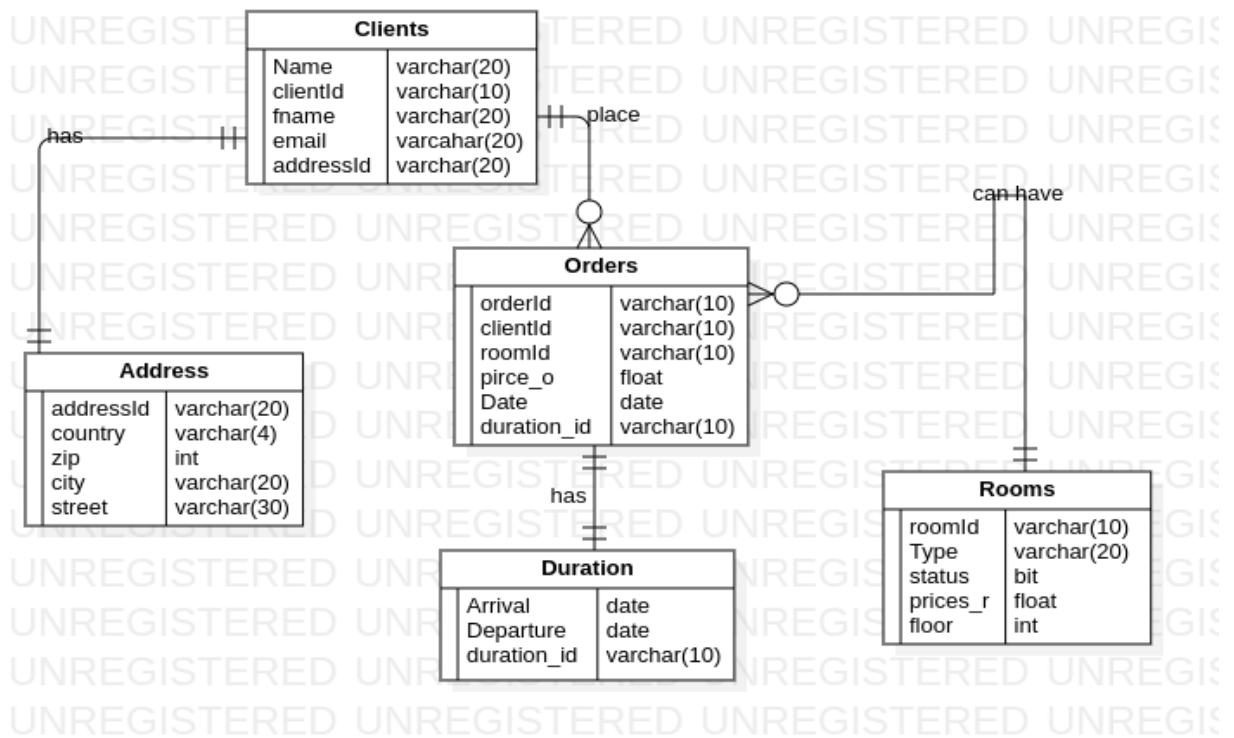


# Hotel Management System

1. Hotel Management System .....	3
1.1. Database Planning .....	3
1.1.1 Mission Statement .....	3
1.1.2 Mission Objective of Database .....	3
1.1.3 CONCEPTUAL DESIGN .....	5
1.1.3.1 Identify entity types .....	5
1.1.3.2 Identify relationship types .....	5
1.1.3.3 Identifying and associating attributes .....	5
1.1.3.4 Attribute domains .....	5
1.1.3.5 Candidate, primary, and alternate key attributes .....	6
1.1.3.6 Model redundancy .....	6
1.1.3.7 .....	6
1.1.1.1 Sql Queries .....	7
1.1.4 Views .....	11
1.2. Task Assign to Members .....	11
1.2.1 Abdul Haseeb Khan And Khanzada Haider Ali: .....	11
1.2.2 Ashfaq Rahim And Hasssan Shah Nawaz .....	15
1.2.3 Fahad Afzal & Imad Ahmed .....	24
1.2.4 Hassan Ali Jadoon, Awais And Sardar Badar .....	30
1.2.4.1 Scope: .....	30
1.2.4.2 Development Time: .....	30
1.2.4.3 Complexity: .....	30
1.2.4.4 Mission Statement .....	30
1.2.4.5 Mission Objective of Database: .....	30
1.2.4.5.1 Badar Mission Objectives: .....	30

## Hotel Management System

1.2.4.5.2 Awais Mission Objectives .....	31
1.2.4.5.3 Hasssan Mission Objectives: .....	31
1.2.4.6 Major Views: .....	31
1.2.4.7 Conclusion:.....	32
1.2.4.8 CONCEPTUAL DESIGN.....	32
1.2.4.8.1 Identify entity types .....	32
1.2.4.8.2 Identify relationship types.....	32
1.2.4.8.3 Identifying and associating attributes .....	32
1.2.4.8.4 Attribute domains .....	33
1.2.4.8.5 Candidate, primary, and alternate key attributes.....	33
1.2.4.8.6 Model redundancy.....	34
1.2.4.8.7 ER-Digram (By Muhammad Awais & Hassan Ali Jadoon) .....	34



.....	34
1.2.4.9 Prototype .....	35
1.1.1.2 SQL QUERIES.....	36

## **1. Hotel Management System**

### **1.1. Database Planning**

We can Divide our Hotel Management System Into Following Sections.

#### **1.1.1 Mission Statement**

*“The purpose of Hotel Management System is to help out Stack-Holders in Manage them room bookings and optimize their profit. The system will keep track of the rooms and generate information related to finance, room booking, and Generate financial report.”*

#### **1.1.2 Mission Objective of Database**

Mission Objective of the database is

- To maintain (Enter, Update and Delete) data on rooms
- To maintain (Enter, Update and Delete) data on Customer
- To maintain (Enter, Update and Delete) data on Managers
- To maintain (Enter, Update and Delete) data on Customer Activities
- To maintain (Enter, Update and Delete) data on Bookings
- To maintain (Enter, Update and Delete) data on Finance
- To maintain (Enter, Update and Delete) data on Free Rooms
- To maintain (Enter, Update and Delete) data on Booked Rooms
- To maintain (Enter, Update and Delete) data on Room Cancellation
- To maintain (Enter, Update and Delete) data on Branch
- To maintain (Enter, Update and Delete) data on Employees
- To maintain (Enter, Update and Delete) data on Wages

## Hotel Management System

- To maintain (Enter, Update and Delete) data on Viewing
- To Search on rooms
- To Search on Customer
- To Search on Finance
- To Search on Branch
- To Search on Employees
- To track on Rooms
- To track on Client
- To track on Free Rooms
- To track on Booked Rooms
- To report on rooms
- To report data on Customer
- To report on Bookings
- To report on Finance
- To report on Branch
- To report on Employees

### 1.1.3 CONCEPTUAL DESIGN

#### 1.1.3.1 Identify entity types

Orders, Clients, Rooms And Time Duration, Address

#### 1.1.3.2 Identify relationship types

Orders are placed by Client

Rooms are Booked by Client

Clients place the orders

Orders has valid Duration

Client has Address

#### 1.1.3.3 Identifying and associating attributes

Orders:orderId, clientId, roomId, durationId,price\_o, date

Clients: clientId, composite(name, fName), email, addressId

Rooms : roomId, type, status, prices\_r, floor

Time Duration: durationId, arrival, departure

Address: addressId, country, zip, city, street

#### 1.1.3.4 Attribute domains

**orderId**, has domain of int with auto increment

**clientId**, has domain of int with auto increment

**roomId**, has domain of int with auto increment

**durationId**, has domain int with auto increment

**addressId**, has domain of int with auto increment

**prices\_r, price\_o**, has domain of float numbers

## Hotel Management System

**arrival, departure, date**, has domain of all possible date

**city, type, country, composite(name, fName)**, has domain of varchar(20)

**street, email**, has domain of varchar(30)

**status** has bit domain with possible values of 1 or 0

**zip, floor**, has domain of int

### 1.1.3.5 Candidate, primary, and alternate key attributes

#### Primary keys:

**orderId**, is primary key for Orders table

**clientId**, is primary key for Clients table

**roomId**, is primary key for Rooms Table

**durationId**, is primary key for Duration table

**addressId**, is primary key for Address table

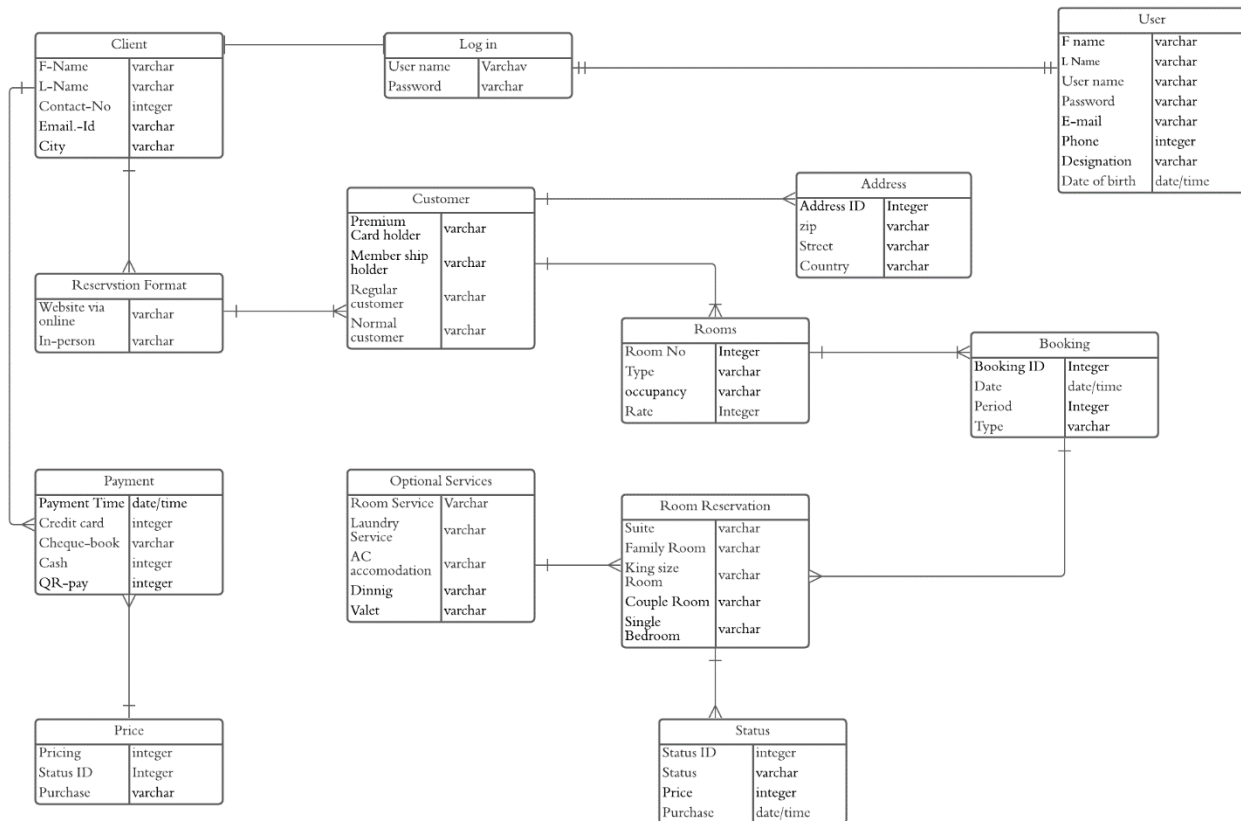
Rest of attributes are alternate keys.

### 1.1.3.6 Model redundancy

All the relations are either one to one or one to many. There is not additional redundancy has been observe.

### 1.1.3.7

# Hotel Management Svstem



## 1.1.1.1 Sql Queries

#SARDAR BADAR, MUHAMMAD AWIAS, AND HASSAN ALI JADOON

```
CREATE DATABASE hotma;
```

```
use hotma;
```

```
CREATE TABLE Clients (
    clientId int IDENTITY(1,1) PRIMARY KEY,
    name varchar(20) not Null,
    fName varchar(20) Not Null,
    email varchar(20) unique not NULL,
);
```

```
CREATE TABLE [Rooms] (
    [roomId] int not null PRIMARY KEY ,
    [type] varchar(20) not null,
    [status] bit not null,
```

# Hotel Management System

```
[price_r] float not null,  
[floor] int not null
```

) *i*

```
CREATE TABLE [Address] (
    [addressId] int not null IDENTITY(1,1) PRIMARY KEY ,
    [clientId] int unique NOT NULL FOREIGN KEY REFERENCES Clients(clientId),
    [country] varchar(4) not null,
    [zip] int not null,
    [city] varchar(20) not null,
    [street] varchar(30) not null
)
```

) ;

```
CREATE TABLE [Orders] (
    [orderId] int not null IDENTITY(1,1) PRIMARY KEY ,
    [clientId] int NOT NULL FOREIGN KEY REFERENCES Clients(clientId),
    [roomId] int NOT NULL FOREIGN KEY REFERENCES Rooms(roomId),
    [price_o] float not null,
    [date o] date not null
)
```

) ;

```
CREATE TABLE [Duration] (
    [durationId] int not null IDENTITY(1,1) PRIMARY KEY ,
    [arrival] date not null,
    [departure] date not null,
    [orderId] int unique NOT NULL FOREIGN KEY REFERENCES Duration(orderId)
```



# Hotel Management System

```
);
```

```
--INSERTION QUERIES FOR
```

```
use hotma;
```

```
INSERT into Clients (
```

```
    name,
```

```
    fName,
```

```
    email
```

```
) values
```

```
('Adil','Nawaz', 'adilna@gmail.com'),
```

```
('Adl','Nawaz', 'adilw@gmail.com'),
```

```
('Ad','awaz', 'adil@gmail.com');
```

```
INSERT into [Address] (
```

```
    [clientId] ,
```

```
    [country] ,
```

```
    [zip],
```

```
    [city] ,
```

```
    [street]
```

```
) values (3, 'pk',22340,'london' ,'london streets');
```

```
--INSERT DATA IN ROOMS
```

## Hotel Management System

```
INSERT into [Rooms] (
    [roomId],
    [type],
    [status] ,
    [price_r],
    [floor]

)Values (2, 'First Class', 0, 100.4, 2),
(1, 'First Class', 0, 100022.4, 2),
(3, 'First Class', 0, 10030.4, 34);

--Insert Order
INSERT into [Orders] (
    [clientId],
    [roomId] ,
    [price_o] ,
    [date_o]

)SELECT clientId , roomId, price_r, '2009-11-11' FROM Clients c, Rooms r where
clientId =2 AND roomId=3 AND status = 0;

--Change Status
UPDATE Rooms
SET status=1 where roomId =1;

--GET FINANCE QUERY WITH AWAI, BADAR, AND HASSAN
SELECT DISTINCT a.roomId as roomNO , b.maxPrice as highestPrice, r.price_r as
currentPrice,
b.revenu as revenu,
b.countr as booking
FROM ((Orders a
      INNER JOIN
      (
```

## Hotel Management System

```
SELECT
MAX(price_o) as maxPrice,
sum(price_o) as revenu,
COUNT(o2.roomId) as countr,
o2.roomId
FROM Orders o2
GROUP BY o2.roomId
) b ON a.roomId = b.roomId AND
a.price_o = b.maxPrice)
INNER JOIN Rooms r on r.roomId = a.roomId) WHERE a.date_o = '2009-11-11';
```

### 1.1.4 Views

There is only one view in our Systems

## 1.2.Task Assign to Members

### 1.2.1 Abdul Haseeb Khan And Khanzada Haider Ali:

Abdul Haseeb Khan and Khanzada Hadier will design and develop the Login Functionalites in Our Hotel Managemnt System by interacting with database to validate the user. This task does not include any java program or moduling. It's purely SQL related. We will be able to finish our tasks in the project as soon as we learn the queries required to do our task. Our task includes the handling of making of new Ids by the users. This includes first time making of a new id which includes unique

## Hotel Management System

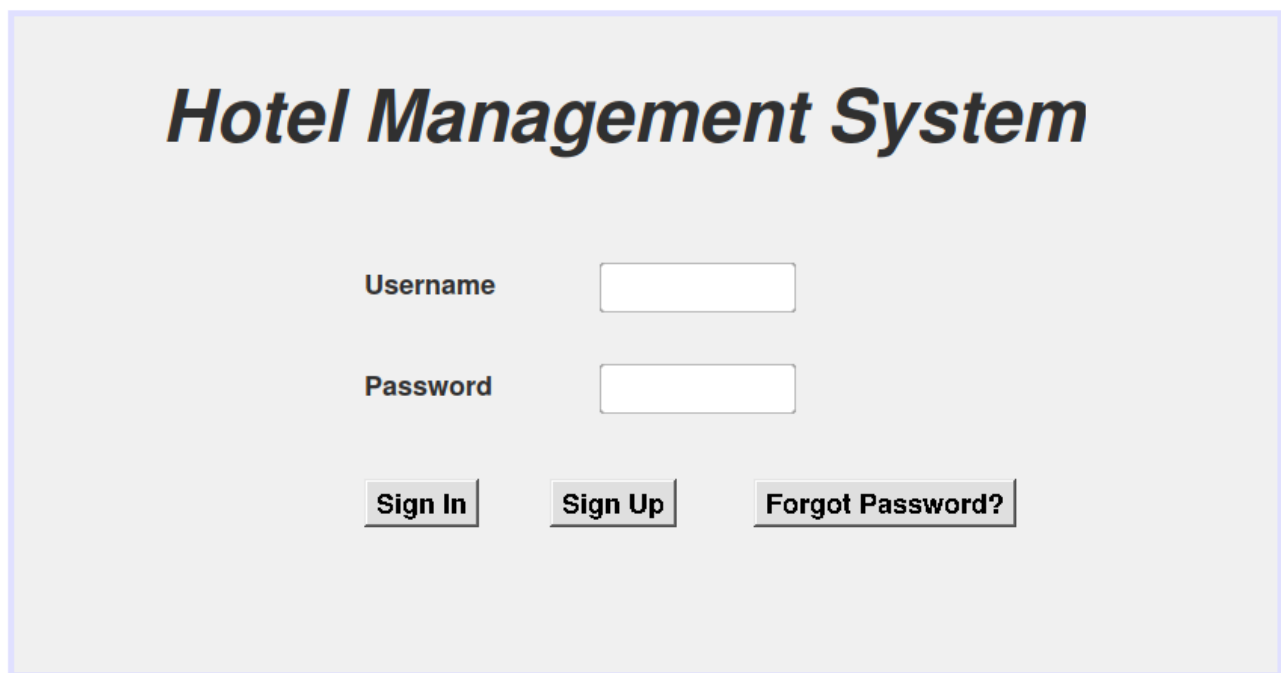
usernames as provided by the user and the password. After making of the new ids the users can log in through the data they provided. This will include cross checking of the usernames and passwords across the ids of the users. Our work will take almost a week if we know the certain queries which we will learn as the classes go by.

### **Mission Objectives:**

- To maintain (Enter, Update and Delete) data on Customers
- To maintain (Enter, Update and Delete) data on Managers
- To maintain (Enter, Update and Delete) data on Employees

### **MAJOR USER VIEW (UI PROTOTYPES)**

---



The image shows a UI prototype for the Hotel Management System. It features a light gray background with a blue border. At the top, the title "Hotel Management System" is displayed in a large, bold, italicized black font. Below the title, there are two input fields: "Username" and "Password", each with a corresponding label to its left. Underneath the password field, there are three buttons: "Sign In", "Sign Up", and "Forgot Password?". The buttons are rectangular with a light gray background and a thin black border.

## ***Make an account***

Email

example: abc@gmail.cor

Username

Choose a username

Phone Number

example: +921234567

Password

Confirm Password

Designation

Customer



**Make an Account**

**Cancel**

## ***Recover Your Account***

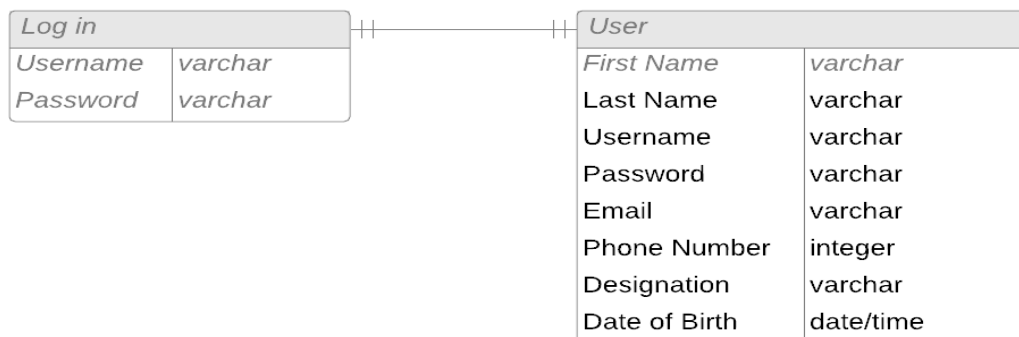
**Enter your mail**

example123@gmail.com

**Send Mail!**

**Cancel**

### **ER DIAGRAM:**



## Hotel Management System

```
CREATE DATABASE hotel;
use hotel;
CREATE TABLE [login](
    [username] varchar(20) not null,
    [password] varchar(20)not null
);

CREATE TABLE [user] (
    [firstname] varchar(20) not null,
    [lastname] varchar(20) not null,
    [username] varchar(20) not null,
    [password] varchar(20) not null,
    [email] varchar(20) not null,
    [phoneno.] integer not null,
    [designation] varchar(20) not null,
    [date_of_birth] date not null
);

--INSERTION QUERIES FOR
use hotel;
INSERT into [login](
    [username],
    [password]
) values
('shah','gagt'),
('farooq','sast'),
('karim','fffa');

INSERT into[user] (
    [firstname] ,
    [lastname] ,
    [username],
    [password],
    [email],
    [phoneno.],
    [designation],
    [date_of_birth]
) values
('shah','gee','shah','gagt','shah@gmail.com',123422,'customer','2003-03-12'),
('farooq','saleem','farooq','sast','farooq@gmail.com',123222,'manager','2003-04-22'),
('karim','khan','karim','fffa','karim@gmail.com',123456,'employer','2003-02-02');
```

### 1.2.2 Ashfaq Rahim And Hasssan Shah Nawaz

### **Mission objective modules of our project:**

Develop and design the dashboard functionalities after user will login the system.

### **SCOPE:**

We want to choose the metrics that matter. We want to keep it visual. We want to make it interactive for collaboration. We want to pull data from all sources to get the full picture and keep the dashboards up to date or refreshed. And, finally, we want to make it simple to access and easy to use.

### **TIME AND COMPLEXITY:**

The time taken for developing and designing dashboard is 2 months. Building an effective dashboard according to best practices for dashboard design is the culmination of a comprehensive process that would usually include gathering requirements, defining, and creating a data model. However, the importance of proper dashboard design should not be understated. Poorly designed dashboards could fail to convey useful information and insights and even make the data less comprehensible than it was originally.

### **MISSION STATEMENT:**

The mission of our hotel is to provide outstanding lodging facilities and services to our guests. Our hotel focuses on individual business and leisure travel, as well as travel associated with groups meetings. we emphasize high quality standards in our rooms and food and beverage divisions. We provide a fair return on investment for our owners and recognize that this cannot be done without well trained , motivated and enthusiastic employees.

### **MISSION OBJECTIVE:**

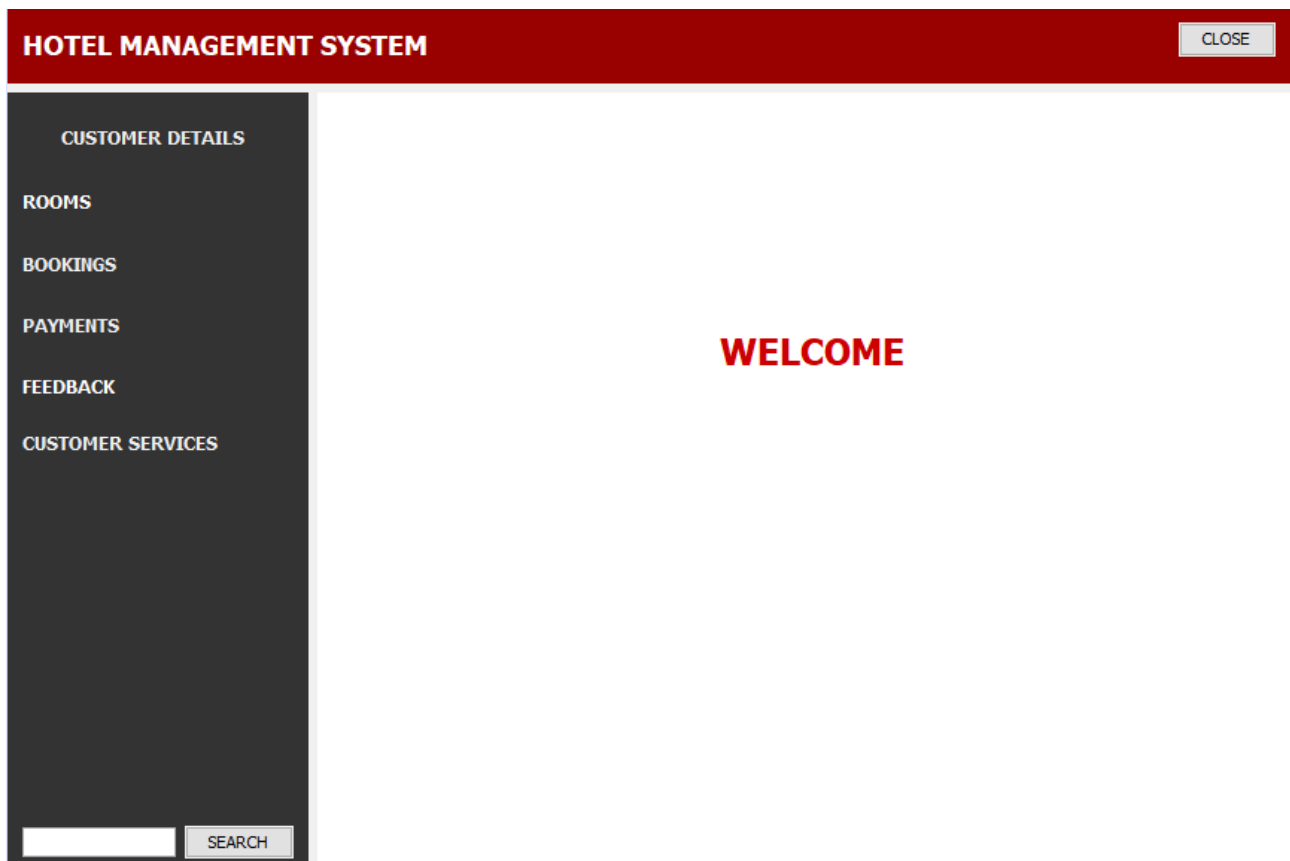
- To maintain (Enter, Update and Delete) data on Rooms
- To maintain (Enter, Update and Delete) data on Bookings
- To maintain (Enter, Update and Delete) data on Payment
- To Search on rooms
- To Search on Bookings
- To Search on Payment
- To track on Rooms



## Hotel Management System

- To track on Bookings
- To track on Payments
- To report on rooms
- To report on Bookings
- To report on Payments

### MAJOR USER VIEW (UI PROTOTYPE):



The image shows a UI prototype for a Hotel Management System. It features a dark red header bar with the text "HOTEL MANAGEMENT SYSTEM" on the left and a "CLOSE" button on the right. Below the header is a dark grey sidebar containing a list of menu items: "CUSTOMER DETAILS", "ROOMS", "BOOKINGS", "PAYMENTS", "FEEDBACK", and "CUSTOMER SERVICES". At the bottom of the sidebar is a search bar with a "SEARCH" button. The main content area is white and displays the word "WELCOME" in large, bold, red capital letters.

# Hotel Management System

**HOTEL MANAGEMENT SYSTEM**

CUSTOMER DETAILS

ROOMS

BOOKINGS

PAYMENTS

FEEDBACK

CUSTOMER SERVICES

ROOM FLOOR

ROOM TYPE

ROOM COST

**HOTEL MANAGEMENT SYSTEM**

CUSTOMER DETAILS

ROOMS

BOOKINGS

PAYMENTS

FEEDBACK

CUSTOMER SERVICES

MY BOOKINGS

CHECK-IN

CHECK-OUT

## Hotel Management System

**HOTEL MANAGEMENT SYSTEM**

CLOSE

CUSTOMER DETAILS

ROOMS

BOOKINGS

PAYMENTS

FEEDBACK

CUSTOMER SERVICES

PAYMENT TYPE

ROOM PAYMENT

TOTAL PAYMENT

### CONCEPTUAL DESIGN

#### Identify entity types

customers details, booking, rooms, payment and feedback

#### Identify relationship types

bookings are placed by customers

Rooms are booked by customers

customers place the booking

customers have done payment

customers have feedback

#### Identifying and associating attributes

Customers:customerid,name,mobile,email,age,gender

Booking:bookingid,date,period,type

Rooms:room\_no.type,occupancy,fee

Payment:bill\_no.,paymentid,paymentdate,paymentmode

## Hotel Management System

Feedback:feedbackid,yes,no,date

### Attribute domains

**Customerid** has domain of int with auto increment

**Name** has domain of varchar

**Mobile** has domain of int

**Email** has domain of varchar

**Age** has domain of int

**gender** has domain of varchar

**bookingid** has domain of int with auto increment

**date** has domain of date/time

**period** has domain of int

**type** has domain of int varchar

**room\_no.** has domain of int

**type** has domain of varhar

**occupancy** has domain of varchar

**fee** has domain of int

**bill\_no.** has domain of int with auto increment

**paymentid** has domain of int with auto increment

**paymentdate** has domain of date/time

**paymentmode** has domain of varchar

**feedbackid** has domain of int with auto increment

**yes** has domain of varchar

**no** has domain of varchar

**date** has domain of date/time

## Hotel Management System

### **Candidate, primary, and alternate key attributes**

#### **Primary keys:**

**customerid** is primary key for Orders table

**room\_no.** is primary key for Clients table

**feedbackid** is primary key for Rooms Table

**bill\_no.** is primary key for Duration table

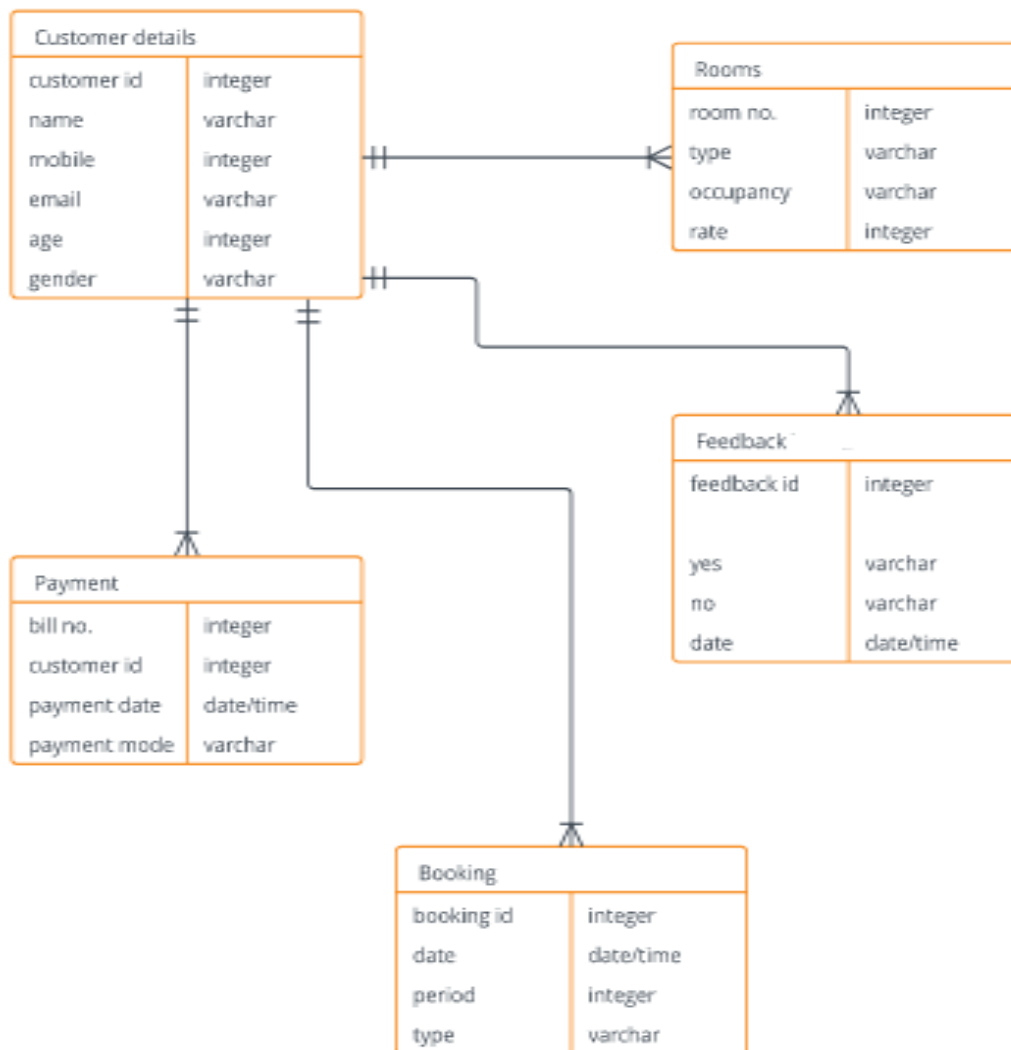
Rest of attributes are alternate keys.

#### **Model redundancy**

We have change data type of the PK so it will be easy to work with less redundancy. So All the relations are either one to one or one to many. The is not additional redundancy has been observe.

### **DASHBOARD ER DIAMGRAM:**

## Hotel Management System



## SQL QUERIES

```
CREATE DATABASE hotel;
use hotel;
CREATE TABLE coustomersdetails(
  customerId int IDENTITY(1,1) PRIMARY KEY,
  name varchar(20) not Null,
  mobile int not null,
  email varchar(20) unique not NULL,
  age int not null,
  gender varchar(20), not null
);

CREATE TABLE [Rooms] (
  [room_no.] int not null PRIMARY KEY ,
  [type] varchar(20) not null,
  [occupany] varchar not null,
  [fee] integer not null,
);
```

## Hotel Management System

```
CREATE TABLE [feedback] (  
    [feedbackId] int not null IDENTITY(1,1) PRIMARY KEY ,  
    [date] date/time NOT NULL,  
    [yes] varchar(20),  
    [no] varchar(20)
```

```
);
```

```
CREATE TABLE [booking] (  
    [bookingId] int not null IDENTITY(1,1) PRIMARY KEY ,  
    [period] int NOT NULL,  
    [type] varchar(20) not null,  
    [date] date/time not null
```

```
);
```

```
CREATE TABLE [payment] (  
    [bill_no.] int not null IDENTITY(1,1) PRIMARY KEY ,  
    [paymentid] date not null,  
    [paymentmode] date not null,  
    [paymentdate] int unique NOT NULL
```

```
);
```

```
--INSERTION QUERIES FOR
```

```
use hotel;
```

```
INSERT into customersdetails (  
    name,  
    mobile,  
    email,  
    age,  
    gender  
) values  
( 'shah',12663822, 'shah@gmail.com',21,'male'),  
( 'farooq',12223822, 'farooq@gmail.com',22,'male'),  
( 'karim',12553822, 'karim@gmail.com',23,'male');
```

```
INSERT into[payment] (  
    [bill_no.] ,  
    [paymentid] ,  
    [paymentdate],  
    [paymentmode]  
) values  
( 'gfg128', '2020-2-2','credit card'),  
( 'gfg123', '2020-3-3','credit card'),  
( 'gfg125', '2020-4-4','credit card');
```

```
INSERT into[Rooms] (  
    [room_no.],  
    [type],  
    [occupany] ,
```

## Hotel Management System

```
[fee]

)Values
(212, 'First Class', 'first floor', 10453),
(121, 'First Class', 'third floor', 104343),
(312, 'First Class', 'second floor', 1003443);

INSERT into [booking] (
    [bookingId],
    [date] ,
    [period] ,
    [type]
) value

('2020-2-2', 22, 'first class'),
('2020-3-3', 11, 'first class'),
('2020-4-4', 4, 'first class');

INSERT into [feedback] (
    [feedbackId],
    [yes],
    [no],
    [date]
) value
('yes', 'no', '2020-2-2'),
('yes', 'no', '2020-3-3'),
('yes', 'no', '2020-4-4');

SELECT cutomerId , room_no., '2020-4-4' FROM customersdetails, Rooms where customerId = 3
AND room_no.= 1;

--Change Status
UPDATE Rooms
SET date='2020-5-5' where room_no. = 3;
```

### 1.2.3 Fahad Afzal & Imad Ahmed

#### Task:

Imad and Fahad must design and develop the room status and selection that will include available rooms, new client's insertion part, available and booked rooms and the price of rooms and client information related part.

## Hotel Management System

#### Module:



## Hotel Management System

Clients Residential module.

### **Scope:**

We will create client`s residential system. This module will help the client to make his/her choice of reservation easy. It will provide the client with the necessary information about suite and rooms which he/she needs to know.

### **Development Time:**

This module will take about three (1) and a half month (1/2) to complete.

### **Mission Statement:**

The purpose of Hotel Management System is to help stack holders in manage them room bookings and optimize their profit. The system will keep track of the rooms and generate information related to finance, room bookings and generate financial report.

### **Mission Objectives:**

- To maintain (Enter, Update and Delete) data on rooms.
- To maintain (Enter, Update and Delete) data on Customer activities.
- To maintain (Enter, Update and Delete) data on Bookings
- To maintain (Enter, Update and Delete) data on Free Rooms
- To maintain (Enter, Update and Delete) data on Booked Rooms
- To maintain (Enter, Update and Delete) data on Room Cancellation
- To Search on rooms
- To Search on Customer
- To track on Rooms
- To track on Client

## Hotel Management System

- To track on Free Rooms
- To track on Booked Rooms
- To report on rooms
- To report on Bookings

### **Major User Views (UI Prototypes):**

#### **SCREEN # 01**

The image shows a UI prototype for a 'Client's Information' form. The form is set against a yellow background. At the top left, there is a navigation bar with 'Home' and 'Login Page' links. The title 'Client's Information' is in a box at the top right. The main section is titled 'Enter Your Personal Data' in a box. Below this, there are five rows of input fields: 'First Name', 'Last Name', 'Contact num.', 'Email ID.', and 'City'. Each label is in a small box to the left of a larger text input field. At the bottom right, there is a 'NEXT' button.

Home Login Page

Client's Information

Enter Your Personal Data

First Name

Last Name

Contact num.

Email ID.

City

NEXT

## Hotel Management System

### SCREEN # 02

Home Menu

Available Rooms

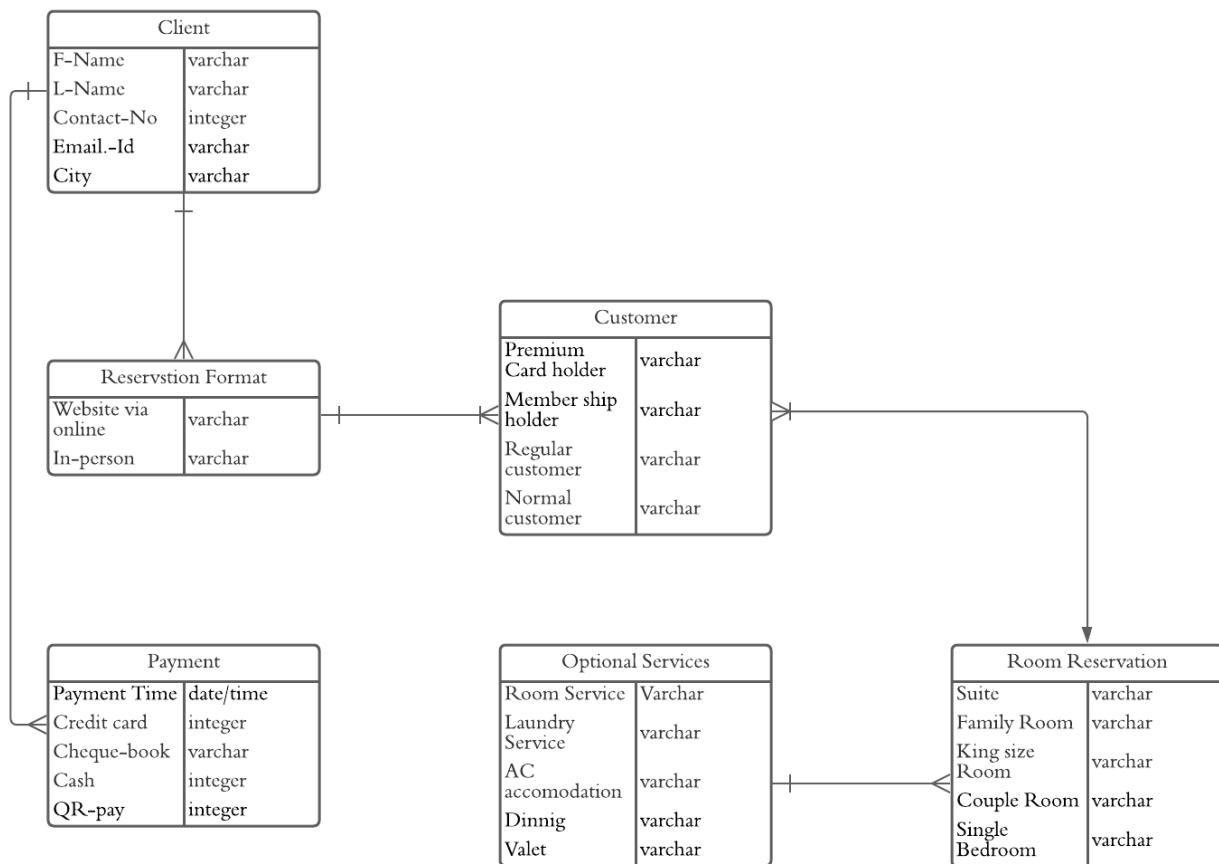
Room Type	Quantity	Reserved	Available
<input type="checkbox"/> Family Room	50	22	28
<input type="checkbox"/> Suite	50	25	25
<input type="checkbox"/> Single Bedroom	50	41	9
<input type="checkbox"/> Double Bedroom	50	17	33
<input type="checkbox"/> Kingsize Bedroom	50	35	15

Okay

<https://drive.google.com/drive/folders/1cusMrL4aN9Ka1rHQJHrPJGaGrRKY1nZS?usp=sharing>

### ER-Diagram:

# Hotel Management System



## DATABASE QUERIES (FA):

```
create database rooms;
```

```
CREATE TABLE [customer_detail](
    [firstname] varchar(20) not null,
    [lastname] varchar(20)not null,
    [email] varchar(20) not null,
    [city] varchar(20) not null,
    [customer_id] varchar(20) not null,
);
```

```
CREATE TABLE [reservation detail] (
    [from_date] varchar(20) not null,
    [to_date] varchar(20) not null,
    [room_id] varchar(20) not null,
);
```

```
CREATE TABLE [room_type] (
    [room_singlebed] varchar(20) not null,
    [room_doublebed] varchar(20) not null,
    [room_suite] varchar(20) not null,
    [room_kingsize] varchar(20) not null,
    [room_familyroom] varchar(20) not null,
);
```

# Hotel Management System

```
--INSERTION QUERIES FOR

INSERT into customer_detail](
    [firstname],
    [lastname],
    [email],
    [city],
    [customer_id]
)

INSERT into [reservation detail] (
    [from_date],
    [to_date],
    [room_id]
)

INSERT into [room_type] (
    [room_singlebed],
    [room_doublebed],
    [room_suite],
    [room_kingsize],
    [room_familyroom]
)
```

## **DATABASE QUERIES (IA):**

create database HMS ;

use RRM;

create table rooms(id int(10) UNSIGNED NOT NULL PRIMARY KEY AUTO\_INCREMENT,

familyrooms int(10) NOT NULL,

suite int(10) NOT NULL,

singleBedRoom int(10) NOT NULL,

doubleBedRoom int (10) NOT NULL,

kingsizeRoom int(10) NOT NULL);

### **Insertion Quaries:**

create table personalData(id int(10) UNSIGNED NOT NULL PRIMARY KEY AUTO\_INCREMENT,

firstName varchar(100) not null,

lastName varchar(100) not null,

phNumber varchar(20) not null unique, email varchar(100) not null unique, city varchar(50) not null);

### **1.2.4 Hassan Ali Jadoon, Awais And Sardar Badar**

#### **1.2.4.1 Scope:**

We will create financial module of the app. This module will generate weekly, monthly and annual Financial report of the hotel. It will also calculate the revenue generated by the rooms. In the end we will also integrate all modules of hotel management system.

#### **1.2.4.2 Development Time:**

This module requires about 1 months to be completed

#### **1.2.4.3 Complexity:**

We will use Swing Framework of Java as assigned by the instructor. Beside that we have to learn Object Oriented concepts of Java. The main issue with the swing framework that it does not have wide community thus we will have to face many issues during the learning phase, also it does not have extensive tutorials.

#### **1.2.4.4 Mission Statement**

*“The system will keep track of the rooms and generate information related to finance, Generate financial report.”*

#### **1.2.4.5 Mission Objective of Database:**

Mission Objective of the database is

##### **1.2.4.5.1 Badar Mission Objectives:**

**“By Sardar Badar Saghir”**

- To maintain (Enter, Update and Delete) data on Free Rooms

## Hotel Management System

- To maintain (Enter, Update and Delete) data on Booked Rooms
- To maintain (Enter, Update and Delete) data on Room Cancellation
- To report on Annual Finance

### **1.2.4.5.2      Awais Mission Objectives**

#### **“By Muhammad Awais”**

- To maintain (Enter, Update and Delete) data on Customer
- To maintain (Enter, Update and Delete) data on Orders
- To maintain (Enter, Update and Delete) data on Wages
- To report on Annual Finance

### **1.2.4.5.3      Hasssan Mission Objectives:**

#### **By Hassan Ali Jadoon.**

- To maintain (Enter, Update and Delete) data on rooms
- To track on Rooms
- To track on Free Rooms
- To report on Annual Finance

### **1.2.4.6      Major Views:**

For the sake of simplicity, we are dealing with one major view.

### **1.2.4.7 Conclusion:**

Although we deal with data financial module of app but it will take about 1 months due to wide range of complexity we will face learning framework like swing and OOP concepts as well

### **1.2.4.8 CONCEPTUAL DESIGN**

#### **1.2.4.8.1 Identify entity types**

**“By Sardar Badar Saghir”**

Orders, Clients, Rooms and Time Duration, Address

#### **1.2.4.8.2 Identify relationship types**

**“By Hassan Ali Jadoon”**

Orders are placed by Client

Rooms are Booked by Client

Clients place the orders

Orders has valid Duration

Client has Address

#### **1.2.4.8.3 Identifying and associating attributes**

**“By Muhammad Awais”**

Orders:orderId, clientId, roomId, durationId,price\_o, date

Clients: clientId, composite(name, fName), email, addressId

Rooms : roomId, type, status, prices\_r, floor

Time Duration: durationId, arrival, departure

Address: addressId, country, zip, city, street



#### 1.2.4.8.4 Attribute domains

**“By Sardar Badar Saghir”**

**orderId**, has domain of int with auto increment

**clientId**, has domain of int with auto increment

**roomId**, has domain of int with auto increment

**durationId**, has domain of int with auto increment

**addressId**, has domain of int with auto increment

**prices\_r, price\_o**, has domain of float numbers

**arrival, departure, date**, has domain of all possible date

**city, type, country, composite(name, fName)**, has domain of varchar(20)

**street, email**, has domain of varchar(30)

**status** has bit domain with possible values of 1 or 0

**zip, floor**, has domain of int

#### 1.2.4.8.5 Candidate, primary, and alternate key attributes

**“By Muhammad Awais”**

**Primary keys:**

**orderId**, is primary key for Orders table

**clientId**, is primary key for Clients table

**roomId**, is primary key for Rooms Table

**durationId**, is primary key for Duration table

**addressId**, is primary key for Address table

## Hotel Management System

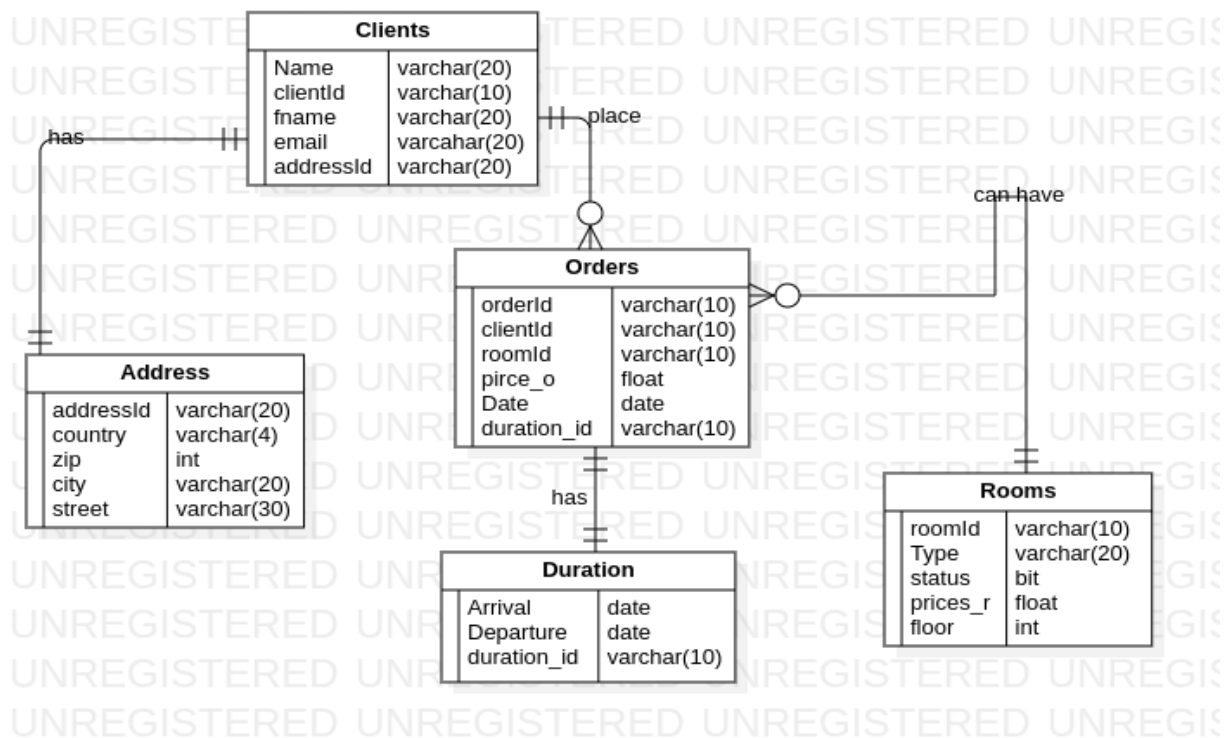
Rest of attributes are alternate keys.

### 1.2.4.8.6 Model redundancy

“By Hassan Ali Jadoon”

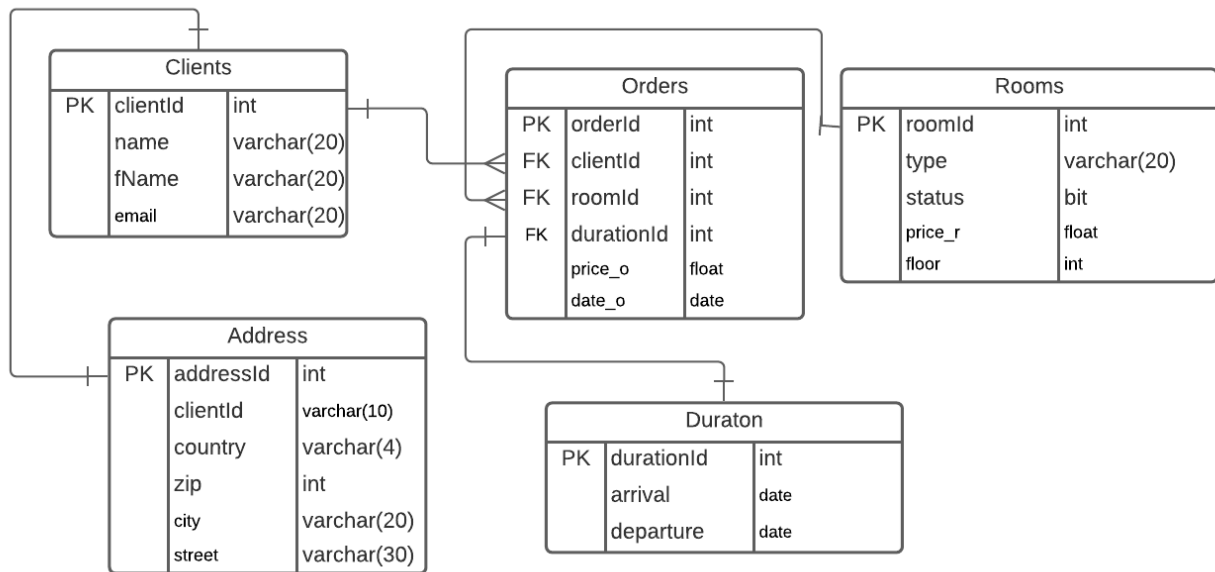
We have change data type of the PK so it will be easy to work with less redundancy. So All the relations are either one to one or one to many. The is not additional redundancy has been observe.

### 1.2.4.8.7 ER-Digram (By Muhammad Awais & Hassan Ali Jadoon)

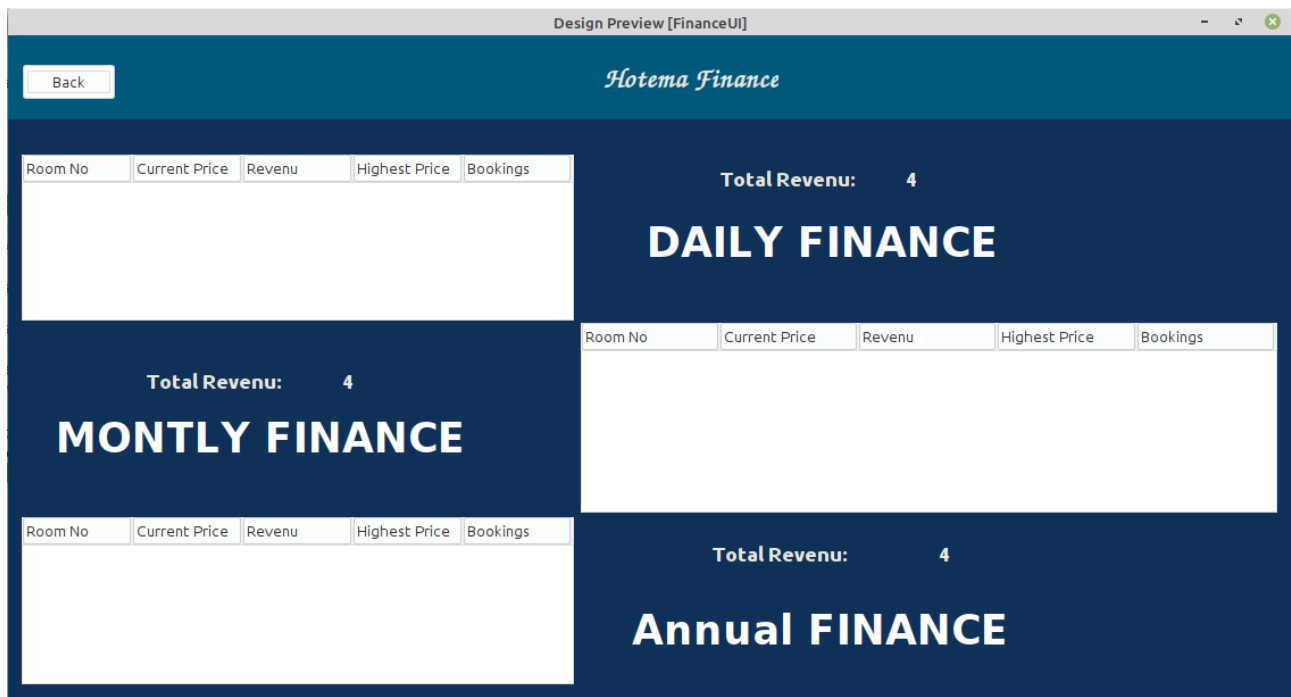


### FIX ANOMALIES IN ER DIGRAM (By Sardar Badar Saghir)

# Hotel Management System



## 1.2.4.9 Prototype



## Hotel Management System

### 1.1.1.2 SQL QUERIES

- Create Queries are made by Muhammad Awais
- Sardar Badar created select queries
- Hassan Ali Jadoon created insert queries

```
use master;
```

```
DROP Database hotma;
```

```
CREATE DATABASE hotma;
```

```
use hotma;
```

```
CREATE TABLE Clients (  
    clientId int IDENTITY(1,1) PRIMARY KEY,  
    name varchar(20) not Null,  
    fName varchar(20) Not Null,  
    email varchar(20) unique not NULL,  
);
```

```
CREATE TABLE [Rooms] (  
    [roomId] int not null    PRIMARY KEY ,  
    [type] varchar(20) not null,  
    [status] bit not null,  
    [price_r] float not null,  
    [floor] int not null  
);
```

```
CREATE TABLE [Address] (  

```

## Hotel Management System

```
[addressId] int not null IDENTITY(1,1)    PRIMARY KEY ,  
[clientId] int unique NOT NULL FOREIGN KEY REFERENCES Clients(clientId),  
[country] varchar(4) not null,  
[zip] int not null,  
[city] varchar(20) not null,  
[street] varchar(30) not null
```

```
);
```

```
CREATE TABLE [Orders] (  
    [orderId] int not null IDENTITY(1,1)    PRIMARY KEY ,  
    [clientId] int NOT NULL FOREIGN KEY REFERENCES  Clients(clientId),  
    [roomId] int  NOT NULL FOREIGN KEY REFERENCES Rooms(roomId),  
    [price_o] float not null,  
    [date_o] date not null
```

```
);
```

```
CREATE TABLE [Duration] (  
    [durationId] int not null IDENTITY(1,1)    PRIMARY KEY ,  
    [arrival] date not null,  
    [departure] date not null,  
    [orderId] int unique NOT NULL FOREIGN KEY REFERENCES Duration(orderId)
```

```
);
```

## Hotel Management System

--INSERTION QUERIES FOR

use hotma;

INSERT into Clients (

name,

fName,

email

) values

('Adil','Nawaz', 'adilna@gmail.com'),

('Adl','Nawaz', 'adilw@gmail.com'),

('Ad','awaz', 'adil@gmail.com');

INSERT into[Address] (

[clientId] ,

[country] ,

[zip].

[city] ,

[street]

) values (3, 'pk',22340,'london' ,'london streets');

--INSERT DATA IN ROOMS

INSERT into[Rooms] (

[roomId],

[type].

[status] ,

## Hotel Management System

[price\_r],

[floor]

)Values(2,'First Class', 0, 100.4, 2),

(1,'First Class', 0, 100022.4, 2),

(3,'First Class', 0, 10030.4, 34);

--Insert Order

INSERT into [Orders] (

[clientId],

[roomId] ,

[price\_o] ,

[date\_o]

)SELECT clientId , roomId, price\_r, '2009-11-11' FROM Clients c, Rooms r where clientId =2 AND roomId=3 AND status = 0;

--Change Status

UPDATE Rooms

SET status=1 where roomId =1;

--GET FINANCE QUERY WITH BADAR

**SELECT DISTINCT** a.roomId **as** roomNO , b.maxPrice **as** highestPrice, r.price\_r **as** currentPrice,

b.revenu **as** revenu,

b.countr **as** booking

**FROM** ((Orders a

**INNER JOIN**

(

**SELECT**

**MAX**(price\_o) **as** maxPrice,

**sum**(price\_o) **as** revenu,

**COUNT**(o2.roomId) **as** countr,

## Hotel Management System

```
o2.roomId
FROM Orders o2
GROUP BY o2.roomId
) b ON a.roomId = b.roomId AND
    a.price_o = b.maxPrice)
INNER JOIN Rooms r on r.roomId = a.roomId) WHERE a.date_o = '2009-11-11';
```

Im a student