[Task 3] Project: Event Management System

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:

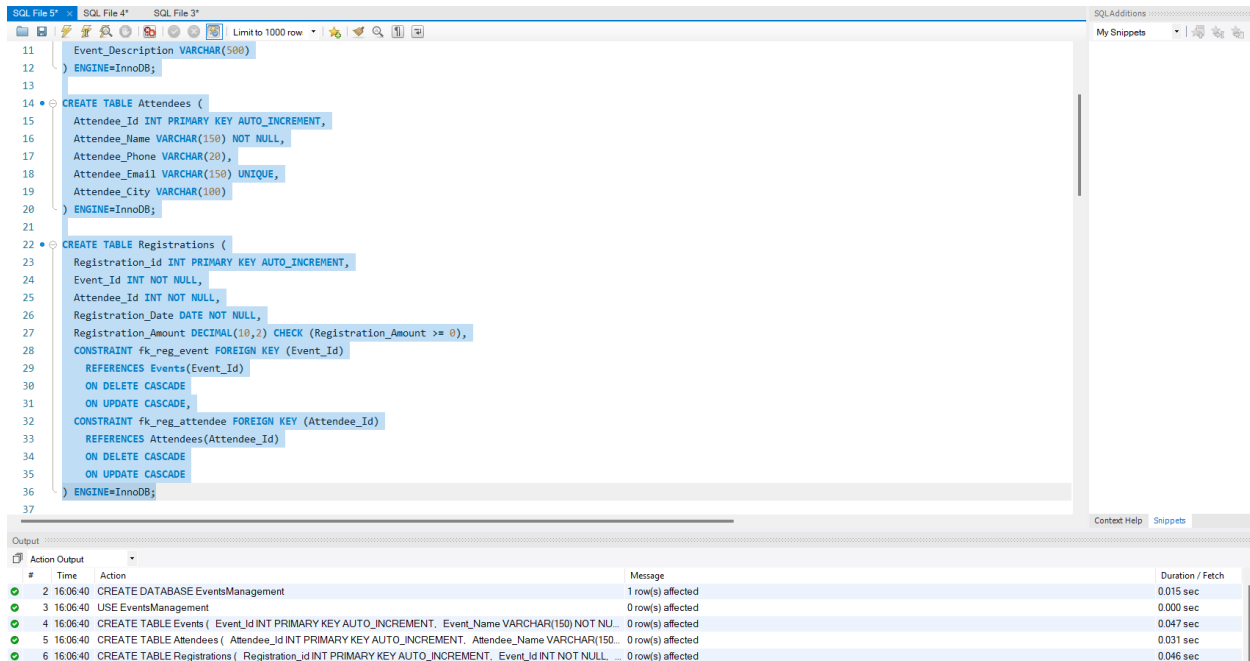1) Database Creation:

- 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.

2) Data Creation:

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

```sql
33        REFERENCES Attendees(Attendee_Id)
34        ON DELETE CASCADE
35        ON UPDATE CASCADE
36    ) ENGINE=InnoDB;
37
38    -- data
39    INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description) VALUES
40    ('Tech Summit India',  '2025-09-10', 'Bengaluru', 'Annual technology conference in India'),
41    ('Data & AI Expo',     '2025-10-05', 'Hyderabad', 'Data analytics and AI exhibition'),
42    ('Startup Pitch India', '2025-08-25', 'Mumbai',   'Pitch competition for Indian startups');
43
44    INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City) VALUES
45    ('Aarav Sharma', '+91-9876543210', 'aarav@demo.in',  'Gurugram'),
46    ('Isha Patel',   '+91-9810022334', 'isha@demo.in',   'Ahmedabad'),
47    ('Rohan Mehta',  '+91-9001234567', 'rohan@demo.in',  'Pune'),
48    ('Diya Nair',    '+91-8080808080', 'diya@demo.in',   'Kochi'),
49    ('Arjun Reddy',  '+91-9123456789', 'arjun@demo.in',  'Hyderabad'),
50    ('Neha Gupta',   '+91-9999912345', 'neha@demo.in',   'Ghaziabad');
51
52    INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES
53    (1, 1, '2025-08-01', 2500.00),
54    (1, 2, '2025-08-02', 2500.00),
55    (2, 3, '2025-09-01', 3500.00),
56    (2, 4, '2025-09-02', 3500.00),
57    (3, 2, '2025-07-20', 1500.00),
58    (3, 5, '2025-07-22', 1500.00);
59
```

#	Time	Action	Message	Duration / Fetch
5	16:06:40	CREATE TABLE Attendees (Attendee_Id INT PRIMARY KEY AUTO_INCREMENT, Attendee_Name VARCHAR(150...	0 row(s) affected	0.031 sec
6	16:06:40	CREATE TABLE Registrations (Registration_id INT PRIMARY KEY AUTO_INCREMENT, Event_Id INT NOT NULL, ...	0 row(s) affected	0.046 sec
7	16:11:41	INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description) VALUES ('Tech Summit India', '...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
8	16:11:41	INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City) VALUES ('Aarav Sharm...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0	0.016 sec
9	16:11:41	INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES (1, 1, '2025-08-0...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0	0.015 sec

3) Manage Event Details:

a) Inserting a new event.


```sql
39    INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description) VALUES
40    ('Tech Summit India',  '2025-09-10', 'Bengaluru', 'Annual technology conference in India'),
41    ('Data & AI Expo',     '2025-10-05', 'Hyderabad', 'Data analytics and AI exhibition'),
42    ('Startup Pitch India', '2025-08-25', 'Mumbai',   'Pitch competition for Indian startups');
43
44    INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City) VALUES
45    ('Aarav Sharma', '+91-9876543210', 'aarav@demo.in',  'Gurugram'),
46    ('Isha Patel',   '+91-9810022334', 'isha@demo.in',   'Ahmedabad'),
47    ('Rohan Mehta',  '+91-9001234567', 'rohan@demo.in',  'Pune'),
48    ('Diya Nair',    '+91-8080808080', 'diya@demo.in',   'Kochi'),
49    ('Arjun Reddy',  '+91-9123456789', 'arjun@demo.in',  'Hyderabad'),
50    ('Neha Gupta',   '+91-9999912345', 'neha@demo.in',   'Ghaziabad');
51
52    INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES
53    (1, 1, '2025-08-01', 2500.00),
54    (1, 2, '2025-08-02', 2500.00),
55    (2, 3, '2025-09-01', 3500.00),
56    (2, 4, '2025-09-02', 3500.00),
57    (3, 2, '2025-07-20', 1500.00),
58    (3, 5, '2025-07-22', 1500.00);
59
60    -- 3a) Insert new event
61    INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description)
62    VALUES ('Cloud World India', '2025-11-12', 'Delhi', 'Cloud technologies and practices');
63
64    -- 3b) Update event info (example: Event_Id = 1)
65    UPDATE Events
```

#	Time	Action	Message	Duration / Fetch
6	16:06:40	CREATE TABLE Registrations (Registration_id INT PRIMARY KEY AUTO_INCREMENT, Event_Id INT NOT NULL, ...	0 row(s) affected	0.046 sec
7	16:11:41	INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description) VALUES ('Tech Summit India', '...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
8	16:11:41	INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City) VALUES ('Aarav Sharm...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0	0.016 sec
9	16:11:41	INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES (1, 1, '2025-08-0...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0	0.015 sec
10	16:12:33	INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description) VALUES ('Cloud World India', '20...	1 row(s) affected	0.000 sec

b) Updating an event's information.

```
45    ('Aarav Sharma',  '+91-9876543210', 'aarav@demo.in',   'Gurugram'),
46    ('Isha Patel',    '+91-9810022334', 'isha@demo.in',    'Ahmedabad'),
47    ('Rohan Mehta',   '+91-9001234567', 'rohan@demo.in',   'Pune'),
48    ('Diya Nair',     '+91-8080808080', 'diya@demo.in',    'Kochi'),
49    ('Arjun Reddy',   '+91-9123456789', 'arjun@demo.in',   'Hyderabad'),
50    ('Neha Gupta',    '+91-9999912345', 'neha@demo.in',    'Ghaziabad');
51
52 ●  INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES
53    (1, 1, '2025-08-01', 2500.00),
54    (1, 2, '2025-08-02', 2500.00),
55    (2, 3, '2025-09-01', 3500.00),
56    (2, 4, '2025-09-02', 3500.00),
57    (3, 2, '2025-07-20', 1500.00),
58    (3, 5, '2025-07-22', 1500.00);
59
60    -- 3a) Insert new event
61 ●  INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description)
62    VALUES ('Cloud World India', '2025-11-12', 'Delhi', 'Cloud technologies and practices');
63
64    -- 3b) Update event info (example: Event_Id = 1)
65 ●  UPDATE Events
66    SET Event_Location = 'Bengaluru (Koramangala)',
67        Event_Description = 'Updated agenda and speakers'
68    WHERE Event_Id = 1;
69
70    -- 3c) Delete event (example: Event_Id = 3)
71 ●  DELETE FROM Events WHERE Event_Id = 3;
```

#	Time	Action	Message	Duration / Fetch
✓	7 16:11:41	INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description) VALUES ('Tech Summit India', '...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
✓	8 16:11:41	INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City) VALUES ('Aarav Sharm...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0	0.016 sec
✓	9 16:11:41	INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES (1, 1, '2025-08-0...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0	0.015 sec
✓	10 16:12:33	INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description) VALUES ('Cloud World India', '20...	1 row(s) affected	0.000 sec
✓	11 16:13:04	UPDATE Events SET Event_Location = 'Bengaluru (Koramangala)', Event_Description = 'Updated agenda and spea...	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec

c) Deleting an event.


```
51
52 ●  INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES
53    (1, 1, '2025-08-01', 2500.00),
54    (1, 2, '2025-08-02', 2500.00),
55    (2, 3, '2025-09-01', 3500.00),
56    (2, 4, '2025-09-02', 3500.00),
57    (3, 2, '2025-07-20', 1500.00),
58    (3, 5, '2025-07-22', 1500.00);
59
60    -- 3a) Insert new event
61 ●  INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description)
62    VALUES ('Cloud World India', '2025-11-12', 'Delhi', 'Cloud technologies and practices');
63
64    -- 3b) Update event info (example: Event_Id = 1)
65 ●  UPDATE Events
66    SET Event_Location = 'Bengaluru (Koramangala)',
67        Event_Description = 'Updated agenda and speakers'
68    WHERE Event_Id = 1;
69
70    -- 3c) Delete event (example: Event_Id = 3)
71 ●  DELETE FROM Events WHERE Event_Id = 3;
72
73    -- 4a) Insert a new attendee
74 ●  INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City)
75    VALUES ('Sanya Verma', '+91-9811112233', 'sanya@demo.in', 'Delhi');
76
77    -- 4b) Register attendee for an event (example: new attendee to Event_Id = 2)
```

#	Time	Action	Message	Duration / Fetch
✓	8 16:11:41	INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City) VALUES ('Aarav Sharm...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0	0.016 sec
✓	9 16:11:41	INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES (1, 1, '2025-08-0...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0	0.015 sec
✓	10 16:12:33	INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description) VALUES ('Cloud World India', '20...	1 row(s) affected	0.000 sec
✓	11 16:13:04	UPDATE Events SET Event_Location = 'Bengaluru (Koramangala)', Event_Description = 'Updated agenda and spea...	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec
✓	12 16:13:21	DELETE FROM Events WHERE Event_Id = 3	1 row(s) affected	0.016 sec

4) Manage, Track Attendees & Handle Events:

a) Inserting a new attendee.

```
57    (3, 2, '2025-07-20', 1500.00),
58    (3, 5, '2025-07-22', 1500.00);
59
60    -- 3a) Insert new event
61  • INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description)
62    VALUES ('Cloud World India', '2025-11-12', 'Delhi', 'Cloud technologies and practices');
63
64    -- 3b) Update event info (example: Event_Id = 1)
65  • UPDATE Events
66    SET Event_Location = 'Bengaluru (Koramangala)',
67        Event_Description = 'Updated agenda and speakers'
68    WHERE Event_Id = 1;
69
70    -- 3c) Delete event (example: Event_Id = 3)
71  • DELETE FROM Events WHERE Event_Id = 3;
72
73    -- 4a) Insert a new attendee
74  • INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City)
75    VALUES ('Sanya Verma', '+91-9811112233', 'sanya@demo.in', 'Delhi');
76
77    -- 4b) Register attendee for an event (example: new attendee to Event_Id = 2)
78  • INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount)
79    VALUES (2, LAST_INSERT_ID(), CURDATE(), 3500.00);
80
81    -- 5) Event info + attendee counts and revenue
82  • SELECT e.Event_Id, e.Event_Name, e.Event_Date, e.Event_Location,
83        COUNT(r.Registration id) AS registrations,
```

#	Time	Action	Message	Duration / Fetch
✓ 9	16:11:41	INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES (1, 1, '2025-08-0...	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0	0.015 sec
✓ 10	16:12:33	INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description) VALUES ('Cloud World India', '20...	1 row(s) affected	0.000 sec
✓ 11	16:13:04	UPDATE Events SET Event_Location = 'Bengaluru (Koramangala)', Event_Description = 'Updated agenda and spea...	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec
✓ 12	16:13:21	DELETE FROM Events WHERE Event_Id = 3	1 row(s) affected	0.016 sec
✓ 13	16:14:04	INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City) VALUES ('Sanya Verma'...	1 row(s) affected	0.000 sec

b) Registering an attendee for an event.


```
57    (3, 2, '2025-07-20', 1500.00),
58    (3, 5, '2025-07-22', 1500.00);
59
60    -- 3a) Insert new event
61  • INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description)
62    VALUES ('Cloud World India', '2025-11-12', 'Delhi', 'Cloud technologies and practices');
63
64    -- 3b) Update event info (example: Event_Id = 1)
65  • UPDATE Events
66    SET Event_Location = 'Bengaluru (Koramangala)',
67        Event_Description = 'Updated agenda and speakers'
68    WHERE Event_Id = 1;
69
70    -- 3c) Delete event (example: Event_Id = 3)
71  • DELETE FROM Events WHERE Event_Id = 3;
72
73    -- 4a) Insert a new attendee
74  • INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City)
75    VALUES ('Sanya Verma', '+91-9811112233', 'sanya@demo.in', 'Delhi');
76
77    -- 4b) Register attendee for an event (example: new attendee to Event_Id = 2)
78  • INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount)
79    VALUES (2, LAST_INSERT_ID(), CURDATE(), 3500.00);
80
81    -- 5) Event info + attendee counts and revenue
82  • SELECT e.Event_Id, e.Event_Name, e.Event_Date, e.Event_Location,
83        COUNT(r.Registration id) AS registrations,
```

#	Time	Action	Message	Duration / Fetch
✓ 10	16:12:33	INSERT INTO Events (Event_Name, Event_Date, Event_Location, Event_Description) VALUES ('Cloud World India', '20...	1 row(s) affected	0.000 sec
✓ 11	16:13:04	UPDATE Events SET Event_Location = 'Bengaluru (Koramangala)', Event_Description = 'Updated agenda and spea...	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec
✓ 12	16:13:21	DELETE FROM Events WHERE Event_Id = 3	1 row(s) affected	0.016 sec
✓ 13	16:14:04	INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City) VALUES ('Sanya Verma'...	1 row(s) affected	0.000 sec
✓ 14	16:14:19	INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES (2, LAST_INSE...	1 row(s) affected	0.000 sec

5) Develop queries to :

a] retrieve event information -

```sql
 74    INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City)
 75    VALUES ('Sanya Verma', '+91-9811112233', 'sanya@demo.in', 'Delhi');
 76
 77    -- 4b) Register attendee for an event (example: new attendee to Event_Id = 2)
 78    INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount)
 79    VALUES (2, LAST_INSERT_ID(), CURDATE(), 3500.00);
 80
 81    -- 5. retreive event information,generate attendee lists, calculate event attendance statistics
 82
 83    -- 1) Event information
 84    SELECT *
 85    FROM Events;
 86
 87    -- 2) Specific event information (replace ? with an Event_Id, e.g., 1)
 88    SELECT *
 89    FROM Events
 90    WHERE Event_Id = ?;
 91
 92    -- 3) Attendees information
 93    SELECT *
```

Result Grid

Event_Id	Event_Name	Event_Date	Event_Location	Event_Description
1	Tech Summit India	2025-09-10	Bengaluru (Koramangala)	Updated agenda and speakers
2	Data & AI Expo	2025-10-05	Hyderabad	Data analytics and AI exhibition
4	Cloud World India	2025-11-12	Delhi	Cloud technologies and practices
NULL	NULL	NULL	NULL	NULL

Events 1

Output — Action Output

#	Time	Action	Message	Duration / Fetch
11	16:13:04	UPDATE Events SET Event_Location = 'Bengaluru (Koramangala)', Event_Description = 'Updated agenda and spe...	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec
12	16:13:21	DELETE FROM Events WHERE Event_Id = 3	1 row(s) affected	0.016 sec
13	16:14:04	INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City) VALUES ('Sanya Verm...	1 row(s) affected	0.000 sec
14	16:14:19	INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES (2, LAST_INS...	1 row(s) affected	0.000 sec
15	16:21:05	SELECT * FROM Events LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec

b] generate attendee lists -

```sql
 80
 81    -- 5. retreive event information,generate attendee lists, calculate event attendance statistics
 82
 83    -- 1) Event information
 84    SELECT *
 85    FROM Events;
 86
 87    -- 2) Specific event information (replace ? with an Event_Id, e.g., 1)
 88    SELECT *
 89    FROM Events
 90    WHERE Event_Id = ?;
 91
 92    -- 3) Attendees information
 93    SELECT *
 94    FROM Attendees;
 95
 96    -- 4) Specific event's attendees (by Event_Id)
 97    SELECT
 98       A.Attendee_Name,
 99       A.Attendee_Email,
```

Result Grid

Attendee_Id	Attendee_Name	Attendee_Phone	Attendee_Email	Attendee_City
1	Aarav Sharma	+91-9876543210	aarav@demo.in	Gurugram
2	Isha Patel	+91-9810022334	isha@demo.in	Ahmedabad
3	Rohan Mehta	+91-9001234567	rohan@demo.in	Pune
4	Diya Nair	+91-8080808080	diya@demo.in	Kochi
5	Arjun Reddy	+91-9123456789	arjun@demo.in	Hyderabad

Attendees 2

Output — Action Output

#	Time	Action	Message	Duration / Fetch
12	16:13:21	DELETE FROM Events WHERE Event_Id = 3	1 row(s) affected	0.016 sec
13	16:14:04	INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City) VALUES ('Sanya Verm...	1 row(s) affected	0.000 sec
14	16:14:19	INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES (2, LAST_INS...	1 row(s) affected	0.000 sec
15	16:21:05	SELECT * FROM Events LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
16	16:25:03	SELECT * FROM Attendees LIMIT 0, 1000	7 row(s) returned	0.000 sec / 0.000 sec

c] calculate event attendance statistics -

```
104     WHERE R.Event_Id = ?;
105
106     -- 5) Overall event attendance statistics
107   • SELECT
108       E.Event_Id,
109       E.Event_Name,
110       COUNT(R.Registration_id) AS Total_Attendees,
111       COALESCE(SUM(R.Registration_Amount), 0) AS Total_Amount,
112       COALESCE(AVG(R.Registration_Amount), 0) AS Average_Amount,
113       COALESCE(MIN(R.Registration_Amount), 0) AS Minimum_Amount,
114       COALESCE(MAX(R.Registration_Amount), 0) AS Maximum_Amount
115     FROM Events AS E
116     LEFT JOIN Registrations AS R
117       ON E.Event_Id = R.Event_Id
118     GROUP BY
119       E.Event_Id,
120       E.Event_Name
121     ORDER BY
122       E.Event_Name;
123
```

Event_Id	Event_Name	Total_Attendees	Total_Amount	Average_Amount	Minimum_Amount	Maximum_Amount
4	Cloud World India	0	0.00	0.000000	0.00	0.00
2	Data & AI Expo	3	10500.00	3500.000000	3500.00	3500.00
1	Tech Summit India	2	5000.00	2500.000000	2500.00	2500.00

Result 3 ×   Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
13	16:14:04	INSERT INTO Attendees (Attendee_Name, Attendee_Phone, Attendee_Email, Attendee_City) VALUES ('Sanya Verm...	1 row(s) affected	0.000 sec
14	16:14:19	INSERT INTO Registrations (Event_Id, Attendee_Id, Registration_Date, Registration_Amount) VALUES (2, LAST_INS...	1 row(s) affected	0.000 sec
15	16:21:05	SELECT * FROM Events LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
16	16:25:03	SELECT * FROM Attendees LIMIT 0, 1000	7 row(s) returned	0.000 sec / 0.000 sec
17	16:25:47	SELECT E.Event_Id, E.Event_Name, COUNT(R.Registration_id) AS Total_Attendees, COALESCE(SUM(R.Registr...	3 row(s) returned	0.016 sec / 0.000 sec