PHASE 1:

1. Introduction:

The Hostel Management System database aims to streamline and automate the management of hostels within our organization. It will provide a centralized platform for efficient administration, improved data management, and enhanced user experience. This system will replace the existing manual processes, which have proven to be inadequate in meeting the growing demands and complexities of hostel management.



1. Goals/Objectives

- **&** Easily manage the customer details,
- room/room status,
- * room booking,
- * hostel branch,
- * employees,
- **A** Payments and transactions.
- With Complete Management System, a lot of repetition can be easily evaded which has reduced the data redundancy.

2. Features:

Database Design for Hostel Management System:

- Creation of building block information
- Provision of various room types
 - o (single/twin/single with air-con room/twin with air-con room/romantic with air-con room/group room for many/luxury with air-con room and family room/family with air-con room)
- * Room allotment to the traveler
- Traveler check in and check out
- Monitoring visitors and guest register
- Transfers of room

3. Entities and Attributes

Customer

customer_id customer_role_id customer_username

Roles

role_id role_name role_decs

Permission

per_id per_name per_role_id per_module

Allottees

alot_name alot_id alot_ address alot_mobile alot_email alot_password

Hostel

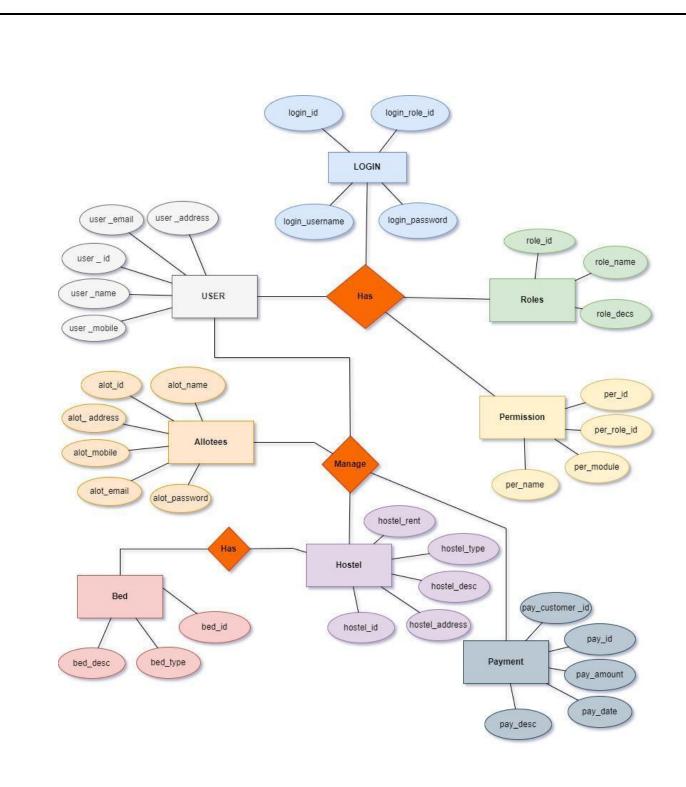
hostel_type hostel_desc hostel_address hostel_id hostel_rent

Payment

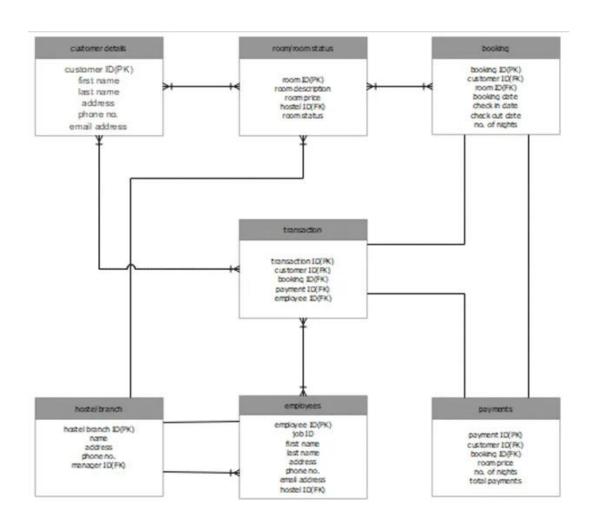
pay_customer _id pay_id pay_amount pay_date pay_desc

PHASE 2:

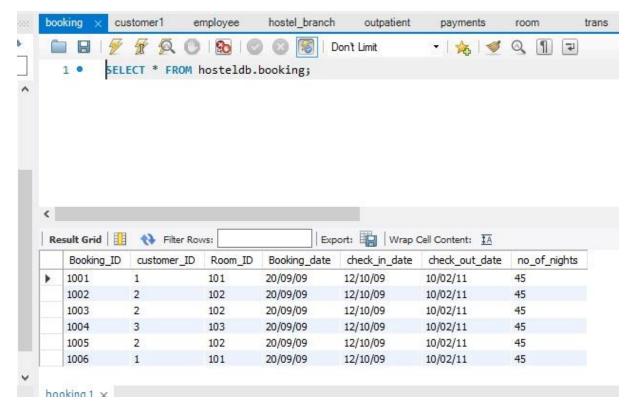
5. ER DIAGRAM



6. RELATIONAL TABLE



PHASE 3: Creating Tables in MYSQL



CREATE TABLE BOOKING

(Booking_ID int,

customer_ID int,

Room_ID int,

Booking_date varchar(50),

check_in_date varchar(10),

check_out_date varchar(10),

no_of_nights int

);

For creating table(Booking) query!

INSERT INTO Booking

(Booking_ID,customer_ID,Room_ID,Booking_date,check_in_date,check_out_date,no_of_nights) VALUES

(1001,1,101,20/09/09',12/10/09',10/02/11',45);

INSERT INTO BOOKING

(Booking_ID,customer_ID,Room_ID,Booking_date,check_in_date,check_out_date,no_of_ni ghts) VALUES

(1002,2,102,20/09/09',12/10/09',10/02/11',45);

INSERT INTO Booking

(Booking_ID,customer_ID,Room_ID,Booking_date,check_in_date,check_out_date,no_of_nights) VALUES

(1003,2,102,20/09/09',12/10/09',10/02/11',45);

INSERT INTO Booking

(Booking_ID,customer_ID,Room_ID,Booking_date,check_in_date,check_out_date,no_of_nights) VALUES

(1004,3,103,20/09/09',12/10/09',10/02/11',45);

INSERT INTO Booking

(Booking_ID,customer_ID,Room_ID,Booking_date,check_in_date,check_out_date,no_of_nights) VALUES

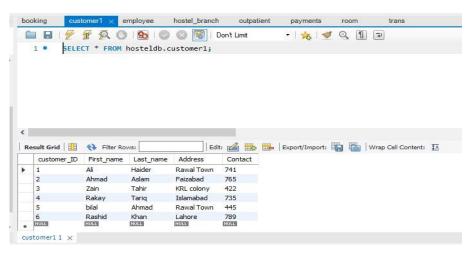
(1005,2,102,20/09/09',12/10/09',10/02/11',45);

INSERT INTO Booking

(Booking_ID,customer_ID,Room_ID,Booking_date,check_in_date,check_out_date,no_of_nights) VALUES

(1006,1,101,20/09/09,12/10/09,10/02/11,45);

Inserting Values in Booking table



CREATE DATABASE Hostel_Management_System_project;

CREATE TABLE customer1

(customer ID int,

First_name varchar(15),

Last_name varchar(15),

Address varchar(25),

Contact int

);

INSERT INTO customer1 (customer_ID,First_name,Last_name,Address,Contact) VALUES (1,'Ali','Haider','Rawal Town',83479281741);

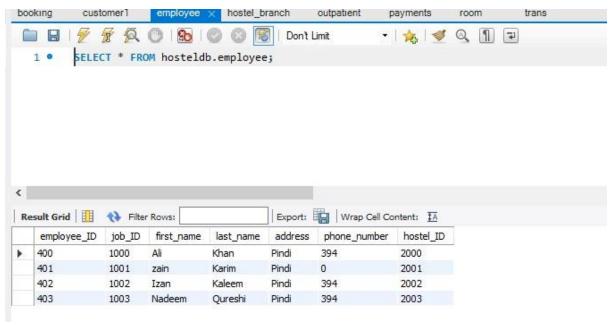
INSERT INTO customer1 (customer_ID,First_name,Last_name,Address,Contact) VALUES (2,'Ahmad','Aslam','Faizabad',0937464765);

INSERT INTO customer1 (customer_ID,First_name,Last_name,Address,Contact) VALUES (3,'Zain','Tahir','KRL colony',426475967422);

INSERT INTO customer1 (customer_ID,First_name,Last_name,Address,Contact) VALUES (4,'Rakay','Tariq','Islamabad',57595735);

INSERT INTO customer1 (customer_ID,First_name,Last_name,Address,Contact) VALUES (5,'bilal','Ahmad','Rawal Town',346666543445);

INSERT INTO customer1 (customer_ID,First_name,Last_name,Address,Contact) VALUES (6,'Rashid','Khan','Lahore',00998767789); select*from customer1;



create table employee

```
(employee_ID int,
job_ID int,
first_name varchar(15),
last_name varchar(15),
address varchar(20),
phone_number int,
hostel_ID int
);
```

INSERT INTO employee(employee_ID, job_ID, first_name, last_name, address, phone_number, hostel_ID)values

(400,1000, 'Ali', 'Khan', 'Pindi', 039485699488, 2000);

INSERT INTO employee(employee_ID, job_ID, first_name, last_name, address, phone number, hostel ID)values

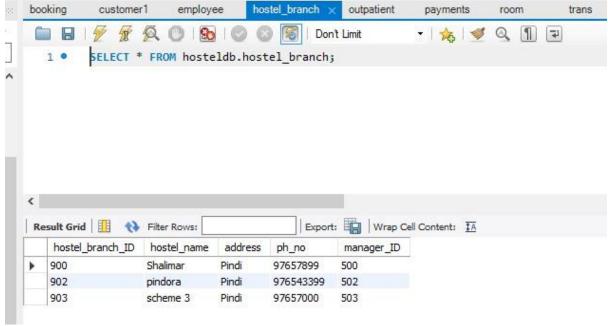
(401,1001,'zain','Karim','Pindi',000005699488, 2001);

INSERT INTO employee(employee_ID, job_ID, first_name, last_name, address, phone_number, hostel_ID)values

(402,1002, 'Izan', 'Kaleem', 'Pindi', 0394856900938, 2002);

INSERT INTO employee(employee_ID, job_ID, first_name, last_name, address, phone_number, hostel_ID)values

(403,1003, 'Nadeem', 'Qureshi', 'Pindi', 039482199488, 2003);



CREATE TABLE Hostel_Branch

(hostel_branch_ID int, hostel_name varchar(15), address varchar(25), ph_no int, manager_ID int);

INSERT INTO Hostel_Branch (hostel_branch_ID,hostel_name, address,ph_no,manager_ID) VALUES

(900, 'Shalimar', "Pindi", 097657899, 500);

INSERT INTO Hostel_Branch (hostel_branch_ID,hostel_name, address,ph_no,manager_ID) VALUES

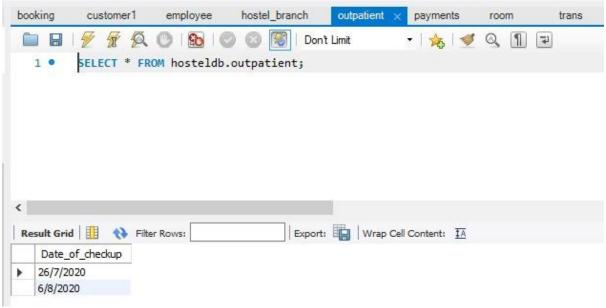
(901, 'katarian', "Pindi", 09374895743, 501);

INSERT INTO Hostel_Branch (hostel_branch_ID,hostel_name, address,ph_no,manager_ID) VALUES

(902, 'pindora', "Pindi", 0976543399, 502);

INSERT INTO Hostel_Branch (hostel_branch_ID,hostel_name, address,ph_no,manager_ID) VALUES

(903, 'scheme 3', "Pindi", 097657000, 503);



CREATE TABLE Outpatient

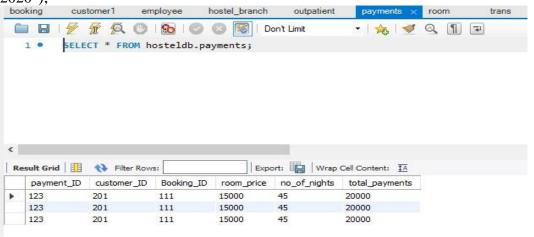
(Date_of_checkup varchar(45)

);

INSERT INTO Outpatient (Date_of_checkup) VALUES ("26/7/2020");

INSERT INTO Outpatient (Date_of_checkup) VALUES

("6/8/2020");



create table payments

(payment_ID int,

customer_ID int,

Booking_ID int,

room_price int,

no_of_nights int,

total_payments int

).

INSERT INTO payments(payment_ID, customer_ID, Booking_ID, room_price,no_of_nights,total_payments)VALUES

(123,201,111,15000,45,20000);

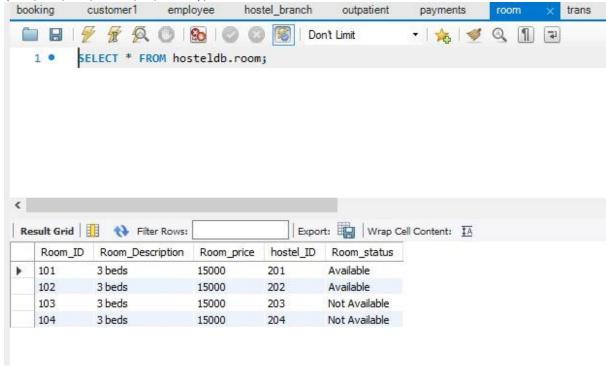
INSERT INTO payments(payment_ID, customer_ID, Booking_ID, room_price,no_of_nights,total_payments)VALUES

(123,201,111,15000,45,20000);

INSERT INTO payments(payment_ID, customer_ID, Booking_ID,

room_price,no_of_nights,total_payments)VALUES

(123,201,111,15000,45,20000);



CREATE TABLE Room

(Room_ID int,

Room_Description varchar(50),

Room_price int,

hostel_ID int,

Room_status varchar(50)

):

INSERT INTO Room (Room_ID,Room_Description,Room_price,hostel_ID,Room_status) VALUES

(101,'3 beds',15000,201,'Available');

INSERT INTO Room (Room_ID,Room_Description,Room_price,hostel_ID,Room_status) VALUES

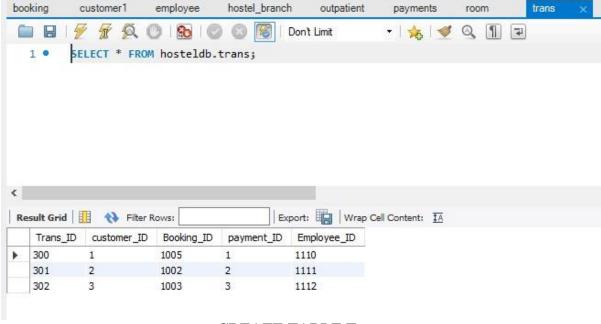
(102,'3 beds',15000,202,'Available');

INSERT INTO Room (Room_ID,Room_Description,Room_price,hostel_ID,Room_status) VALUES

(103,'3 beds',15000,203,'Not Available');

INSERT INTO Room (Room_ID,Room_Description,Room_price,hostel_ID,Room_status) VALUES

(104,'3 beds',15000,204,'Not Available');



CREATE TABLE Trans

(Trans ID int,

customer_ID int,

Booking_ID int,

payment_ID int,

Employee_ID int

).

INSERT INTO Trans (Trans_ID, customer_ID, Booking_ID, payment_ID, Employee_ID) VALUES

(300,1, 1005, 0001, 1110);

INSERT INTO Trans (Trans_ID, customer_ID, Booking_ID, payment_ID, Employee_ID) VALUES

(301,2, 1002, 0002, 1111);

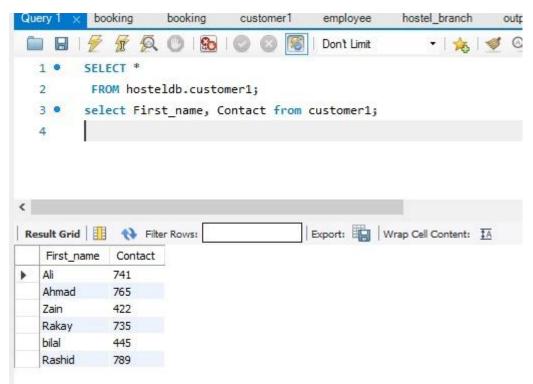
INSERT INTO Trans (Trans_ID, customer_ID, Booking_ID, payment_ID, Employee_ID) VALUES

(302,3, 1003, 0003, 1112);

SELECT *

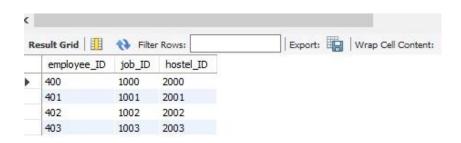
FROM hosteldb.customer1;

select First_name, Contact from customer1;

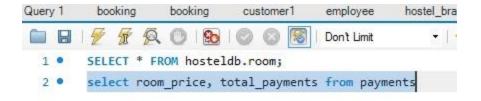


SELECT * FROM hosteldb.employee; select employee_ID, job_ID, hostel_ID from employee;





SELECT * FROM hosteldb.room; select room_price, total_payments from payments





SELECT * FROM hosteldb.customer1;

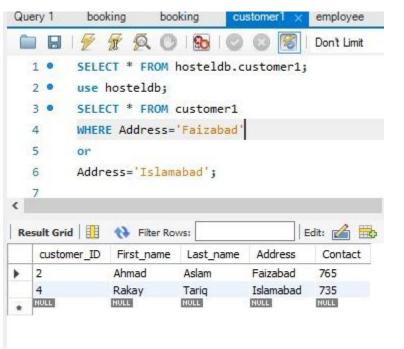
use hosteldb;

SELECT * FROM customer1

WHERE Address='Faizabad'

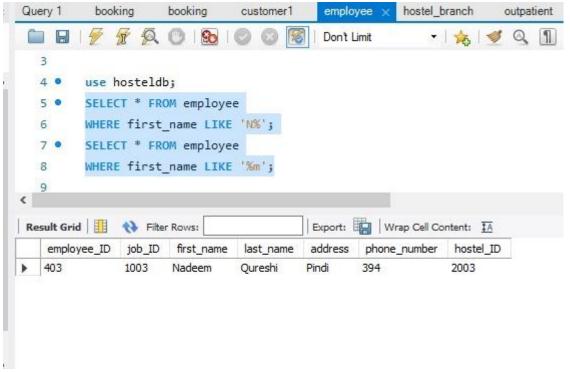
or

Address='Islamabad';

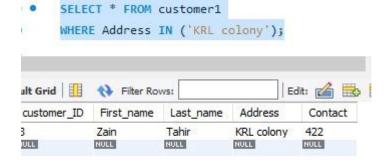


SELECT * FROM hosteldb.employee; select employee_ID, job_ID, hostel_ID from employee;

SELECT * FROM employee WHERE first_name LIKE 'N%'; SELECT * FROM employee WHERE first_name LIKE '%m';



SELECT * FROM customer1 WHERE Address IN ('KRL colony');

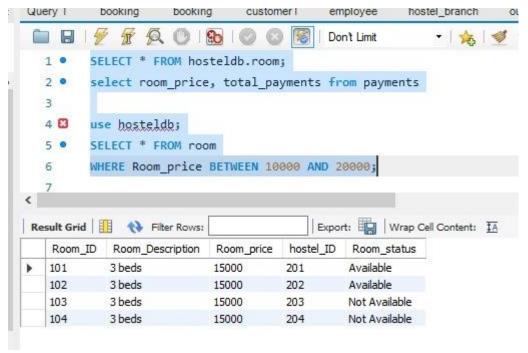


SELECT * FROM hosteldb.room; select room_price, total_payments from payments

use hosteldb;

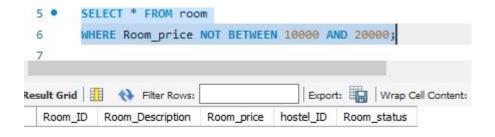
SELECT * FROM room

WHERE Room_price BETWEEN 10000 AND 20000;



SELECT * FROM room

WHERE Room_price NOT BETWEEN 10000 AND 20000;



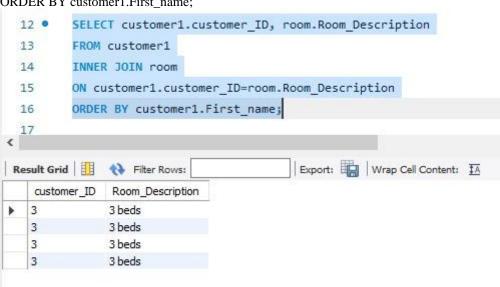
SELECT customer_ID, room.Room_Description

FROM customer1

INNER JOIN room

ON customer1.customer_ID=room.Room_Description

ORDER BY customer1. First name;



FRONT END INPLEMENTATION CODE:

```
□using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

□namespace HostelDatabase
{
    12 references
    internal class Booking
    {
        2 references
        public int ID { get; set; }
        4 references
        public String NAME { get; set; }
        4 references
        public String CHECKIN { get; set; }
        4 references
        public String CHECKOUT { get; set; }
}
```

Database Declaration

Database Access

```
Design Mysil. Data Mysil(Classics)

| Comparison of the Comparison
```

```
☐ HostelDatabase
              using System.Net;
 (品)
                                                                      Database Integration
             ⊟namespace HostelDatabase
                                                                                 with UI
                      BindingSource bookingBindingSource = new BindingSource();
                       internal List<Booking> Booking { get; private set; }
                      public Form1()
                           InitializeComponent();
                      private void button1_Click(object sender, EventArgs e)
                           BookingDAO bookingDAO = new BookingDAO();
                           bookingBindingSource.DataSource = bookingDAO.getAllBooking();
                           dataGridView1.DataSource = bookingBindingSource;
       24
25
                      private void button2_Click(object sender, EventArgs e)
                           BookingDAO bookingDAO = new BookingDAO();
                           bookingBindingSource.DataSource = bookingDAO.searchTitles(textBox1.Text);
                           dataGridView1.DataSource = bookingBindingSource;
                      1 reference
private void button3_Click(object sender, EventArgs e)
       32
33
34
                           Booking booking = new Booking
                               NAME = txt_NAME.Text,
CHECKIN = txt_CHECKIN.Text,
CHECKOUT = txt_CHECKOUT.Text,
                           BookingDAO bookingDAO = new BookingDAO();
```

```
BookingDAO bookingDAO = new BookingDAO();
                   int result = bookingDAO.addOneBooking(booking);
                   MessageBox.Show(result + "new rows inserted");
              private void label2_Click(object sender, EventArgs e)
               3
              private void button4_Click(object sender, EventArgs e)
                   int rowClicked = dataGridView1.CurrentRow.Index;
                   int trackID = (int)dataGridView1.Rows[rowClicked].Cells[0].Value;
                  MessageBox.Show("ID of Booking = " + trackID);
                   BookingDAO bookingDao = new BookingDAO();
                  int result = bookingDao.deleteTrack(trackID);
                  MessageBox.Show("Result " + result);
                   dataGridView1.DataSource = null;
                   Booking = bookingDao.getAllBooking();
               private void button5_Click(object sender, EventArgs e)
                   int rowClicked = dataGridView1.CurrentRow.Index;
                   int trackID = (int)dataGridView1.Rows[rowClicked].Cells[0].Value;
                   BookingDAO bookingDao = new BookingDAO();
                   int update = bookingDao.UpdateBooking(booking);
                   MessageBox.Show("Update " + update);
                   dataGridView1.DataSource = null;
746
                   Booking = bookingDao.getAllBooking();
           }
```

FRONT END



