



CSE302: Database Systems (Section - 05)

[Spring2024]

Project Report

Project : Hotel Management System

Project URL

<https://apex.oracle.com/pls/apex/r/apex/workspace/home?session=110399399959413>

Submitted by:

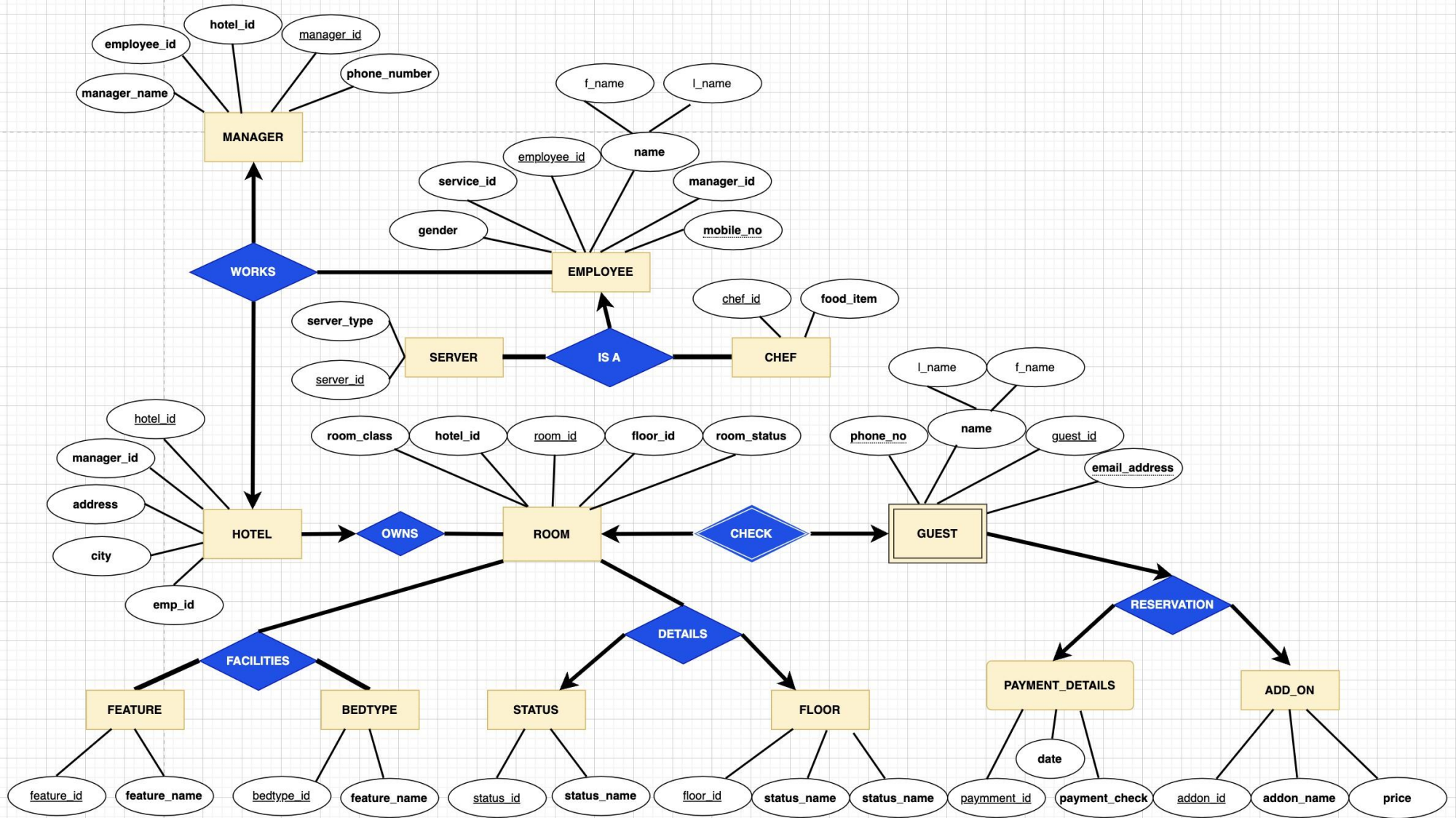
Student ID	Student Name	Contribution Percentage
2021-3-60-253	Ahmed Mustafa Amlan	40%
2022-2-60-040	Abrar Hossain Zahin	40%
2021-3-60-153	Farhana Rahman Munira	20%

Submitted to –

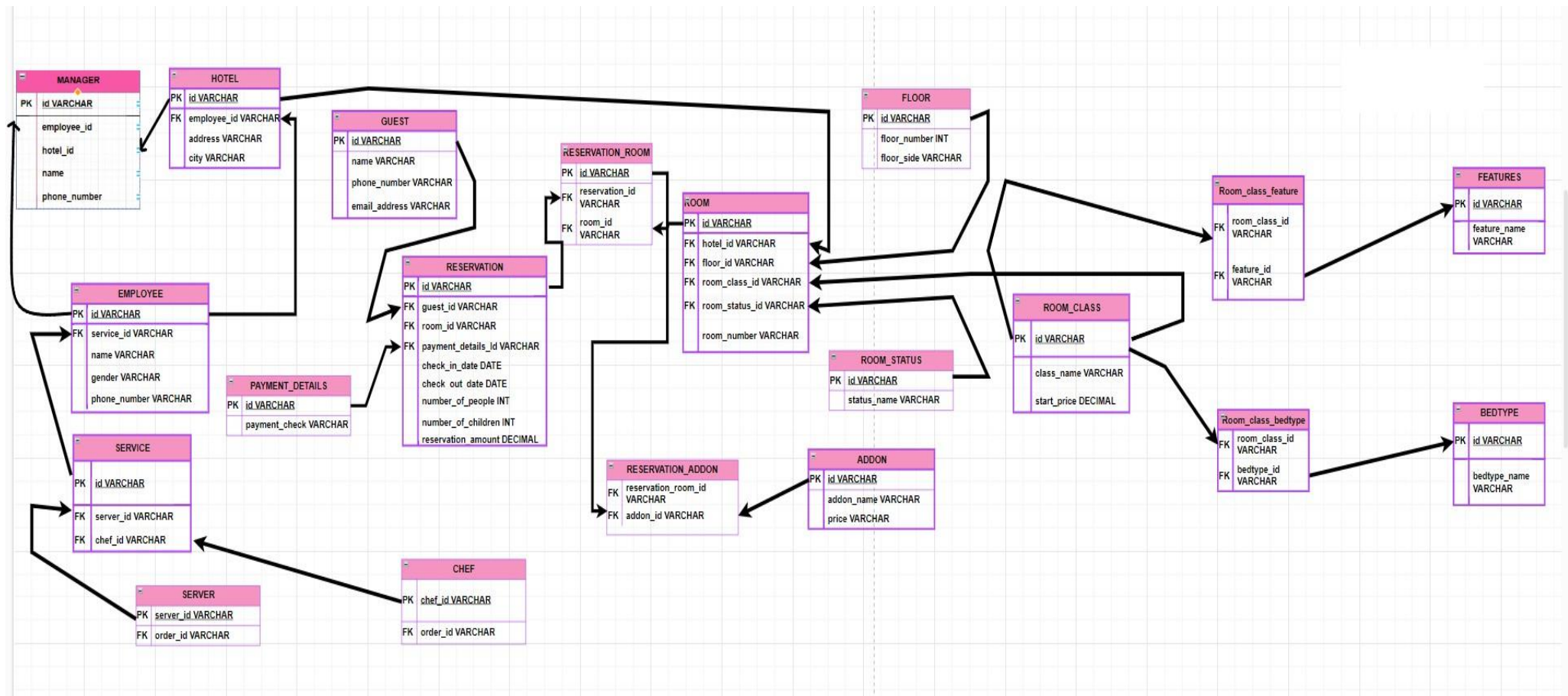
Mahmuda Rawnak Jahan
Lecturer
Department of Computer Science and Engineering

Date of Submission : 24 May, 2024

1. E-R Model of the Project



2. Schema Design of the Project :

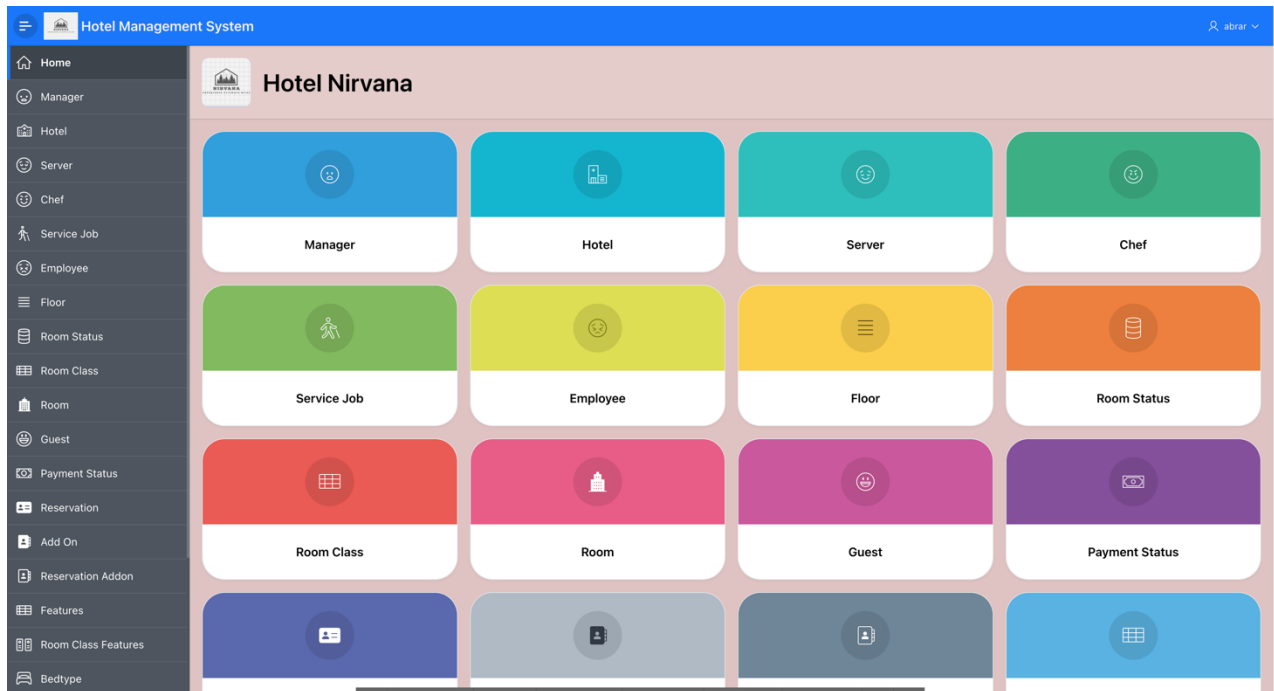


3. Implementation Checklist

Description	Remarks
Project ID	
Workspace Name	md.zahin
Workspace Email	2022-2-60-040@STD.EWUBD.EDU
Workspace Password	Hotel2024
Authentication Type	Application Custom (keep the relevant one)
Admin	Abrar abrar1234
Admin	Amlan amaln1234
Guest	Zahin zahin1234
Employee	Ohin ohin1234
Manager	Ibrahim Manager ibrahim1234
Number of Reports with Forms	40
Number of Reports based on Queries, Aggregate Queries	6
Write the most unique feature/functionality in your application or the page of your application that you are proud of. Explain briefly.	The most unique feature of this hotel management database is its comprehensive structure that captures various aspects of hotel operations, including employee management, room booking, guest information, and financial transactions. It provides a robust framework for managing a hotel's day-to-day operations and allows for efficient tracking and analysis of data. Additionally, the database's design allows for complex queries that provide valuable insights into revenue generation, reservation trends, and guest preferences. This analytical capability empowers hotel managers to make informed decisions to optimize operations, pricing strategies, and guest satisfaction.

4. Reports with Forms

Report Page Number and Name	Form Page Number and Name	Table
Page-2 2-Manager	3-Manager	Manager
Page-4 4-Hotel	5-Hotel	Hotel
Page-6 6-Server	7-Server	Server
Page-8 8-Chef	9-Chef	Chef
Page-10 10-Service Job	11-Service Job	Service Job
Page-12 12-Employee	13-Employee	Employee
Page-14 14-Floor	15-Floor	Floor
Page-16 16-Room Status	17-Room Status	Room Status
Page-18 18-Room Class	19-Room Class	Room Class
Page-20 20-Room	21-Room	Room
Page-22 22-Guest	23-Guest	Guest
Page-24 24-Payment Status	25-Payment Status	Payment Status
Page-26 26-Reservation	27-Reservation	Reservation
Page-28 28-Add on	29-Add on	Add on
Page-30 30-Reservation Addon	31-Reservation Addon	Reservation Addon
Page-32 32-Features	33-Features	Features
Page-34 34-RoomClassFratures	35-RoomClassFratures	RoomClassFratures
Page-36 36-Bedtype	37-Bedtype	Bedtype
Page-38 38-Room Class Bedtype	39-Room Class Bedtype	Room Class Bedtype
Page-41 40-User_report	41-User_report	



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Figures : 4.1



Figures : 4.2

Hotel Management System			ohin
Server			
Q	Go	Actions	Create
	Server ID	Server Type	
	sv01	Dinner	
	sv02	Breakfast	
	sv03	Breakfast	
	sv04	Lunch	
	sv05	Dinner	
	sv06	Breakfast	
	sv07	Lunch	
	sv08	Dinner	
	sv09	Breakfast	
	sv10	Lunch	
			1 - 10

Figures : 4.3

Hotel Management System			ohin
Chef			
Q	Go	Actions	Create
	Chef ID	Food Item	
	cf01	Seafood Platter	
	cf02	Waffles	
	cf03	Eggs Benedict	
	cf04	Grilled Chicken Salad	
	cf05	Steak and Potatoes	
	cf06	Pancakes	
	cf07	Sandwiches	
	cf08	Pasta	
	cf09	French Toast	
	cf10	Burgers	
			1 - 10

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Hotel Management System			ohin
Service Job			
Q	Go	Actions	Create
	Service ID	Server	Chef
	s01	Dinner	Waffles
	s02	Breakfast	Seafood Platter
	s03	Breakfast	Grilled Chicken Salad
	s04	Lunch	Eggs Benedict
	s05	Dinner	Pancakes
	s06	Breakfast	Steak and Potatoes
	s07	Lunch	Pasta
	s08	Dinner	Sandwiches
	s09	Breakfast	Burgers
	s10	Lunch	French Toast
			1 - 10

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Hotel Management System

ibrahim manager

Employee

Q

Go

Actions

Create

	Employee ID ↑↓	Hotel	Service	Employee Name	Gender	Phone Number
	e01	m01	sv01	Ibrahim Manager	Male	013456-78901
	e02	m01	sv02	Amlan	Male	01812-222222
	e03	m01	sv03	Akiba	Female	01913-333333
	e04	m01	sv04	Sumaiya	Female	01414-444444
	e05	m01	sv05	Rafid	Male	01515-555555
	e06	m01	sv06	Nafisa	Female	01316-666666
	e07	m01	sv07	Sajib	Male	01817-777777
	e08	m01	sv08	Jebin	Female	01618-888888
	e09	m01	sv09	Midul	Male	01719-999999
	e10	m01	sv10	Ahamed	Male	01320-000000

1 - 10

Figures : 4.6

Hotel Management System

ibrahim manager

Floor

Q

Go

Actions

Create

	Floor ID ↑↓	Floor Number	Floor Side
	f101	6.0	East
	f102	6.0	South
	f103	2.0	East
	f104	2.0	West
	f105	3.0	East
	f106	3.0	North
	f107	4.0	East
	f108	4.0	South
	f109	5.0	North
	f110	5.0	West

1 - 10

Figures : 4.7

Hotel Management System

abrar

Room Status

Q

Go

Actions

Create

	Room Status ID ↑↓	Status Name
	rs01	Available
	rs02	Occupied
	rs03	Maintenance
	rs04	Cleaning
	rs05	Out of Order
	rs06	Reserved
	rs07	Under Renovation
	rs08	Vacant
	rs09	Ready for Check-in
	rs10	Ready for Check-out

1 - 10

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Hotel Management System				
Room Class				
Q	Go	Actions	Create	
	Room Class ID ↑	Class Name	Start Price	
	rc01	Cabin	170	
	rc02	Villa	360	
	rc03	Standard	100	
	rc04	Deluxe	150	
	rc05	Suite	200	
	rc06	Penthouse	300	
	rc07	Studio	120	
	rc08	Loft	180	
	rc09	Chalet	250	
	rc10	Bungalow	220	
			1 - 10	

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Hotel Management System

abrar

Room

Q

Go

Actions

Create

	Room ID ↑	Hotel	Floor	Room Class	Room Status	Room Number
	rm01	m01	East	Cabin	Available	111K
	rm02	m01	South	Villa	Available	112L
	rm03	m01	East	Standard	Available	103C
	rm04	m01	West	Deluxe	Available	104D
	rm05	m01	East	Suite	Available	105E
	rm06	m01	North	Penthouse	Available	106F
	rm07	m01	East	Studio	Available	107G
	rm08	m01	South	Loft	Available	108H
	rm09	m01	North	Chalet	Available	109I
	rm10	m01	West	Bungalow	Available	110J

1 - 10

Figures : 4.10

Hotel Management System				
Guest				
Q	Go	Actions	Create	
	Guest ID ↑	Guest Name	Phone Number	Email
	g01	Israt Jahan	01719-999999	israt.jahan@example.com
	g02	Wahid Ali	01710-000000	wahid.ali@example.com
	g03	Amina Rahman	01711-111111	amina.rahman@example.com
	g04	Bashir Uddin	01712-222222	bashir.uddin@example.com
	g05	Farhana Islam	01713-333333	farhana.islam@example.com
	g06	Mahmud Hasan	01714-444444	mahmud.hasan@example.com
	g07	Shabnam Akter	01715-555555	shabnam.akter@example.com
	g08	Jamal Ahmed	01716-666666	jamal.ahmed@example.com
	g09	Olivia Chowdhury	01717-777777	olivia.chowdhury@example.com
	g10	Dulal Hossain	01718-888888	dulal.hossain@example.com
				1 - 10

Figures : 4.11

Hotel Management System

ibrahim manager

Payment Status

Q

Go

Actions

Create

	Payment Status ID ↑	Payment Status Name
	p01	Voided
	p02	Pending Approval
	p03	Cancelled
	p04	Refunded
	p05	Partially Paid
	p06	Overdue
	p07	Completed
	p08	Processing
	p09	Failed
	p10	Authorized

1 - 10

Figures : 4.12

Hotel Management System

ibrahim manager

Reservation

Q

Go

Actions

Create

	Reservation ID ↑	Guest	Room	Payment Status	Check In Date	Check Out Date	Num of People	Num of Children	Reservation Amount
	r01	Israt Jahan	h01	Voided	5/1/2024	5/5/2024	2.0	1.0	170
	r02	Wahid Ali	h01	Pending Approval	5/3/2024	5/7/2024	3.0	2.0	350
	r03	Amina Rahman	h01	Cancelled	5/5/2024	5/10/2024	2.0	0.0	100
	r04	Bashir Uddin	h01	Refunded	5/7/2024	5/12/2024	1.0	1.0	150
	r05	Farhana Islam	h01	Partially Paid	5/9/2024	5/14/2024	2.0	2.0	200
	r06	Mahmud Hasan	h01	Overdue	5/11/2024	5/16/2024	1.0	0.0	300
	r07	Shabnam Akter	h01	Completed	5/13/2024	5/18/2024	2.0	1.0	120
	r08	Jamal Ahmed	h01	Processing	5/15/2024	5/20/2024	3.0	3.0	180
	r09	Olivia Chowdhury	h01	Failed	5/17/2024	5/22/2024	2.0	2.0	250
	r10	Dulal Hossain	h01	Authorized	5/19/2024	5/24/2024	1.0	0.0	220

1 - 10

Figures : 4.13

Hotel Management System

ibrahim manager

Add On

Q

Go

Actions

Create

	Addon ID ↑	Addon Name	Price
	a01	Champagne	50
	a02	Concierge Service	35
	a03	Late Checkout	30
	a04	City Tour	30
	a05	Airport Shuttle	25
	a06	Room Service	20
	a07	Laundry Service	15
	a08	Bike Rental	10
	a09	Gym Access	5
	a10	Welcome Basket	40
			1 - 10

Figures : 4.14

Hotel Management System

ibrahim manager

Reservation Addon

Q

Go

Actions

Create

	Addon	Reservation
	Airport Shuttle	g04
	Bike Rental	g07
	Champagne	g10
	City Tour	g03
	Concierge Service	g01
	Gym Access	g08
	Late Checkout	g02
	Laundry Service	g06
	Room Service	g04
	Welcome Basket	g09

1 - 10

Figures : 4.15

Hotel Management System

abrar

Features

Q

Go

Actions

Create

	Feature ID	Feature Name
	f01	In-Room Bar
	f02	Terrace
	f03	Balcony
	f04	Ocean View
	f05	Fireplace
	f06	Private Pool
	f07	Kitchenette
	f08	Garden View
	f09	Hot Tub
	f10	Mountain View

1 - 10

Figures : 4.16

Hotel Management System

abrar

Room Class Features

Q

Go

Actions

Create

	Feature	Room Class
	Balcony	Standard
	Fireplace	Suite
	Garden View	Loft
	Hot Tub	Chalet
	In-Room Bar	Cabin
	Kitchenette	Studio
	Mountain View	Bungalow
	Ocean View	Deluxe
	Private Pool	Penthouse
	Terrace	Villa

1 - 10

Figures : 4.17

Hotel Management System			abrar
Bedtype			
Q	Go	Actions	Create
	Bed Type ID	Bed Type Name	
	bt01	Daybed	
	bt02	Sofa Bed	
	bt03	Double	
	bt04	King	
	bt05	California	
	bt06	Queen	
	bt07	Twin	
	bt08	Full	
	bt09	Single	
	bt10	Murphy	
			1 - 10

Figures : 4.18

Hotel Management System			abrar
Room Class Bedtype			
Q	Go	Actions	Create
	Room Class	Bed Type	Num of Beds
	Bungalow	Murphy	1.0
	Cabin	Daybed	3.0
	Chalet	Single	1.0
	Deluxe	King	1.0
	Loft	Full	3.0
	Penthouse	Queen	2.0
	Standard	Double	2.0
	Studio	Twin	1.0
	Suite	California	1.0
	Villa	Sofa Bed	1.0
			1 - 10

Figures : 4.19

5. Reports based on Multi-Table and Aggregate Queries

Page Number and Name	Query Type	Report description
Page-40 Total_reservation_by_room_class report	Multitable	The system tracks reservations with detailed information, including guest details, room details, payment status, check-in and check-out dates, the number of people, and the reservation amount.
Page-44 otal_revenue_each_room report	Aggregate	The system calculates total revenue generated from reservations, including the additional revenue from selected add-ons.This helps the hotel management in financial planning and performance analysis.
Page-46 Guests with Their Reservations and Add-ons Report	Multitable	the functionality to display detailed information about guests, including their reservation details and any additional services or products they have opted for. This multi-table report integrates data from multiple sources to provide a comprehensive view of each guest's stay and their associated extras.

Hotel Management System			ibrahim manager ▾
Total_reservation_by_room_class report			
Q ▾	Go	Actions ▾	Create
	Class Name		Total Reservations
	Cabin		1
	Villa		1
	Studio		1
	Standard		1
	Suite		1
	Deluxe		1
	Penthouse		1
	Bungalow		1
	Loft		1
	Chalet		1
			1 - 10

Figures : 5.1

Hotel Management System			ibrahim manager
total_revenue_each_room report			
Q	Go	Actions	Create
	Class Name		Total Revenue
	Cabin		170
	Villa		350
	Studio		120
	Standard		100
	Suite		200
	Deluxe		150
	Penthouse		300
	Bungalow		220
	Loft		180
	Chalet		250
			1 - 10

Figures : 5.2

Hotel Management System

ibrahim manager

Guests with Their Reservations and Add-ons Report

Q

Go

Actions

Create

	Guest Name	Reservation Id	Addon Name	Addon Price
	Amina Rahman	r03	City Tour	30
	Bashir Uddin	r04	Airport Shuttle	25
	Bashir Uddin	r04	Room Service	20
	Dulal Hossain	r10	Champagne	50
	Farhana Islam	r05		
	Israt Jahan	r01	Concierge Service	35
	Jamal Ahmed	r08	Gym Access	5
	Mahmud Hasan	r06	Laundry Service	15
	Olivia Chowdhury	r09	Welcome Basket	40
	Shabnam Akter	r07	Bike Rental	10
	Wahid Ali	r02	Late Checkout	30

1 - 11

Figures : 5.3

6. Authorization and User Role Assignment

User Role Assignment

User name	Password	Role
Ibrahim Manager	ibrahim1234	manager
Amlan	amlan1234	admin
Abrar	abrar1234	admin
Farhana	farhana1234	admin
Nafisa	nafisa1234	employee
Ohin	Ohin1234	employee
Zahin	zahin1234	guest
Rajib	rajob1234	guest
Israt	israt1234	Guest

Hotel Management System					
user_report					
<div><input type="text" value="Q"/> <input type="button" value="Go"/> <input type="button" value="Actions"/> <input type="button" value="Create"/></div>					
	User ID	User Name	User Pass	User Roll	User Activated
	3	Amlan	amlan1234	admin	1
	1	Rajib	rajob1234	guest	1
	6	Nafisa	nafisa1234	employee	1
	9	Ohin	Ohin1234	employee	1
	4	Abrar	abrar1234	admin	1
	7	Israt	israt1234	guest	1
	5	Farhana	farhana1234	admin	1
	8	Zahin	zahin1234	guest	1
	2	Ibrahim Manager	ibrahim1234	manager	1
					1 - 9

Figure : 6.1

7. Concluding Remarks

During this hotel management database project, I learned a lot about database design, SQL, and managing complex relationships between different data entities. It was exciting to apply theoretical concepts practically and see them come to life. There were challenges, especially with maintaining foreign key dependencies and data integrity, but these helped me improve my skills. Writing and testing complex SQL queries was both frustrating and rewarding. Each time a query worked correctly, it felt like solving a puzzle. Despite moments of frustration, persevering through and finding solutions was gratifying. Overall, completing this project filled me with pride and boosted my confidence in handling complex databases. Throughout the hotel management database project, I gained valuable insights into database design and SQL, which was a rewarding learning experience. The challenges of maintaining foreign key dependencies and ensuring data integrity were tough, but they helped sharpen my problem-solving skills. Writing and testing complex SQL queries often felt like tackling intricate puzzles, which was both frustrating and fulfilling. Overcoming these obstacles provided a great sense of achievement. Despite moments of difficulty, the satisfaction of seeing the project come together made the effort worthwhile. In the end, completing the project boosted my confidence and deepened my understanding of database management.

Thanks Ma'am for Helping us to the Max

-----THE END-----