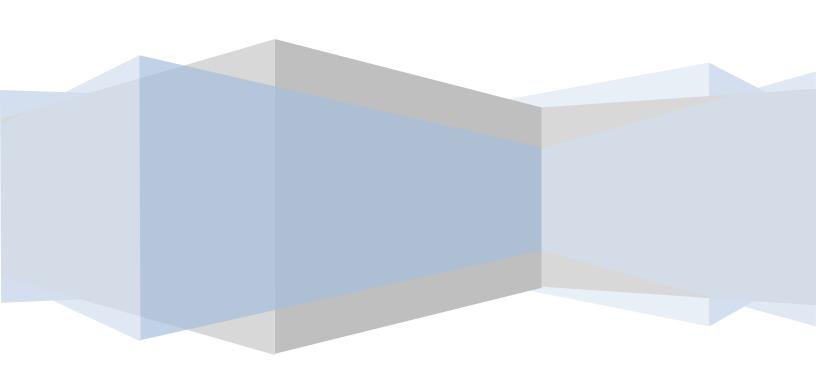
# EVENT TICKETING SYSTEM DATABASE DESIGN

Database Management for Event Ticketing: An SQL Approach

Praveen



# Create Database and Tables

#### **Create database**

```
2 -- Create Database and Select Database --

3

4 • create database event_ticketing_system;

5 • use event_ticketing_system;

6

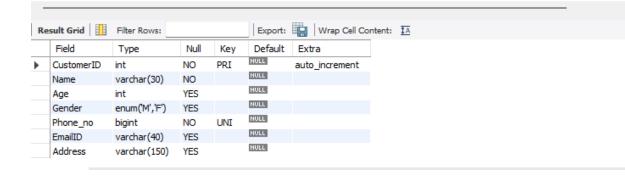
Itput

# Time | Action | Message |

1 19:08:14 use event_ticketing_system | 0 row(s) affected
```

#### **Create customers table**

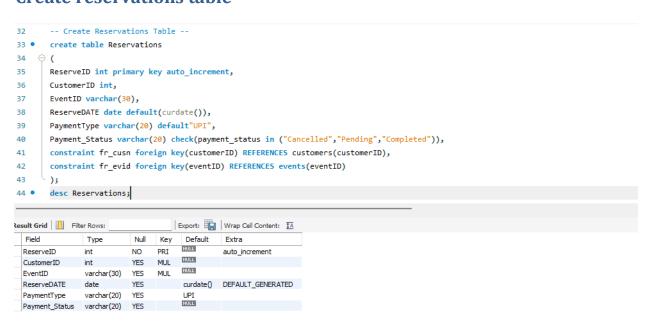
```
-- create customers table --
 8 •
       create table customers
9
10
       CustomerID int primary key auto_increment,
       Name varchar(30) not null,
11
       Age int check(age>=10),
12
       Gender enum("M", "F"),
13
       Phone_no bigint unique not null,
       EmailID varchar(40),
15
16
       Address varchar(150)
17
       );
18 •
       desc customers;
```



#### Create events table

```
20
         -- Create Events Table --
 21 •
         create table events
    ⊖ (
 22
         EventID varchar(30) unique not null,
 23
         Event_Name varchar(100) unique not null,
 24
         Category varchar(50),
 25
         Date varchar(20) not null,
 26
         Address varchar(100) default "Chennai",
 27
         Description varchar(500) default"Welcome to the Event"
 28
 29
 30 •
         desc events;
 31
                                       Export: Wrap Cell Content: IA
Result Grid Filter Rows:
                                        Default
                                                           Extra
               Type
                           Null
                                 Key
                                       NULL
  EventID
              varchar(30)
                          NO
                                 PRI
                                       NULL
  Event_Name
              varchar(100) NO
                                 UNI
                                       NULL
  Category
              varchar(50)
                                       NULL
  Date
              varchar(20) NO
  Address
              varchar(100) YES
                                       Chennai
                                       Welcome to the Event
  Description varchar(500) YES
```

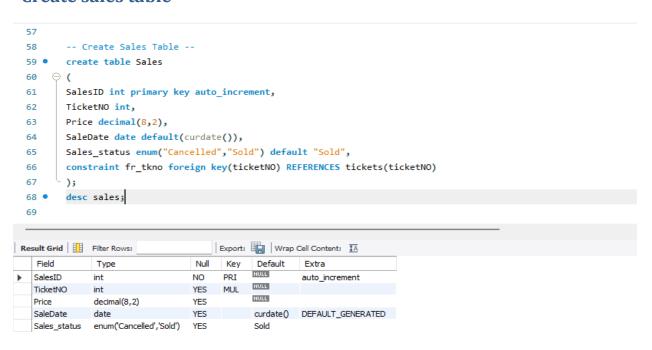
#### Create reservations table



#### Create tickets table

```
45
         -- Create Tickets Table --
 46
        create table Tickets
 47 •
 48
 49
        TicketNO int primary key auto_increment,
 50
        ReserveID int,
        Category varchar(10) check(Category in ("VIP","Ordinary","FristClass")),
 51
 52
        SeatNO varchar(10) not null,
        constraint fk_rsID foreign key(ReserveID) REFERENCES Reservations(ReserveID)
 54
        desc Tickets;
 55 •
 56
Result Grid | Filter Rows:
                                     Export: Wrap Cell Content: IA
                             Key
                                    Default Extra
             Type
                        Null
                                   NULL
                             PRI
  TicketNO
                       NO
            int
                                           auto_increment
                                   NULL
                       YES
                             MUL
  ReserveID int
                                   NULL
  Category
            varchar(10)
                       YES
                                   NULL
  SeatNO varchar(10) NO
```

#### Create sales table

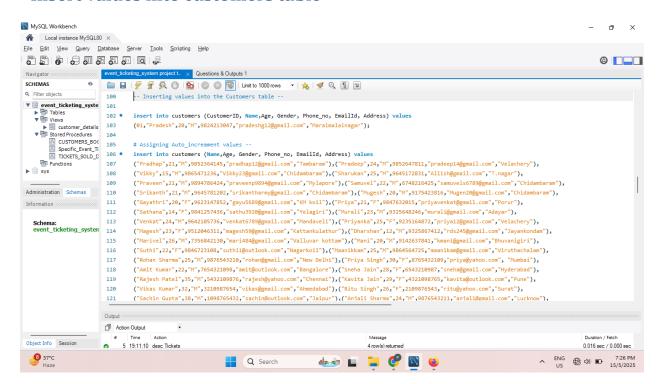


# Insert values

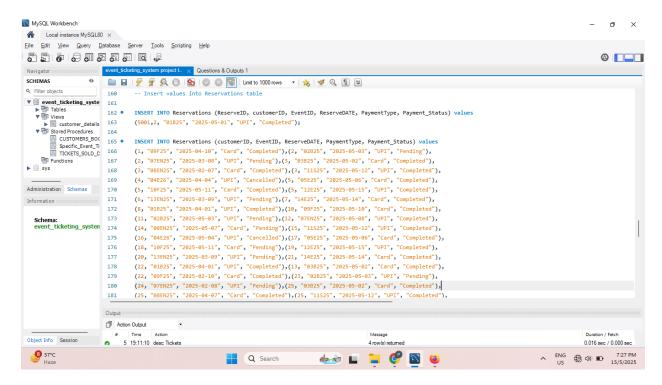
#### Insert values into events table

```
single insert statement
        insert into events(eventid, event_name,category, date, Address, Description) values
        ("01B25", "India Business Summit 2025", "Business", "20-June-2025", "The Leela Palace, New Delhi", "Join industry leaders and experts for
        insert into events(eventid, event_name,category, date, Address,Description) values
        ("02B25", "Startup India Expo 2025", "Business", "28-MAY-2025", "Pragati Maidan, New Delhi", "Improve your Business skills"),
        ("03B25","Corporate Leadership Summit 2025","Business","02-AUG-2025","The Taj Mahal Palace, Mumbai","Improve your leadership skill
        ("04E26","EduTech Conference 2025","Education","06-jan-2026","Anna conference hall, Adayar,Chennai.","Explore the latest trends an
        ("05E25", "Career Expo 2025", "Education", "04-MAY-2025", "Exhibition Centre, Chidhambaram", "The Career Expo 2025 will feature job fair
        ("06E26", "International Conference on Education", "Education", "04-MAY-2025", "Jawaharlal Nehru University, Mumbai.", "Share knowledge
        ("07EN25","Comedy Show","Entertainment","20-NOV-2025","The Comedy Club, Mumbai","Laugh out loud with India's top comedians at this
83
        ("08EN25", "Dance Competition", "Entertainment", "22-OCT-2025", "Siri Fort Auditorium, New Delhi", "- Witness the best dancers in the co
        ("09F25","Designer Showcase 2025","Fashion","15-OCT-2025","The Oberoi, Mumbai","Get a glimpse of the latest collections from India
        ("10F25", "Bridal Fashion Show", "Fashion", "26-DEC-2025", "The Leela Palace, Jaipur", "Witness the latest bridal fashion trends and de
        ("11525"," India Open Tennis Tournament","Sports","10-JUNE-2025","R.K. Khanna Tennis Stadium, New Delhi","The India Open Tennis Tou
("12E25","AGRI TEC EXPO-2025","Education","29-MAY-2025","Anandha Thirumana Mahal,Viluppuram,","AGRI TEC EXPO - 2025 the objective
86
         ("13EN25","Drink meetup Chennai","Entertainment","10-MAY-2025","Lower Deck Bar & Nightclub, Chennai.","Let's meet up in Chennai fo
89
        ("14E25", "Automate Intelligently", "Education", "09-MAY-2025", "Technology Services Private Limited, Chennai.", "Learn how to harness
```

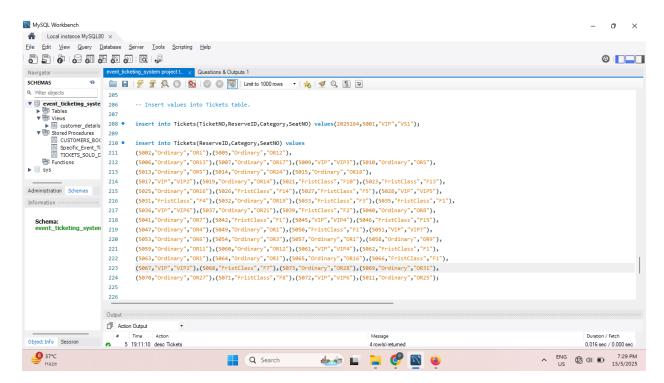
#### Insert values into customers table



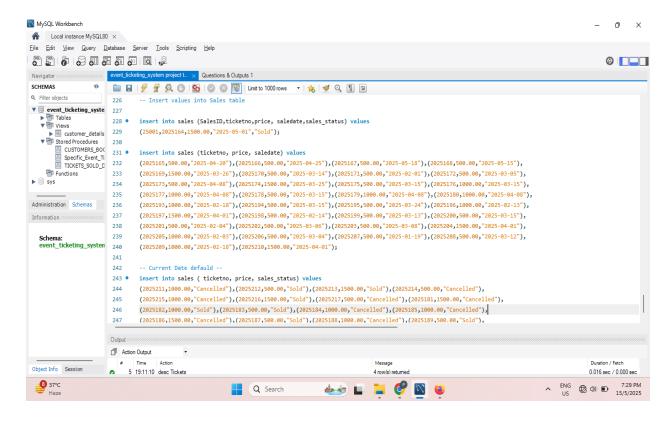
#### Insert values into reservations table



#### Insert values into tickets table



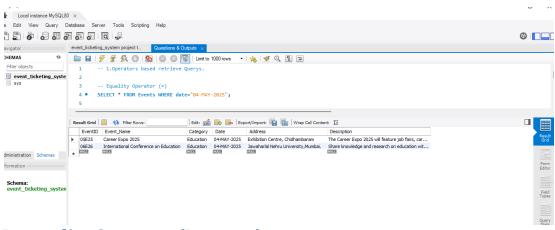
#### Insert values into sales table



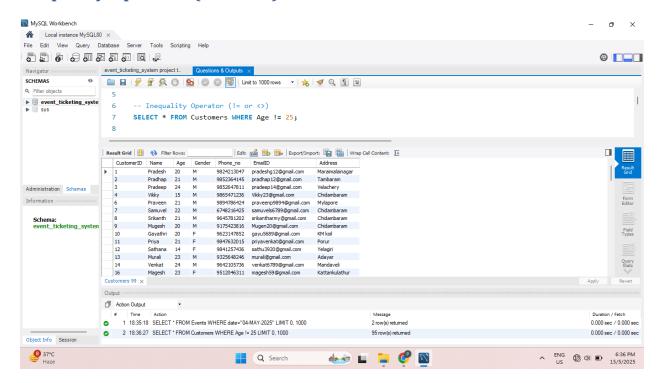
# Querying THE DATABASE

# **Operators-Based Retrieve Queries:**

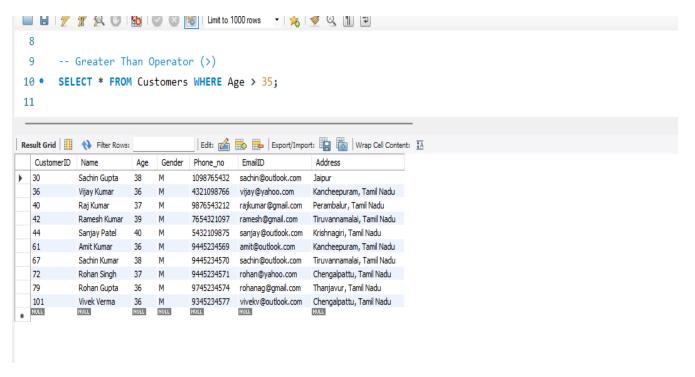
#### **Equality Operator (=)**



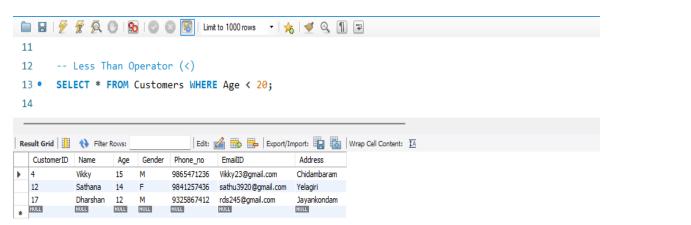
#### Inequality Operator (! = or <>)



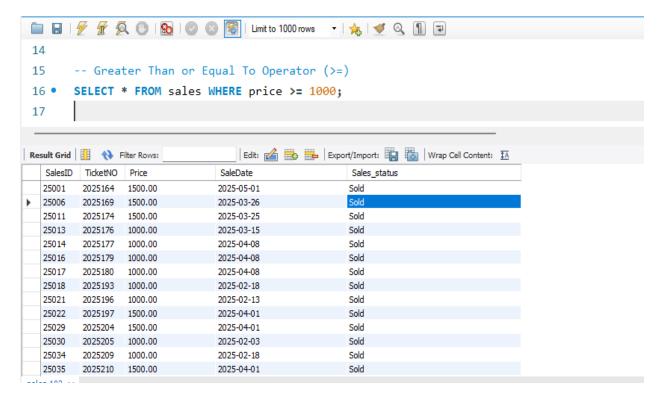
#### **Greater Than Operator (>)**



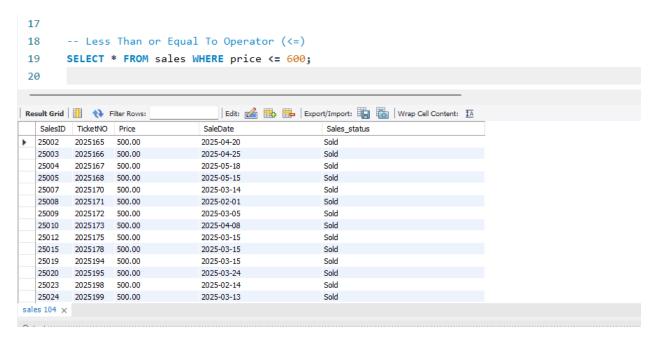
#### Less than Operator (<)



#### **Greater Than or Equal To Operator (>=)**



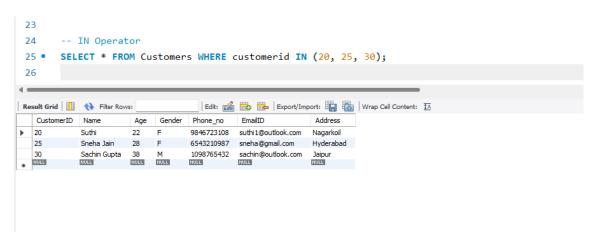
#### Less Than or Equal To Operator (<=)</pre>



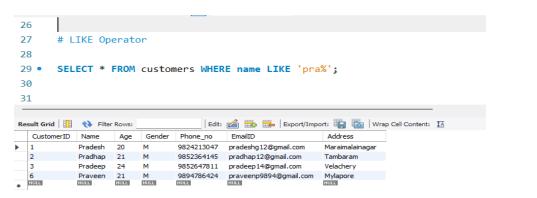
#### "BETWEEN" Operator

```
20
21
       -- BETWEEN Operator
22 • select * from reservations where reservedate between "2025-04-01" and "2025-04-30";
| Edit: 💪 🔜 🖶 | Export/Import: 识 🐻 | Wrap Cell Content: 🏗
  ReserveID CustomerID EventID ReserveDATE PaymentType Payment_Status
                  09F25 2025-04-10 Card
04E26 2025-04-04 UPI
▶ 5002
                                                  Completed
                                                Cancelled
  5008
  5014 8 01B25 2025-04-01 UPI Completed
5026 22 01B25 2025-04-01 UPI Completed
 5032 25 08EN25 2025-04-07 Card Completed
5038 28 13EN25 2025-04-09 UPI Pending
  5044
                    07EN25 2025-04-08 UPI
                                                  Pendina
          32
  5054 38 09F25 2025-04-10 Card Completed
```

#### "IN" Operator



#### "LIKE" Operator



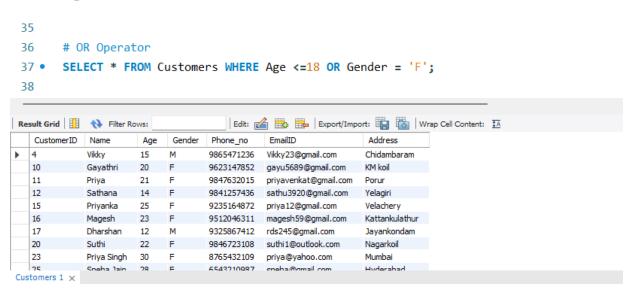
#### "NOT" Operator

```
30
        -- NOT Operator
        SELECT * FROM reservations WHERE NOT Payment_Status = "completed";
31
Edit: 🚄 🖶 Export/Import: 📳 🐻 Wrap Cell Content: 🖽
  ReserveID CustomerID EventID ReserveDATE PaymentType Payment_Status
  5003
                     02B25
                             2025-05-03
                                        UPI
                                                   Pendina
                 07EN25 2025-03-08
                                                   Pending
  5004
                                        UPI
  5008
                     04E26
                             2025-04-04
                                        UPI
                                                    Cancelled
                    13EN25 2025-03-09
                                        UPI
                                                   Pending
  5016
                     02B25
                             2025-05-03
                                        UPI
            11
                                                    Pending
                  08EN25 2025-05-07
                                        Card
                      04E26
                                                    Cancelled
                   10F25 2025-05-11
                                        Card
                                                   Pending
  5024
                      13EN25
                             2025-03-09
                    02B25
  5029
                             2025-05-03
                                                   Pending
  5030
                      07EN25
                             2025-02-08
                                        UPI
                                                    Pending
  5034
           26
                     04E26
                             2025-03-04
                                        UPI
                                                   Cancelled
  5038
            28
                      13EN25
                             2025-04-09
                                        UPI
                                                    Pending
  5043
          31
                     02B25
                            2025-05-03
                                        UPI
                                                   Pending
```

#### "AND" Operator



#### "OR" Operator

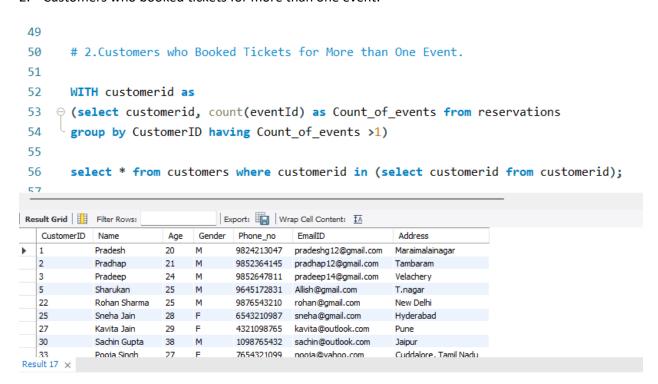


### **Subquery-Based Queries:**

1. Get the details of all events that have no tickets sold.

```
-- SUB QUERY--
39
40
        #1.Get the details of all events that have no tickets sold.
42 • ⊝ select * from events where eventId not in (select e.eventID from events e
43
        left join reservations r on e.eventid=r.eventId
44
        where r.payment_status="completed"
45
        group by e.eventid);
                                          Edit: 🚄 🖶 Export/Import: 🙀 📸 Wrap Cell Content: 🖽
EventID Event Name
                                                          Address
                                 Category
  02B25
          Startup India Expo 2025
                                Business
                                             28-MAY-2025
                                                         Pragati Maidan, New Delhi
                                                                                         Improve your Business skills
  04E26
          EduTech Conference 2025
                                Education
                                             06-jan-2026
                                                         Anna conference hall, Adayar, Chennai.
                                                                                        Explore the latest trends and technologies in ed...
  13EN25 Drink meetup Chennai
                                Entertainment 10-MAY-2025 Lower Deck Bar & Nightdub, Chennai.
                                                                                        Let's meet up in Chennai for some drinks and go...
 NULL
          NULL
                                NULL
                                             NULL
```

2. Customers who booked tickets for more than one event.

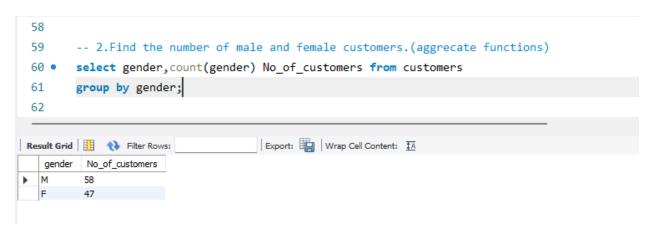


# **Aggregate Function Queries:**

1. Find the total number of events in each category.

```
-- AGGREGATE FUNCTIONS --
54
55
       -- 1.Find the total number of events in each category --
56
       select Category,count(event_name) from events group by Category;
58
Export: Wrap Cell Content: IA
  Category
            count(event_name)
 Business
         5
 Education
 Entertainment 3
 Fashion
            2
 Sports
```

2. Find the number of male and female customers.

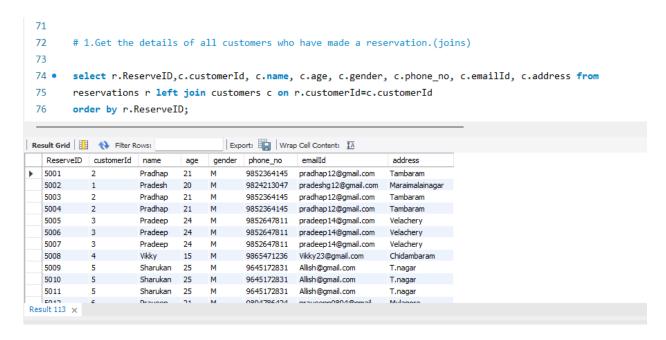


3. What are the top 3 days with the highest revenue for ticket sales?

```
62
63
       # 3.What are the top 3 days with the highest revenue for the ticketsales?.
64
65 •
       select saledate, sum(price) as total_sales_per_day from sales
       group by SaleDate order by total sales per day desc limit 3;
66
67
                                   Export: Wrap Cell Content: 🖽 Fetch rows:
saledate
          total_sales_per_day
 2025-05-13 18000.00
  2025-04-01 4500.00
  2025-04-08 3500.00
```

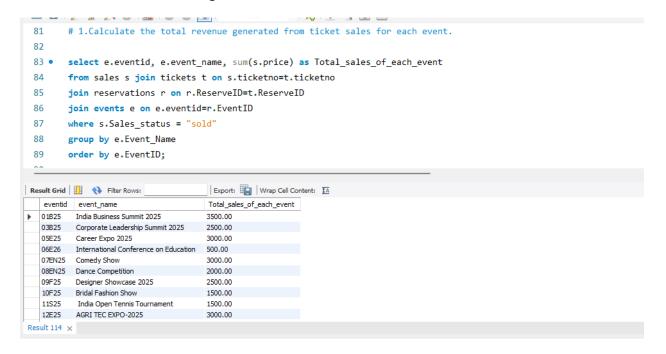
## Join-Based Queries:

1. Get the details of all customers who have made a reservation.



# Join and Aggregate Function Queries:

1. Calculate the total revenue generated from ticket sales for each event.



2. Find the average price of tickets sold for each category.

```
91
        # 2.Find the average price of tickets sold for each category.
 92
        select e.Category, avg(s.price) as Total_sales_of_each_event
 93 •
        from sales s join tickets t on s.ticketno=t.ticketno
 94
        join reservations r on r.ReserveID=t.ReserveID
 95
        join events e on e.eventid=r.EventID
 96
 97
        where s.Sales_status = "sold"
 98
        group by e.Category;
 99
                                     Export: Wrap Cell Content: 1A
Total_sales_of_each_event
   Category
              857.142857
Business
  Fashion
              666.666667
  Entertainment 1000.000000
  Sports
             714.285714
  Education
              863.636364
```

3. Which events have the top two highest revenues?

```
100
        # 3.Which events have the top two highest revenues?.
101
102 •
        select e.eventId, e.event_name, sum(s.price) Total_Income_Each_Event from sales s
        join tickets t on t.TicketNO=s.TicketNO
103
        join reservations r on r.reserveid=t.reserveid
104
        join events e on r.eventid=e.eventid
105
106
        group by e.eventid order by Total_Income_Each_Event desc limit 2;
107
                                      Export: Wrap Cell Content: A Fetch rows:
Result Grid Filter Rows:
   eventId event_name
                             Total_Income_Each_Event
  14E25
          Automate Intelligently
                             6000.00
  09F25 Designer Showcase 2025 4000.00
```

4. Find the total number of events in each category.

```
-- AGGREGATE FUNCTIONS --
55
       -- 1. Find the total number of events in each category --
56
57 •
       select Category,count(event_name) from events group by Category;
58
Export: Wrap Cell Content: TA
             count(event_name)
  Category
 Business
  Education
  Entertainment 3
            2
  Fashion
  Sports
```

# **Advanced Queries**

# **Stored Procedure Queries:**

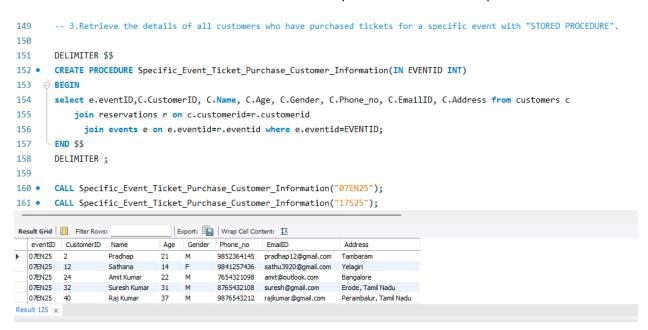
1. Find all tickets sold for a specific event.

```
118
        -- 1.Find all tickets sold for a specific event.(Stored Procedure Method & SUB QUERY)
119
120
       DELIMITER $$
121 • CREATE PROCEDURE TICKETS SOLD DETAILS(IN EVENT_NAME VARCHAR(50))
122 ⊝ BEGIN
123
            select * from sales where ticketno in (select ticketno from tickets where reserveId in
124
                (select r.reserveId from reservations r left join events e on e.eventId=r.eventId
125
                 where e.event_name=event_name and r.payment_status = "completed"))
126
                    and sales_status = "sold";
127
      END $$
128
       DELIMITER;
       CALL TICKETS_SOLD_DETAILS("India Business Summit 2025");
129 •
130 • CALL TICKETS_SOLD_DETAILS("Comedy Show");
                                 Export: Wrap Cell Content: IA
Result Grid Filter Rows:
  SalesID TicketNO Price
                                 SaleDate
                                                        Sales_status
  25001
         2025164 1500.00
                                 2025-05-01
                                                        Sold
  25009 2025172 500.00
                                 2025-03-05
                                                        Sold
  25016 2025179 1000.00
                                 2025-04-08
  25051 2025189 500.00
```

2. Get the details of all events for which a specific customer has made a reservation.

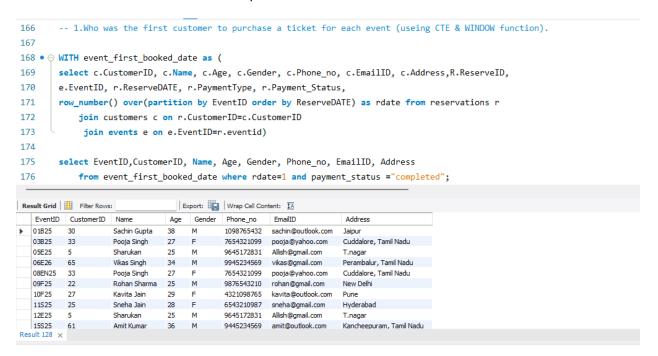
```
-- 2.Get the details of all events for which a specific customer has made a reservation with "STORED PROCEDURE".
133
134
135
        DELIMITER $$
        CREATE PROCEDURE CUSTOMERS_BOOKED_EVENTS_DETAILS(IN CUSTOMERID INT)
138
        select c.customerid, c.name, E.EventID, E.Event_Name, E.Category, E.Date, E.Address, E.Description from customers c
             join reservations r on c.customerid=r.customerid
139
140
                  join events e on e.eventid=r.eventid
141
                      where c.customerid=CUSTOMERID;
142
       END $$
143
        DELIMITER;
145 •
        call CUSTOMERS_BOOKED_EVENTS_DETAILS(5);
Result Grid Filter Rows:
                                    Export: Wrap Cell Content: IA
   customerid name
                                               Category Date
  5
            Sharukan 05E25
                             Career Expo 2025
                                               Education 04-MAY-2025
                                                                   Exhibition Centre, Chidhambaram
                                                                                                 The Career Expo 2025 will feature job fairs, car...
  5
            Sharukan 10F25
                             Bridal Fashion Show Fashion 26-DEC-2025 The Leela Palace, Jaipur
                                                                                                 Witness the latest bridal fashion trends and des...
            Sharukan 12E25
                            AGRI TEC EXPO-2025 Education 29-MAY-2025 Anandha Thirumana Mahal, Viluppuram, AGRI TEC EXPO - 2025 the objective of this exp...
```

3. Retrieve the details of all customers who have purchased tickets for a specific event.



# **CTE and Window Function Queries:**

1. Who was the first customer to purchase a ticket for each event?



2. How many tickets were sold for each event?

```
179
         -- 2. How many tickets were sold for each event? (using CTE & WINDOW Function).
180
181 • ⊝ WITH total_count as(
        select e.EventID, e.Event_Name, s.SaleDate, count(r.ReserveID)over(partition by EventId) as Tickets_sales_count,
        row_number() over(partition by Event_Name order by SaleDate desc) as Rownum from sales s
184
        join tickets t on t.TicketNO=s.TicketNO
        join reservations r on r.reserveid=t.reserveid
185
        join events e on r.eventid=e.eventid)
186
187
188
        select Eventid, Event_name, Tickets_Sales_Count from total_count where rownum=1;
189
Result Grid | Filter Rows:
                                    Export: Wrap Cell Content: IA
  Eventid Event_name
                                     Tickets_Sales_Count
          India Open Tennis Tournament
  11525
   12F25
          AGRI TEC EXPO-2025
   14E25
          Automate Intelligently
  10F25 Bridal Fashion Show
   05E25
          Career Expo 2025
  07EN25 Comedy Show
   03B25
          Corporate Leadership Summit 2025
  08EN25 Dance Competition
   09F25
          Designer Showcase 2025
  01B25 India Business Summit 2025
```

# **View-Based Queries:**

1. Create a view for ticket booking customer details.

