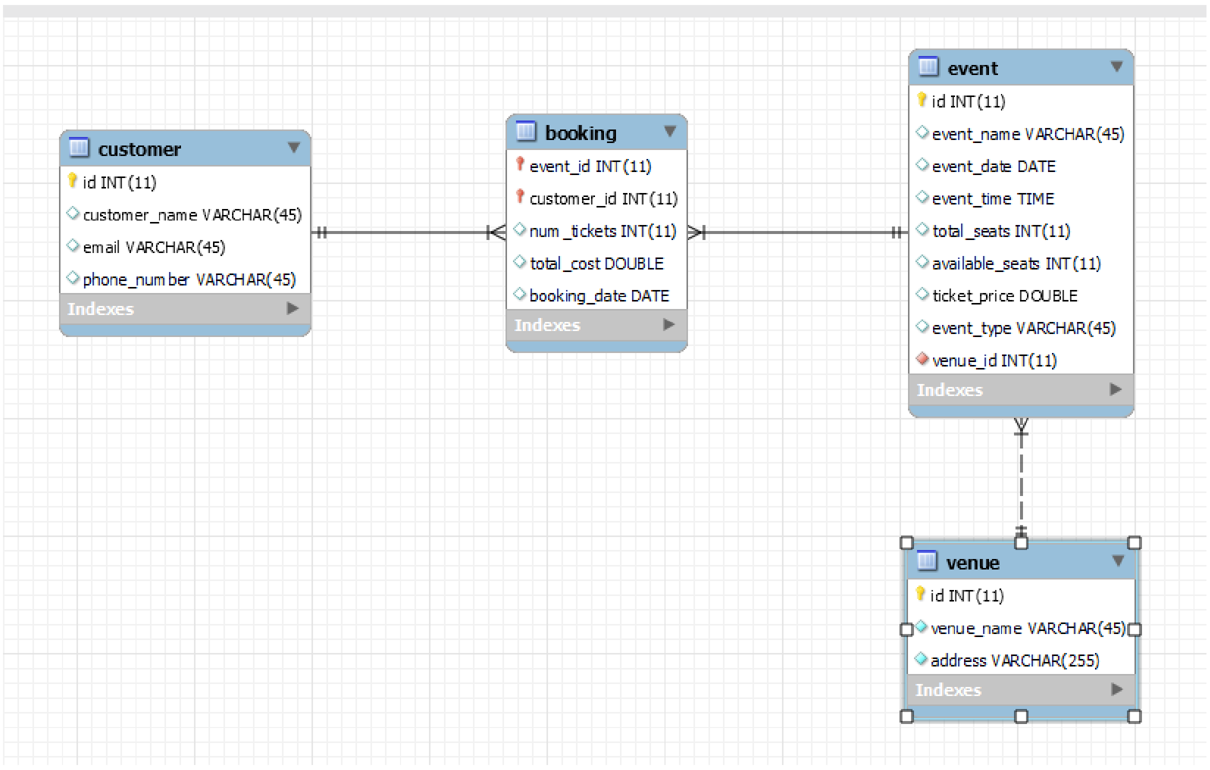
ASSIGNMENT NO : 5

TICKET BOOKING SYSTEM

ER DIAGRAM:



DATABASE DESIGN:

```
-- MySQL Workbench Forward Engineering

-- -----------------------------------------------------

-- Schema ticketbooking_feb_hex_24

-- -----------------------------------------------------



-- -----------------------------------------------------

-- Schema ticketbooking_feb_hex_24

-- -----------------------------------------------------

CREATE SCHEMA IF NOT EXISTS ticketbooking_feb_hex_24 DEFAULT CHARACTER SET utf8 ;

USE ticketbooking_feb_hex_24 ;


-- -----------------------------------------------------
-- Table ticketbooking_feb_hex_24.venue
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS ticketbooking_feb_hex_24.venue (
  id INT NOT NULL AUTO_INCREMENT,
  venue_name VARCHAR(45) NOT NULL,
  address VARCHAR(255) NOT NULL,
  PRIMARY KEY (id))
ENGINE = InnoDB;



-- -----------------------------------------------------
-- Table ticketbooking_feb_hex_24.event
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS ticketbooking_feb_hex_24.event (
  id INT NOT NULL AUTO_INCREMENT,
  event_name VARCHAR(45) NULL,
  event_date DATE NULL,
  event_time TIME NULL,
  total_seats INT NULL,
  available_seats INT NULL,
  ticket_price DOUBLE NULL,
  event_type VARCHAR(45) NULL,
  venue_id INT NOT NULL,
  PRIMARY KEY (id),
  INDEX fk_event_venue_idx (venue_id ASC),
  CONSTRAINT fk_event_venue
    FOREIGN KEY (venue_id)
    REFERENCES ticketbooking_feb_hex_24.venue (id)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;
```

```
-- -----------------------------------------------------
-- Table ticketbooking_feb_hex_24.customer
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS ticketbooking_feb_hex_24.customer (
  id INT NOT NULL AUTO_INCREMENT,
  customer_name VARCHAR(45) NULL,
  email VARCHAR(45) NULL,
  phone_number VARCHAR(45) NULL,
  PRIMARY KEY (id))
ENGINE = InnoDB;


-- -----------------------------------------------------
-- Table ticketbooking_feb_hex_24.booking
-- -----------------------------------------------------
CREATE TABLE IF NOT EXISTS ticketbooking_feb_hex_24.booking (
  event_id INT NOT NULL,
  customer_id INT NOT NULL,
  num_tickets INT NULL,
  total_cost DOUBLE NULL,
  booking_date DATE NULL,
  PRIMARY KEY (event_id, customer_id),
  INDEX fk_event_has_customer_customer1_idx (customer_id ASC) ,
  INDEX fk_event_has_customer_event1_idx (event_id ASC) ,
  CONSTRAINT fk_event_has_customer_event1
    FOREIGN KEY (event_id)
    REFERENCES ticketbooking_feb_hex_24.event (id)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
  CONSTRAINT fk_event_has_customer_customer1
    FOREIGN KEY (customer_id)
    REFERENCES ticketbooking_feb_hex_24.customer (id)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;
```

INSERTIONS:

- VENUE INSERTION

```
insert into venue(venue_name,address) values
('mumbai', 'marol andheri(w)'),
('chennai', 'IT Park'),
('pondicherry ', 'state beach');
```

- CUSTOMER INSERTION

```
insert into customer(customer_name,email,phone_number)
values
('harry potter','harry@gmail.com','45454000'),
('ronald weasley','ron@gmail.com','45454545'),
('hermione granger','her@gmail.com','45454000'),
('draco malfoy','drac@gmail.com','45454545'),
('ginni weasley','ginni@gmail.com','45454000'),
('albus dumbledore','albus@gmail.com','45454001'),
('neville longbottom','longbottom@gmail.com','45454002'),
('severus snape','snape@gmail.com','45454004'),
('rubeus hagrid','hagrid@gmail.com','45454000'),
('lord voldemort','lord@gmail.com','45454003');
```

- EVENT INSERTION

```
insert into
event(event_name,event_date,event_time,total_seats,available_seats,ticket_price,event_type,venu
e_id)values
('Late Ms. Lata Mangeshkar Musical', '2021-09-12','20:00',320,270,600,'concert',3),
('CSK vs RCB', '2024-04-11','19:30',23000,3,3600,'sports',2),
('CSK vs RR', '2024-04-19','19:30',23000,10,3400,'sports',2),
('MI vs KKR', '2024-05-01','15:30',28000,100,8000,'sports',1),
('World Cup', '2024-05-01','15:30',5000,100,2400,'sports',1),
('Conference cup', '2024-05-01','15:30',16000,100,1200,'concert',1);
```

- BOOKING INSERTION

```
insert into booking values
(1,1,2,640,'2021-09-12'),
(2,4,3,960,'2021-09-12'),
(3,1,3,10800,'2024-04-11'),
(4,3,5,18000,'2024-04-10'),
(5,5,10,34000,'2024-04-15'),
(6,2,4,32000,'2024-05-01'),
(1,6,2,640,'2021-09-12'),
(2,7,3,960,'2021-09-12'),
(3,8,3,10800,'2024-04-11'),
(4,9,5,18000,'2024-04-10'),
(5,10,10,34000,'2024-04-15'),
(6,6,4,32000,'2024-05-01');
```

Task 2 : Query

-- 1. Write a SQL query to insert at least 10 sample records into each table.=> inserted

-- 2. Write a SQL query to list all Events.

```
select event_name from event;
```

-- 3. Write a SQL query to select events with available tickets.

select event_name from event where available_seats>0;

-- 4. Write a SQL query to select events name partial match with ‘cup’.

select event_name from event where event_name like '%cup%';

-- 5. Write a SQL query to select events with ticket price range is between 1000 to 2500.

select event_name from event where ticket_price between 1000 and 2500;

-- 6. Write a SQL query to retrieve events with dates falling within a specific range.

select * from event where event_date between '2024-05-01' and '2024-05-31';

-- 7. Write a SQL query to retrieve events with available tickets that also have "Concert" in their name.

select * from event where event_type="concert";

-- 8. Write a SQL query to retrieve users in batches of 4, starting from the 6th user.

select * from customer limit 5,4;

-- 9. Write a SQL query to retrieve bookings details contains booked no of ticket more than 4.

select * from booking where num_tickets>4;

-- 10. Write a SQL query to retrieve customer information whose phone number end with ‘000’

select * from customer where phone_number like '%000';

-- 11. Write a SQL query to retrieve the events in order whose seat capacity more than 15000.

select * from event where total_seats>15000;

-- 12. Write a SQL query to select events name not start with ‘l’, ‘m’, ‘w’

select * from event where event_name not like 'l%' and event_name not like 'm%' and event_name not like 'w%';

Task 3

```
-- 1.Write a SQL query to List venues and Their Average Ticket Prices.
select v.venue_name,avg(e.ticket_price)
from venue v,event e
where e.venue_id=v.id
group by v.venue_name;

-- 2. Write a SQL query to Calculate the Total Revenue Generated by Events.
select event_name,sum((total_seats-available_seats)*ticket_price) as revenue
from event
group by event_name;

-- 3. Write a SQL query to find the event with the highest ticket sales.
select event_name, total_seats-available_seats as total_tickets
from event
group by event_name
order by total_tickets desc limit 0,1;

-- 4. Write a SQL query to Calculate the Total Number of Tickets Sold for Each Event.
select event_name, total_seats-available_seats as total_tickets
from event
group by event_name;

-- 5. Write a SQL query to Find Events with No Ticket Sales.
select event_name from event
where total_seats=available_seats;

-- 6. Write a SQL query to Find the User Who Has Booked the Most Tickets.
select c.customer_name,sum(num_tickets) as ticket_count
from customer c, booking b
```

```
where c.id=b.customer_id
group by c.customer_name
order by ticket_count desc limit 0,1;

-- 8.Write a SQL query to calculate the average Ticket Price for Events in Each Venue
select v.venue_name,avg(e.ticket_price) as Average_ticket_price from
event e, venue v
where v.id=e.venue_id
group by v.id;

-- 9. Write a SQL query to calculate the total Number of Tickets Sold for Each Event Type.
select event_type,sum(total_seats-available_seats)
from event
group by event_type;

-- 11. Write a SQL query to list users who have booked tickets for multiple events.
select c.customer_name,count(c.id) as event_count
from customer c,event e,booking b
where b.customer_id=c.id and b.event_id=e.id
group by c.id
having event_count>1;

-- 12. Write a SQL query to calculate the Total Revenue Generated by Events from Each User.
select c.customer_name,e.event_name,b.total_cost
from event e,booking b,customer c
where e.id=b.event_id
and c.id=b.customer_id
group by e.event_name ,c.customer_name;

-- 13. Write a SQL query to calculate the Average Ticket Price for Events in Each Category and Venue.
select e.event_type,v.venue_name,avg(e.ticket_price)
```

```
from event e,venue v
where v.id=e.venue_id
group by event_type,venue_name;

delete from customer where id>=11 ;
delete from event where id>=7;
delete from  venue where id>=4;

-- joining the tables
select *
from event e join booking b on e.id=b.event_id
join customer c on c.id=b.customer_id;

-- step 2: group by customer name as we need to compute revenue for each customer which will
-- give customer_name and number of bookings
select c.customer_name,count(c.id) as number_of_booking
from event e join booking b on e.id=b.event_id
join customer c on c.id=b.customer_id
group by c.customer_name;

-- Step 3: We need to calculate sum of total cost for each customer, so updating above query
select c.customer_name as customer_name,sum(b.total_cost) as Revenue
from event e join booking b on e.id=b.event_id
join customer c on c.id=b.customer_id
group by c.customer_name
order by Revenue desc;

-- 14. Write a SQL query to list Users and the Total Number of Tickets They've Purchased in the
-- Last 30 Days.
select c.customer_name, SUM(b.num_tickets) as Number_Of_tickets
from  event e  JOIN booking b  ON e.id = b.event_id JOIN  customer c ON c.id = b.customer_id
```

```
where b.booking_date between DATE_SUB('2024-04-30',INTERVAL 30 DAY) and  '2024-04-30'
group by c.customer_name;
```

Tasks 4: Subquery and its types :

```
-- 1. Calculate the Average Ticket Price for Events in Each Venue Using a Subquery.
select venue_id,avg(ticket_price)
from event
where venue_id in(select id from venue)
group by venue_id;

-- 2. Find Events with More Than 50% of Tickets Sold using subquery.
select event_name,total_seats,available_seats
from event
where id in(select id
from event
where (total_seats-available_seats)>(total_seats/2));

-- 3. Calculate the Total Number of Tickets Sold for Each Event.
select e.event_name,sum(b.num_tickets)as total_number
from booking b join event e on e.id=b.event_id
group by e.event_name;

-- 4. Find Users Who Have Not Booked Any Tickets Using a NOT EXISTS Subquery.
select id,customer_name
from customer
where not exists(select customer_id from booking b
            where b.customer_id=customer.id);

-- 5. List Events with No Ticket Sales Using a NOT IN Subquery.
select event_name
```

```
from event

where id not in(select event_id

            from booking);


/*  6. Calculate the Total Number of Tickets Sold for Each Event Type Using a Subquery in the FROM
Clause. */

select event_type,sum(b.num_tickets)as total_sold

from event join booking b on event.id=b.event_id

group by event_type;


/*  7. Find Events with Ticket Prices Higher Than the Average Ticket Price Using a Subquery in the
WHERE Clause. */

select event_name, ticket_price

from event

where ticket_price > (select avg(ticket_price) from event);


/* 8. Calculate the Total Revenue Generated by Events for Each User Using a Correlated Subquery. */

select c.customer_name,(

                select sum(b.total_cost)

                  from booking b

                where c.id=b.customer_id)as total_revenue

from customer c;


/* 9. List Users Who Have Booked Tickets for Events in a Given Venue Using a Subquery in the
WHERE Clause. */

select customer_name

from customer

where id IN (

          select customer_id

          from booking

          where event_id IN (

                        select id from event
```

```
                         where venue_id=1));



/* 10. Calculate the Total Number of Tickets Sold for Each Event Category Using a Subquery with
GROUP BY. */

select event_type,(

                        select sum(b.num_tickets)

                    from booking b

                    where b.event_id=e.id)as total_sold

from event e

group by event_type;


/* 11. Find Users Who Have Booked Tickets for Events in each Month Using a Subquery with
DATE_FORMAT. */

select c.customer_name,month(booking_date) as booking_month

from customer c JOIN booking b ON c.id = b.customer_id;


-- 12. Calculate the Average Ticket Price for Events in Each Venue Using a Subquery

select v.venue_name,avg(e.ticket_price) as avg_price

from venue v,event e

where v.id=e.venue_id

group by v.venue_name;
```