Soccer Match Analytics Database

Goal: Track match results and player contributions.

Tables:

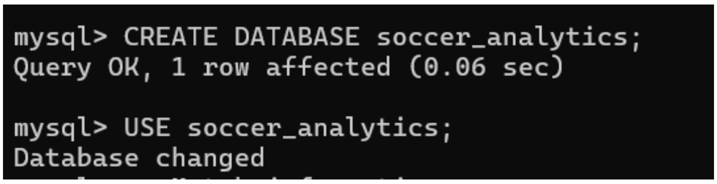
- `matches(match_id, date, home_team, away_team, home_score, away_score)`
- `players(player_id, name, team, position)`
- `performance(match_id, player_id, goals, assists, minutes_played)`

Queries:

- Find top goal scorers by season.
- Calculate win/loss ratios for each team.
- Identify players with the highest average minutes played.

a. Create database

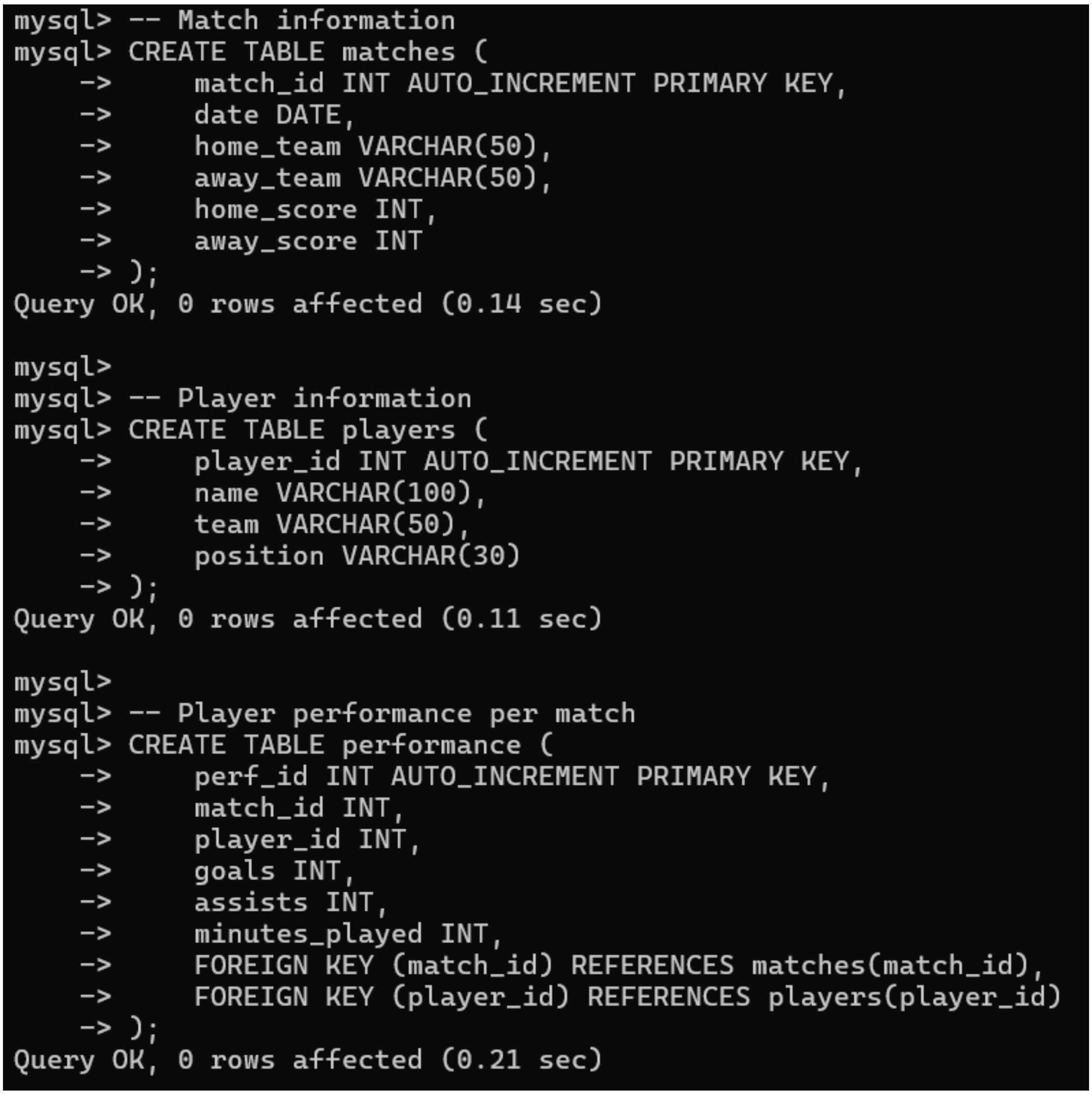
```
CREATE DATABASE soccer_analytics;
USE soccer_analytics;
```



```
mysql> CREATE DATABASE soccer_analytics;
Query OK, 1 row affected (0.06 sec)

mysql> USE soccer_analytics;
Database changed
```

b. Create tables

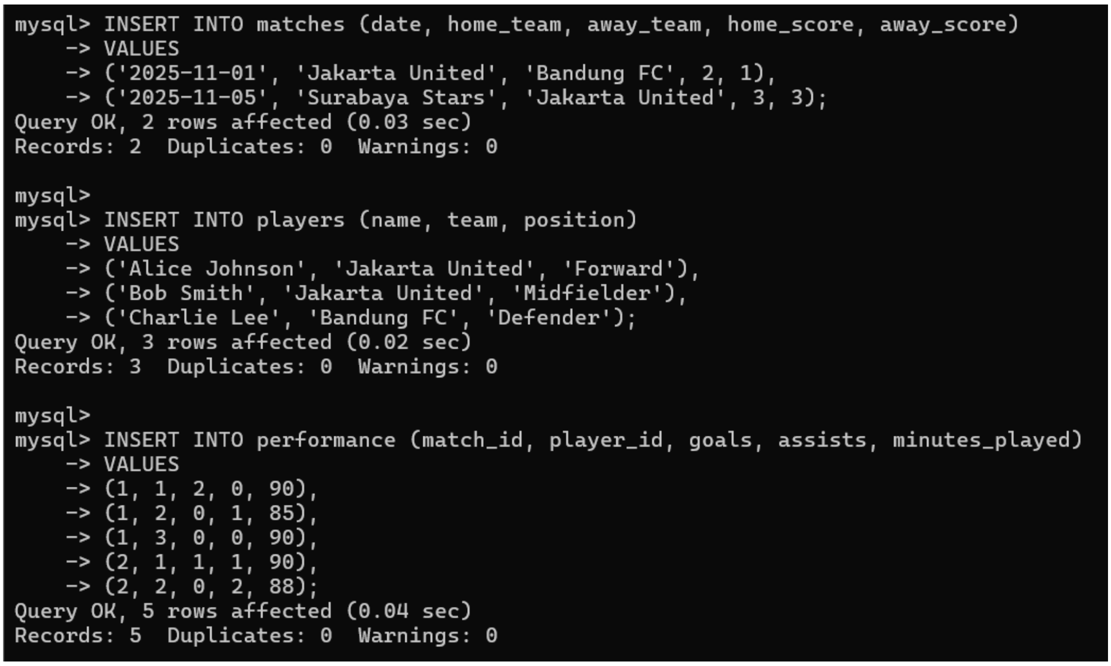
```
-- Match information
CREATE TABLE matches (
    match_id INT AUTO_INCREMENT PRIMARY KEY,
    date DATE,
    home_team VARCHAR(50),
    away_team VARCHAR(50),
    home_score INT,
    away_score INT
);

-- Player information
CREATE TABLE players (
    player_id INT AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(100),
    team VARCHAR(50),
    position VARCHAR(30)
);

-- Player performance per match
CREATE TABLE performance (
    perf_id INT AUTO_INCREMENT PRIMARY KEY,
    match_id INT,
    player_id INT,
    goals INT,
    assists INT,
    minutes_played INT,
    FOREIGN KEY (match_id) REFERENCES matches(match_id),
    FOREIGN KEY (player_id) REFERENCES players(player_id)
);
```



```
mysql> -- Match information
mysql> CREATE TABLE matches (
    ->     match_id INT AUTO_INCREMENT PRIMARY KEY,
    ->     date DATE,
    ->     home_team VARCHAR(50),
    ->     away_team VARCHAR(50),
    ->     home_score INT,
    ->     away_score INT
    -> );
Query OK, 0 rows affected (0.14 sec)

mysql>
mysql> -- Player information
mysql> CREATE TABLE players (
    ->     player_id INT AUTO_INCREMENT PRIMARY KEY,
    ->     name VARCHAR(100),
    ->     team VARCHAR(50),
    ->     position VARCHAR(30)
    -> );
Query OK, 0 rows affected (0.11 sec)

mysql>
mysql> -- Player performance per match
mysql> CREATE TABLE performance (
    ->     perf_id INT AUTO_INCREMENT PRIMARY KEY,
    ->     match_id INT,
    ->     player_id INT,
    ->     goals INT,
    ->     assists INT,
    ->     minutes_played INT,
    ->     FOREIGN KEY (match_id) REFERENCES matches(match_id),
    ->     FOREIGN KEY (player_id) REFERENCES players(player_id)
    -> );
Query OK, 0 rows affected (0.21 sec)
```

c. Insert sample data

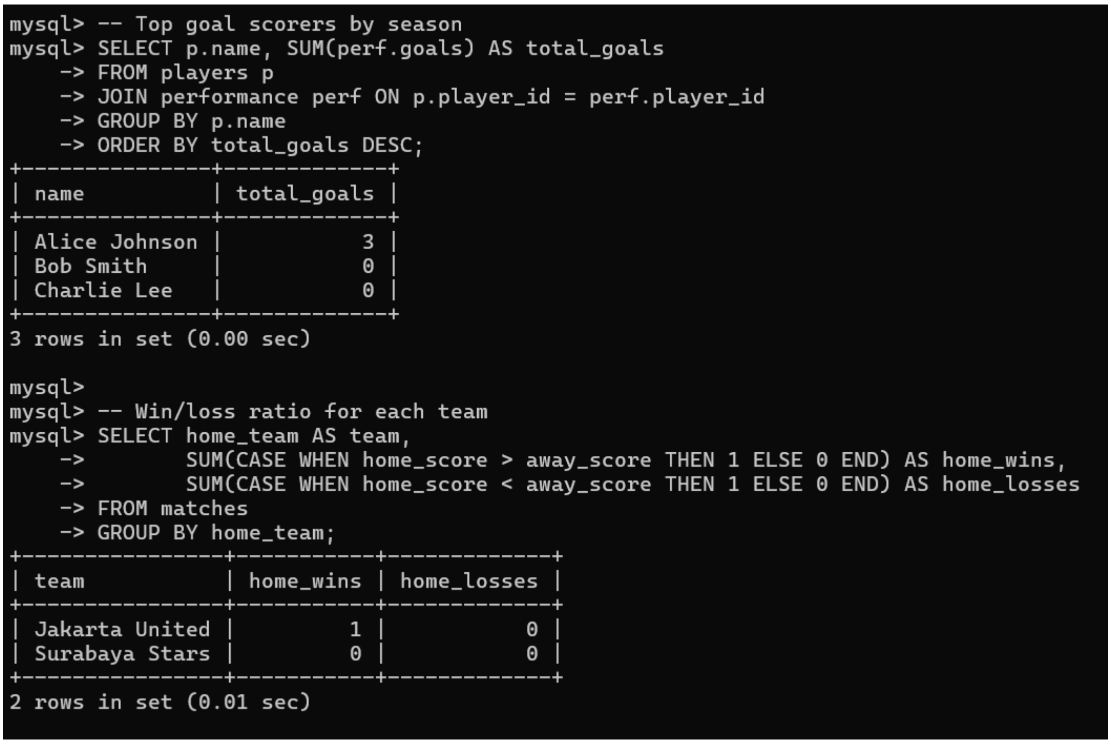
```
INSERT INTO matches (date, home_team, away_team, home_score,
away_score)
VALUES
('2025-11-01', 'Jakarta United', 'Bandung FC', 2, 1),
('2025-11-05', 'Surabaya Stars', 'Jakarta United', 3, 3);

INSERT INTO players (name, team, position)
VALUES
('Alice Johnson', 'Jakarta United', 'Forward'),
('Bob Smith', 'Jakarta United', 'Midfielder'),
('Charlie Lee', 'Bandung FC', 'Defender');

INSERT INTO performance (match_id, player_id, goals, assists,
minutes_played)
VALUES
(1, 1, 2, 0, 90),
(1, 2, 0, 1, 85),
(1, 3, 0, 0, 90),
(2, 1, 1, 1, 90),
(2, 2, 0, 2, 88);
```



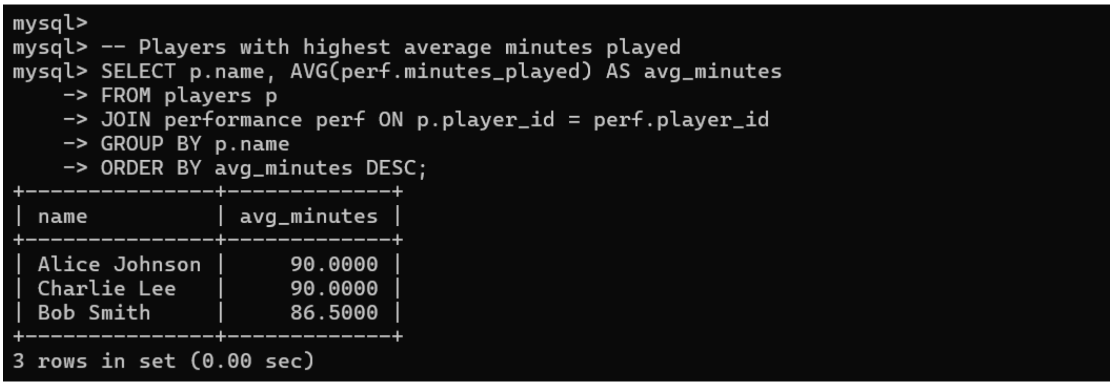
```
mysql> INSERT INTO matches (date, home_team, away_team, home_score, away_score)
    -> VALUES
    -> ('2025-11-01', 'Jakarta United', 'Bandung FC', 2, 1),
    -> ('2025-11-05', 'Surabaya Stars', 'Jakarta United', 3, 3);
Query OK, 2 rows affected (0.03 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql>
mysql> INSERT INTO players (name, team, position)
    -> VALUES
    -> ('Alice Johnson', 'Jakarta United', 'Forward'),
    -> ('Bob Smith', 'Jakarta United', 'Midfielder'),
    -> ('Charlie Lee', 'Bandung FC', 'Defender');
Query OK, 3 rows affected (0.02 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql>
mysql> INSERT INTO performance (match_id, player_id, goals, assists, minutes_played)
    -> VALUES
    -> (1, 1, 2, 0, 90),
    -> (1, 2, 0, 1, 85),
    -> (1, 3, 0, 0, 90),
    -> (2, 1, 1, 1, 90),
    -> (2, 2, 0, 2, 88);
Query OK, 5 rows affected (0.04 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

d. Example queries

```
-- Top goal scorers by season
SELECT p.name, SUM(perf.goals) AS total_goals
FROM players p
JOIN performance perf ON p.player_id = perf.player_id
GROUP BY p.name
ORDER BY total_goals DESC;

-- Win/loss ratio for each team
SELECT home_team AS team,
       SUM(CASE WHEN home_score > away_score THEN 1 ELSE 0 END) AS
home_wins,
       SUM(CASE WHEN home_score < away_score THEN 1 ELSE 0 END) AS
home_losses
FROM matches
GROUP BY home_team;

-- Players with highest average minutes played
SELECT p.name, AVG(perf.minutes_played) AS avg_minutes
FROM players p
JOIN performance perf ON p.player_id = perf.player_id
GROUP BY p.name
ORDER BY avg_minutes DESC;
```



```
mysql> -- Top goal scorers by season
mysql> SELECT p.name, SUM(perf.goals) AS total_goals
    -> FROM players p
    -> JOIN performance perf ON p.player_id = perf.player_id
    -> GROUP BY p.name
    -> ORDER BY total_goals DESC;
+---------------+-------------+
| name          | total_goals |
+---------------+-------------+
| Alice Johnson |           3 |
| Bob Smith     |           0 |
| Charlie Lee   |           0 |
+---------------+-------------+
3 rows in set (0.00 sec)

mysql>
mysql> -- Win/loss ratio for each team
mysql> SELECT home_team AS team,
    ->        SUM(CASE WHEN home_score > away_score THEN 1 ELSE 0 END) AS home_wins,
    ->        SUM(CASE WHEN home_score < away_score THEN 1 ELSE 0 END) AS home_losses
    -> FROM matches
    -> GROUP BY home_team;
+----------------+-----------+-------------+
| team           | home_wins | home_losses |
+----------------+-----------+-------------+
| Jakarta United |         1 |           0 |
| Surabaya Stars |         0 |           0 |
+----------------+-----------+-------------+
2 rows in set (0.01 sec)
```



```
mysql>
mysql> -- Players with highest average minutes played
mysql> SELECT p.name, AVG(perf.minutes_played) AS avg_minutes
    -> FROM players p
    -> JOIN performance perf ON p.player_id = perf.player_id
    -> GROUP BY p.name
    -> ORDER BY avg_minutes DESC;
+---------------+-------------+
| name          | avg_minutes |
+---------------+-------------+
| Alice Johnson |     90.0000 |
| Charlie Lee   |     90.0000 |
| Bob Smith     |     86.5000 |
+---------------+-------------+
3 rows in set (0.00 sec)
```