A Report

On the work done during 3ʳᵈ semester subject

Database Management System

of

B.Tech. Computer Engineering

Hotel Management System

Prepared by:	Prepared by:
Kanjariya Gautam	Kanzariya Sandip
21CEUBG129	21CEUOF057
CE054	CE056
Computer Engineering,	Computer Engineering,
Dharmsinh Desai University	Dharmsinh Desai University

Dharmsinh Desai University
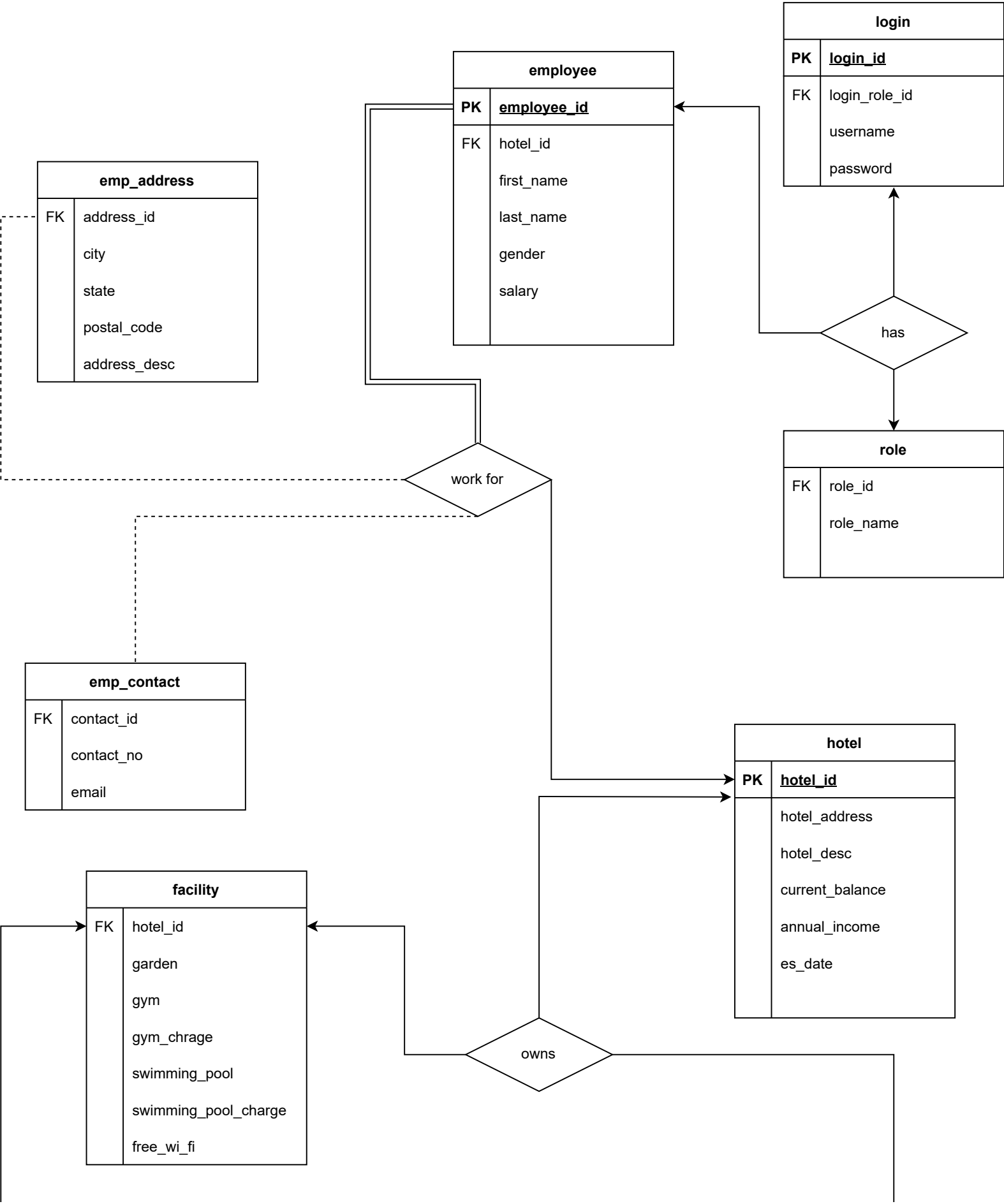October 2022

Hotel Management system

Hotel Management System is a system that provides us with reserving rooms, checking whether the rooms are vacant or not etc by using online browsing. This system is very useful to all, especially for business people. For Business people they don't have sufficient time for these then they can use these types of online Hotel Management Systems.
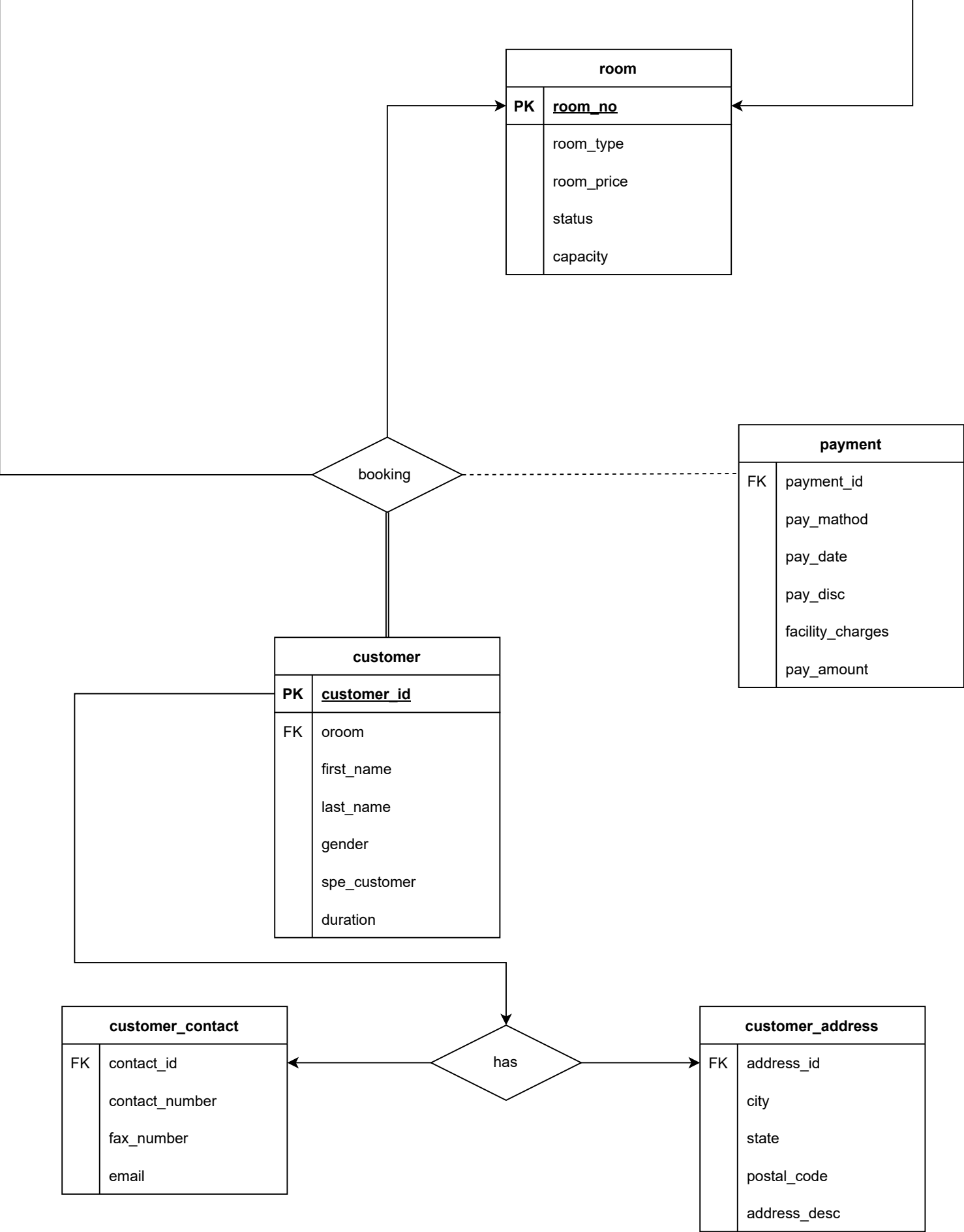
By this project we will reduce the faults in bills of their expenditure and decrease time of delay to give the bills to the customers. Additionally, we can save the customer's bills. By this project we can also include all the taxes on the bills according to their expenditures. It has a scope to reduce the errors in making the bills. Computerized bills can be printed within a fraction of seconds. Online ordering of Booking is possible by using this software. If any one wants to book a room for a few days then they can specify the specific number by seeing the types of rooms we have. The bill of this online booking is based on the type of room they can select.

HOTEL MANAGEMENT SYSTEM is a hotel reservation site script where site users will be able to search rooms availability with an online booking reservations system. Site users can also browse hotels, view room inventory, check availability, and book reservations in real-time. Site users enter duration then search for availability. After choosing the right room in the wanted hotel – all booking and reservation process is done on the site.

Our system can't provide Dining facilities in hotels, only room reservations.Additionally Our System provides Discount for Special guests(Customers).

ER - Diagram

emp_address

FK	address_id
	city
	state
	postal_code
	address_desc

employee

PK	**employee_id**
FK	hotel_id
	first_name
	last_name
	gender
	salary

login

PK	**login_id**
FK	login_role_id
	username
	password

has

role

FK	role_id
	role_name

work for

emp_contact

FK	contact_id
	contact_no
	email

hotel

PK	**hotel_id**
	hotel_address
	hotel_desc
	current_balance
	annual_income
	es_date

facility

FK	hotel_id
	garden
	gym
	gym_chrage
	swimming_pool
	swimming_pool_charge
	free_wi_fi

owns

room

PK	**room_no**
	room_type
	room_price
	status
	capacity

payment

FK	payment_id
	pay_mathod
	pay_date
	pay_disc
	facility_charges
	pay_amount

booking

customer

PK	**customer_id**
FK	oroom
	first_name
	last_name
	gender
	spe_customer
	duration

has

customer_contact

FK	contact_id
	contact_number
	fax_number
	email

customer_address

FK	address_id
	city
	state
	postal_code
	address_desc

Hotel Management System Schema

hotel (<u>hotel_id</u>, hotel_address, hotel_desc, current_balance, annual_income, es_date)

employee(<u>employee_id</u>, hotel_id, first_name, last_name, gender, salary)

role(role_id, role_name)

login(<u>login_id</u>, login_role_id, username, password)

facility(hotel_id, garden, gym, gym_charge, swimming_pool, swimming_pool_charge, free_wi_fi)

room(<u>room_no</u>, room_type, room_price, status, capacity)

customer(<u>customer_id</u>, oroom, first_name, last_name, gender, spe_customer, duration)

customer_contact(contact_id, contact_number, fax_number, email)

customer_address(address_id, city, state, postal_code, address_desc)

payment(payment_id, pay_method, pay_date, pay_disc, facility_charges, pay_amount)

emp_contact(contact_id, contact_no, email)

emp_address(address_id, city, state, postal_code, address_desc)

Project Source Code Link (Github)

Database Name : **hotel_management_system**

1. **Hotel**

```
create table hotel
(
    hotel_id varchar2(6),
    primary key (hotel_id),
    check(hotel_id like 'H%'),

    hotel_address varchar2(30),
    hotel_desc varchar2(20),
    current_balance number(10, 2),
    annual_income number(10, 2),
    es_date date
);
```

Data :

insert into hotel values
('H0001', 'Nearby chokdi', 'Anand', 1200000, 540000, '12-jan-2020');

insert into hotel values
('H0002', 'opposite to ambaji cinema', 'Jamnagar', 1250000, 640000,
'10-june-2005');

insert into hotel values
('H0003', 'opposite to shivji temple', 'Baroda', 1000000, 840000, '12-aug-2012');

insert into hotel values
('H0004', 'behind to modi school', 'Rajkot', 2000000, 600000, '15-jan-2009');

2. Employee

```
create table employee(

    employee_id varchar2(6),
    check(employee_id like 'E%'),
    primary key ( employee_id ),

    hotel_id varchar2(6),
    foreign key (hotel_id) references hotel,


    first_name varchar2(10),
    last_name varchar2(10),

    gender char(1),
    check(gender in ('M', 'F')),

    salary number(7, 0)
);
```

Data :

insert into employee values ('E01', 'H0001', 'Evan', 'shah', 'M', 12000);

insert into employee values ('E02', 'H0002', 'Mohan', 'patel', 'M', 45000);

insert into employee values ('E04', 'H0003', 'Monali', 'Gohil', 'F', 13000);

insert into employee values ('E05', 'H0004', 'Gopal', 'Gamit', 'M', 13500);

3. Role

```
create table role(
    role_id varchar2(6),
    foreign key(role_id) references employee,
    role_name varchar2(20)
);
```

Data :

insert into role values ('E02', 'Manager');
insert into role values ('E01', 'Servant');
insert into role values ('E04', 'receptionist');
insert into role values ('E05', 'Servant');

4. Login

```
create table login(
    login_id varchar2(5),
    check (login_id like 'L%'),
    primary key ( login_id ),

    login_role_id varchar2(6),
    foreign key(login_role_id) references employee,

    username varchar2(10),
    password varchar2(10)
);
```

Data :

insert into login values ('L01', 'E01', 'Evan_shah', 'Evan@450');
insert into login values ('L02', 'E02', 'Mohan_OP', 'M@455');
insert into login values ('L03', 'E05', 'Gopal_Jay', 'Gopal@DBMS');

5. Facility

```
create table facility(
    hotel_id varchar2(6),
    foreign key(hotel_id) references hotel,

    garden char(1),
    check(garden in ('Y', 'N')),

    gym char(1),
    check(gym in ('Y', 'N')),
    gym_charge number(4),

    swimming_pool char(1),
    check(swimming_pool in ('Y', 'N')),
    swimming_pool_charge number(4),

    free_wi_fi char(1),
    check(free_wi_fi in ('Y', 'N'))
);
```

Data :

insert into facility values ('H0001', 'Y', 'Y', 400, 'N', 0, 'Y');

insert into facility values ('H0002', 'Y', 'Y', 300, 'Y', 550, 'N');

insert into facility values ('H0003', 'N', 'Y', 600, 'N', 0, 'Y');

insert into facility values ('H0004', 'Y', 'Y', 500, 'N', 0, 'N');

6. Room

```
create table room(
    room_no varchar2(12),
    check(room_no like 'H%R%'),
    primary key (room_no),

    room_type varchar2(15),
    room_price number(8, 2),

    status char(1),
    check(status in ('E', 'O')),

    capacity number(1),
    check(capacity in (1, 2, 3, 4, 5, 6, 7, 8, 9)),

);
```

Data :

insert into room values('H0001R102', 'Delux', 500, 'E', 2);

insert into room values('H0002R122', 'Super Delux', 800, 'E', 2);

insert into room values('H0003R120', 'Regular', 400, 'O', 3);

insert into room values('H0002R111', 'Super Delux', 800, 'E', 1);

insert into room values('H0004R125', 'Super Delux', 600, 'E', 2);

7. Customer

```
create table customer(

    customer_id varchar2(6),
    check(customer_id like 'C%'),
    primary key ( customer_id ),

    first_name varchar2(10),
    last_name varchar2(10),

    gender char(1),
    check(gender in ('M', 'F')),
    oroom varchar2(12),
    foreign key (oroom) references room,
    spe_customer char(1),
    check(spe_customer in ('Y', 'N')),
    duration number(1)
);
```

Data :

insert into customer values('C01', 'Gopal', 'Shah', 'M', 'H0004R125', 'N', 4);

insert into customer values('C02', 'Jayoti', 'Shah', 'F', 'H0003R120', 'Y', 3);

insert into customer values('C03', 'Jay', 'Modi', 'M', 'H0002R122', 'N', 4);

insert into customer values('C04', 'Mohan', 'Joshi', 'M', 'H0001R102', 'N', 1);

8. Customer_Contact

create table customer_contact(

    contact_id varchar2(6),
    foreign key (**contact_id**) references **customer**,
    contact_number number(10),
    fax_number number(10),
    email varchar2(18)
);

Data :

insert into customer_contact values ('C01', 1232324434, 92727, 'gopal@gmail.com');

insert into customer_contact values ('C02', 1212004434, 92700, 'jayoti@gmail.com');

insert into customer_contact values ('C03', 1000004434, 82707, 'jay@gmail.com');

insert into customer_contact values ('C04', 1212000034, 72700, 'mohan@gmail.com');

9. Customer_address

create table **customer_address**(
   address_id varchar2(6),
   foreign key (**address_id**) references **customer**,

   city varchar2(15),
   state varchar2(15),
   postal_code number(6),
   address_desc varchar(50)
);

Data :

insert into customer_address values ('C01', 'Jammu', 'Jammu', 420010, 'Nearby yellow temple');

insert into customer_address values ('C02', 'Jaipur', 'Rajasthan', 429910, 'Nearby hawa mahal');

insert into customer_address values ('C03', 'Amritsar', 'Punjab', 333910, 'Nearby Golden temple');

insert into customer_address values ('C04', 'Surat', 'Gujarat',657575, 'Nearby Golden wood hotel');

10. Payment

create table **payment**(

    payment_id varchar2(6),
    foreign key (**payment_id**) references **customer**,
    pay_method varchar2(10),

    pay_date date,
    pay_disc number(4),
    facility_charges number(5),

    pay_amount number(8)
);

Data :

insert into payment values('C01', 'UPI', '02-January-2020', 0, 500, 1700);

insert into payment values('C02', 'Cash', '22-June-2021', 300, 600, 1500);

insert into payment values('C03', 'Cheque', '2-June-2022', 0, 300, 3500);

insert into payment values('C04', 'Cheque', '10-June-2019', 0, 400, 900);

11. Emp_contact

```
create table emp_contact(
    contact_id varchar2(6),
    foreign key (contact_id) references employee,

    contact_no number(10),
    email varchar2(20)
);
```

Data :

insert into emp_contact values ('E01', 4455454545, 'evan@gmail.com');

insert into emp_contact values ('E02', 4455666545, 'mohan@gmail.com');

insert into emp_contact values ('E04', 4005666545, 'monali389@gmail.com');

insert into emp_contact values ('E05', 4488866545, 'gopal34@gmail.com');

12. Emp_address

create table **emp_address**(
   address_id varchar2(6),
   foreign key (**address_id**) references employee,

   city varchar2(15),
   state varchar2(15),
   postal_code number(6),
   address_desc varchar(50)
);

Data :

insert into emp_address values ('E01', 'Jamnagar', 'Gujarat', '361005', 'Near Five By Tower');

insert into emp_address values ('E02', 'Patna', 'Bihar', '478005', 'Opposite to lake');

insert into emp_address values ('E04', 'Surat', 'Gujarat', '361435', 'Nearby temple');

insert into emp_address values ('E05', 'jaipur', 'Rajasthan', '455055', 'Nearby Hawa mahal');

Some Queries

1.

```sql
--1. Find Manager from employees
select
    *
from
    employee
where
    employee_id in (
        select
            role_id
        from
            role
        where
            role_name = 'Manager'
    );
```

2.

```sql
--2. Create view which contain only manager employees
create view manager_view as
select
    *
from
    employee
where
    employee_id in (
        select
            role_id
        from
            role
        where
            role_name = 'Manager'
    );
```

3.

```sql
--3. Find manager of hotel
select
    *
from
    manager_view
where
    hotel_id = 'H0002';
```

4.

```sql
--4. select rooms of a hotel
select
    *
from
    room
where
    room_no like 'H0001%';
```

5.

```sql
--5. Select room details of customer
select
    *
from
    room
where
    room_no = (
        select
            oroom
        from
            customer
        where
            customer_id = 'C03'
    );
```

6.

```sql
--6. Give details about hotel which is visited by some customer
select
    *
from
    hotel
where
    hotel_id like (
        select
            SUBSTR(oroom, 0, 5)
        from
            customer
        where
            customer_id = 'C02'
    );
```

7.

```sql
--7. Give all employee of all hotels
select * from employee where hotel_id in (select hotel_id from hotel);
```

8.

```sql
--8. Facility in hotel
select * from facility where hotel_id in (select hotel_id from hotel);
```

9.

```sql
--9. Total Payments of all customers
select sum(pay_amount) from payment;
```

Triggers

1. If customer makes payment, current_balance of hotel will be updated :

   CREATE TRIGGER payment_trigger AFTER INSERT ON

   hotel_management_system.payment FOR EACH ROW BEGIN INSERT INTO

   hotel_management_system.hotel(current_balance)

   VALUES(current_balance + pay_amount)

   END

   /

References

- TutorialsPoints
- Naresh i technologies