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**Phase One  
CSCI273 Project**

**December 16, 2003**

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\* Note: Functional Model not needed for our particular database project.

## List of Team Members & Initial Responsibilities

**Team Members:** Dominique Ralph, Archana Patel, Erik Sisco, Jill Jones, Abe Miessler  
**Team Leader:** Dominique Ralph

### Division of Labor (Phase 1):

**All:** Object Model, State Transition Diagrams, Evaluations

**Jill:** ER to Relational Mapping

**Archana:** User Views, Data Dictionary, Event Traces

**Erik:** User Views, Data Dictionary, Event Traces

**Dominique:** User Views, Data Dictionary, Event Traces

**Abe:** Object Model, Event Traces

## **Problem Statement/Requirements Definition**

Hotels have been around for a very long time, using various methods of keeping records. Historically, hotels have kept paper records in filing cabinets. However, hotels are much larger now with many customers to keep track of with regard to types of accommodations, whether low budget, luxury, or somewhere in between, as well as smoking or non-smoking preferences. Keeping track of large customer bases and all their attendant details would require an inordinate space for file cabinets, not to mention the time employees would spend going back and forth to file cabinets looking up each client's information! JADE is a large new hotel, and requires more sophisticated methods of tracking customers and their preferences, as well as all the details about each customer and the rooms themselves. JADE is a complex of two towers, offering many differing types of accommodations with the prospect of a large customer base. JADE has decided to implement a relational database for record-keeping.

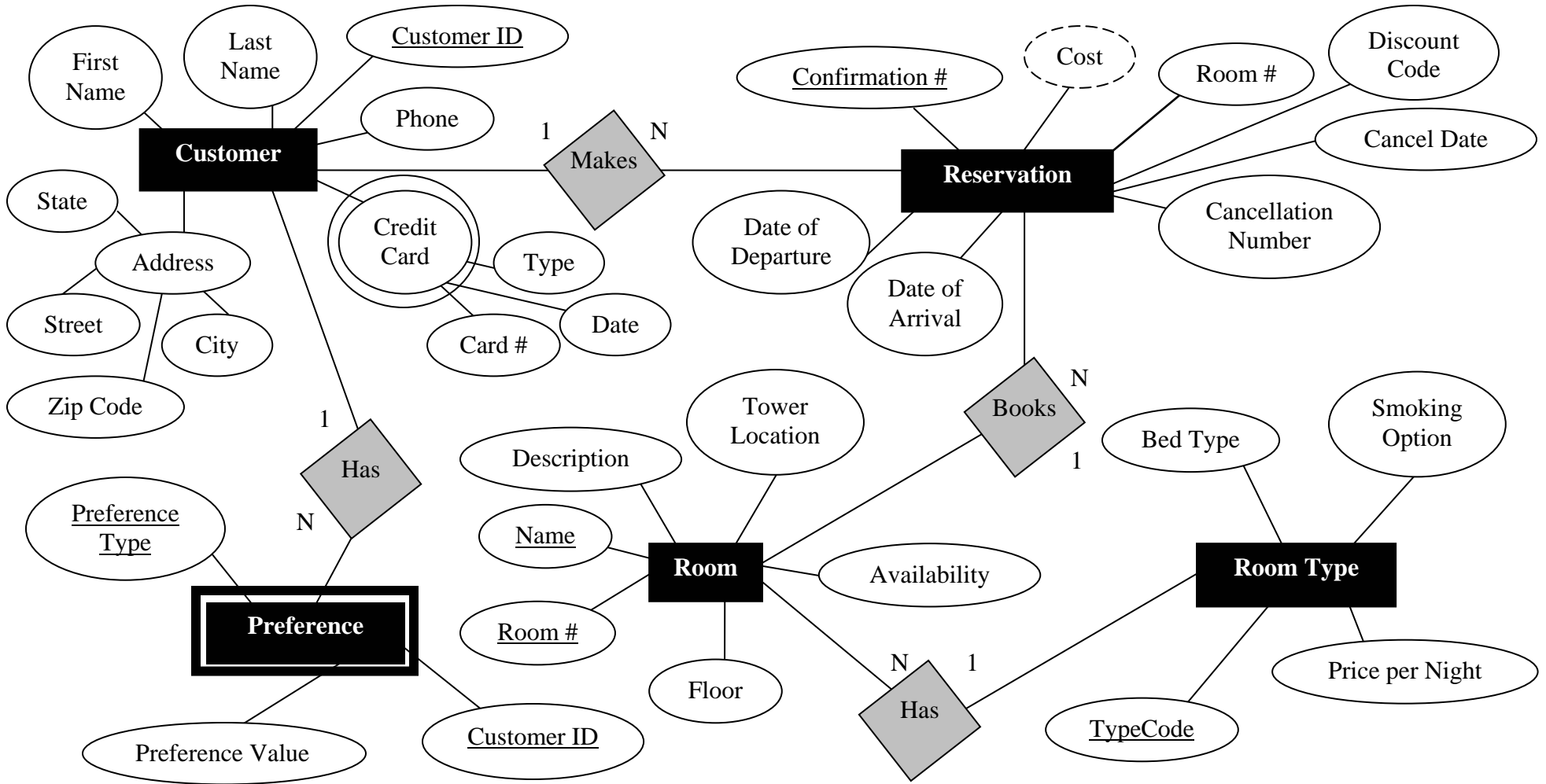
The general requirements for a new customer are: in order for the customer to make a reservation they need a first and last name, valid address, credit card number, and phone number. They will be informed about the two towers we have, the different room types available, and the prices for each of the room types. Then the customer can make an informed decision in what they want. After the reservation is complete the hotel database will assign a customer ID number to the new customer. But as far as the customer is concerned they are simply given a confirmation number for their reservation, which they present upon arrival.

If the customer is a returning guest and wants to make a reservation all their information is already in the database. Therefore, all they need to present is the arrival and departure dates and the room type they want. In return we give them the price and a confirmation number, which again they present upon arrival.

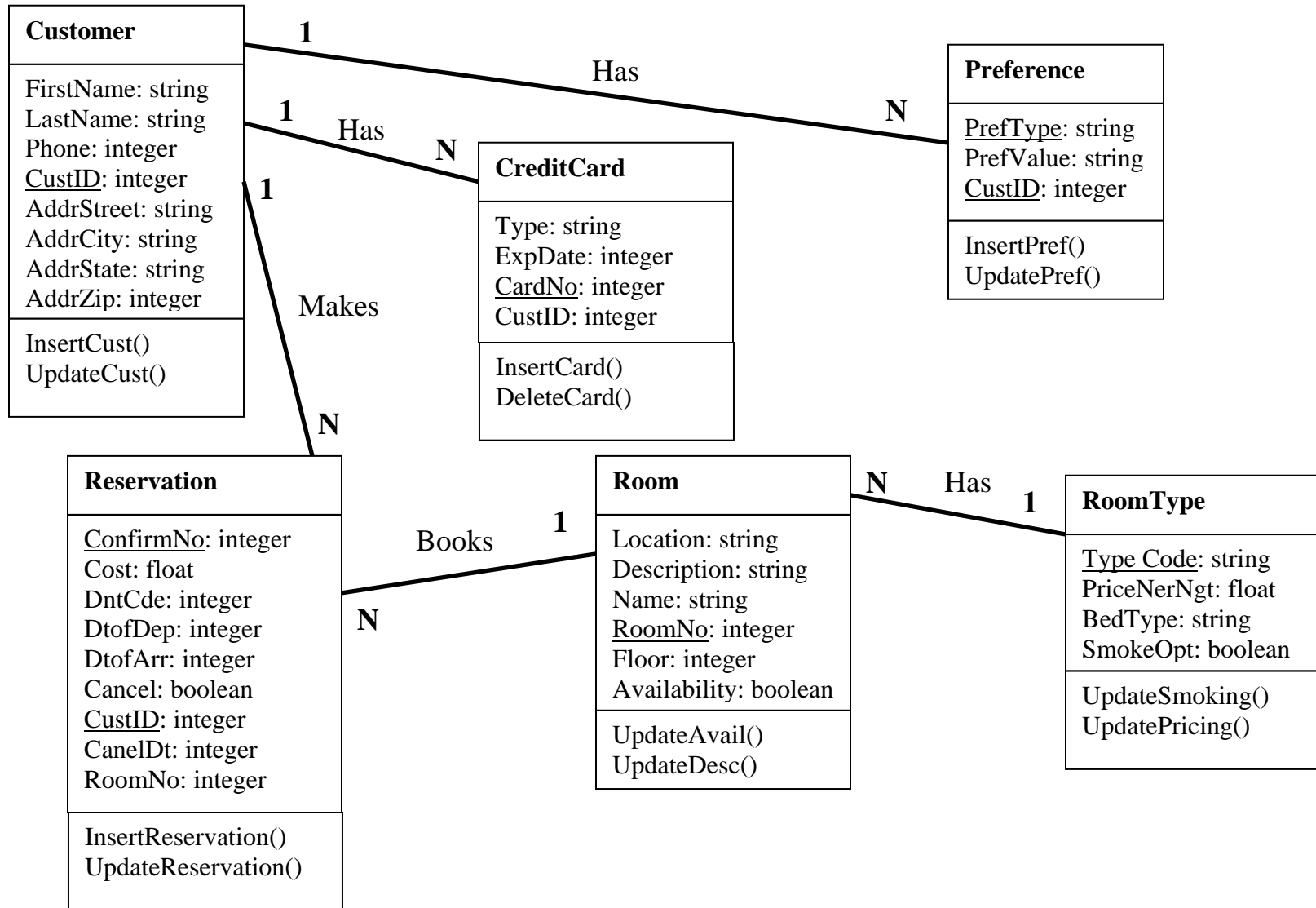
As the database development team, we will be creating a database which will have a three actor system. There will be the following actors: customer, employee, and administrator. Each will have a varied level of access to the details of the hotel and reservations made at the hotel. The customer will provide biographical information which will be entered in and alterable by any of the three actors. The main business process focused around the database will be creating reservations for J.A.D.E. hotel. After the employee submits the customer's preferences a query will be done to the database to find a suitable accommodation. As a secondary process we will allow modification of data states by the Administrator (i.e. change which floors are smoking/non-smoking).

The problem of slow paper filing systems will be solved with merely accessing the database containing the customer and room entities rather than referencing multiple physical filing systems. The process of querying the hotel for a reservation shall need to be rather timely (less than 20 seconds) to facilitate speedy transactions between the employee and the customer. There are no necessary time constraints on the administrator-specific tasks though integrity of the reservation system will have to remain intact (i.e. if a person has reserved a non-smoking room and the administrator changes the floor to a smoking floor, then the confirmation number given to the customer shall then refer to a new room number which takes into account their room preferences). We will assume that the customer knows what his/her preferences are and he/she has all of their biographical information available for entry. The majority of stored information will be mandatory (i.e. we cannot have null for first and last names). The interface will have to be as simple and straightforward as possible (limit it to about 2 screens, one for initial customer data and for final reservation data) to allow ease of use by the employees and administrators.

## Entity-Relationship Model



## Object Model



## ER to Relational Mapping

### Customer

CustID | FirstName | LastName | AddrStreet | AddrCity | AddrState | AddrZip | Phone

PK

### Credit Card

CardNo | CustID | Type | ExpDate

PK      FK

Composite Key

### Preference

CustID | PrefType | PrefValue

FK      PK

Composite Key

### Room Type

TypeCode | PricePerNgt | BedType | SmokeOpt

PK

### Reservation

Confirm# | CustID | Cost | Room# | DiscountCode | CancelDate | CancelOption | DepartDate | ArriveDate

PK      FK              FK

Composite Key

### Room

RoomNo | Name | Description | Location | Floor | Availability | TypeCode

PK

FK

## User Views

### View 1

Name Main Menu  
View Number 1  
Type Menu  
Description This is the main menu of our hotel database system, Ja<sup>2</sup>de. It is based on individual users who are accessing the system.  
Customer Menu, Employee Menu, Administrator Menu

Graphical Design:

The logo for Jade, featuring the word "Jade" in a stylized, red, serif font.

### HOTEL RESERVATION SYSTEM: L & M TOWERS

PLEASE CHOOSE THE USER THAT YOU REPRESENT BELOW:

Customer/Hotel Guest

Employee

Administrator

### View 2

Name Customer Menu  
View Number 2  
Type Menu  
Description This menu is viewed by customers to change their contact information, check room availability, and add or change preferences.

Graphical Design:

### Customer/Hotel Guest Main Menu

Please choose from the following options:

Change Contact Information

Add Preferences

Change Preferences

Check Availability of Hotel

Name Change Contact Information  
View Number 2A  
Type Form  
Description A customer will be able to change their contact information by entering in their Customer ID Number. If the customer was found, their contact information will be placed on the screen. They may change the text in the boxes and click "Change Contact Info Now". Otherwise, they will be redirected back to the Customer Menu.

Graphical Design:

**Customer/Hotel Guest Main Menu  
Change Contact Information**

Please enter your Customer ID #:

Customer ID #: 789123456

First Name:  Last Name:   
Street Address:   
City:  State:  Zip Code:   
Phone Number:

Number of Credit Cards on record: 1

Credit Card #1:  Exp. Date:   
Type:  Visa  MasterCard  American Express  
Credit Card #2:  Exp. Date:   
Type:  Visa  MasterCard  American Express  
Credit Card #3:  Exp. Date:   
Type:  Visa  MasterCard  American Express

Name	Add Preferences
View Number	2B
Type	Form
Description	A customer will be able to add personal preferences for their hotel rooms. They will enter their Customer ID Number. Then they will select the number of items requested for each preference. After clicking "Add Customer Preferences", they will be added to the database.

Graphical Design:

**Customer/Hotel Guest Main Menu  
Add/Change Customer Preferences**

Please enter your Customer ID #:

Customer ID #: 789123456

Enter in the amount you would like to request.

Extra Blankets:   
Extra Roll-Away Beds:   
Extra Pillows:   
Extra Toiletries:

Name	Change Preferences
View Number	2C
Type	Form

Description A customer will be able to change personal preferences for their hotel rooms. They will enter their Customer ID Number. Then they will change the number of items requested for each preference. After clicking “Change Customer Preferences”, they will be updated in the database.

Graphical Design:

**Customer/Hotel Guest Main Menu  
Add/Change Customer Preferences**

Please enter your Customer ID #:

**Customer ID #: 789123456**

Enter in the amount you would like to request.

Extra Blankets:

Extra Roll-Away Beds:

Extra Pillows:

Extra Toiletries:

Name Check Availability of Hotel  
View Number 2D  
Type Report  
Description A customer will be able to check if the hotel has any rooms available of a certain type. They may choose the tower they would like to stay in and the page will display the amount of rooms available, the room types, and prices for those rooms.

Graphical Design:

**Customer/Hotel Guest Main Menu  
Availability of Rooms in L & M Towers**

Room Types	Classic	Deluxe	Luxury	Premium	MT Suites	LT Suites
Price per Night	\$89	\$99	\$119	\$149	\$129	\$189
No. Available	8	5	6	3	2	3
Tower Location	Mountain	Mountain	Lake	Lake	Mountain	Lake

**View 3**

Name Employee Menu  
View Number 3  
Type Menu  
Description This allows the user to preview the employee menu

Graphical Design:

**Employee Main Menu**

Please choose from the following options:

Name Make a Reservation  
View Number 3A

Type Form  
 Description Employee will be prompted with menu screen. Then the employee will enter the customer's ID number. There after, the screen will show the customer's information on the screen. Employee then will enter all the customer's information and then the employee will reserve the room for the customer and give the customer a confirmation number.

Graphical Design:

**Employee Main Menu  
Make a Reservation**

Please enter your Customer ID #:

**Employee Main Menu  
Make a Reservation**

**Customer ID #: 789123456**

Date of Arrival:  Date of Departure:   
 Discount Code (if applicable):   
 Requested Room Type:  
 **Classic**  **Deluxe**  **Luxury**  
 **Premium**  **MT Suites**  **LT Suites**

**Confirmation #: 459027**  
**Total Cost Charged to Credit Card: \$189**  
**Room #: 508**

Name Add a Customer  
 View Number 3B  
 Type Form  
 Description The employee will be prompted with a menu screen. The employee will add all the information of the customer. There after the employee will add the customer to the database. A new customer ID will be given to the new customer.

Graphical Design:

**Employee Main Menu  
Add a Customer**

First Name:  Last Name:   
 Street Address:   
 City:  State:  Zip Code:   
 Phone Number:

Number of Credit Cards on record: 1  
 Credit Card #1:  Exp. Date:   
 Type:  Visa  MasterCard  American Express  
 Credit Card #2:  Exp. Date:   
 Type:  Visa  MasterCard  American Express  
 Credit Card #3:  Exp. Date:   
 Type:  Visa  MasterCard  American Express

**Customer ID #: 789123456**

Name Cancel Reservation  
View Number 3C  
Type Form  
Description Employee will be prompted with menu screen. Employee will enter in the confirmation number and cancel the reservation. A cancellation number and date will be created and given to the customer.

Graphical Design:

**Employee Main Menu  
Cancel a Reservation**

Please enter the Confirmation #:

**The reservation has been cancelled.  
Cancellation #: 2384932  
Cancellation Date: 11/4/2003**

Name Print Reservation Receipt  
View Number 3D  
Type Report  
Description Employee will be prompted a menu screen. Employee will enter the customer ID number where the reservation receipt will displayed and print the current information in the system.

Graphical Design:

**Employee Main Menu  
Print Reservation Receipt**

Please enter your Customer ID #:

Customer ID #: 2384389                      Date of Arrival: 12/01/2003  
Confirmation #: 134149023                  Date of Departure: 12/04/2003

-----  
Type of Room: Classic (NS)              Room #: 508                      Preferences: 2 Pillows

3 Nights @ \$89                      = \$267  
State Tax                                      = \$ 33

-----  
Total Amount Charged = \$300  
Charged on VISA \*3467

**Thank you for staying at L & M Towers!**

Name Change Contact Information  
View Number 3E  
Type Form  
Description A customer will be able to change their contact information by entering in their Customer ID Number. If the customer was found, their contact information will be placed on the screen. They may change the text in the boxes and click "Change Contact Info Now". Otherwise, they will be rejected back to the Customer Menu.

Graphical Design:

*Please See View Number 2A*

Name	Add Preferences
View Number	3F
Type	Form
Description	A customer will be able to add personal preferences for their hotel rooms. They will enter their Customer ID Number. Then they will select the number of items requested for each preference. After clicking “Add Customer Preferences”, they will be added to the database.

Graphical Design:

*Please See View Number 2B*

Name	Change Preferences
View Number	3G
Type	Form
Description	A customer will be able to change personal preferences for their hotel rooms. They will enter their Customer ID Number. Then they will change the number of items requested for each preference. After clicking “Change Customer Preferences”, they will be updated in the database.

Graphical Design:

*Please See View Number 2C*

Name	Check Availability of Hotel
View Number	3H
Type	Report
Description	A customer will be able to check if the hotel has any rooms available of a certain type. They may choose the tower they would like to stay in and the page will display the amount of rooms available, the room types, and prices for those rooms.

Graphical Design:

*Please See View Number 2D*

#### **View 4**

Name	Administrator Menu
View Number	4
Type	Menu
Description	This view is displayed after the user selects Administrator at the initial log-in screen. It contains a list of options which the Administrator may perform: <ol style="list-style-type: none"><li>1) Popularity of Room Report</li><li>2) Change Floor Smoking Status</li><li>3) Change Room Pricing</li><li>4) Profit Made by Date</li><li>5) Make a Reservation</li><li>6) Add a Customer</li><li>7) Cancel a Reservation</li><li>8) Change Contact Information</li><li>9) Check Room Availability</li><li>10) Add/Change Preferences</li></ol>

Graphical Design:

**Administrator Main Menu**

Please choose from the following options:

<input type="button" value="Change Contact Information"/>	<input type="button" value="Add a Customer"/>
<input type="button" value="Add Preferences"/>	<input type="button" value="Print Reservation Receipt"/>
<input type="button" value="Change Preferences"/>	<input type="button" value="Make a Reservation"/>
<input type="button" value="Check Availability of Hotel"/>	<input type="button" value="Cancel a Reservation"/>
<input type="button" value="Popularity of Room Report"/>	<input type="button" value="Change Room Pricing"/>
<input type="button" value="Change Floor Smoking Status"/>	<input type="button" value="Profit Made by Date"/>

**Name** Popularity of Room Report  
**View Number** 4A  
**Type** Report  
**Description** This view is displayed after 'Popularity of Room Report' is selected from the Administrator Menu. It will provide fields for a "Start Date" and "End Date" along with fields for "Start Time" and "End Time" with which to do the Popularity (Count) query. The Administrator will enter the dates and then choose to print the report (via a 'Print Report' button). The screen will also display the data being printed; an organized listing of the number of reservations made (the room type and location included) associated with the date/time query.

Graphical Design:

**Administrator Main Menu  
Popularity of Room Reports**

Start Date:  End Date:

If needed -> Start Time:  End Time:

<b>Room Types</b>	Classic	Deluxe	Luxury	Premium	MT Suites	LT Suites
<b>Reservations Made</b>	57	39	42	61	13	35
<b>Tower Location</b>	Mountain	Mountain	Lake	Lake	Mountain	Lake

**Name** Change Floor Smoking Status  
**View Number** 4B  
**Type** Form  
**Description** This view is displayed after 'Change Floor Smoking Status' is selected from the Administrator menu. It will provide drop down menus to select the tower, floor number, and the current Smoking/Non-Smoking status. There will be an 'Apply' button to be selected after each drop-down menu item has been selected.

Graphical Design:

**Administrator Main Menu  
Change Floor Smoking Status**

Tower Location:  Floor Number:  Floor Status:

Name Change Room Pricing  
View Number 4C  
Type Form  
Description This view is displayed after 'Change Room Pricing' is selected from the Administrator Menu. It will display a drop-down listing of room-types and a field with a heading of 'Price'. After the room type is chosen the Administrator can type in a Price into the field. An 'Apply' button will be located at the bottom as a completion step once the changes are made.

Graphical Design:

**Administrator Main Menu  
Change Room Pricing**

Room Type:  New Price:

Name Profit Made by Date  
View Number 4D  
Type Report  
Description This view is displayed after 'Profit Made by Date' is selected from the Administrator Menu. It will display fields titled 'Start Date' and 'End Date' and a button 'Show Me The Money' which prints and displays the earnings associated with the Date/Reservation query; profits are grouped by room type.

Graphical Design:

**Administrator Main Menu  
Profit Made by Date**

Start Date:  End Date:

Room Types	Classic	Deluxe	Luxury	Premium	MT Suites	LT Suites
Money Generated	\$20,000	\$12,500	\$13,200	\$11,000	\$9,847	\$45,645
Tower Location	Mountain	Mountain	Lake	Lake	Mountain	Lake

Name Make a Reservation  
View Number 4E  
Type Form  
Description Employee will be prompted with menu screen. Then the employee will enter the customer's ID number. There after, the screen will show the customer's information on the screen. Employee then will enter all the

customer's information and then the employee will reserve the room for the customer and give the customer a confirmation number.

Graphical Design:

***Please See View Number 3A***

Name Add a Customer  
View Number 4F  
Type Form  
Description The employee will be prompted with a menu screen. The employee will add all the information of the customer. There after the employee will add the customer to the database. A new customer ID # will be given to the new customer.

Graphical Design:

***Please See View Number 3B***

Name Cancel Reservation  
View Number 4G  
Type Form  
Description Employee will be prompted with menu screen. Employee will enter in the confirmation number and cancel the reservation. A cancellation number and date will be created and given to the customer.

Graphical Design:

***Please See View Number 3C***

Name Print Reservation receipt  
View Number 4H  
Type Report  
Description Employee will be prompted a menu screen. Employee will enter the customer ID number where the reservation receipt will be displayed and printed.

Graphical Design:

***Please See View Number 3D***

Name Change Contact Information  
View Number 4I  
Type Form  
Description A customer will be able to change their contact information by entering in their Customer ID Number. If the customer was found, their contact information will be placed on the screen. They may change the text in the boxes and click "Change Contact Info Now". Otherwise, they will be redirected back to the Customer Menu.

Graphical Design:

***Please See View Number 2A***

Name Add Preferences  
View Number 4J  
Type Form  
Description A customer will be able to add personal preferences for their hotel rooms. They will enter their Customer ID Number. Then they will select the number of items requested for each preference. After clicking "Add Customer Preferences", they will be added to the database.

Graphical Design:

***Please See View Number 2B***

Name Change Preferences  
View Number 4K  
Type Form

Description            A customer will be able to change personal preferences for their hotel rooms. They will enter their Customer ID Number. Then they will change the number of items requested for each preference. After clicking “Change Customer Preferences”, they will be updated in the database.

Graphical Design:

***Please See View Number 2C***

Name                    Check Availability of Hotel

View Number        4L

Type                    Report

Description           A customer will be able to check if the hotel has any rooms available of a certain type. They may choose the tower they would like to stay in and the page will display the amount of rooms available, the room types, and prices for those rooms.

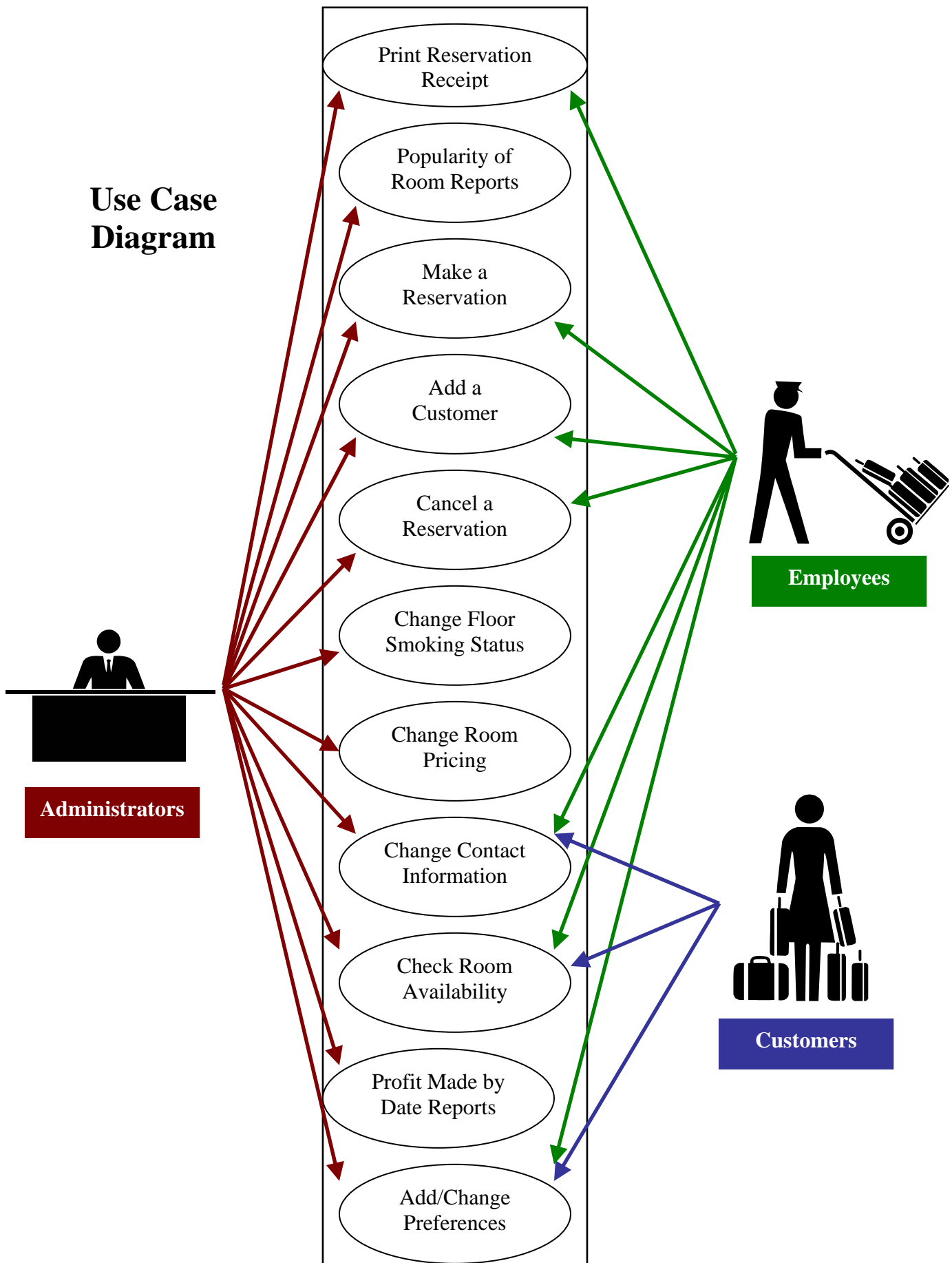
Graphical Design:

***Please See View Number 2D***

## Data Dictionary

Object	Name	Type	Description	Primary Key	Foreign Key
Customer	FirstName	String	The first name of the customer	No	No
	LastName	String	The last name of the customer	No	No
	CustID	Integer	Unique Identification number for the customer	Yes	No
	Phone	Integer	Customer Phone Number	No	No
	AddrState	String	State Location information	No	No
	AddrStreet	String	Street Location information	No	No
	AddrZip	Integer	5 or 9 Digit U.S. Zip Code	No	No
	AddrCity	String	City Location information	No	No
CreditCard	CustID	Integer	Unique Identification number for the customer	No	Yes
	CardNo	Integer	Unique Credit Card 16 digit number	Yes	No
	Type	String	Name of organization providing the credit (i.e. Visa)	No	No
	ExpDate	Integer (Date)	The expiration date of the credit card	No	No
Preference	PrefType	String	The different preferences a customer can choose	Yes	No
	PrefValue	Integer	Preference Value	No	No
	CustID	Integer	Unique Identification number for the customer	No	Yes
Room	Name	String	Room type's name	Yes	No
	RoomNo	Integer	Number of a particular room	Yes	No
	Description	String	Describes the type of room	No	No
	Floor	Integer	Floor Number	No	No
	Availability	Boolean	Rooms that are available	No	No
	Location	String	Either Mountain or Lake Tower	No	No
Reservation	ConfirmNo	Integer	Confirmation Number for the reservation	Yes	No
	RoomNo	Integer	Number of a particular room	No	Yes
	Cost	Float	The total cost of the customer's stay at the hotel	No	No
	DntCde	Integer	Discount Code if available	No	No
	CancelDt	Integer (Date)	If the reservation was cancelled, there will be a cancellation date	No	No
	Cancel	Boolean	Was the reservation cancelled	No	No
	DtofDep	Integer (Date)	Date of Departure	No	No
	CustID	Integer	Unique Identification number for the customer	No	Yes
	DtofArr	Integer (Date)	Date of Arrival	No	No
RoomType	TypeCode	String	Number of a particular room	Yes	No
	BedType	String	1 King or 2 Queens	No	No
	SmokeOpt	Boolean	Smoking or Non-Smoking Room	No	No
	PricePerNgt	Float	Price of the room per night	No	No

# Use Case Diagram



## Narrative Description of Project Use Cases

### Use case 1: **Make a Reservation**

Actor(s): Hotel Employees, Administrators

Description: Employee/Admin will be prompted with menu screen. After choosing “Employee” and “Make a Reservation”, they will enter in the Customer ID Number. (Note: If it is a new customer, they must enter in the Customer Information before making a reservation – see Use Case: Add a Customer). The screen should populate the customer’s first and last name, address, phone number, and credit card information. Employee must enter in the date of arrival and departure, tower choice, and room type. The room number will be populated by availability, so they may choose any room number in the list. After clicking button “Reserve Room Now”, a confirmation number will be created.

### Use case 2: **Add a Customer**

Actor(s): Hotel Employees, Administrators

Description: Employee/Admin will be prompted with menu screen. After choosing “Employee” and “Add a Customer”, they will enter in the first and last name, address, city, state, zip code, phone number, and credit card information. After clicking button “Add Customer Now”, a customer ID number will be created.

### Use case 3: **Cancel a Reservation**

Actor(s): Hotel Employees, Administrators

Description: Employee/Admin will be prompted with menu screen. After choosing “Employee” and “Cancel a Reservation”, they will enter in the confirmation number. After clicking button “Cancel Reservation Now”, a cancellation date will be displayed.

### Use case 4: **Change Floor Smoking/Non Smoking Status**

Actor(s): Administrators

Description: Administrators will be prompted with menu screen. After choosing “Administrators”, and “Change Floor Status”, they will select the floor to change and enter in either S or NS. After clicking button “Change Floor Status”, the floor will be changed to new status.

### Use case 5: **Change Room Pricing**

Actor(s): Administrators

Description: Administrators will be prompted with menu screen. After choosing “Administrators”, and “Change Room Pricing”, they will select the room type and enter in new price. After clicking button “Change Room Pricing”, the price for the room type will be updated.

### Use case 6: **Change Contact Information**

Actor(s): Customers, Employees, Administrators

Description: They will be prompted with menu screen. After choosing “Change Contact Information”, they will enter in the Customer ID. Select from the menu what needs to be changed. They will enter in the new changes for customer. After clicking button “Change Contact Info Now”, the customer information will be updated.

### Use case 7: **Add Customer Preferences**

Actor(s): Customers, Employees, Administrators

Description: They will be prompted with menu screen. After choosing “Add Customer Preferences”, they will enter in the Customer ID. Select the number of items requested for each preference. After clicking button “Add Customer Preferences”, the customer preferences will be added.

Use case 8: **Change Customer Preferences**

Actor(s): Customers, Employees, Administrators

Description: They will be prompted with menu screen. After choosing “Change Customer Preferences”, they will enter in the Customer ID. Select the preference that needs to be changed. Enter in new amount for that preference. After clicking button “Change Customer Preferences”, the customer preferences will be updated.

Use case 9: **Check Availability of Hotel**

Actor(s): Customers, Employees, Administrators

Description: They will be prompted with menu screen. After choosing “Check Availability”, they will choose tower they would like to stay in. After clicking button “Check Availability”, the page should display the room types, prices for room types, and number of rooms available.

Use case 10: **Profit by Date Report**

Actor(s): Administrators

Description: Administrators will be prompted with menu screen. After choosing “Profit by Date”, they will enter the start and end dates (this time frame will show the profit made). After clicking button “Show Me the Money”, the page should display the room types and profit made for those types.

Use case 11: **Reservation Receipts Reporting**

Actor(s): Employees, Administrators

Description: Employees and Administrators will be prompted with menu screen. After making a reservation, they will enter the customer’s ID number where the reservation receipt page should display and print out the most current reservation information.

Use case 12: **Popularity of Rooms Report by Date and/or Time**

Actor(s): Administrators

Description: Administrators will be prompted with menu screen. After choosing “Popularity of Rooms Report”, they will enter the start and end dates (this time frame will show the profit made) and/or choose a time from (e.g. 9AM to 11AM). After clicking button “Print Report”, the page should display and print out the room types and amount of reservations made for those types.

## Scenarios and Event Traces

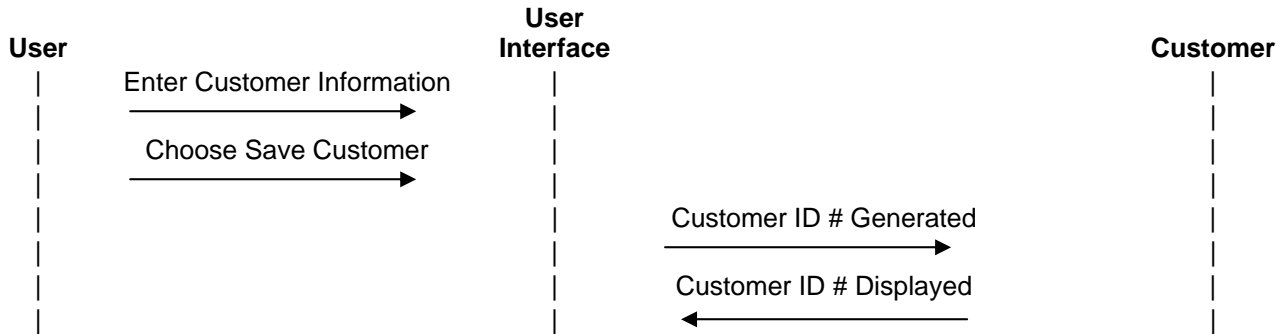
### Scenario for *Make a Reservation*

- The user enters the Customer ID #
- The user enters the reservation criteria (start date, end date, room type)
- The room # is populated by availability
- User chooses to reserve the room
- A confirmation # is created and displayed

**Please See Figure #1 (Page 25) For Make A Reservation**

**Scenario for Add a Customer**

- The user enters the customer information (name, address, phone, credit card, etc.)
- The user chooses to "Save Customer"
- The Customer ID # is created and displayed



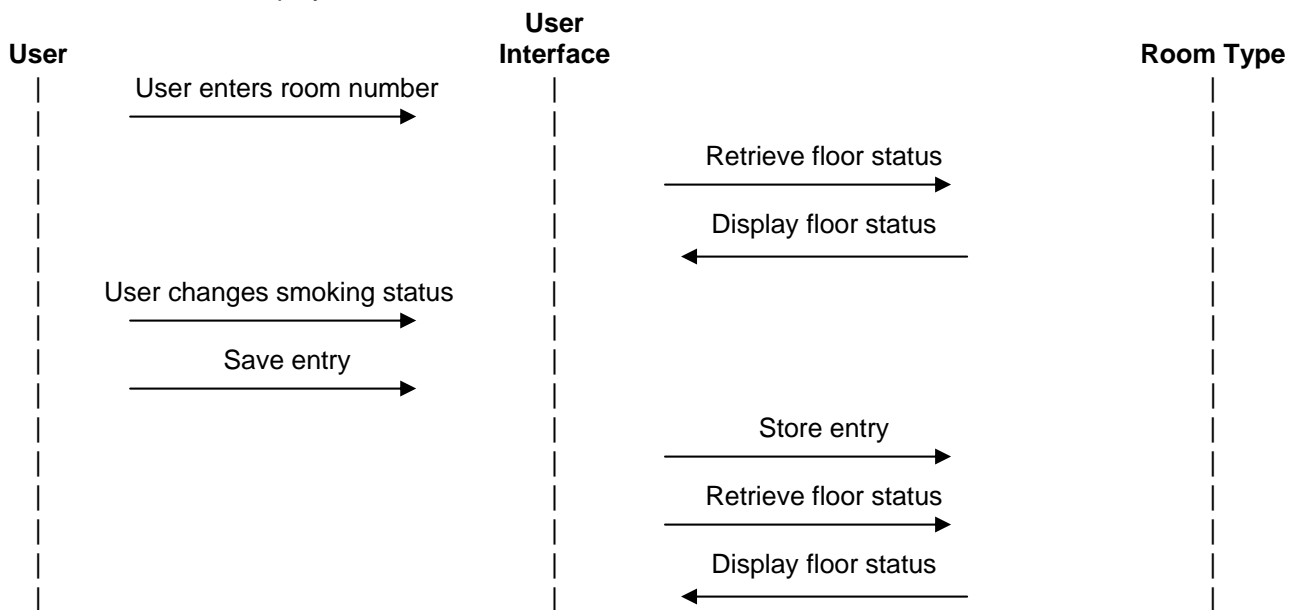
**Scenario for Cancel a Reservation**

- The user enters the Reservation Confirmation #
- The user chooses to "Cancel Reservation"
- The Room # is made available
- Cancellation Number and Date is displayed

**Please See Figure #2 (Page 25) For Cancel Reservation**

**Scenario for Change Floor Smoking Status**

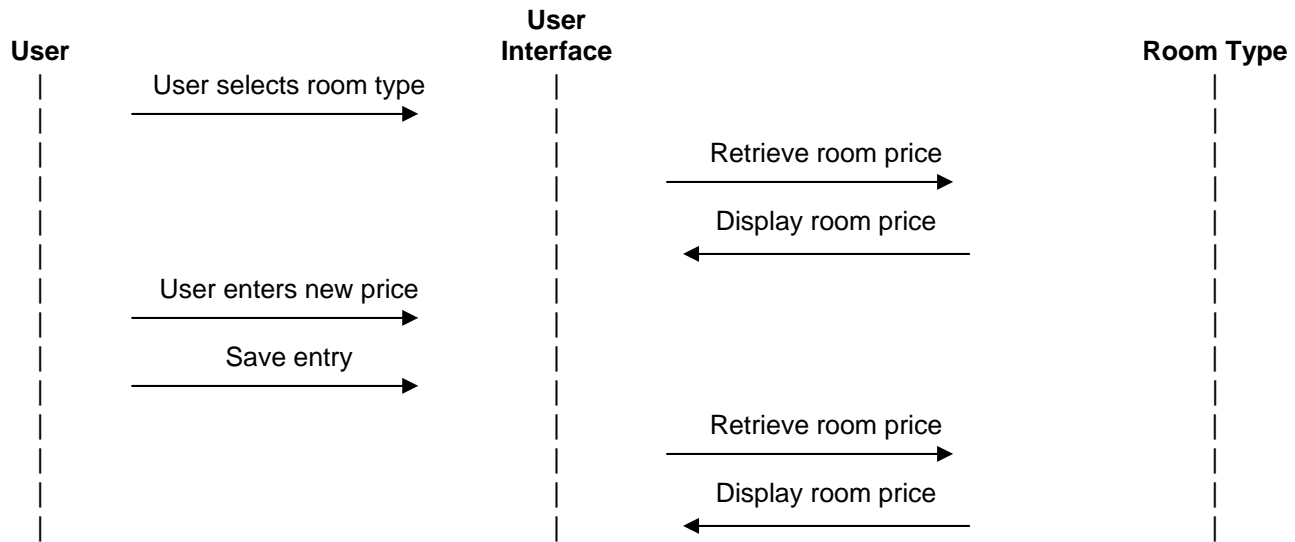
- User enters Floor Number and changes smoking status
- User saves new changes
- New floor status is displayed



**Scenario for Change Room Pricing**

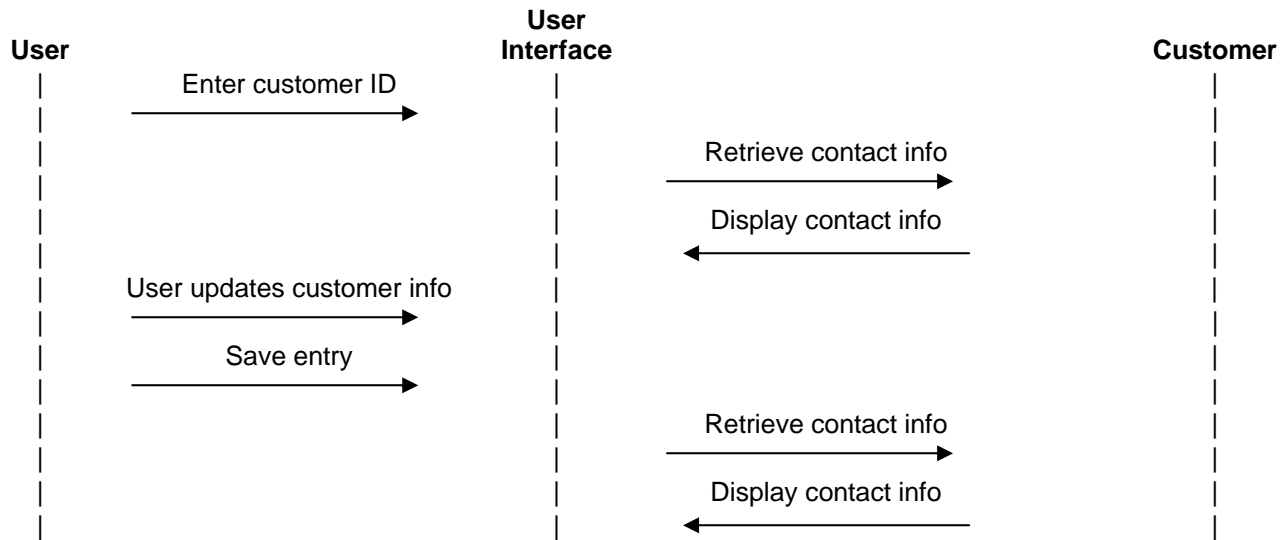
- User selects a room type
- Enters in new price for that room type

- User saves new changes
- New room type is displayed



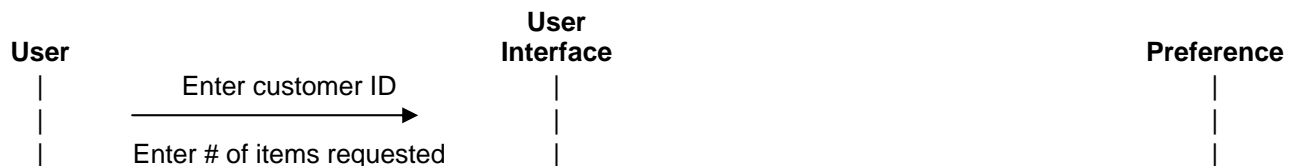
**Scenario for *Change Contact Information***

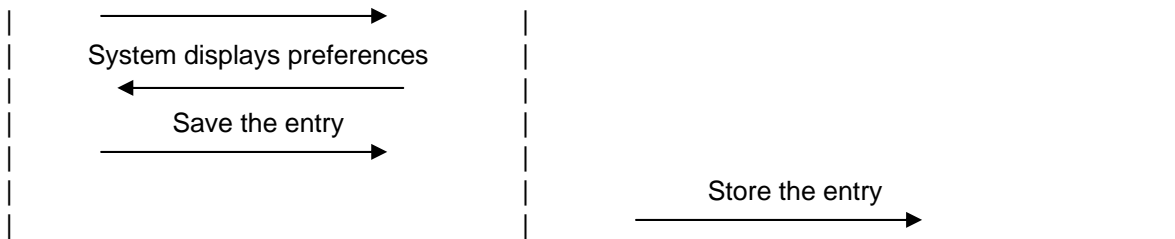
- User enters customer ID #
- Makes new changes to the customer's contact information
- User saves new changes
- New contact information is displayed



**Scenario for *Add a Customer Preference***

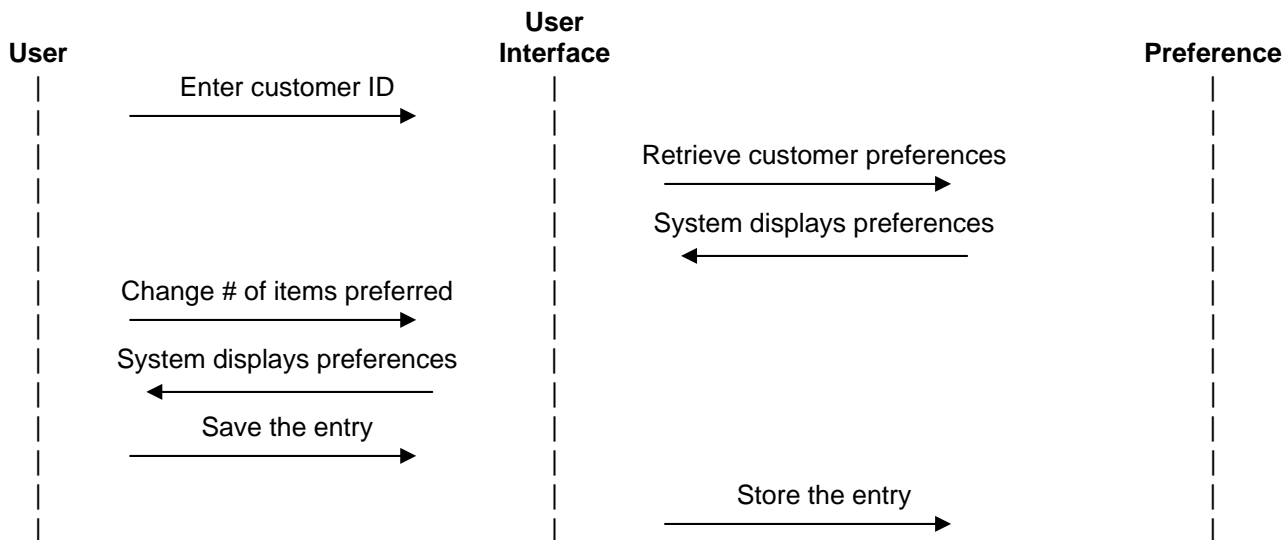
- The user enters customer ID number
- The user enters number of items requested for each preference
- The system displays the information
- The user saves the entry
- The system stores the entry





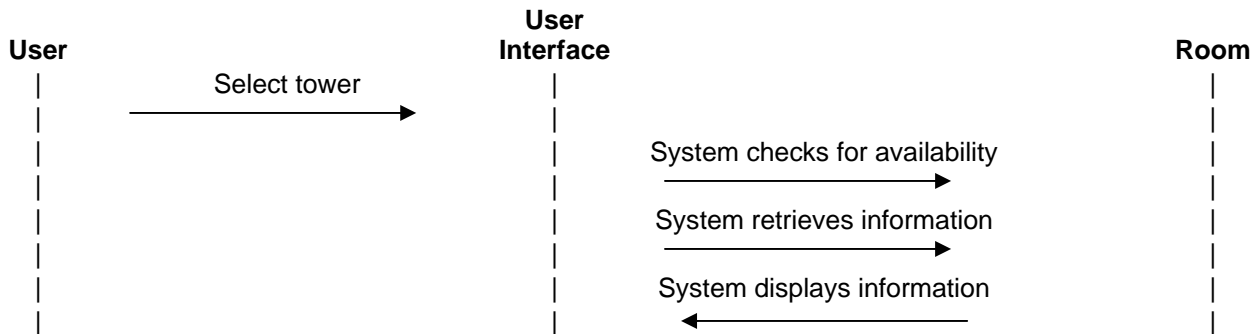
**Scenario for *Change Customer Preferences***

- The user enters customer ID number
- The user enters makes changes to number of items preferred
- The system displays the changed information
- The user saves the entry
- The system stores the entry



**Scenario for *Checking Availability of Hotel***

- The user selects tower
- The systems looks for availability for specified tower
- The system retrieves information
- Display availability information



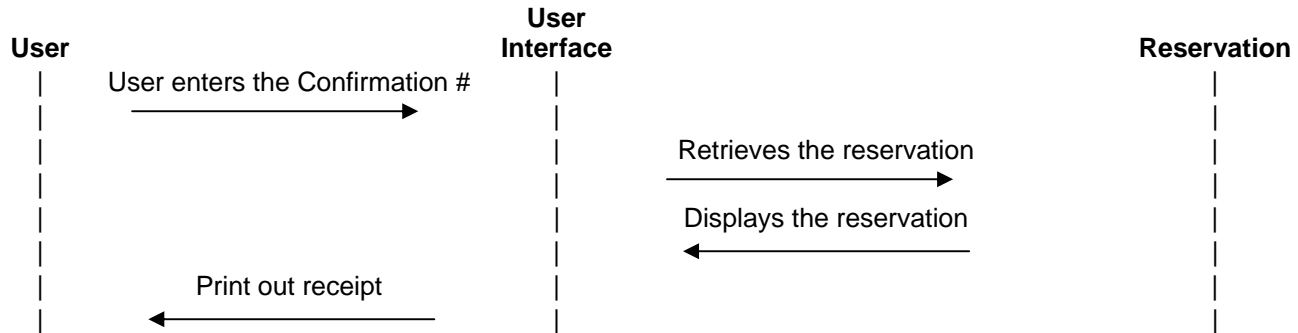
**Scenario for *Profit by Date Report***

- The user will enter a start and end date
- The user will submit the entry
- A report will be generated with the room types and profit made

**Please See Figure #3 (Page 26) For Profit by Date Report**

**Scenario for Reservation Receipts Reporting**

- The user will enter Confirmation #
- The user will submit the entry
- A report will be generated with the reservation information

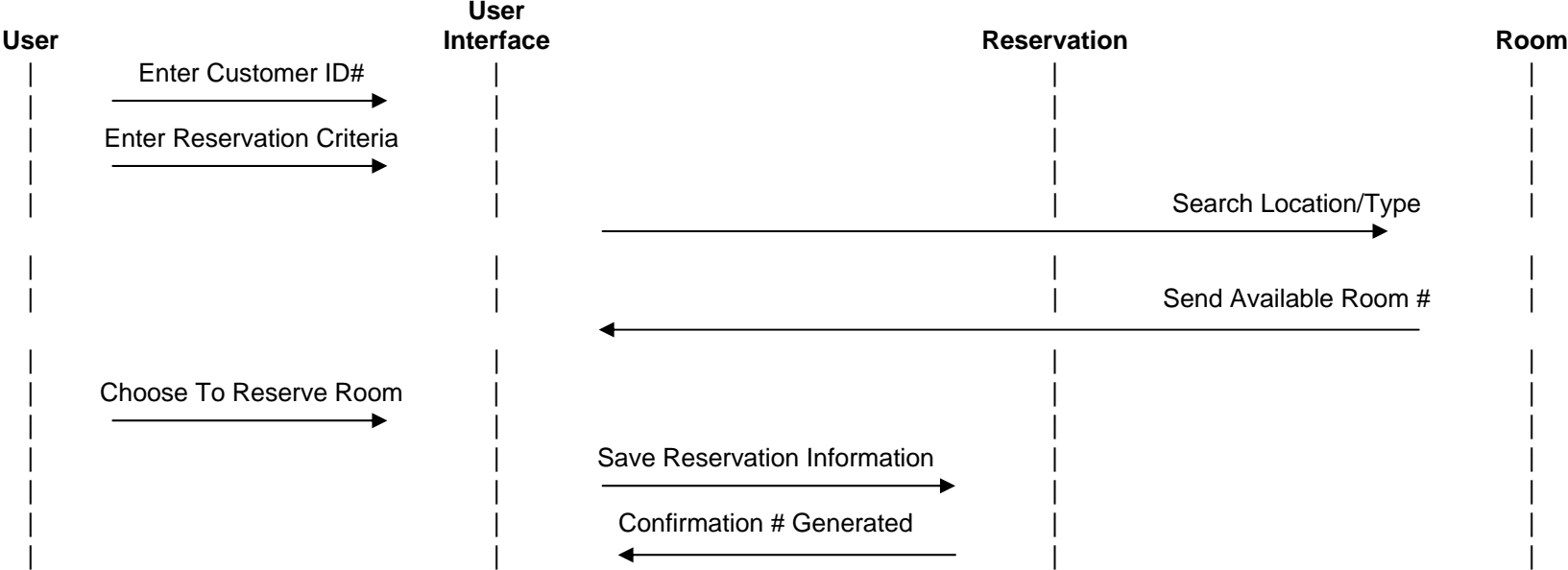


**Scenario for Popularity of Rooms Report by Date and/or Time**

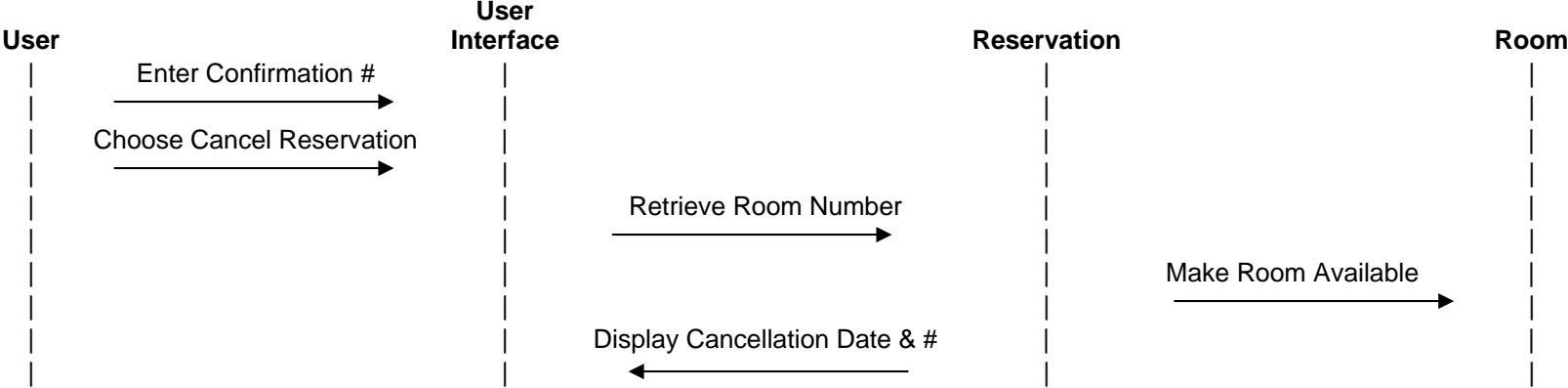
- The user enters a start and end date
- There is an option for time as well if chosen
- The user will submit the entry
- A report will be generated with room types and amount of reservations made

**Please See Figure #4 (Page 26) For Popularity of Rooms**

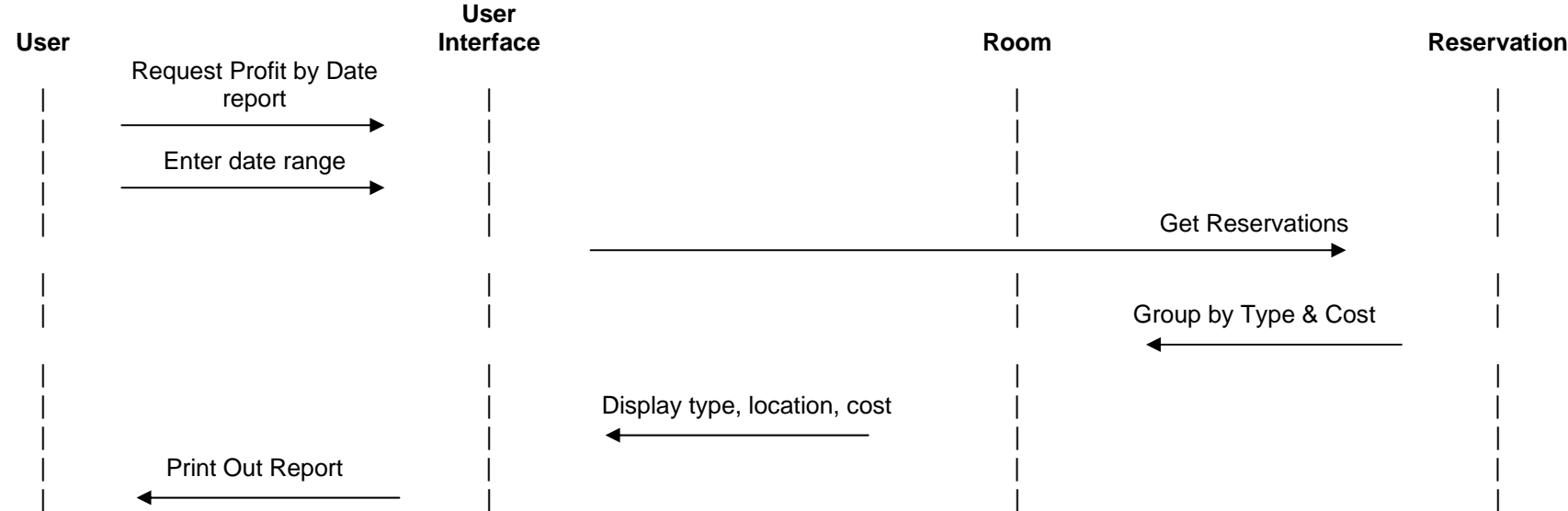
**Figure #1 Make A Reservation**



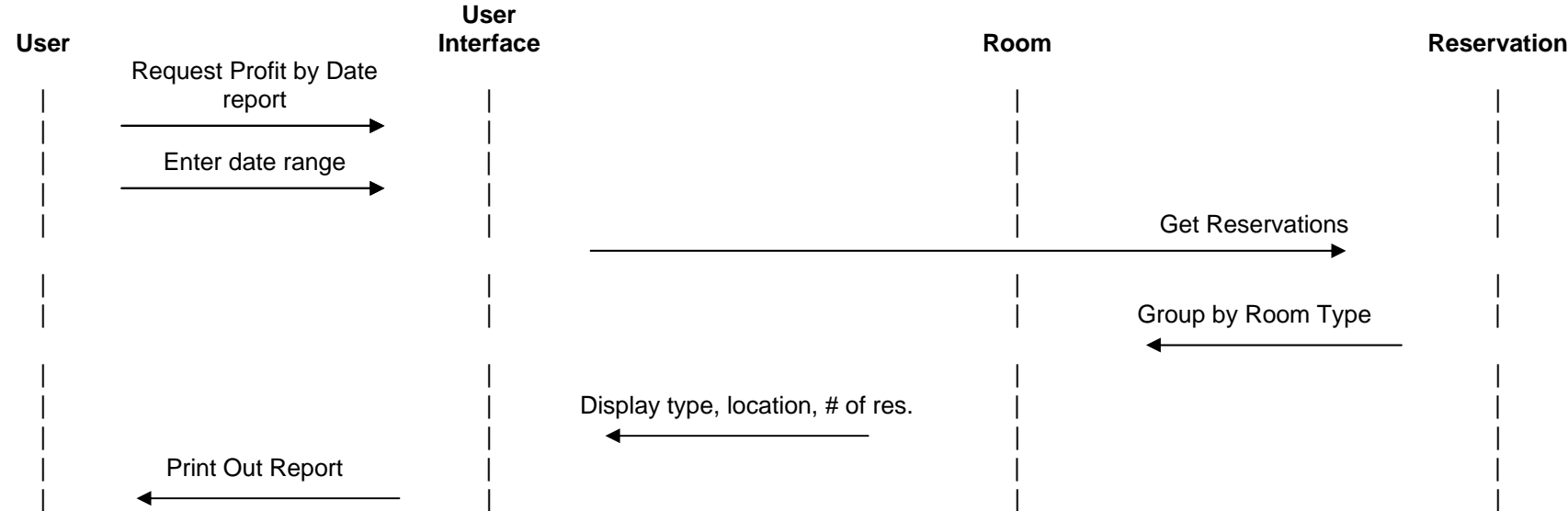
**Figure #2 Cancel A Reservation**



**Figure #3 Profit By Date Report**

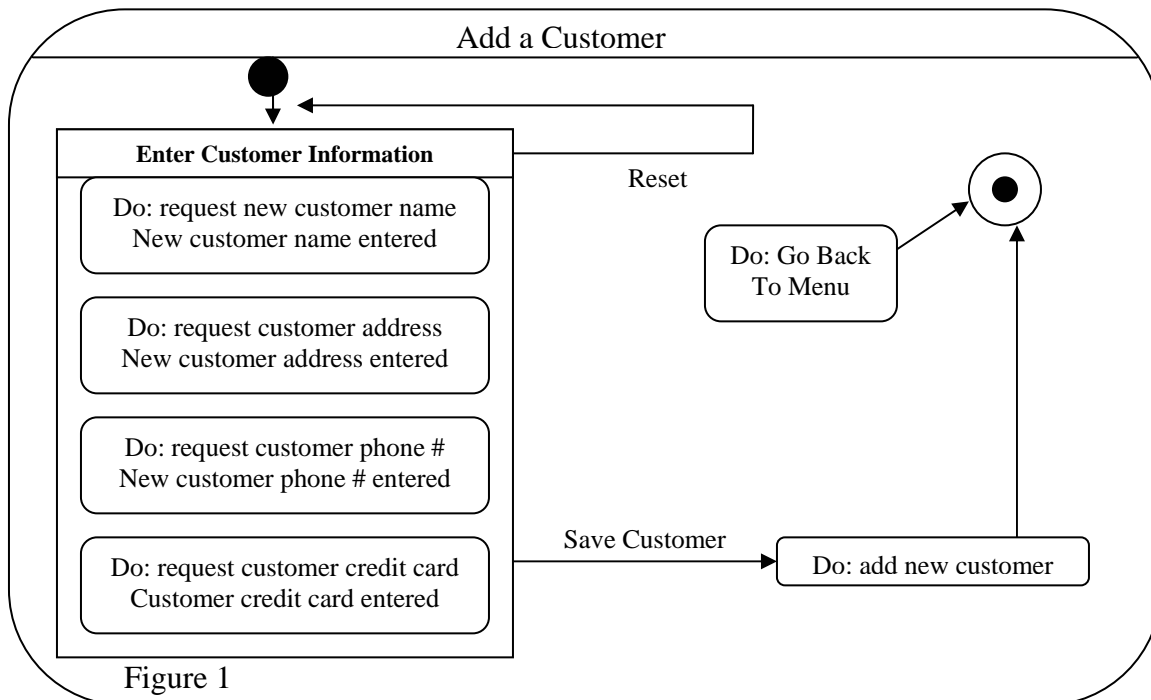
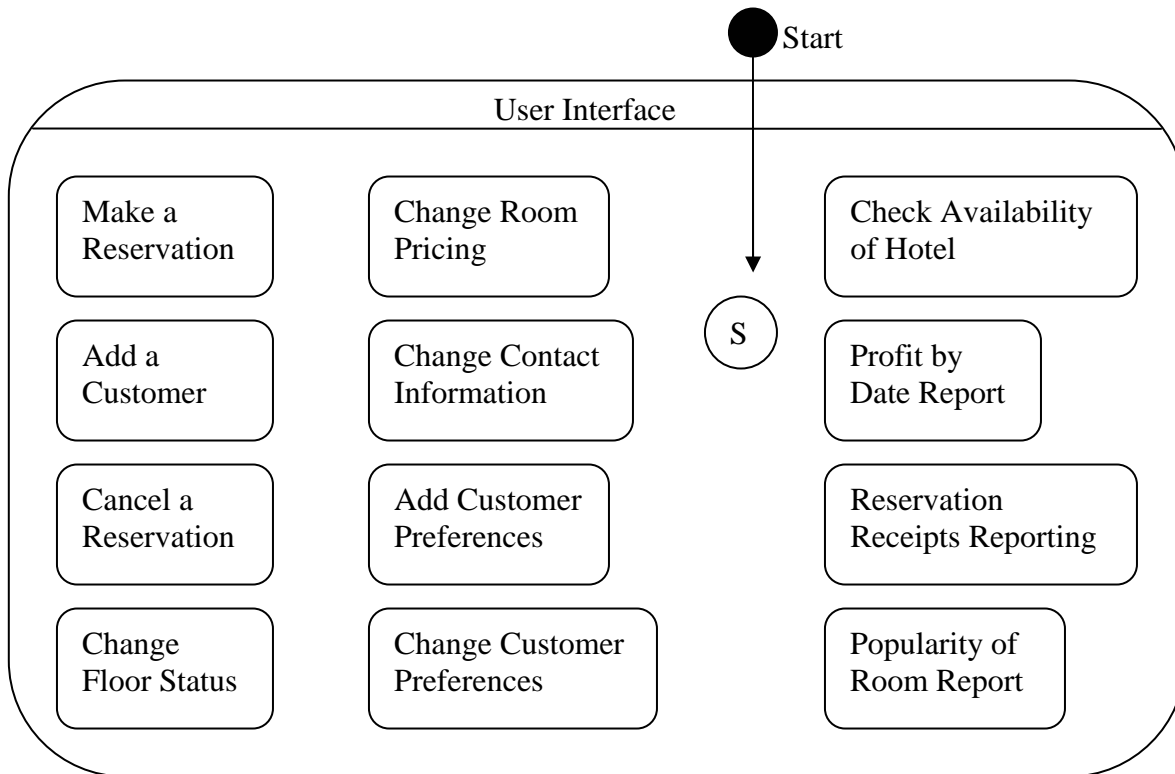


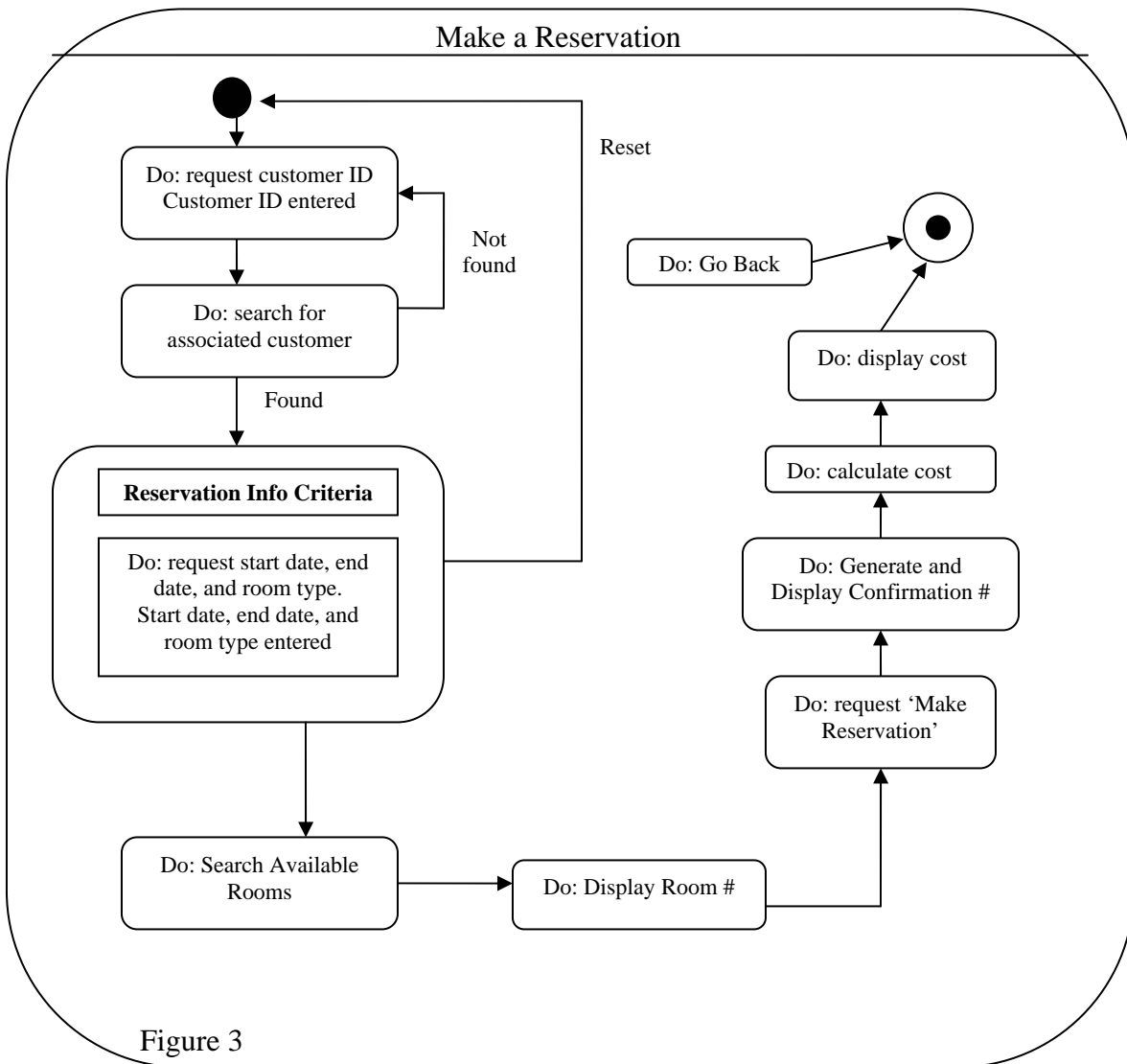
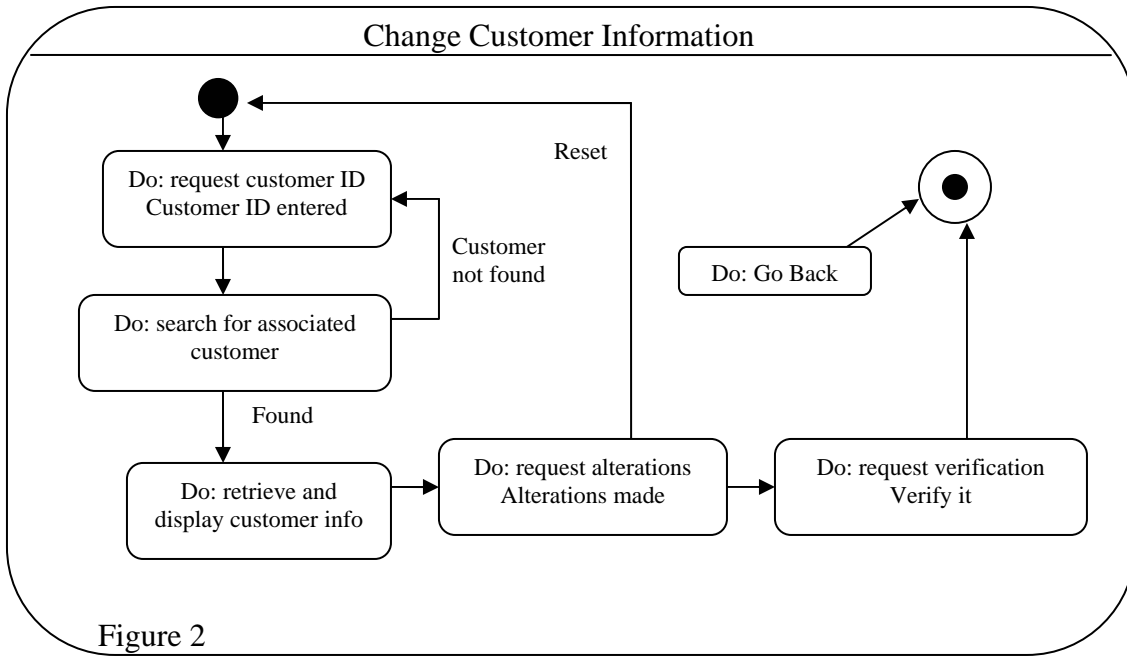
**Figure #4 Popularity of Rooms Report**



## State Transition Diagrams

The dynamic model is shown in twelve state transition diagrams for the highest user of our database, the administrator. The hotel guest and employee would have the similar choices, but the administrator has all possible choices for the User Interface. The selection state is represented with an S. The hotel guest would have access to Figure 2, & 7 – 9 and the employee would have access to Figure 1 – 4, 7 – 9, & 11. After choosing a selection S, it would move to the corresponding state diagram.





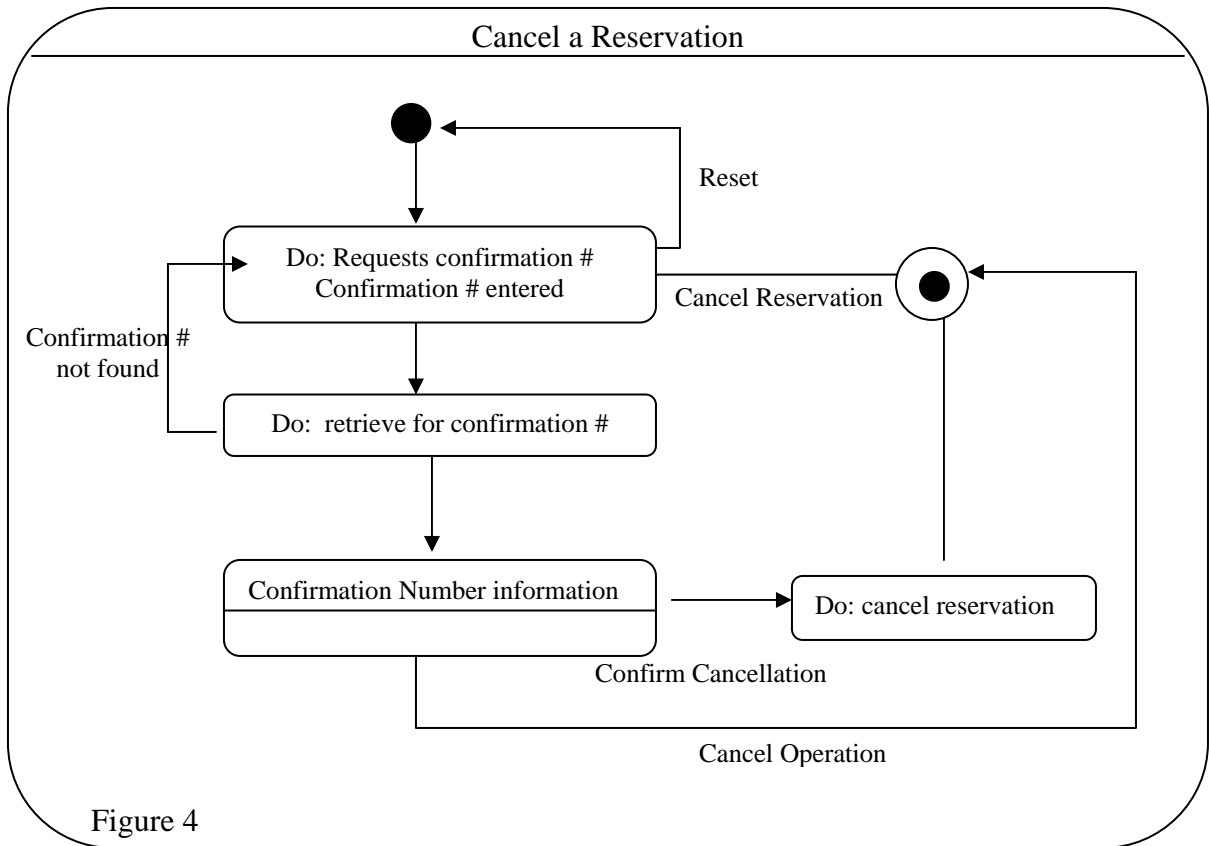


Figure 4

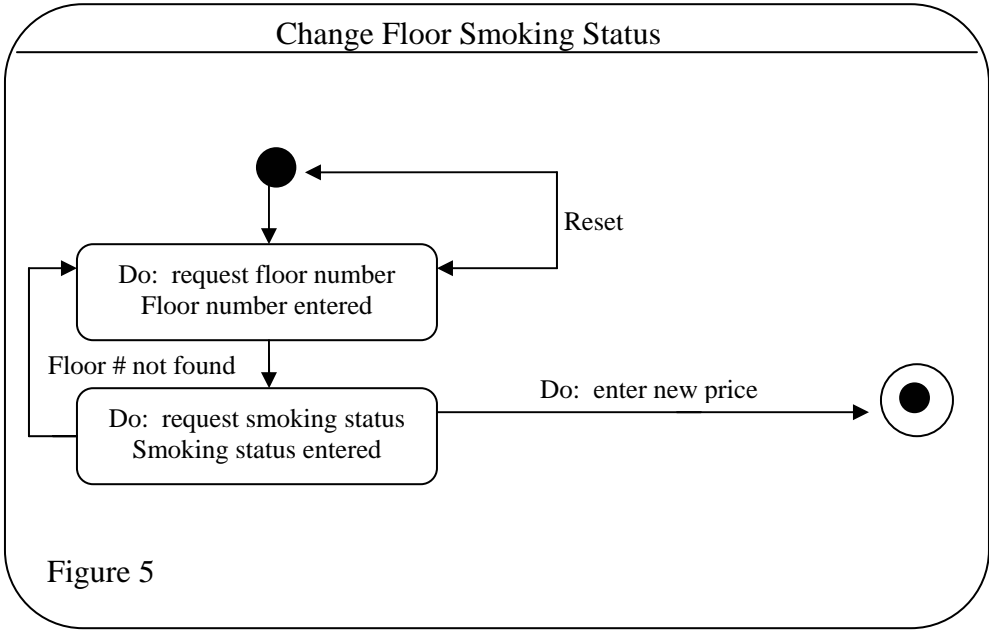
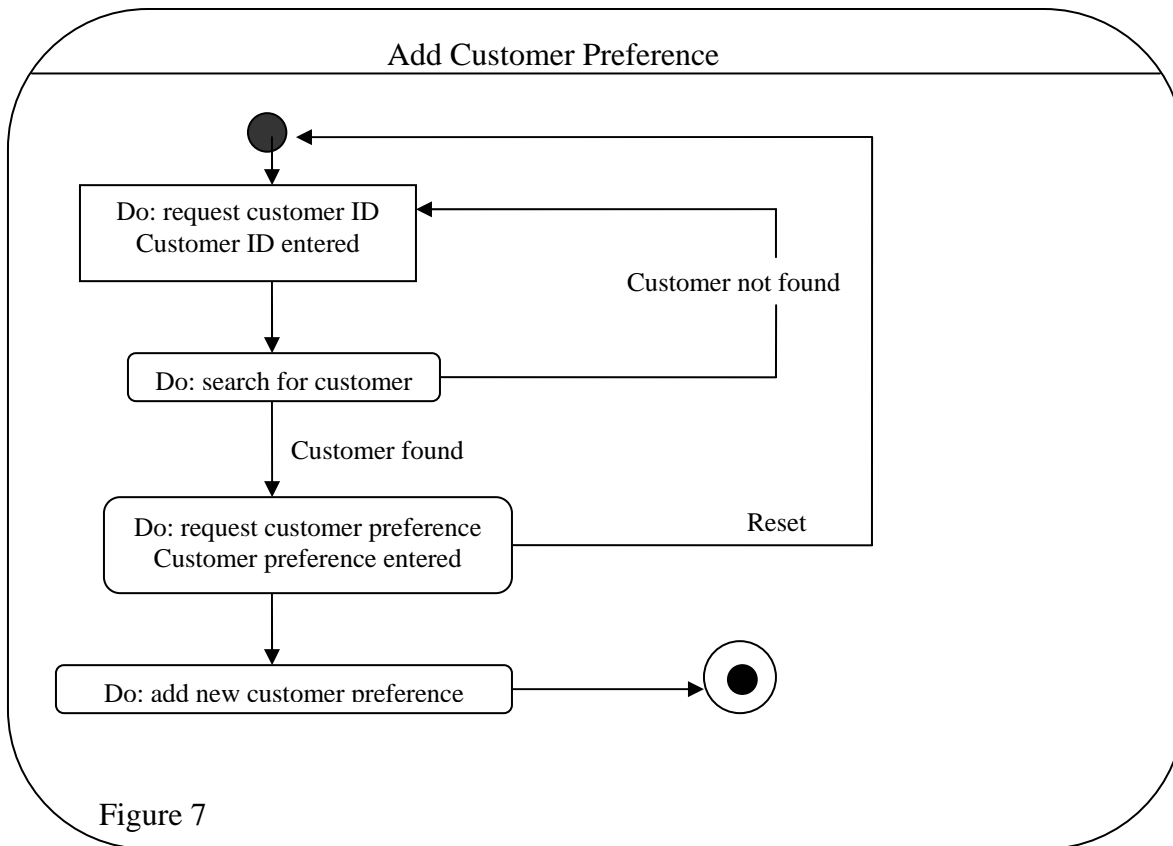
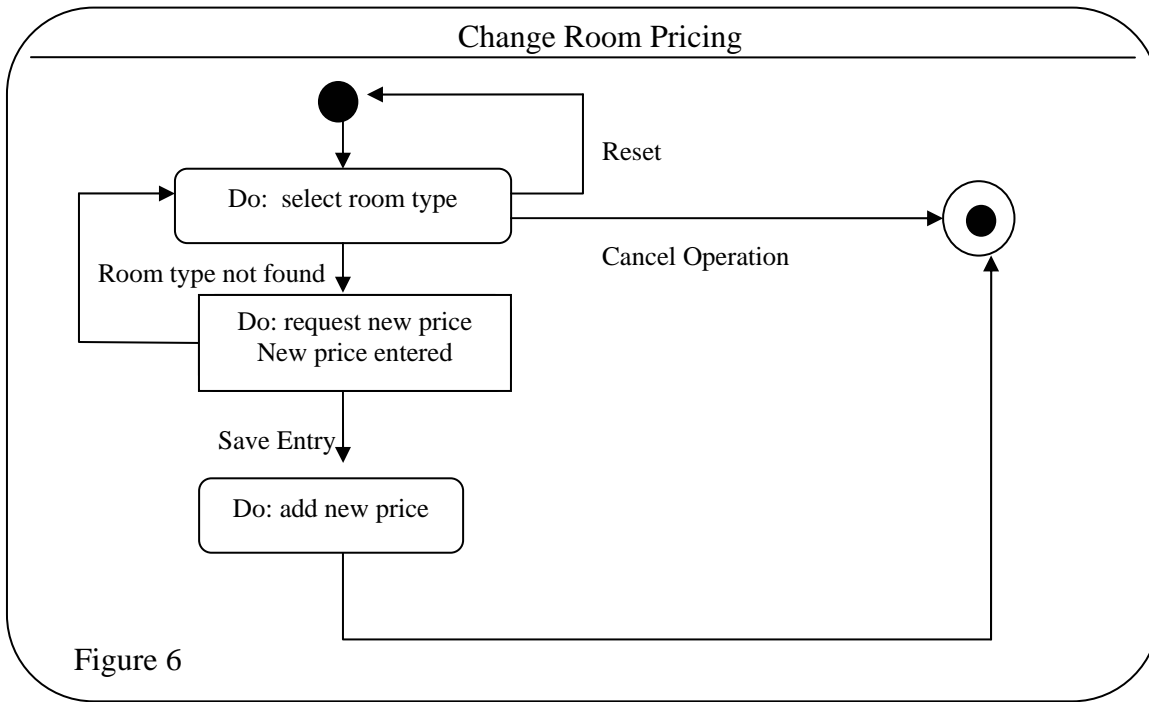


Figure 5



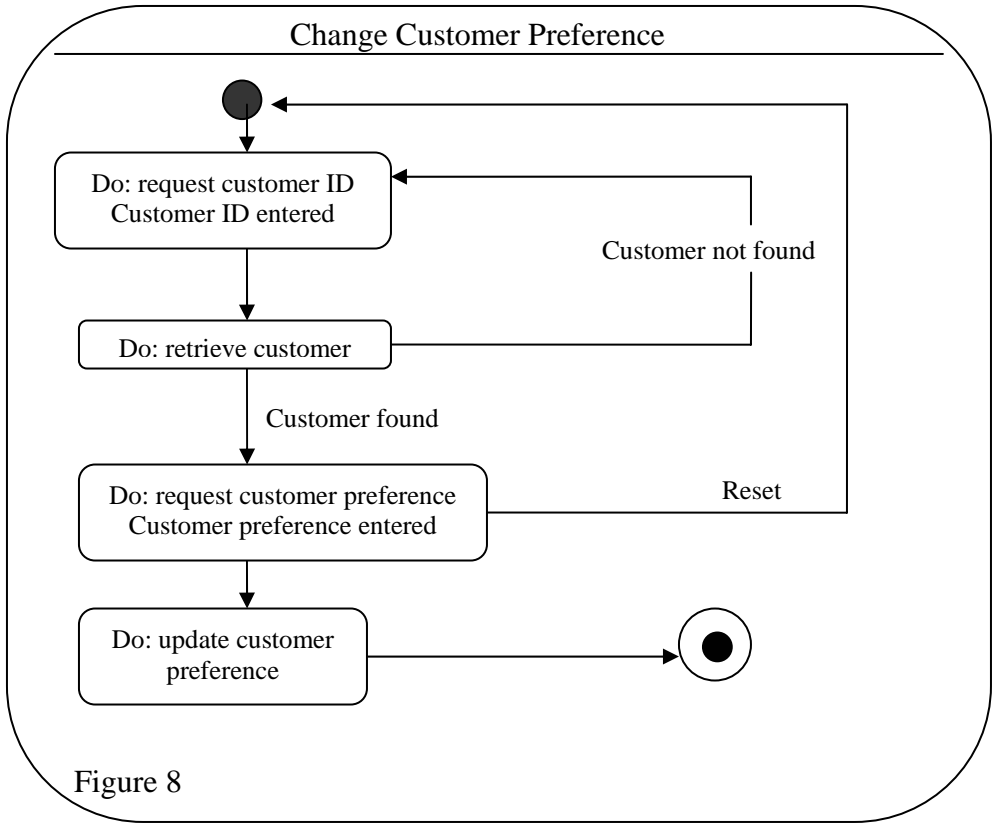


Figure 8

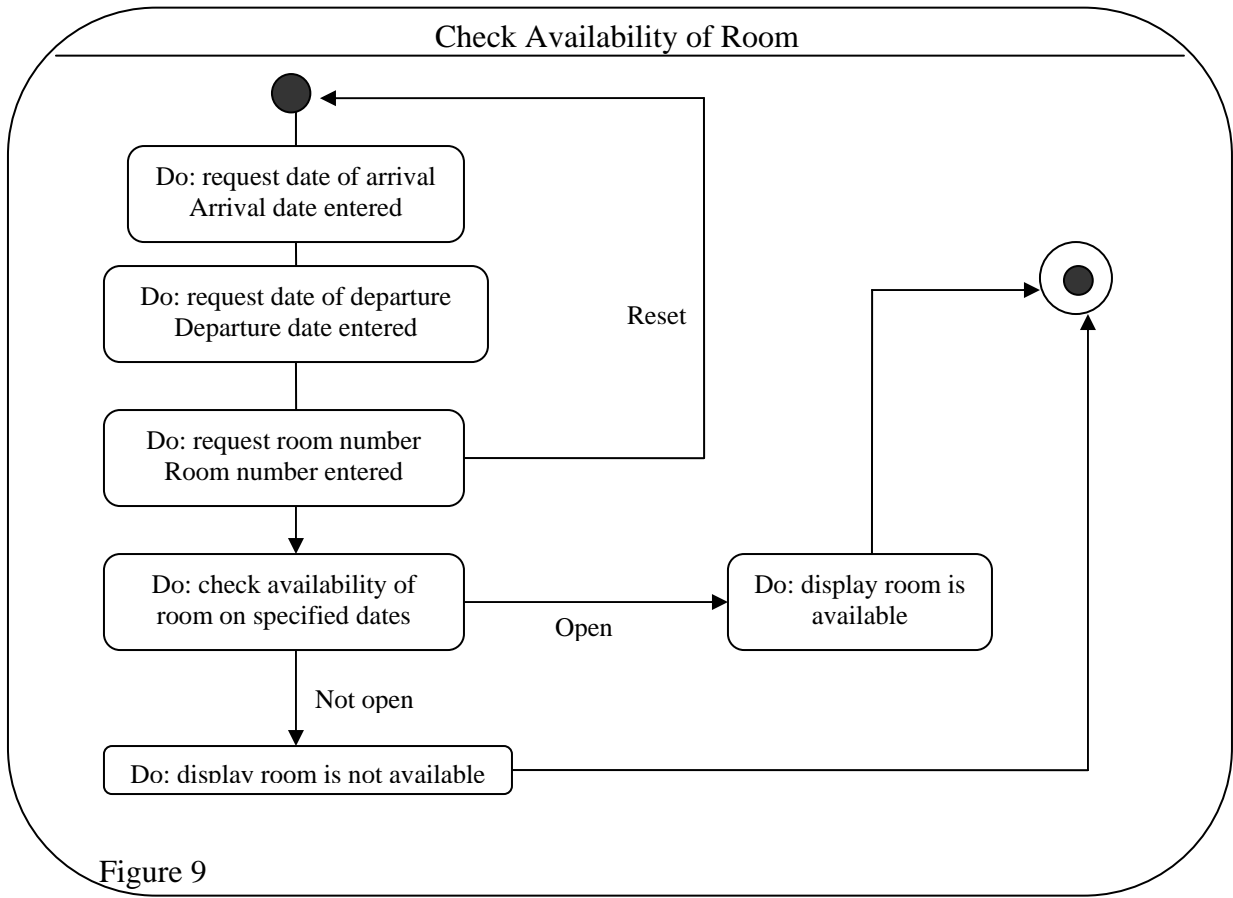


Figure 9

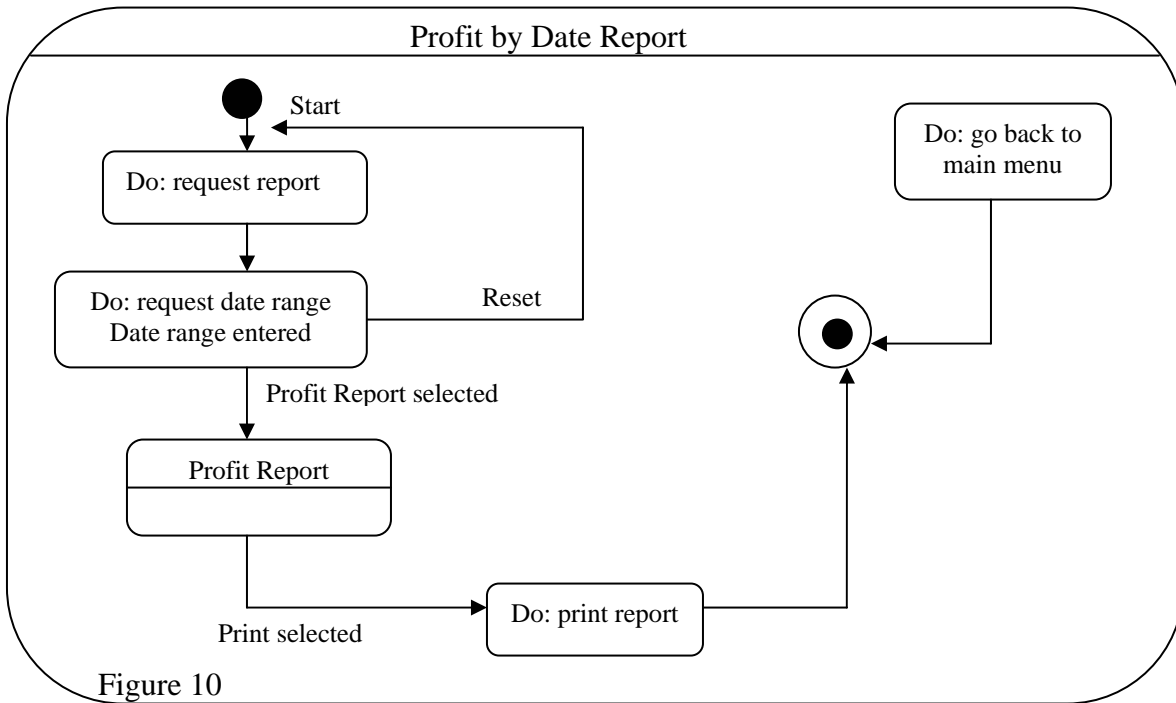


Figure 10

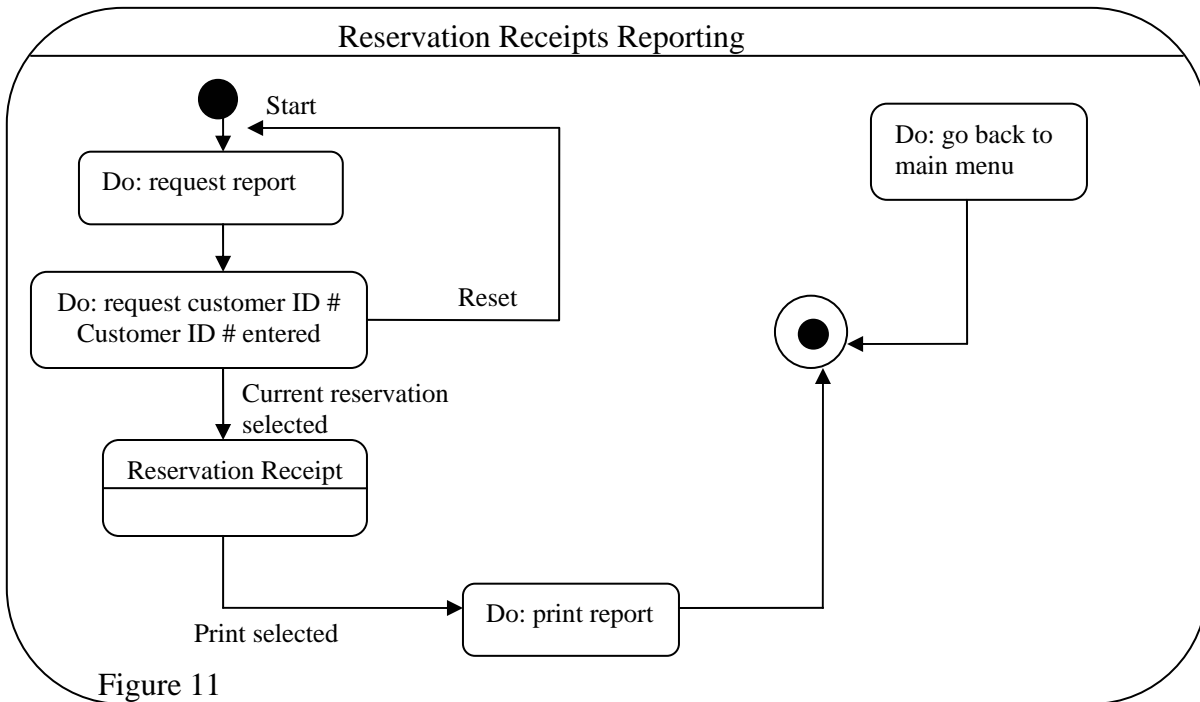


Figure 11

