Project: Event Management System using PostgreSQL.

Objective: To develop the application that allows users to create and manage events, track attendees, and handle event registrations efficiently. The project will include the following tasks:

1. Database Creation

Create a database named "EventsManagement."

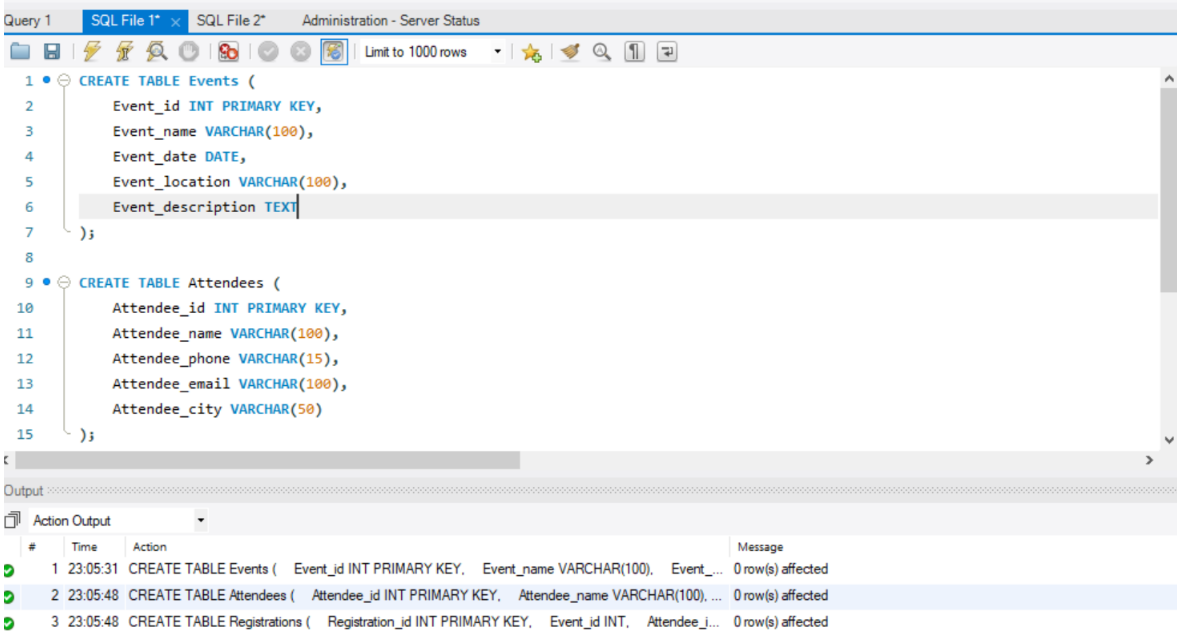
Create tables for Events, Attendees, and Registrations.

Events- Event_Id, Event_Name, Event_Date, Event_Location, Event_Description

Attendees- Attendee_Id, Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City

Registrations-Registration_id, Event_Id, Attendee_Id,Registration_Date,Registration_Amount.

The FOREIGN KEY constraint in the Registrations table references the Event_Id column in the Events table and the Attendee_Id column in the Attendees table.

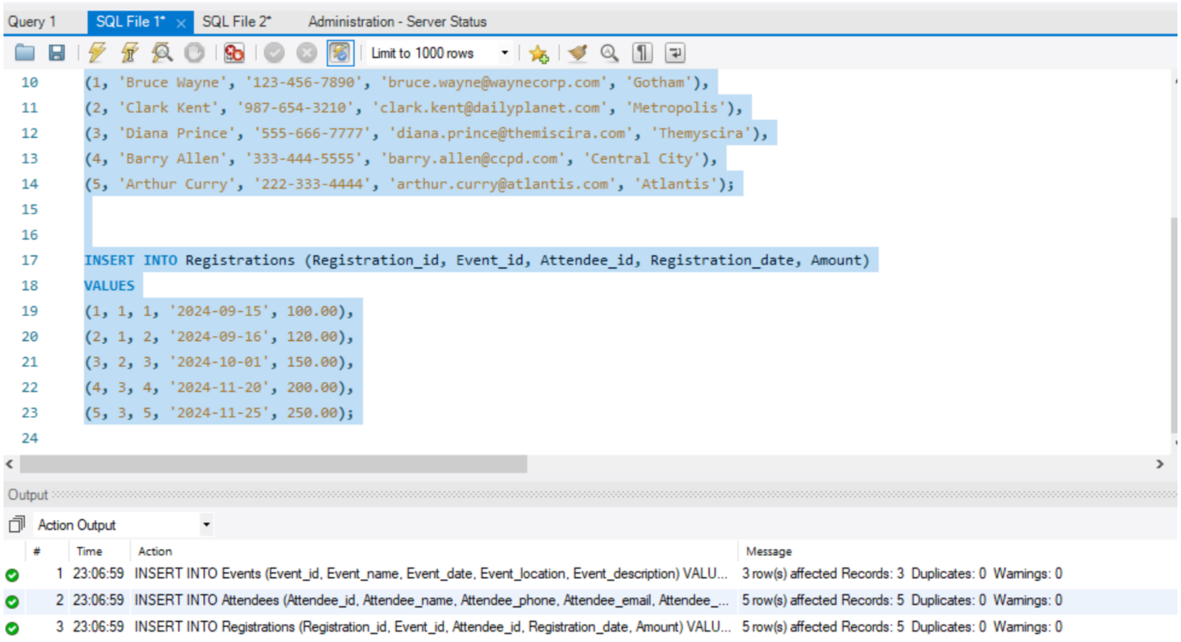


```
CREATE TABLE Events (
    Event_id INT PRIMARY KEY,
    Event_name VARCHAR(100),
    Event_date DATE,
    Event_location VARCHAR(100),
    Event_description TEXT
);

CREATE TABLE Attendees (
    Attendee_id INT PRIMARY KEY,
    Attendee_name VARCHAR(100),
    Attendee_phone VARCHAR(15),
    Attendee_email VARCHAR(100),
    Attendee_city VARCHAR(50)
);
```

#	Time	Action	Message
1	23:05:31	CREATE TABLE Events (Event_id INT PRIMARY KEY, Event_name VARCHAR(100), Event_...	0 row(s) affected
2	23:05:48	CREATE TABLE Attendees (Attendee_id INT PRIMARY KEY, Attendee_name VARCHAR(100), ...	0 row(s) affected
3	23:05:48	CREATE TABLE Registrations (Registration_id INT PRIMARY KEY, Event_id INT, Attendee_i...	0 row(s) affected

2. Data Creation

Insert some sample data for Events, Attendees, and Registrations tables with respective fields.

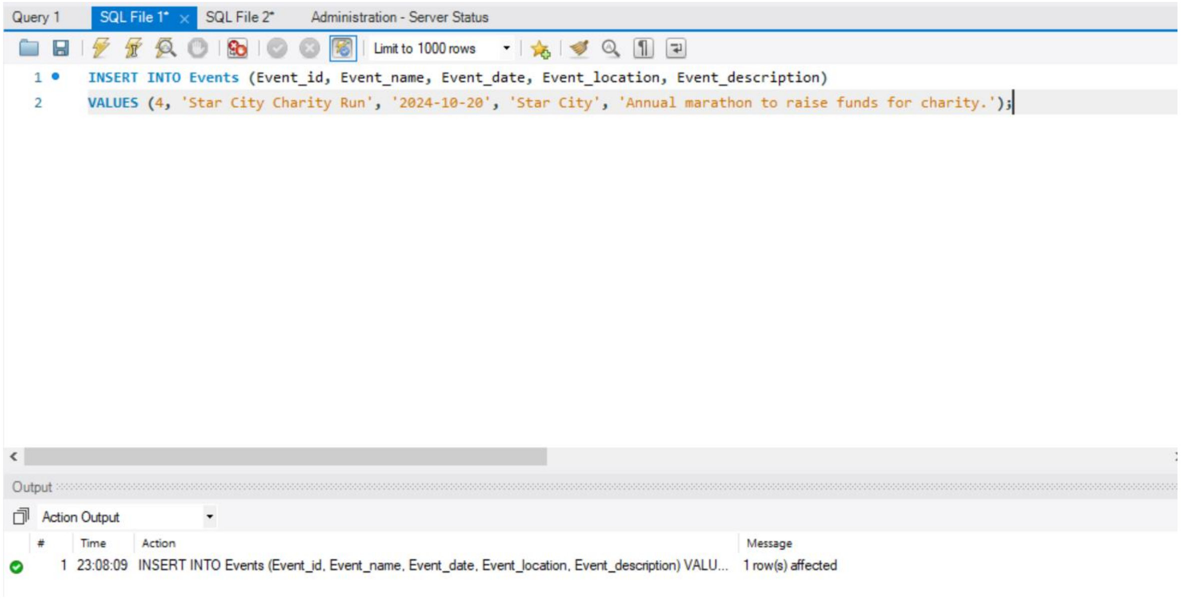


```sql
(1, 'Bruce Wayne', '123-456-7890', 'bruce.wayne@waynecorp.com', 'Gotham'),
(2, 'Clark Kent', '987-654-3210', 'clark.kent@dailyplanet.com', 'Metropolis'),
(3, 'Diana Prince', '555-666-7777', 'diana.prince@themiscira.com', 'Themyscira'),
(4, 'Barry Allen', '333-444-5555', 'barry.allen@ccpd.com', 'Central City'),
(5, 'Arthur Curry', '222-333-4444', 'arthur.curry@atlantis.com', 'Atlantis');


INSERT INTO Registrations (Registration_id, Event_id, Attendee_id, Registration_date, Amount)
VALUES
(1, 1, 1, '2024-09-15', 100.00),
(2, 1, 2, '2024-09-16', 120.00),
(3, 2, 3, '2024-10-01', 150.00),
(4, 3, 4, '2024-11-20', 200.00),
(5, 3, 5, '2024-11-25', 250.00);

```

```
  #  Time      Action                                                                                       Message
  1  23:06:59  INSERT INTO Events (Event_id, Event_name, Event_date, Event_location, Event_description) VALU...  3 row(s) affected Records: 3  Duplicates: 0  Warnings: 0
  2  23:06:59  INSERT INTO Attendees (Attendee_id, Attendee_name, Attendee_phone, Attendee_email, Attendee_...  5 row(s) affected Records: 5  Duplicates: 0  Warnings: 0
  3  23:06:59  INSERT INTO Registrations (Registration_id, Event_id, Attendee_id, Registration_date, Amount) VALU...  5 row(s) affected Records: 5  Duplicates: 0  Warnings: 0
```

3. Manage Event Details

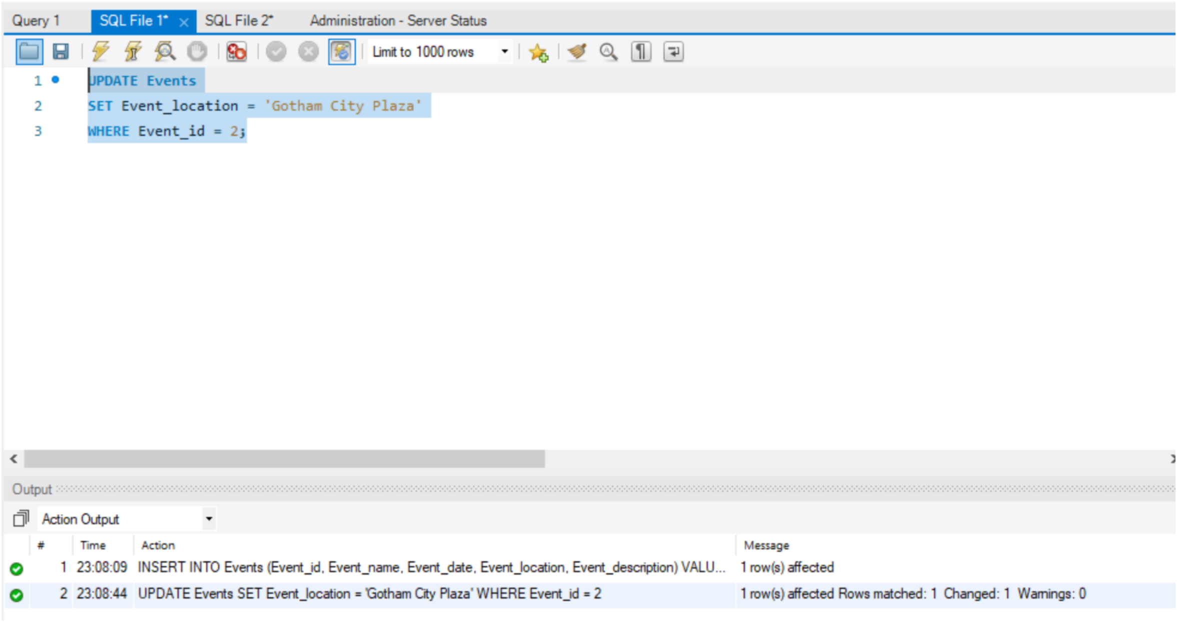
a) Inserting a new event.



```sql
INSERT INTO Events (Event_id, Event_name, Event_date, Event_location, Event_description)
VALUES (4, 'Star City Charity Run', '2024-10-20', 'Star City', 'Annual marathon to raise funds for charity.');
```

```
  #  Time      Action                                                                                       Message
  1  23:08:09  INSERT INTO Events (Event_id, Event_name, Event_date, Event_location, Event_description) VALU...  1 row(s) affected
```

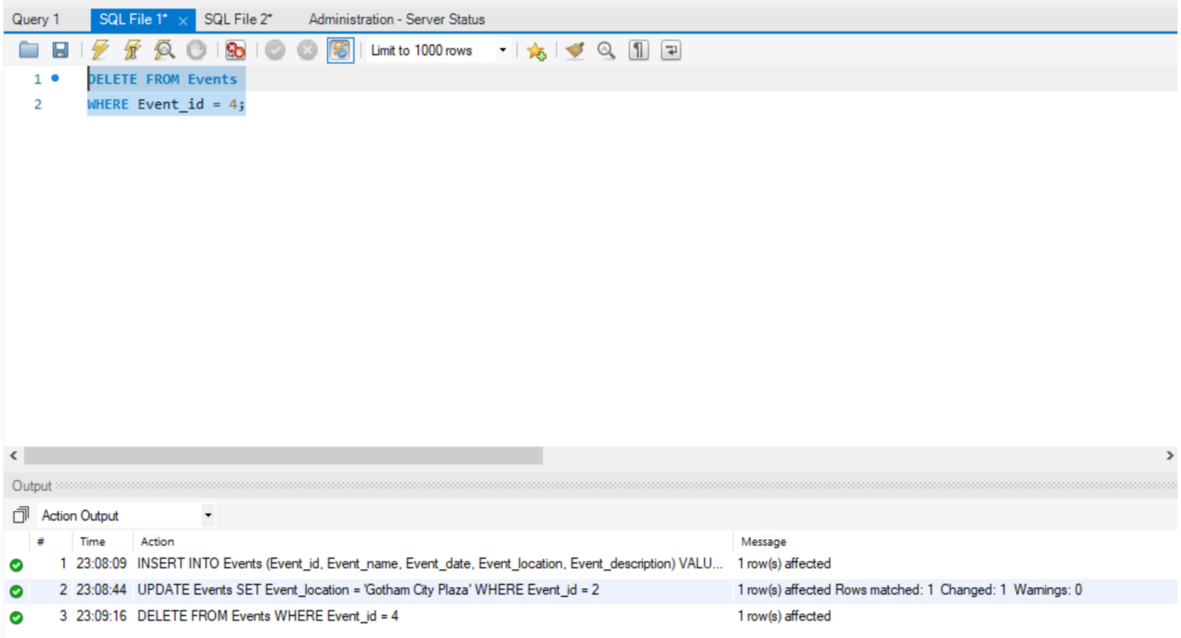
b) Updating an event's information.



```sql
UPDATE Events
SET Event_location = 'Gotham City Plaza'
WHERE Event_id = 2;
```

```
#  Time      Action                                                                                          Message
1  23:08:09  INSERT INTO Events (Event_id, Event_name, Event_date, Event_location, Event_description) VALU...  1 row(s) affected
2  23:08:44  UPDATE Events SET Event_location = 'Gotham City Plaza' WHERE Event_id = 2                         1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```

c) Deleting an event.

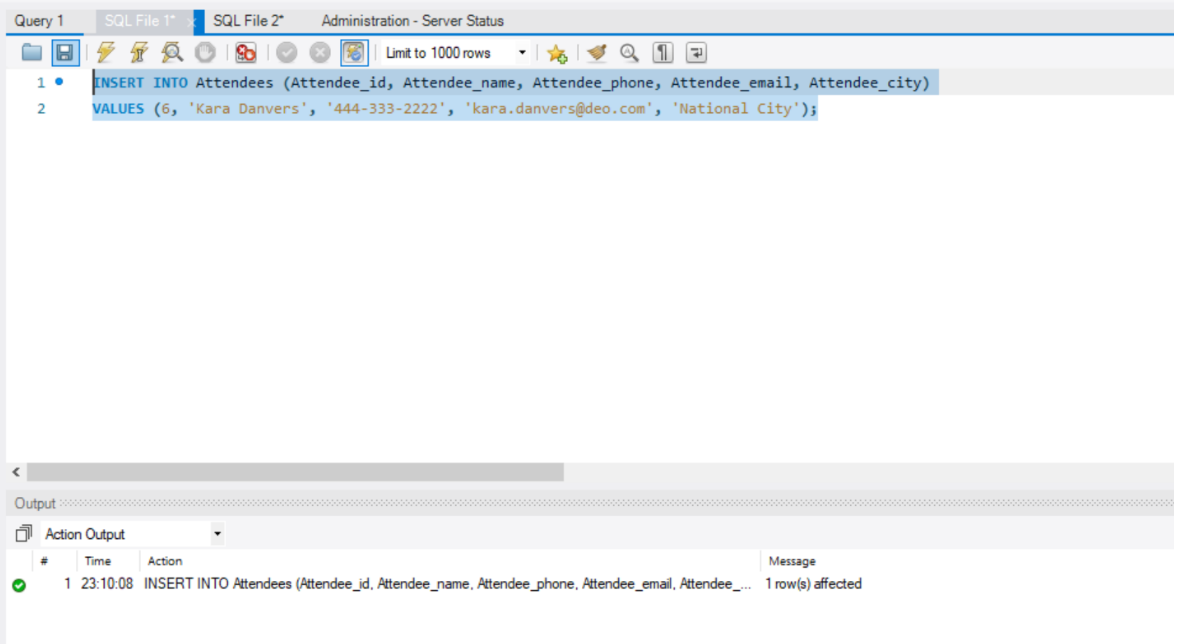


```sql
DELETE FROM Events
WHERE Event_id = 4;
```

```
#  Time      Action                                                                                          Message
1  23:08:09  INSERT INTO Events (Event_id, Event_name, Event_date, Event_location, Event_description) VALU...  1 row(s) affected
2  23:08:44  UPDATE Events SET Event_location = 'Gotham City Plaza' WHERE Event_id = 2                         1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
3  23:09:16  DELETE FROM Events WHERE Event_id = 4                                                              1 row(s) affected
```

3) Manage Track Attendees & Handle Events

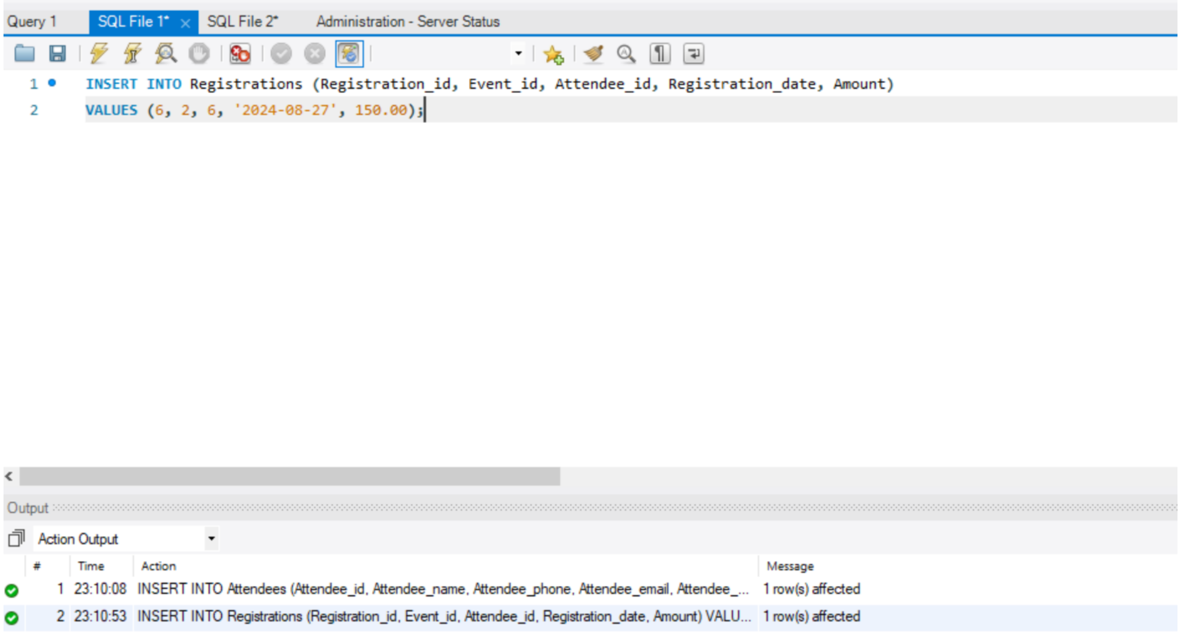
a) Inserting a new attendee.



```sql
INSERT INTO Attendees (Attendee_id, Attendee_name, Attendee_phone, Attendee_email, Attendee_city)
VALUES (6, 'Kara Danvers', '444-333-2222', 'kara.danvers@deo.com', 'National City');
```

```
#  Time      Action                                                                                  Message
1  23:10:08  INSERT INTO Attendees (Attendee_id, Attendee_name, Attendee_phone, Attendee_email, Attendee_...  1 row(s) affected
```

b)Registering an attendee for an event.

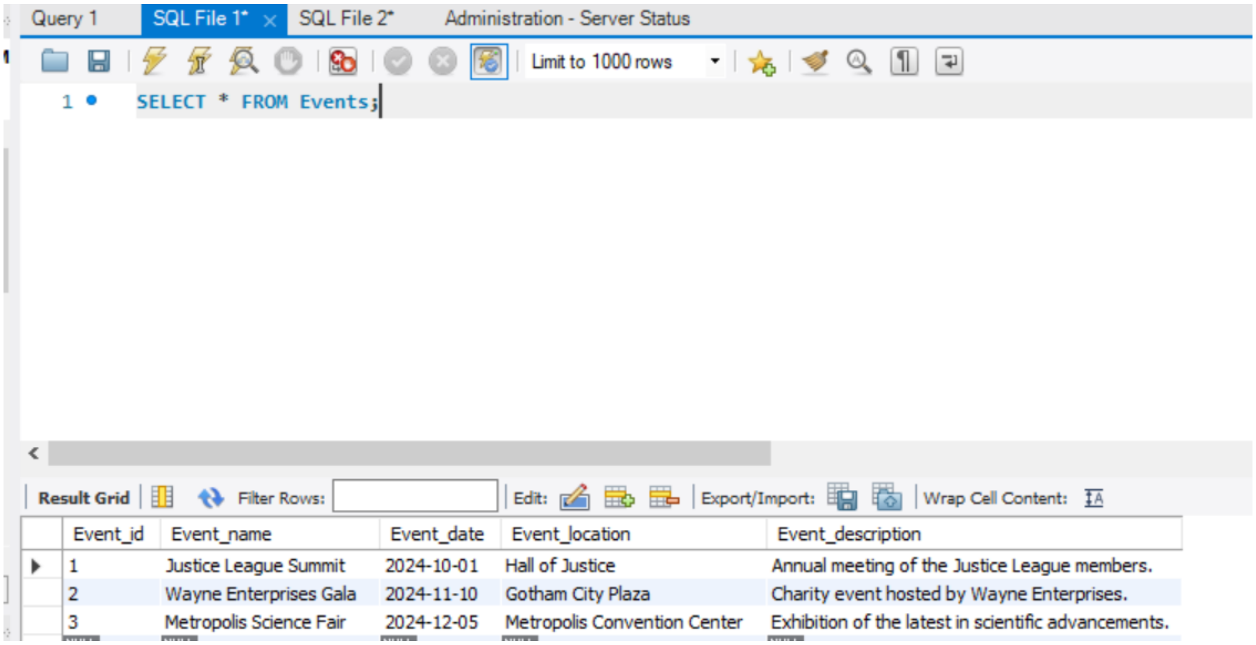


```sql
INSERT INTO Registrations (Registration_id, Event_id, Attendee_id, Registration_date, Amount)
VALUES (6, 2, 6, '2024-08-27', 150.00);
```

```
#  Time      Action                                                                                  Message
1  23:10:08  INSERT INTO Attendees (Attendee_id, Attendee_name, Attendee_phone, Attendee_email, Attendee_...  1 row(s) affected
2  23:10:53  INSERT INTO Registrations (Registration_id, Event_id, Attendee_id, Registration_date, Amount) VALU...  1 row(s) affected
```

5.Develop queries to

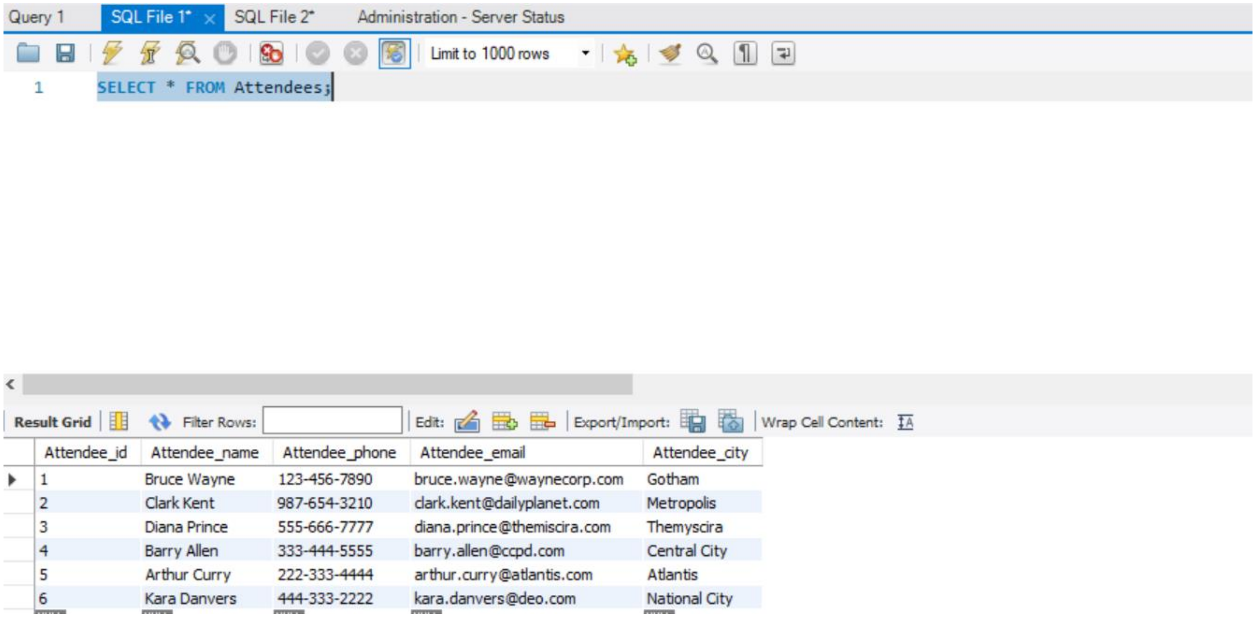
- retrieve event information,



```sql
SELECT * FROM Events;
```

Event_id	Event_name	Event_date	Event_location	Event_description
1	Justice League Summit	2024-10-01	Hall of Justice	Annual meeting of the Justice League members.
2	Wayne Enterprises Gala	2024-11-10	Gotham City Plaza	Charity event hosted by Wayne Enterprises.
3	Metropolis Science Fair	2024-12-05	Metropolis Convention Center	Exhibition of the latest in scientific advancements.

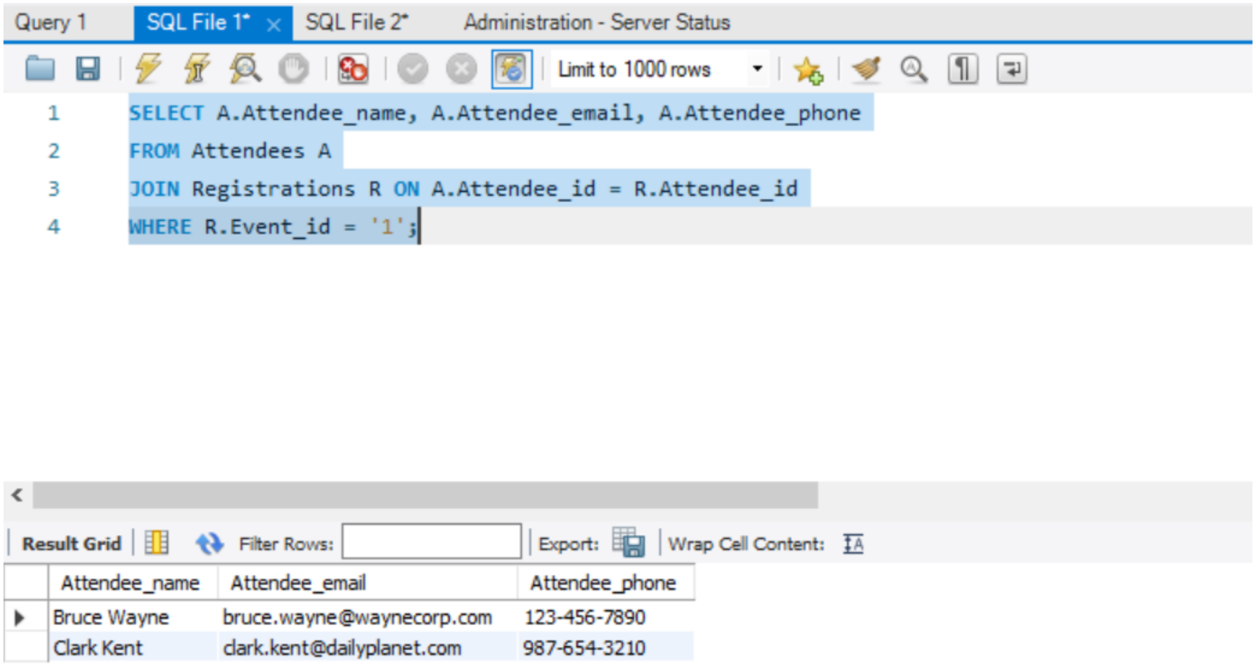
- generate attendee lists



```sql
SELECT * FROM Attendees;
```

Attendee_id	Attendee_name	Attendee_phone	Attendee_email	Attendee_city
1	Bruce Wayne	123-456-7890	bruce.wayne@waynecorp.com	Gotham
2	Clark Kent	987-654-3210	clark.kent@dailyplanet.com	Metropolis
3	Diana Prince	555-666-7777	diana.prince@themiscira.com	Themyscira
4	Barry Allen	333-444-5555	barry.allen@ccpd.com	Central City
5	Arthur Curry	222-333-4444	arthur.curry@atlantis.com	Atlantis
6	Kara Danvers	444-333-2222	kara.danvers@deo.com	National City

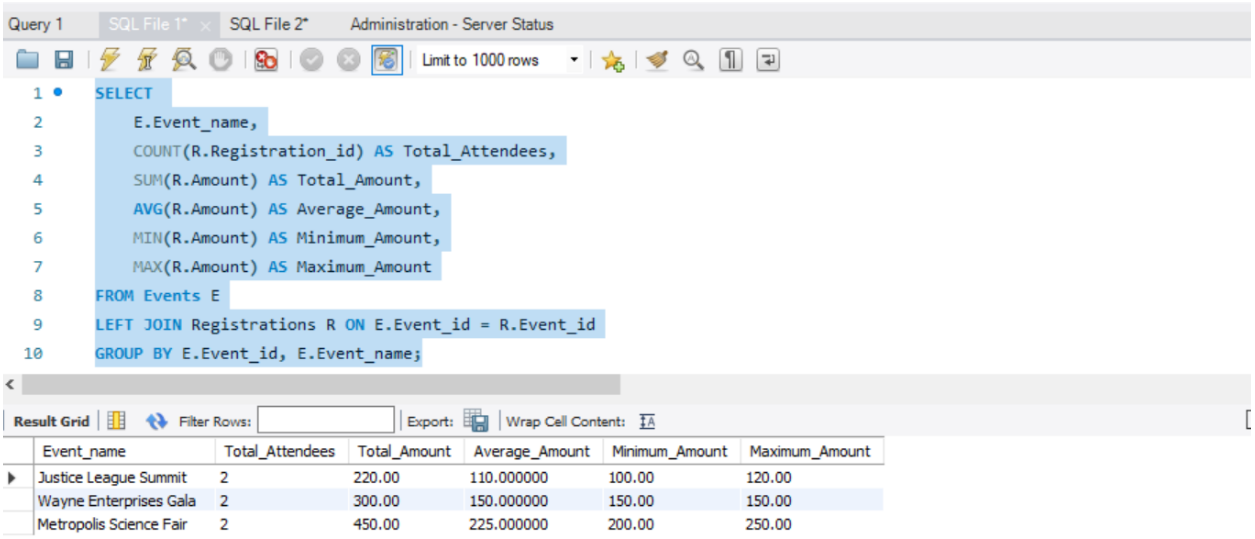
Attendee list for specific event



```sql
SELECT A.Attendee_name, A.Attendee_email, A.Attendee_phone
FROM Attendees A
JOIN Registrations R ON A.Attendee_id = R.Attendee_id
WHERE R.Event_id = '1';
```

Attendee_name	Attendee_email	Attendee_phone
Bruce Wayne	bruce.wayne@waynecorp.com	123-456-7890
Clark Kent	clark.kent@dailyplanet.com	987-654-3210

- calculate event attendance statistics.



```sql
SELECT
    E.Event_name,
    COUNT(R.Registration_id) AS Total_Attendees,
    SUM(R.Amount) AS Total_Amount,
    AVG(R.Amount) AS Average_Amount,
    MIN(R.Amount) AS Minimum_Amount,
    MAX(R.Amount) AS Maximum_Amount
FROM Events E
LEFT JOIN Registrations R ON E.Event_id = R.Event_id
GROUP BY E.Event_id, E.Event_name;
```

Event_name	Total_Attendees	Total_Amount	Average_Amount	Minimum_Amount	Maximum_Amount
Justice League Summit	2	220.00	110.000000	100.00	120.00
Wayne Enterprises Gala	2	300.00	150.000000	150.00	150.00
Metropolis Science Fair	2	450.00	225.000000	200.00	250.00