail.*;
import java.sql.*;
import javax.mail.internet.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.io.*;

public class SendMailC extends HttpServlet {
    private String smtpHost;
    static Statement s;

    public void init(ServletConfig config)throws ServletException {
        super.init(config);
        smtpHost="mycgiserver.com";
    }


    public void doPost(HttpServletRequest res,HttpServletResponse rs )throws
ServletException,IOException {
        String from = "ahmed_monsur@hotmail.com";
        PrintWriter out = rs.getWriter();
        String name = res.getParameter("fname")+" "
                      +res.getParameter("lname");
        name = name.trim();
        name = name.toUpperCase();
        String to = res.getParameter("email");
        to = to.trim();
        String subject = "Your booking information";
        String text = "Testing mail";
        String status = "";

        Connection c = null;
        try {
          String url = "jdbc:hsqldb:"
                       + getServletContext().getRealPath("/~hotelabc/hotel");
          c = DriverManager.getConnection(url,"hotelabc","mahmed");
          s = c.createStatement();
        } catch(Exception ex) {
          ex.printStackTrace();
        }
        try {
        ResultSet rsb = s.executeQuery("select c.ccode,c.name,
c.email,b.entrydate,b.exitdate,b.rooms,b.roomtype from customer
c,booking_info b where c.ccode=b.ccode and c.email='" + to + "'");
          if (rsb.next()==false) {
            text="Your name does not exist in our database.\nSo you may enter
incorrect name.";
            status="<p>Your name does not exist in our database.<br>So you may
enter incorrect name.</p>";
```

```java
        out.println("<html><head><title>Status</title></head>");
        out.println("<body><p><b>"+status+"</b></p>");
        out.println("<p><a
href=http://www.mycgiserver.com/~hotelabc/cancel.htm>Click here </a> for
cancel page</p></body></html>");

    } else {
        text = "Booking information of "+name +" are as follows\n" ;

text+="Ccode\tName\t\t\temail\t\t\tEntryDate\tExitDate\tRoomType\tNo. of
Rooms\n";
        text += "\n";
        text += rsb.getInt("ccode")+"\t";
        text += rsb.getString("name")+"\t";
        text+=rsb.getString("email")+"\t\t";
        text+=rsb.getString("entrydate")+"\t";
        text+=rsb.getString("exitdate")+"\t";
        text+=rsb.getString("roomtype")+"\t\t";
        text+=rsb.getInt("rooms")+"\t";
        text+="\n";
        while(rsb.next()) {
            text+="\n";
            text+=rsb.getInt("ccode")+"\t";
            text+=rsb.getString("name")+"\t";
            text+=rsb.getString("email")+"\t\t";
            text+=rsb.getString("entrydate")+"\t";
            text+=rsb.getString("exitdate")+"\t";
            text+=rsb.getString("roomtype")+"\t\t";
            text+=rsb.getInt("rooms")+"\t";
            text+="\n";
        }
        java.util.Properties properties = System.getProperties();
        properties.put("mail.smtp.host",smtpHost);
        Session session = Session.getInstance(properties,null);
        MimeMessage msg = new MimeMessage(session);
        Address frmAddress = new InternetAddress(from);
        Address []toAddress = InternetAddress.parse(to);
        msg.setFrom(frmAddress);
        msg.setRecipients(Message.RecipientType.TO,toAddress);
        msg.setSubject(subject);

        text+="\nFor any further enquiry feel free to contact us.";
        text+="\n\n Manager";
        text+="\nHotel ABC";
        text+="\nKazi Nazrul Islam Road";
        text+="\nDhaka,Bangladesh";
        text+="\nEmail:hotelabc@hotmail.com";
        text+="\nPhone:+88029125864";
        text+="\nFax:+88029128569";
        text+="\n\nhttp://www.mycgiserver.com/~hotelabc";

        msg.setText(text);
        Transport.send(msg);
```

```
        status="<p><b>Message is sent</b><p>";
        status+="<p><b>Now check your email and then come to cancel
page</b></p>";
        status+="<p><b>Enter your exact customer code and email to cancel
your booking</b></p>";
        rs.setContentType("text/html");

        out.println("<html><head><title>Status</title></head>");
        out.println("<body><p><b>"+status+"</b></p>");
        out.println("<p><a
href=http://www.mycgiserver.com/~hotelabc/cancel.htm>Click here </a> for
cancel page</p></body></html>");
        }
    } catch(AddressException ae) {
        status = "There was an error parsing address";
    } catch(MessagingException me) {
        status = "There was an unexpected error";
    } catch(Exception e) {
        status = "exception occured";
    }
    out.close();
  }

}
```

cancel.java: updates database when a client cancel his booking
at the same time checks for any penalty to client

```java
package hotelabc;

import javax.mail.*;
import javax.mail.internet.*;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.util.*;
import java.sql.*;

public class cancel extends HttpServlet {
  private String smtpHost;
  int ccode,rn;
  static String rt,email;
  String es,exs;
  Statement s;
  long time;

  public void init(ServletConfig config)throws ServletException {
    super.init(config);
    smtpHost = "mycgiserver.com";
  }


  public String getSurvletInfo() {
    return "Servlet returning myservlet world to client brower";
  }


  public void doPost(HttpServletRequest req,HttpServletResponse
rs)throws ServletException,IOException {
    String from="ahmed_monsur@hotmail.com";
    String subject="Your Cancelling information";
    String text="Testing mail";
    String status="";
    try {
      PrintWriter pw=rs.getWriter();
      rs.setContentType("text/html");
      pw.println("<html>");
      pw.println("<head>");
      pw.println("<title>Room Information</title>");
      pw.println("</head>");

      ccode = Integer.parseInt(req.getParameter("ccode"));
      email = req.getParameter("email");
      time = java.lang.System.currentTimeMillis();
      cancel id=new cancel();

      Class.forName("org.hsqldb.jdbcDriver");
      Connection c=null;
      try {
      c = DriverManager.getConnection("jdbc:hsqldb:" +
          getServletContext().getRealPath("/~hotelabc/hotel")
            ,"hotelabc","mahmed");
      } catch(Exception ex) {
```

```java
        ex.printStackTrace();
    }
    id.s = c.createStatement();
    ResultSet rsbc = null;
    try {
        rsbc = id.s.executeQuery("select customer.ccode,customer.name,"+
                "customer.telephone,customer.email,customer.creditcard"
                + ",customer.cardnumber,customer.expair,"
                + "booking_info.entrydate,booking_info.exitdate,"
                + "booking_info.roomtype,booking_info.rooms"
                + " from customer ,booking_info"
                + " where customer.ccode=booking_info.ccode"
                + " and customer.ccode=" + ccode
                +" and customer.email='" + email + "'");
    } catch(SQLException se) {
        pw.println(se);
    }
    if(rsbc.next()==false) {
        pw.println("<p><b>Your customer code is not correct</b></p>");
        pw.println("<p><b>Enter exact customer code</b></p>");
        pw.println("<p><b><a
href=http://www.mycgiserver.com/~hotelabc/cancel.htm>click here</a>to
enter cancel page</b></p>");
    } else {
        String cname="",ctelephone="",ccreditcard="",ccardnumber="",
                cexpair="",croomtype="",cemail="";
        int cccode=0,crooms=0;
        java.sql.Date centrydate=null,cexitdate=null;
        cccode =       rsbc.getInt("ccode");
        cname =        rsbc.getString("name");
        ctelephone =   rsbc.getString("telephone");
        ccreditcard =  rsbc.getString("creditcard");
        ccardnumber =  rsbc.getString("cardnumber");
        cexpair =      rsbc.getString("expair");
        centrydate =   rsbc.getDate("entrydate");
        cexitdate =    rsbc.getDate("exitdate");
        croomtype =    rsbc.getString("roomtype");
        crooms =       rsbc.getInt("rooms");
        cemail =       rsbc.getString("email");

        text ="Cancelling information of " + cname +" are as follows\n";
        text += "\nName= " + cname;
        text += "\nCustomer Code= " + cccode;
        text += "\nTelephone= " + ctelephone;
        text += "\nCredit Card= " + ccreditcard;
        text += "\nCard Number= " + ccardnumber;
        text += "\nCard Expairs= " + cexpair;
        text += "\nProposed Entry Date= " + centrydate;
        text += "\nProposed Exit Date= " + cexitdate;
        text += "\nRoomType= " + croomtype;
        text += "\nNo of rooms= " + crooms;
        text += "\nEmail= " + cemail;

        java.util.Date ud = new java.util.Date(time);
        java.sql.Date ctime = new java.sql.Date(time);
        try {
            id.s.executeUpdate("insert into cancel1 values("
                + cccode + " ,'" + cname + "','" + ctelephone + "','"
```

```
                     + ccreditcard + "','" + ccardnumber + "','"
                     + cexpair + "','" + centrydate + "','" + cexitdate + "','"
                     + croomtype + "'," + crooms + ",'" + cemail + "','"
                     + ctime + "')");
          } catch(SQLException sq) {
              pw.println(sq);
          }

          java.sql.Date edate=centrydate;
          String cstatus = "ok";
          java.sql.Date exdate = cexitdate;
          long ct = ctime.getTime();
          long el = edate.getTime();
          long exl = exdate.getTime();
          long ld = 24*60*60*1000;
          long dd = exl-el, nd = 0;
          ResultSet rsb = id.s.executeQuery("Select * from booked where
roomtype='" + rt + "'");

          Vector vd = new Vector();
          Vector va = new Vector();
          java.sql.Date bd=null;
          while(rsb.next()) {
            bd = rsb.getDate("date");
            vd.addElement(bd);
            va.addElement(new Integer(rsb.getInt("amount")));
          }
          if(!id.is_multiple(edate,exdate)) {
            id.dataEntryS(edate,exdate,vd,va,id.s,rn);
            pw.println("<p><b>You have sucessfully cancel your
booking</b></p>");
            pw.println("<p>We hope that for your next reservation you
select our hotel</p>");
            pw.println("<p>You are always welcome</p>");
            pw.println("<p>A message is sent to your email address about
your booking cancelation</p>");
          } else {
            id.dataEntryM(edate,exdate,vd,va,id.s,rn);
            pw.println("<p><b>You have sucessfully cancel your
booking</b></p>");
            pw.println("<p>We hope that for your next reservation you
select our hotel</p>");
            pw.println("<p>You are always welcome</p>");
            pw.println("<p>A message is sent to your email address about
your booking cancelation</p>");

          }

          ct = ct+16*24*60*60*1000;
          if(ct<=el) {
            cstatus="ok";
            pw.println("<p>Your booking is cancelled without any
penalty</p>");
            text+="\nYour booking is cancelled without any penalty";
          } else  {
            cstatus="penalty";
            pw.println("<p>You will have to pay for one night because you
cancel your booking after the deadline of cancelation</p>");
```

```java
            text+="\nYou will have to pay for one night because you
\ncancel your booking after the deadline of cancelation";
        }

        try {
            java.util.Properties properties = System.getProperties();
            properties.put("mail.smtp.host",smtpHost);
            Session session = Session.getInstance(properties,null);
            MimeMessage msg = new MimeMessage(session);
            Address frmAddress = new InternetAddress(from);
            Address []toAddress = InternetAddress.parse(cemail);
            msg.setFrom(frmAddress);
            msg.setRecipients(Message.RecipientType.TO,toAddress);
            msg.setSubject(subject);

            text += "\nFor any further enquiry feel free to contact us.";
            text += "\n\n Manager";
            text += "\nHotel ABC";
            text += "\nKazi Nazrul Islam Road";
            text += "\nDhaka,Bangladesh";
            text += "\nEmail:hotelabc@hotmail.com";
            text += "\nPhone:+88029125864";
            text += "\nFax:+88029128569";
            text += "\n\nhttp://www.mycgiserver.com/~hotelabc";
            msg.setText(text);

            Transport.send(msg);
            status="<p><b>Message is sent</b><p>";
        } catch(AddressException ae)  {
            status="There was an error parsing address";
        } catch(MessagingException me) {
            status="There was an unexpected error";
        } catch(Exception e) {
            status="exception occur";
        }

        try {
            id.s.executeUpdate("update cancell set telephone='"
                + cstatus + "' where ccode=" + cccode);
        } catch(SQLException sql) {
            pw.println(sql);
        }
        id.s.executeUpdate("delete from booking_info"
            + " where ccode=" + cccode);
        id.s.executeUpdate("delete from customer where ccode=" +cccode);
    }//end of else
    pw.println("</body>");
    pw.println("</html>");
    pw.close();
} catch(Exception e) {}

}//end of main
```

```java
    /* data entry in database for single booking */
    void dataEntryS(java.sql.Date edate,java.sql.Date exdate,Vector
v,Vector aa,Statement s,int rooms)throws Exception {

      if(v.contains(edate)) {
        int a = amount(edate,v,aa);
        s.executeUpdate("update booked set amount="
          + (a-rooms) + " where date='" + edate + "'");
        s.executeQuery("select * from booked");
      }
    }//end of dataEntryS

    /* data entry in database for multiple booking */
    void dataEntryM(java.sql.Date edate,java.sql.Date exdate,Vector
v,Vector a,Statement s,int rooms)throws Exception {

      long el = edate.getTime();
      long exl = exdate.getTime();
      long ld = 24*60*60*1000;
      java.sql.Date temp = null;
      Vector vd=new Vector();

      for(long i=el;i<exl;i+=ld) {
        temp=new java.sql.Date(i);
        vd.addElement(temp);
      }

      Enumeration enum=vd.elements();
      while(enum.hasMoreElements()) {
        java.sql.Date dd = (java.sql.Date)enum.nextElement();
        dataEntryS(dd,exdate,v,a,s,rooms);
      }
    }//end of dataEntryD


    /* extracting no. of booked rooms for a particular date */
    int amount(java.sql.Date ed,Vector d,Vector a) {
      int in = d.indexOf(ed);
      Integer ii=(Integer)a.elementAt(in);
      int aa=ii.intValue();
      return aa;
    }

    /*
    checking the booking whether it is single booking or multiple booking
    */
    boolean  is_multiple(java.sql.Date ed,java.sql.Date exd) {
      long el = ed.getTime();       //milisecond of entry date
      long exl = exd.getTime();     //milisecond of exit date
      long ld = 24*60*60*1000;      //milisecond of a day
      long dd = exl-el;             //diff between entry and exit date
      if(dd>ld)
        return true;
      else
        return false;
    }

}//end of class
```

Appendix B

Design of the database

1) Room Type

Variable Name	Variable Type	Special Note
Room Type	VARCHAR	Primary Key
Capacity	INTEGER	
Fare	INTEGER	
Description	VARCHAR	

2) Form

Variable Name	Variable Type
Meeting_Planner_Guide	VARCHAR
Benquets_Weedings_Information	VARCHAR
General_Hotel_Brochure	VARCHAR
Name	VARCHAR
Title	VARCHAR
Company	VARCHAR
Address	VARCHAR
City	VARCHAR
State	VARCHAR
Zip	VARCHAR
Telephone	VARCHAR
Fax	VARCHAR
Email	VARCHAR
How_Do_You_Find_Us	VARCHAR
Special_Questions_Or_Requirements	VARCHAR

3) Temporary table

Variable Name	Variable Type
Ccode	INTEGER
Edate	DATE
ExDate	DATE
RN	INTEGER
RT	VARCHAR

4) Meeting

Variable Name	Variable Type
Name	VARCHAR
Title	VARCHAR
Organization	VARCHAR
Address	VARCHAR
Address2	VARCHAR
City	VARCHAR
State	VARCHAR
Zip	VARCHAR
Telephone	VARCHAR
Fax	VARCHAR
Email	VARCHAR
Sdate	DATE
Edate	DATE
Preffered_Pattern_Arrival	VARCHAR
Preferred_Pattern_Departure	VARCHAR
Number_Of_Guest_Rooms_Peak	VARCHAR
Total_Nights	VARCHAR
Number_Of_Attedees	INTEGER
How_Did_You_Find_Us	VARCHAR

5) Booking_Info

Variable Name	Variable Type	Special Note
Ccode	INTEGER	Foreign Key
EntryDate	DATE	
ExitDate	DATE	
RoomType	VARCHAR	Foreign Key
Rooms	INTEGER	

6) Booked

Variable Name	Variable Type	Special Note
Amount	INTEGER	
Date	DATE	
Roomtype	VARCHAR	Foreign Key

7) Customer

Variable Name	Variable Type	Special Note
Ccode	INTEGER	Primary Key
Name	VARCHAR	
Address	VARCHAR	
City	VARCHAR	
Zip Code	VARCHAR	
Country	VARCHAR	
Telephone	VARCHAR	
Email	VARCHAR	
Credit Card	VARCHAR	
Card Number	VARCHAR	
Expire Date	DATE	
Request	VARCHAR	

8) Cancel

Variable Name	Variable Type	Special Note
Ccode	INTEGER	Primary Key
Name	VARCHAR	
Status	VARCHAR	
Credit Card	VARCHAR	
Card Number	VARCHAR	
Expire Date	DATE	
Entry Date	DATE	
Exit Date	DATE	
Room Type	VARCHAR	Foreign Key
Rooms	INTEGER	
Email	VARCHAR	
Cancel Time	DATE	

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