

Database Organization

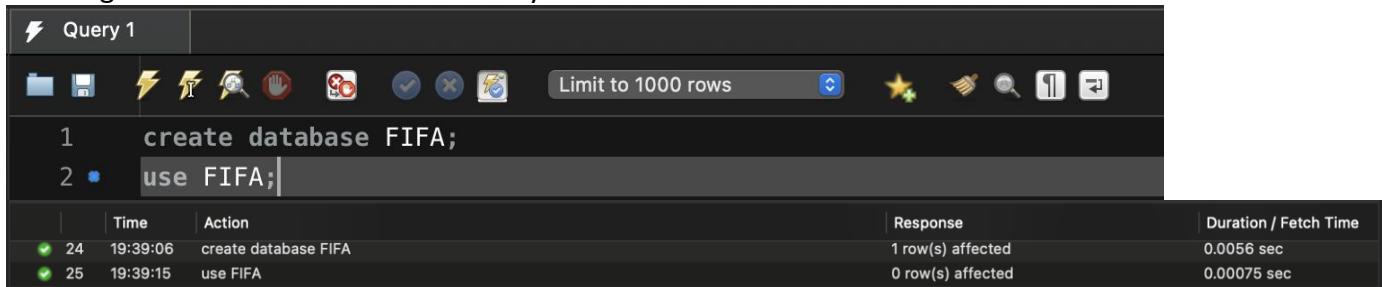
Project Phase 2

Group members: (Group 12)

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Create the database in the database system (MySQL, PostgreSQL) using general Data Definition Language (DDL) statements. Load mock data (from free online data generator tools) into the database. Ensure that you have loaded at least 15 records per relation. Furthermore, you are required to implement indexes, views, temporary tables, triggers, stored procedures, and functions in your database (assume interesting business logic where applicable). Display the statements you have employed for each task, along with the corresponding output.

Creating database FIFA in the database system



The screenshot shows the MySQL Workbench interface with a query editor titled "Query 1". The code entered is:

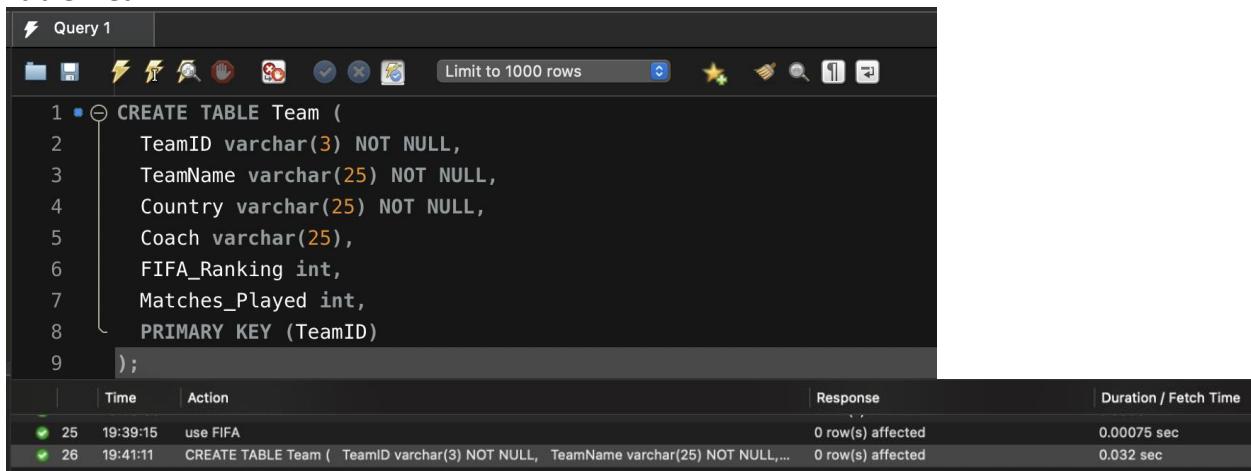
```
1 create database FIFA;
2 • use FIFA;
```

The results table below shows two queries: "create database FIFA" and "use FIFA". Both queries were successful with 1 row(s) affected and a duration of approximately 0.0056 sec and 0.00075 sec respectively.

Time	Action	Response	Duration / Fetch Time
24 19:39:06	create database FIFA	1 row(s) affected	0.0056 sec
25 19:39:15	use FIFA	0 row(s) affected	0.00075 sec

Creating tables and loading mock data

Table: Team



The screenshot shows the MySQL Workbench interface with a query editor titled "Query 1". The code entered is:

```
1 • ⊖ CREATE TABLE Team (
2     TeamID varchar(3) NOT NULL,
3     TeamName varchar(25) NOT NULL,
4     Country varchar(25) NOT NULL,
5     Coach varchar(25),
6     FIFA_Ranking int,
7     Matches_Played int,
8     PRIMARY KEY (TeamID)
9 );
```

The results table below shows the creation of the "Team" table with 0 row(s) affected and a duration of 0.032 sec.

Time	Action	Response	Duration / Fetch Time
25 19:39:15	use FIFA	0 row(s) affected	0.00075 sec
26 19:41:11	CREATE TABLE Team (TeamID varchar(3) NOT NULL, TeamName varchar(25) NOT NULL,...	0 row(s) affected	0.032 sec

Loading Data into Team Table

Table: Player

The screenshot shows the MySQL Workbench interface with a query editor titled "Query 1". The code displayed is the SQL statement to create the "Player" table:

```

1   CREATE TABLE Player (
2     PlayerID varchar(10) NOT NULL,
3     FirstName varchar(25) NOT NULL,
4     LastName varchar(25) NOT NULL,
5     TeamID VARCHAR(3),
6     Position varchar(25) ,
7     JerseyNumber int,
8     PRIMARY KEY (PlayerID),
9     FOREIGN KEY (TeamID) REFERENCES Team(TeamID)
10    );
11

```

Below the code, the results of the execution are shown in a table:

	Time	Action	Response	Duration / Fetch Time
28	19:45:52	Select * from Team LIMIT 0, 1000	16 row(s) returned	0.0052 sec / 0.00001...
29	19:49:44	CREATE TABLE Player (PlayerID varchar(10) NOT NULL, FirstName varchar(25) NOT...)	0 row(s) affected	0.024 sec

Loading Data into Player Table country wise

The screenshot shows the MySQL Workbench interface with two queries to insert data into the "player" table.

Query 1:

```

1   INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2     ('SUI1', 'Gaelle', 'Thalmann', 'SUI', 'Goalkeeper', 1),
3     ('SUI2', 'Noëlle', 'Maritz', 'SUI', 'Defender', 5),
4     ('SUI3', 'Julia', 'Stierli', 'SUI', 'Defender', 2),
5     ('SUI4', 'Luana', 'Bühler', 'SUI', 'Defender', 15),
6     ('SUI5', 'Lia', 'Wälti', 'SUI', 'Midfielder', 13),
7     ('SUI6', 'Coumba', 'Sow', 'SUI', 'Midfielder', 11),
8     ('SUI7', 'Amira', 'Arfaoui', 'SUI', 'Midfielder', 7),
9     ('SUI8', 'Ana-Maria', 'Crnogorčević', 'SUI', 'Forward', 9),
10    ('SUI9', 'Ramona', 'Bachmann', 'SUI', 'Forward', 10),
11    ('SUI10', 'Alisha', 'Lehmann', 'SUI', 'Forward', 23),
12    ('SUI11', 'Fabienne', 'Humm', 'SUI', 'Forward', 20);

```

Query 2:

```

1   INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2     ('ESP1', 'Misa', 'Rodriguez', 'ESP', 'Goalkeeper', 1),
3     ('ESP2', 'Irene', 'Paredes', 'ESP', 'Defender', 4),
4     ('ESP3', 'Laia', 'Codina', 'ESP', 'Defender', 14),
5     ('ESP4', 'Olga', 'Carmona', 'ESP', 'Defender', 19),
6     ('ESP5', 'Maria', 'Perez', 'ESP', 'Midfielder', 16),
7     ('ESP6', 'Alexia', 'Putellas', 'ESP', 'Midfielder', 11),
8     ('ESP7', 'Aitana', 'Bonmatí', 'ESP', 'Midfielder', 6),
9     ('ESP8', 'Mariona', 'Caldentey', 'ESP', 'Forward', 8),
10    ('ESP9', 'Jennifer', 'Hermoso', 'ESP', 'Forward', 10),
11    ('ESP10', 'Alba', 'Redondo', 'ESP', 'Forward', 7),
12    ('ESP11', 'Salma', 'Paralluelo', 'ESP', 'Forward', 18);

```

```
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES  
2 ('NED1', 'Daphne', 'van Domselaar', 'NED', 'Goalkeeper', 1),  
3 ('NED2', 'Dominique', 'Janssen', 'NED', 'Defender', 20),  
4 ('NED3', 'Aniek', 'Nouwen', 'NED', 'Defender', 4),  
5 ('NED4', 'Merel', 'van Dongen', 'NED', 'Defender', 5),  
6 ('NED5', 'Sherida', 'Spitse', 'NED', 'Midfielder', 8),  
7 ('NED6', 'Jill', 'Roord', 'NED', 'Midfielder', 6),  
8 ('NED7', 'Lieke', 'Martens', 'NED', 'Forward', 11),  
9 ('NED8', 'Lineth', 'Beerensteyn', 'NED', 'Forward', 7),  
10 ('NED9', 'Renate', 'Jansen', 'NED', 'Forward', 13),  
11 ('NED10', 'Daniëlle', 'van de Donk', 'NED', 'Midfielder', 10),  
12 ('NED11', 'Stefanie', 'van der Graat', 'NED', 'Defender', 8);
```

```
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES  
2 ('RSA1', 'Andile', 'Dlamini', 'RSA', 'Goalkeeper', 16),  
3 ('RSA2', 'Lebohang', 'Ramalepe', 'RSA', 'Defender', 2),  
4 ('RSA3', 'Noko', 'Matlou', 'RSA', 'Defender', 4),  
5 ('RSA4', 'Bambanani', 'Mbane', 'RSA', 'Defender', 13),  
6 ('RSA5', 'Fikile', 'Magama', 'RSA', 'Defender', 5),  
7 ('RSA6', 'Refiloe', 'Jane', 'RSA', 'Midfielder', 15),  
8 ('RSA7', 'Mapula', 'Kgoale', 'RSA', 'Forward', 22),  
9 ('RSA8', 'Linda', 'Motlhalo', 'RSA', 'Midfielder', 10),  
10 ('RSA9', 'Hildah', 'Magaia', 'RSA', 'Forward', 8),  
11 ('RSA10', 'Kholosa', 'Biyana', 'RSA', 'Midfielder', 19),  
12 ('RSA11', 'Thembi', 'Kgatlana', 'RSA', 'Forward', 11);
```

```
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES  
2 ('JPN1', 'Ayaka', 'Yamashita', 'JPN', 'Goalkeeper', 1),  
3 ('JPN2', 'Risa', 'Shimizu', 'JPN', 'Defender', 2),  
4 ('JPN3', 'Honoka', 'Hayashi', 'JPN', 'Midfielder', 16),  
5 ('JPN4', 'Hikaru', 'Naomoto', 'JPN', 'Defender', 8),  
6 ('JPN5', 'Hina', 'Sugita', 'JPN', 'Midfielder', 6),  
7 ('JPN6', 'Yui', 'Hasegawa', 'JPN', 'Midfielder', 14),  
8 ('JPN7', 'Maika', 'Hamano', 'JPN', 'Forward', 20),  
9 ('JPN8', 'Riko', 'Ueki', 'JPN', 'Forward', 9),  
10 ('JPN9', 'Mina', 'Tanaka', 'JPN', 'Forward', 11),  
11 ('JPN10', 'Saki', 'KUMAGAI', 'JPN', 'Defender', 4),  
12 ('JPN11', 'Hinata', 'Miyazawa', 'JPN', 'Midfielder', 7);
```

```
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES  
2 ('NOR1', 'Maren', 'Mjelde', 'NOR', 'Defender', 6),  
3 ('NOR2', 'Caroline', 'Graham Hansen', 'NOR', 'Forward', 10),  
4 ('NOR3', 'Ada', 'Hegerberg', 'NOR', 'Forward', 14),  
5 ('NOR4', 'Guro', 'Reiten', 'NOR', 'Midfielder', 11),  
6 ('NOR5', 'Ingrid', 'Syrstad Engen', 'NOR', 'Midfielder', 7),  
7 ('NOR6', 'Anja', 'Sonstevold', 'NOR', 'Defender', 2),  
8 ('NOR7', 'Cecilie', 'Fiskerstrand', 'NOR', 'Goalkeeper', 1),  
9 ('NOR8', 'Vilde', 'Bøe Risa', 'NOR', 'Midfielder', 8),  
10 ('NOR9', 'Sara', 'Horte', 'NOR', 'Defender', 3),  
11 ('NOR10', 'Karina', 'Sævik', 'NOR', 'Forward', 9),  
12 ('NOR11', 'Emilie', 'Haavi', 'NOR', 'Forward', 20);
```

Query 1

```
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2 ('SWE1', 'Zecira', 'Musovic', 'SWE', 'Goalkeeper', 1),
3 ('SWE2', 'Magdalena', 'Eriksson', 'SWE', 'Defender', 6),
4 ('SWE3', 'Amanda', 'Ilestedt', 'SWE', 'Defender', 13),
5 ('SWE4', 'Linda', 'Sembrant', 'SWE', 'Defender', 3),
6 ('SWE5', 'Kosovare', 'Asllani', 'SWE', 'Midfielder', 9),
7 ('SWE6', 'Caroline', 'Seger', 'SWE', 'Midfielder', 17),
8 ('SWE7', 'Sofia', 'Jakobsson', 'SWE', 'Forward', 10),
9 ('SWE8', 'Rebecka', 'Blomqvist', 'SWE', 'Forward', 15),
10 ('SWE9', 'Fridolina', 'Rolfö', 'SWE', 'Midfielder', 18),
11 ('SWE10', 'Jonna', 'Andersson', 'SWE', 'Defender', 2),
12 ('SWE11', 'Filippa', 'Angeldal', 'SWE', 'Midfielder', 16);|
```

Query 1

```
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2 ('USA1', 'Alyssa', 'Naehler', 'USA', 'Goalkeeper', 1),
3 ('USA2', 'Crystal', 'Dunn', 'USA', 'Defender', 19),
4 ('USA3', 'Alana', 'Cook', 'USA', 'Defender', 12),
5 ('USA4', 'Emily', 'Fox', 'USA', 'Defender', 23),
6 ('USA5', 'Kelley', 'O'Hara', 'USA', 'Defender', 5),
7 ('USA6', 'Rose', 'Lavelle', 'USA', 'Midfielder', 16),
8 ('USA7', 'Ashley', 'Sanchez', 'USA', 'Midfielder', 2),
9 ('USA8', 'Julie', 'Ertz', 'USA', 'Midfielder', 8),
10 ('USA9', 'Lynn', 'Williams', 'USA', 'Forward', 6),
11 ('USA10', 'Alex', 'Morgan', 'USA', 'Forward', 13),
12 ('USA11', 'Megan', 'Rapinoe', 'USA', 'Forward', 15);|
```

Query 1

```
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2 ('AUS1', 'Lydia', 'Williams', 'AUS', 'Goalkeeper', 1),
3 ('AUS2', 'Ellie', 'Carpenter', 'AUS', 'Defender', 21),
4 ('AUS3', 'Alanna', 'Kennedy', 'AUS', 'Defender', 14),
5 ('AUS4', 'Steph', 'Catley', 'AUS', 'Defender', 7),
6 ('AUS5', 'Clare', 'Polkinghorne', 'AUS', 'Defender', 4),
7 ('AUS6', 'Tameka', 'Yallop', 'AUS', 'Midfielder', 13),
8 ('AUS7', 'Katrina', 'Gorry', 'AUS', 'Midfielder', 19),
9 ('AUS8', 'Alex', 'Chidiac', 'AUS', 'Midfielder', 8),
10 ('AUS9', 'Emily', 'van Egmond', 'AUS', 'Midfielder', 10),
11 ('AUS10', 'Sam', 'Kerr', 'AUS', 'Forward', 20),
12 ('AUS11', 'Caitlin', 'Foord', 'AUS', 'Forward', 9);|
```

Query 1

```
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2 ('DEN1', 'Katrine', 'Larsen', 'DEN', 'Goalkeeper', 16),
3 ('DEN2', 'Rikke', 'Sevecke', 'DEN', 'Defender', 4),
4 ('DEN3', 'Simone', 'Boye Sørensen', 'DEN', 'Defender', 5),
5 ('DEN4', 'Katrine', 'Veje', 'DEN', 'Defender', 11),
6 ('DEN5', 'Nicoline', 'Sorensen', 'DEN', 'Midfielder', 14),
7 ('DEN6', 'Emma', 'Snerle', 'DEN', 'Midfielder', 8),
8 ('DEN7', 'Pernille', 'Harder', 'DEN', 'Forward', 10),
9 ('DEN8', 'Marie', 'Madsen', 'DEN', 'Forward', 17),
10 ('DEN9', 'Signe', 'Bruun', 'DEN', 'Forward', 20),
11 ('DEN10', 'Karen', 'Holmgård', 'DEN', 'Midfielder', 6),
12 ('DEN11', 'Sofie', 'Svava', 'DEN', 'Defender', 23);|
```

```

Query 1
Limit to 1000 rows
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2 ('FRA1', 'Pauline', 'Peyraud-Magnin', 'FRA', 'Goalkeeper', 16),
3 ('FRA2', 'Wendie', 'Renard', 'FRA', 'Defender', 3),
4 ('FRA3', 'Estelle', 'Cascarino', 'FRA', 'Defender', 20),
5 ('FRA4', 'Sandie', 'Toletti', 'FRA', 'Midfielder', 6),
6 ('FRA5', 'Eugénie', 'Le Sommer', 'FRA', 'Forward', 9),
7 ('FRA6', 'Amel', 'Majri', 'FRA', 'Midfielder', 10),
8 ('FRA7', 'Kadidiatou', 'Diani', 'FRA', 'Forward', 11),
9 ('FRA8', 'Grace', 'Geyoro', 'FRA', 'Midfielder', 8),
10 ('FRA9', 'Viviane', 'Asseyi', 'FRA', 'Forward', 18),
11 ('FRA10', 'Kensa', 'Dali', 'FRA', 'Midfielder', 15),
12 ('FRA11', 'Sakina', 'Karchaoui', 'FRA', 'Defender', 7);

Query 1
Limit to 1000 rows
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2 ('MOR1', 'Assia', 'Zouhair', 'MOR', 'Goalkeeper', 12),
3 ('MOR2', 'Zineb', 'Redouani', 'MOR', 'Defender', 2),
4 ('MOR3', 'Nauhaila', 'Benzina', 'MOR', 'Defender', 3),
5 ('MOR4', 'Nesryne', 'El Chad', 'MOR', 'Defender', 5),
6 ('MOR5', 'Sarah', 'Kassi', 'MOR', 'Midfielder', 4),
7 ('MOR6', 'Salma', 'Amani', 'MOR', 'Midfielder', 8),
8 ('MOR7', 'Ibtissam', 'Jraidi', 'MOR', 'Forward', 9),
9 ('MOR8', 'Fatima', 'Gharbi', 'MOR', 'Forward', 15),
10 ('MOR9', 'Fatima', 'Tagnaout', 'MOR', 'Forward', 11),
11 ('MOR10', 'Anissa', 'Lahmari', 'MOR', 'Midfielder', 16),
12 ('MOR11', 'Yasim', 'Mrabet', 'MOR', 'Defender', 21);

Query 1
Limit to 1000 rows
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2 ('ENG1', 'Mary', 'Earps', 'ENG', 'Goalkeeper', 1),
3 ('ENG2', 'Lucy', 'Bronze', 'ENG', 'Defender', 2),
4 ('ENG3', 'Millie', 'Bright', 'ENG', 'Defender', 6),
5 ('ENG4', 'Niamh', 'Charles', 'ENG', 'Defender', 3),
6 ('ENG5', 'Keira', 'Walsh', 'ENG', 'Midfielder', 4),
7 ('ENG6', 'Ella', 'Toone', 'ENG', 'Midfielder', 10),
8 ('ENG7', 'Chloe', 'Kelly', 'ENG', 'Forward', 18),
9 ('ENG8', 'Alessia', 'Russo', 'ENG', 'Forward', 23),
10 ('ENG9', 'Lauren', 'Hemp', 'ENG', 'Forward', 11),
11 ('ENG10', 'Georgia', 'Stanway', 'ENG', 'Midfielder', 8),
12 ('ENG11', 'Alex', 'Greenwood', 'ENG', 'Defender', 5);

Query 1
Limit to 1000 rows
1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2 ('NGA1', 'Tochukwu', 'Oluehi', 'NGA', 'Goalkeeper', 1),
3 ('NGA2', 'Osinachi', 'Ohale', 'NGA', 'Defender', 3),
4 ('NGA3', 'Michelle', 'Alozie', 'NGA', 'Defender', 22),
5 ('NGA4', 'Onome', 'Ebi', 'NGA', 'Defender', 5),
6 ('NGA5', 'Halimatu', 'Ayinde', 'NGA', 'Midfielder', 18),
7 ('NGA6', 'Toni', 'Payne', 'NGA', 'Midfielder', 7),
8 ('NGA7', 'Asisat', 'Oshoala', 'NGA', 'Forward', 8),
9 ('NGA8', 'Desire', 'Oparanozie', 'NGA', 'Forward', 9),
10 ('NGA9', 'Francisca', 'Ordega', 'NGA', 'Forward', 17),
11 ('NGA10', 'Christy', 'Ucheibe', 'NGA', 'Midfielder', 10),
12 ('NGA11', 'Evelyn', 'Nwabuoku', 'NGA', 'Defender', 11);

```

```

Query 1
Limit to 1000 rows

1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2 ('COL1', 'Catalina', 'Pérez', 'COL', 'Goalkeeper', 1),
3 ('COL2', 'Daniela', 'Arias', 'COL', 'Defender', 3),
4 ('COL3', 'Jorelyn', 'Carabali', 'COL', 'Defender', 19),
5 ('COL4', 'Manuela', 'Vanegas', 'COL', 'Defender', 2),
6 ('COL5', 'Leicy', 'Santos', 'COL', 'Midfielder', 10),
7 ('COL6', 'Daniela', 'Montoya', 'COL', 'Midfielder', 6),
8 ('COL7', 'Carolina', 'Arias', 'COL', 'Defender', 17),
9 ('COL8', 'Catalina', 'Usme', 'COL', 'Forward', 11),
10 ('COL9', 'Linda', 'Caicedo', 'COL', 'Forward', 18),
11 ('COL10', 'Maria', 'Camila Reyes', 'COL', 'Midfielder', 7),
12 ('COL11', 'Mayra', 'Ramirez', 'COL', 'Forward', 8);

Query 1
Limit to 1000 rows

1 • INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber) VALUES
2 ('JAM1', 'Sydney', 'Schneider', 'JAM', 'Goalkeeper', 1),
3 ('JAM2', 'Chantelle', 'Swaby', 'JAM', 'Defender', 4),
4 ('JAM3', 'Deneisha', 'Blackwood', 'JAM', 'Defender', 14),
5 ('JAM4', 'Konya', 'Plummer', 'JAM', 'Defender', 5),
6 ('JAM5', 'Havana', 'Solaun', 'JAM', 'Midfielder', 6),
7 ('JAM6', 'Solai', 'Washington', 'JAM', 'Midfielder', 2),
8 ('JAM7', 'Kameron', 'Simmonds', 'JAM', 'Forward', 9),
9 ('JAM8', 'Khadija', 'Shaw', 'JAM', 'Forward', 11),
10 ('JAM9', 'Cheyna', 'Matthews', 'JAM', 'Forward', 21),
11 ('JAM10', 'Drew', 'Spenser', 'JAM', 'Midfielder', 8),
12 ('JAM11', 'Vyan', 'Sampson', 'JAM', 'Defender', 3);

```

	Time	Action	Response	Duration / Fetch Time
✓	30 19:51:04	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0065 sec
✓	31 19:51:24	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0018 sec
✓	32 19:51:33	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0016 sec
✓	33 19:51:43	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0015 sec
✓	34 19:51:54	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0024 sec
✓	35 19:52:10	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0017 sec
✓	36 19:52:18	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0031 sec
✓	37 19:52:26	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0035 sec
✓	38 19:52:35	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0023 sec
✓	39 19:52:45	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0026 sec
✓	40 19:52:57	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0032 sec
✓	41 19:53:07	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0030 sec
✓	42 19:53:15	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0015 sec
✓	43 19:53:24	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0025 sec
✓	44 19:53:32	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0037 sec
✓	45 19:53:42	INSERT INTO player (PlayerID, FirstName, LastName, TeamID, Position, JerseyNumber)...	11 row(s) affected Records: 11 Duplicates: 0...	0.0019 sec

Data is loaded successfully.

Query 1

```
1 • select * from Player;
```

Result Grid

PlayerID	FirstName	LastName	TeamID	Position	JerseyNumber
AUS1	Lydia	Williams	AUS	Goalkeeper	1
AUS10	Sam	Kerr	AUS	Forward	20
AUS11	Caitlin	Foord	AUS	Forward	9
AUS2	Ellie	Carpenter	AUS	Defender	21
AUS3	Alanna	Kennedy	AUS	Defender	14
AUS4	Steph	Catley	AUS	Defender	7
AUS5	Clare	Polkinghorne	AUS	Defender	4
AUS6	Tameka	Yallow	AUS	Midfielder	13
AUS7	Katrina	Gorry	AUS	Midfielder	19
AUS8	Alex	Chidiac	AUS	Midfielder	8
AUS9	Emily	van Egmond	AUS	Midfielder	10
COL1	Catalina	Pérez	COL	Goalkeeper	1
COL10	Maria	Camila Reyes	COL	Midfielder	7
COL11	Mayra	Ramírez	COL	Forward	8
COL2	Daniela	Arias	COL	Defender	3
COL3	Jorelyn	Carabali	COL	Defender	19
COL4	Manuela	Vanegas	COL	Defender	2
COL5	Leicy	Santos	COL	Midfielder	10
COL6	Daniela	Montoya	COL	Midfielder	6
COL7	Carolina	Arias	COL	Defender	17
COL8	Catalina	Usme	COL	Forward	11
COL9	Linda	Caicedo	COL	Forward	18
DEN1	Katrine	Larsen	DEN	Goalkeeper	16
DEN10	Karen	Holmgård	DEN	Midfielder	6
DEN11	Sofie	Svava	DEN	Defender	23
DEN2	Rikke	Sevecke	DEN	Defender	4
DEN3	Simone	Boye Søren...	DEN	Defender	5
DEN4	Katrine	Veje	DEN	Defender	11
DEN5	Nicoline	Sørensen	DEN	Midfielder	14

Query 1

```
1 • select TeamID,count(PlayerID) from Player group by TeamID;
```

Result Grid

TeamID	count(PlayerID)
AUS	11
COL	11
DEN	11
ENG	11
ESP	11
FRA	11
JAM	11
JPN	11
MOR	11
NED	11
NGA	11
NOR	11
RSA	11
SUI	11
SWE	11
USA	11

Table: Venues

The screenshot shows the MySQL Workbench interface with a query editor titled "Query 1". The code entered is:

```
1  ⊕ create table Venues (
2      VenueID varchar(25),
3      VenueName varchar(50),
4      City varchar(20),
5      Capacity int,
6      PRIMARY KEY (VenueID)
7  );
```

	Time	Action	Response	Duration / Fetch Time
48	20:09:09	select TeamID,count(PlayerID) from Player group by TeamID LIMIT 0, 1000	16 row(s) returned	0.016 sec / 0.000007...
49	20:10:47	create table Venues (VenueID varchar(25), VenueName varchar(50), City varchar(20),...)	0 row(s) affected	0.019 sec

Loading the data into table Venues

The screenshot shows the MySQL Workbench interface with a query editor titled "Query 1". The code entered is:

```
1  ⊕ INSERT INTO Venues (VenueID, VenueName, City, Capacity)
2  VALUES
3      ('VEN1', 'Sydney Stadium', 'Sydney', 45000),
4      ('VEN2', 'Melbourne Park', 'Melbourne', 53343),
5      ('VEN3', 'Brisbane Arena', 'Brisbane', 52500),
6      ('VEN4', 'Auckland Stadium', 'Auckland', 50000),
7      ('VEN5', 'Wellington Park', 'Wellington', 34500),
8      ('VEN6', 'Perth Arena', 'Perth', 15500),
9      ('VEN7', 'Adelaide Stadium', 'Adelaide', 51515),
10     ('VEN8', 'Christchurch Park', 'Christchurch', 38000),
11     ('VEN9', 'Gold Coast Arena', 'Gold Coast', 37000),
12     ('VEN10', 'Chicago Stadium', 'Chicago', 35000),
13     ('VEN11', 'Zurich Stadium', 'Zurich', 36000),
14     ('VEN12', 'Doha Stadium', 'Doha', 35000),
15     ('VEN13', 'Dubai International Stadium', 'Dubai', 38000),
16     ('VEN14', 'Delhi Football Arena', 'Delhi', 37000),
17     ('VEN15', 'Paris field Park', 'Paris', 35000),
18     ('VEN16', 'Amsterdam city stadium', 'Amsterdam', 35000);
```

	Time	Action	Response	Duration / Fetch Time
51	20:12:23	INSERT INTO Venues (VenueID, VenueName, City, Capacity) VALUES ('VEN1', 'Sydney St...', 16 row(s) affected Records: 0...	16 row(s) affected Records: 0...	0.0095 sec

Data loaded successfully.

The screenshot shows the MySQL Workbench interface with a query editor and a result grid. The query editor contains the SQL command: `Select * from Venues;`. The result grid displays 17 rows of data from the Venues table, including columns: VenueID, VenueName, City, and Capacity. The data includes various stadium names like Sydney Stadium, Chicago Stadium, and Gold Coast Arena, along with their respective cities and capacities.

VenueID	VenueName	City	Capacity
VEN1	Sydney Stadium	Sydney	45000
VEN10	Chicago Stadium	Chicago	35000
VEN11	Zurich Stadium	Zurich	36000
VEN12	Doha Stadium	Doha	35000
VEN13	Dubai International Stadium	Dubai	38000
VEN14	Delhi Football Arena	Delhi	37000
VEN15	Paris field Park	Paris	35000
VEN16	Amsterdam city stadium	Amsterdam	35000
VEN2	Melbourne Park	Melbourne	53343
VEN3	Brisbane Arena	Brisbane	52500
VEN4	Auckland Stadium	Auckland	50000
VEN5	Wellington Park	Wellington	34500
VEN6	Perth Arena	Perth	15500
VEN7	Adelaide Stadium	Adelaide	51515
VEN8	Christchurch Park	Christchurch	38000
VEN9	Gold Coast Arena	Gold Coast	37000
HULL	HULL	HULL	HULL

Table: Matches

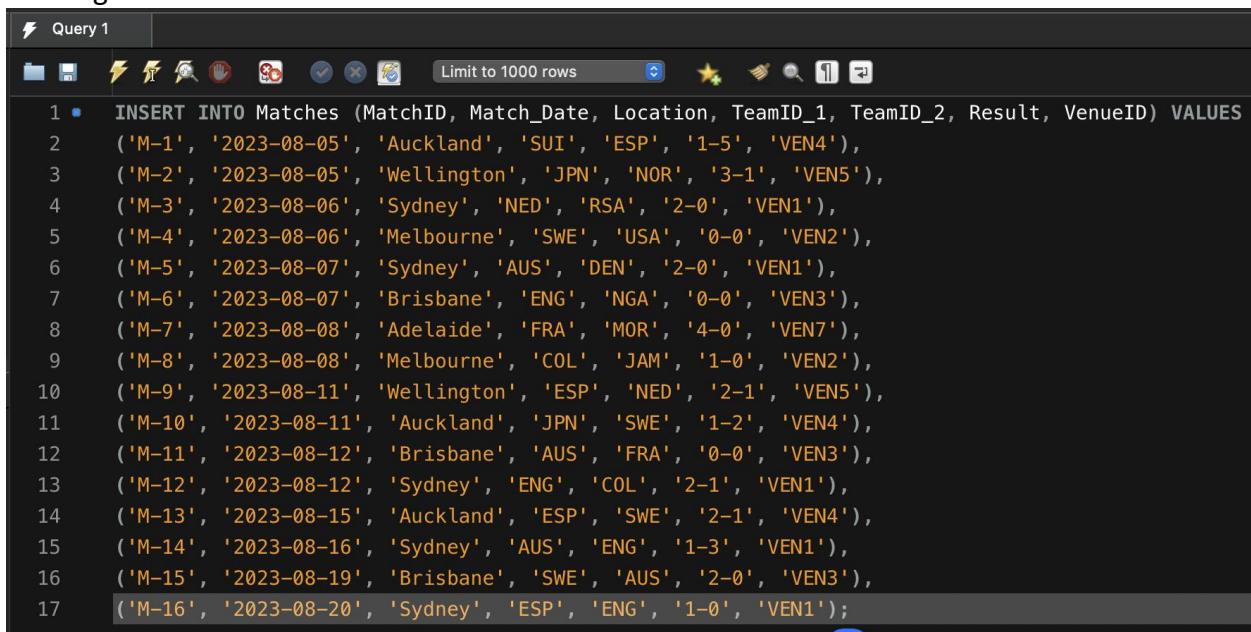
The screenshot shows the MySQL Workbench interface with a query editor. The query editor contains the SQL command for creating the Matches table:

```
1  CREATE TABLE Matches (
2      MatchID VARCHAR(25) NOT NULL,
3      Match_Date DATE NOT NULL,
4      Location VARCHAR(25),
5      TeamID_1 VARCHAR(3),
6      TeamID_2 VARCHAR(3),
7      Result VARCHAR(25),
8      VenueID varchar(25),
9      PRIMARY KEY (MatchID),
10     FOREIGN KEY (TeamID_1) REFERENCES Team(TeamID),
11     FOREIGN KEY (TeamID_2) REFERENCES Team(TeamID),
12     FOREIGN KEY (VenueID) REFERENCES Venues(VenueID)
13 );
```

The screenshot shows the MySQL Workbench interface with a log table at the bottom. The log table has columns: #, Time, Action, Response, and Duration / Fetch Time. It shows the execution of the CREATE TABLE command at 20:18:11, which affected 0 rows and took 0.024 seconds.

#	Time	Action	Response	Duration / Fetch Time
57	20:18:11	CREATE TABLE Matches (MatchID VARCHAR(25) NOT NULL, Match_Date DATE N...)	0 row(s) affected	0.024 sec

Loading Data into Matches table



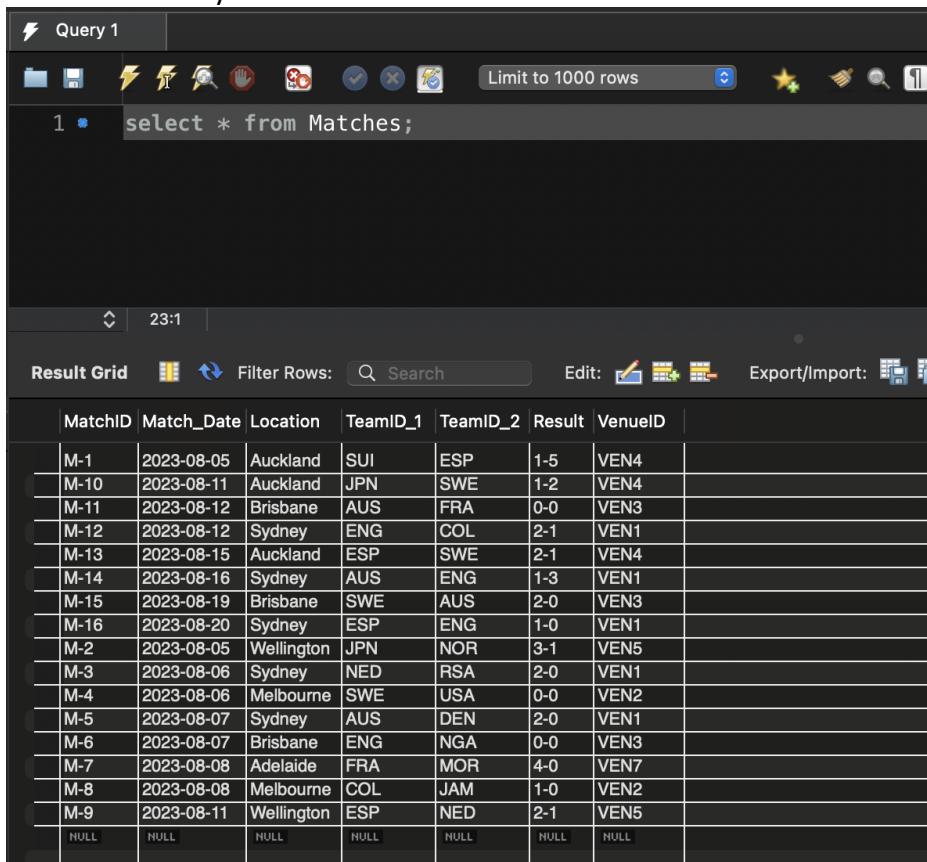
```

1 •  INSERT INTO Matches (MatchID, Match_Date, Location, TeamID_1, TeamID_2, Result, VenueID) VALUES
2      ('M-1', '2023-08-05', 'Auckland', 'SUI', 'ESP', '1-5', 'VEN4'),
3      ('M-2', '2023-08-05', 'Wellington', 'JPN', 'NOR', '3-1', 'VEN5'),
4      ('M-3', '2023-08-06', 'Sydney', 'NED', 'RSA', '2-0', 'VEN1'),
5      ('M-4', '2023-08-06', 'Melbourne', 'SWE', 'USA', '0-0', 'VEN2'),
6      ('M-5', '2023-08-07', 'Sydney', 'AUS', 'DEN', '2-0', 'VEN1'),
7      ('M-6', '2023-08-07', 'Brisbane', 'ENG', 'NGA', '0-0', 'VEN3'),
8      ('M-7', '2023-08-08', 'Adelaide', 'FRA', 'MOR', '4-0', 'VEN7'),
9      ('M-8', '2023-08-08', 'Melbourne', 'COL', 'JAM', '1-0', 'VEN2'),
10     ('M-9', '2023-08-11', 'Wellington', 'ESP', 'NED', '2-1', 'VEN5'),
11     ('M-10', '2023-08-11', 'Auckland', 'JPN', 'SWE', '1-2', 'VEN4'),
12     ('M-11', '2023-08-12', 'Brisbane', 'AUS', 'FRA', '0-0', 'VEN3'),
13     ('M-12', '2023-08-12', 'Sydney', 'ENG', 'COL', '2-1', 'VEN1'),
14     ('M-13', '2023-08-15', 'Auckland', 'ESP', 'SWE', '2-1', 'VEN4'),
15     ('M-14', '2023-08-16', 'Sydney', 'AUS', 'ENG', '1-3', 'VEN1'),
16     ('M-15', '2023-08-19', 'Brisbane', 'SWE', 'AUS', '2-0', 'VEN3'),
17     ('M-16', '2023-08-20', 'Sydney', 'ESP', 'ENG', '1-0', 'VEN1');

```

	Time	Action	Response	Dur.
59	20:19:50	INSERT INTO Matches (MatchID, Match_Date, Location, TeamID_1, TeamID_2, Result, Ve... 16 row(s) affected Records: 16 Duplicates: 0 Warnings: 0		0.00

Data successfully Loaded into the Matches table.



```

1 •  select * from Matches;

```

Result Grid

MatchID	Match_Date	Location	TeamID_1	TeamID_2	Result	VenueID
M-1	2023-08-05	Auckland	SUI	ESP	1-5	VEN4
M-10	2023-08-11	Auckland	JPN	SWE	1-2	VEN4
M-11	2023-08-12	Brisbane	AUS	FRA	0-0	VEN3
M-12	2023-08-12	Sydney	ENG	COL	2-1	VEN1
M-13	2023-08-15	Auckland	ESP	SWE	2-1	VEN4
M-14	2023-08-16	Sydney	AUS	ENG	1-3	VEN1
M-15	2023-08-19	Brisbane	SWE	AUS	2-0	VEN3
M-16	2023-08-20	Sydney	ESP	ENG	1-0	VEN1
M-2	2023-08-05	Wellington	JPN	NOR	3-1	VEN5
M-3	2023-08-06	Sydney	NED	RSA	2-0	VEN1
M-4	2023-08-06	Melbourne	SWE	USA	0-0	VEN2
M-5	2023-08-07	Sydney	AUS	DEN	2-0	VEN1
M-6	2023-08-07	Brisbane	ENG	NGA	0-0	VEN3
M-7	2023-08-08	Adelaide	FRA	MOR	4-0	VEN7
M-8	2023-08-08	Melbourne	COL	JAM	1-0	VEN2
M-9	2023-08-11	Wellington	ESP	NED	2-1	VEN5
NULL	HULL	NULL	NULL	NULL	NULL	NULL

Table: Fixture

The screenshot shows the MySQL Workbench interface with a query editor titled "Query 1". The code entered is:

```
1 • 1 create table Fixture (
2   FixtureID varchar(20) primary key,
3   MatchID varchar(20),
4   Stage varchar(20),
5   Location varchar(25),
6   Foreign key(MatchID) references Matches(MatchID)
7 );
```

The code is highlighted with syntax coloring. A status bar at the bottom indicates the operation was successful with 0 row(s) affected in 0.020 sec.

Loading data into Fixture table

The screenshot shows the MySQL Workbench interface with a query editor titled "Query 1". The code entered is:

```
1 • 1 INSERT INTO Fixture (FixtureID, MatchID, Stage, Location) VALUES
2   ('F-1', 'M-1', 'Round of 16', 'Auckland'),
3   ('F-2', 'M-2', 'Round of 16', 'Wellington'),
4   ('F-3', 'M-3', 'Round of 16', 'Sydney'),
5   ('F-4', 'M-4', 'Round of 16', 'Melbourne'),
6   ('F-5', 'M-5', 'Round of 16', 'Sydney'),
7   ('F-6', 'M-6', 'Round of 16', 'Brisbane'),
8   ('F-7', 'M-7', 'Round of 16', 'Adelaide'),
9   ('F-8', 'M-8', 'Round of 16', 'Melbourne'),
10  ('F-9', 'M-9', 'Quarter-final', 'Wellington'),
11  ('F-10', 'M-10', 'Quarter-final', 'Auckland'),
12  ('F-11', 'M-11', 'Quarter-final', 'Brisbane'),
13  ('F-12', 'M-12', 'Quarter-final', 'Sydney'),
14  ('F-13', 'M-13', 'Semi-final', 'Auckland'),
15  ('F-14', 'M-14', 'Semi-final', 'Sydney'),
16  ('F-15', 'M-15', 'Third place', 'Brisbane'),
17  ('F-16', 'M-16', 'Finals', 'Sydney');
```

The code is highlighted with syntax coloring. A status bar at the bottom indicates the operation was successful with 16 row(s) affected, 0 duplicates, 0 warnings, and 0.0050 sec.

Data loaded successfully.

The screenshot shows the MySQL Workbench interface with a query editor and a result grid. The query editor contains the following SQL code:

```
1 • select * from |Fixture;
```

The result grid displays the following data:

FixtureID	MatchID	Stage	Location
F-1	M-1	Round of 16	Auckland
F-10	M-10	Quarter-final	Auckland
F-11	M-11	Quarter-final	Brisbane
F-12	M-12	Quarter-final	Sydney
F-13	M-13	Semi-final	Auckland
F-14	M-14	Semi-final	Sydney
F-15	M-15	Third place	Brisbane
F-16	M-16	Finals	Sydney
F-2	M-2	Round of 16	Wellington
F-3	M-3	Round of 16	Sydney
F-4	M-4	Round of 16	Melbourne
F-5	M-5	Round of 16	Sydney
F-6	M-6	Round of 16	Brisbane
F-7	M-7	Round of 16	Adelaide
F-8	M-8	Round of 16	Melbourne
F-9	M-9	Quarter-final	Wellington
NULL	NULL	NULL	NULL

Table: PlayedBy

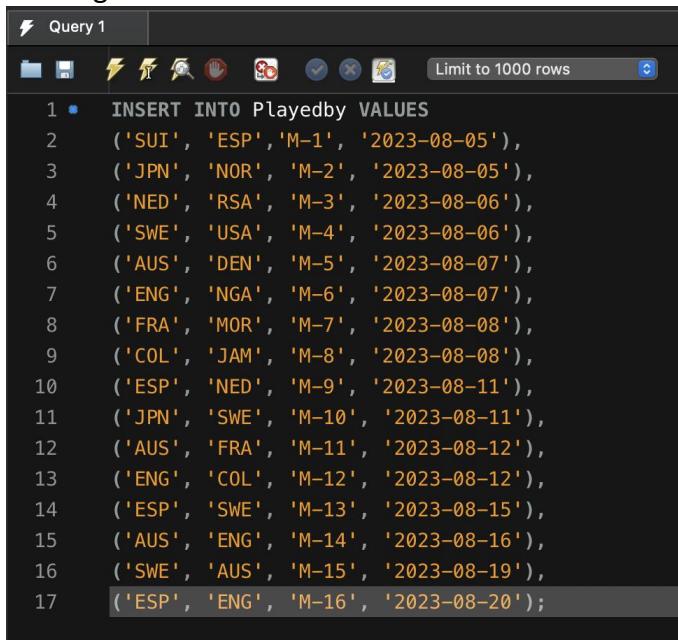
The screenshot shows the MySQL Workbench interface with a query editor containing the SQL code to create the Playedby table:

```
1 ⊕ CREATE TABLE Playedby (
2     TeamID_1 varchar(3) NOT NULL,
3     TeamID_2 varchar(3) NOT NULL,
4     MatchID varchar(25),
5     Match_Date DATE NOT NULL,
6     PRIMARY KEY(TeamID_1,TeamID_2,MatchID,Match_Date),
7     FOREIGN KEY (TeamID_1) REFERENCES Team(TeamID),
8     FOREIGN KEY (TeamID_2) REFERENCES Team(TeamID),
9     FOREIGN KEY (MatchID) REFERENCES Matches(MatchID));
```

The screenshot shows the MySQL Workbench interface with a table showing the execution details of the previous query:

	Time	Action	Response	Duration / Fetch Time
96	21:24:06	CREATE TABLE Playedby (TeamID_1 varchar(3) NOT NULL, TeamID_2...)	0 row(s) affected	0.024 sec

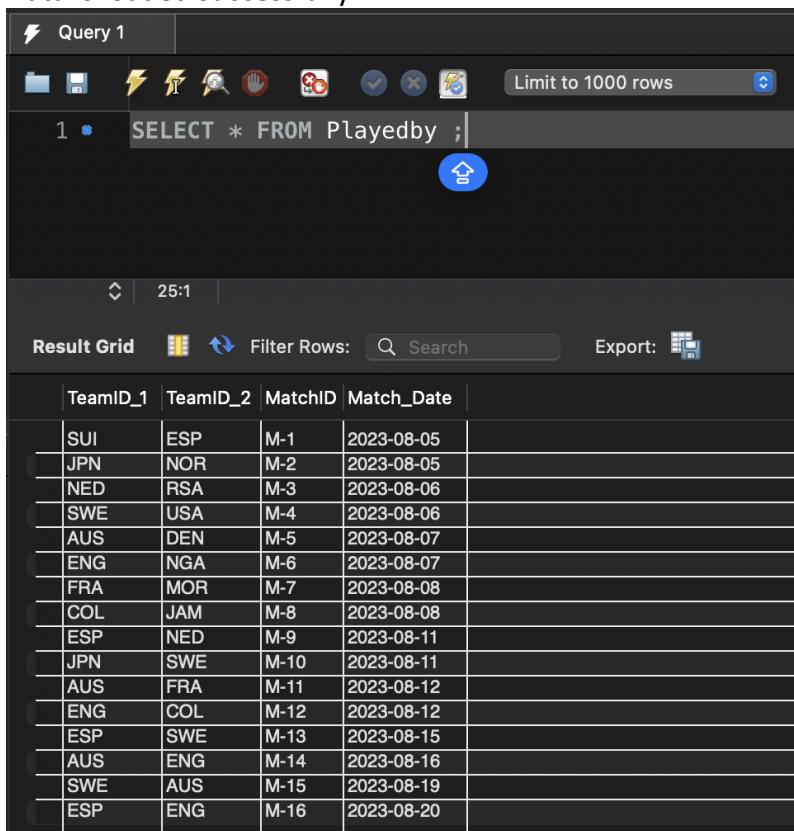
Loading Data into table



```
Query 1
INSERT INTO Playedby VALUES
('SUI', 'ESP', 'M-1', '2023-08-05'),
('JPN', 'NOR', 'M-2', '2023-08-05'),
('NED', 'RSA', 'M-3', '2023-08-06'),
('SWE', 'USA', 'M-4', '2023-08-06'),
('AUS', 'DEN', 'M-5', '2023-08-07'),
('ENG', 'NGA', 'M-6', '2023-08-07'),
('FRA', 'MOR', 'M-7', '2023-08-08'),
('COL', 'JAM', 'M-8', '2023-08-08'),
('ESP', 'NED', 'M-9', '2023-08-11'),
('JPN', 'SWE', 'M-10', '2023-08-11'),
('AUS', 'FRA', 'M-11', '2023-08-12'),
('ENG', 'COL', 'M-12', '2023-08-12'),
('ESP', 'SWE', 'M-13', '2023-08-15'),
('AUS', 'ENG', 'M-14', '2023-08-16'),
('SWE', 'AUS', 'M-15', '2023-08-19'),
('ESP', 'ENG', 'M-16', '2023-08-20');
```

	Time	Action	Response	Duration / Fetch Time
97	21:25:32	INSERT INTO Playedby VALUES ('SUI', 'ESP', 'M-1', '2023-08-05'), ('JPN...', 16 row(s) affected	Records: 16 Duplicates: 0 Warnings: 0	0.016 sec

Data is loaded successfully.



```
Query 1
SELECT * FROM Playedby ;
```

Result Grid

TeamID_1	TeamID_2	MatchID	Match_Date
SUI	ESP	M-1	2023-08-05
JPN	NOR	M-2	2023-08-05
NED	RSA	M-3	2023-08-06
SWE	USA	M-4	2023-08-06
AUS	DEN	M-5	2023-08-07
ENG	NGA	M-6	2023-08-07
FRA	MOR	M-7	2023-08-08
COL	JAM	M-8	2023-08-08
ESP	NED	M-9	2023-08-11
JPN	SWE	M-10	2023-08-11
AUS	FRA	M-11	2023-08-12
ENG	COL	M-12	2023-08-12
ESP	SWE	M-13	2023-08-15
AUS	ENG	M-14	2023-08-16
SWE	AUS	M-15	2023-08-19
ESP	ENG	M-16	2023-08-20

Table: Goal

```

1  ↗ CREATE TABLE Goal (
2      GoalID VARCHAR(25) NOT NULL,
3      MatchID VARCHAR(25) NOT NULL,
4      PlayerID varchar(10),
5      ScoredforTeamID varchar(3),
6      PRIMARY KEY (GoalID),
7      FOREIGN KEY (MatchID) REFERENCES Matches(MatchID),
8      FOREIGN KEY (PlayerID) REFERENCES Player(PlayerID),
9      FOREIGN KEY (ScoredforTeamID) REFERENCES Team(TeamID)
10 );
11

```

	Time	Action	Response	Duration / Fetch Time
90	21:12:27	CREATE TABLE Goal (GoalID VARCHAR(25) NOT NULL, MatchID V... 0 row(s) affected		0.037 sec

```

INSERT INTO Goal (GoalID, MatchID, PlayerID, ScoredforTeamID) VALUES
('G-1','M-1', 'ESP7', 'SUI'),
('G-2','M-1', 'ESP10', 'ESP'),
('G-3','M-1', 'ESP3', 'ESP'),
('G-4','M-1', 'ESP9', 'ESP'),
('G-5','M-1', 'ESP9', 'ESP'),
('G-6','M-2', 'NOR5', 'JPN'),
('G-6','M-2', 'JPN10', 'JPN'),
('G-8','M-2', 'JPN11', 'JPN'),
('G-9','M-2', 'NOR4', 'NOR'),
('G-10','M-3', 'NED6', 'NED'),
('G-11','M-3', 'NED8', 'NED'),
('G-12','M-6', 'AUS11', 'AUS'),
('G-13','M-6', 'AUS9', 'AUS'),
('G-14','M-7', 'COL8', 'COL'),
('G-15','M-8', 'FRA7', 'FRA'),
('G-16','M-8', 'FRA10', 'FRA'),
('G-17','M-8', 'FRA5', 'FRA'),
('G-18','M-8', 'FRA1', 'FRA'),
('G-19','M-9', 'ESP8', 'ESP'),
('G-20','M-9', 'ESP11', 'ESP'),
('G-21','M-9', 'NED11', 'NED'),
('G-22','M-10', 'JPN3', 'JPN'),
('G-23','M-10', 'SWE3', 'SWE'),
('G-24','M-10', 'SWE11', 'SWE'),
('G-25','M-12', 'ENG9', 'ENG'),
('G-26','M-12', 'ENG8', 'ENG'),
('G-27','M-12', 'COL5', 'COL'),
('G-28','M-13', 'ESP11', 'ESP'),
('G-29','M-13', 'ESP4', 'ESP'),
('G-30','M-13', 'SWE8', 'SWE'),
('G-31','M-14', 'AUS10', 'AUS'),
('G-32','M-14', 'ENG6', 'ENG'),
('G-33','M-14', 'ENG9', 'ENG'),
('G-34','M-14', 'ENG8', 'ENG'),
('G-35','M-15', 'SWE9', 'SWE'),
('G-36','M-15', 'SWE5', 'SWE'),
('G-37','M-16', 'ESP4', 'ESP');

```

```

1 •  INSERT INTO Goal (GoalID, MatchID, PlayerID, ScoredforTeamID) VALUES
2 ('G-1','M-1', 'ESP7', 'SUI'),
3 ('G-2','M-1', 'ESP10', 'ESP'),
4 ('G-3','M-1', 'ESP3', 'ESP'),
5 ('G-4','M-1', 'ESP9', 'ESP'),
6 ('G-5','M-1', 'ESP9', 'ESP'),
7 ('G-6','M-2', 'NOR5', 'JPN'),
8 ('G-7','M-2', 'JPN10', 'JPN'),
9 ('G-8','M-2', 'JPN11', 'JPN'),
10 ('G-9','M-2', 'NOR4', 'NOR'),
11 ('G-10','M-3', 'NED6', 'NED'),
12 ('G-11','M-3', 'NED8', 'NED'),
13 ('G-12','M-6', 'AUS11', 'AUS'),
14 ('G-13','M-6', 'AUS9', 'AUS'),
15 ('G-14','M-7', 'COL8', 'COL'),
16 ('G-15','M-8', 'FRA7', 'FRA'),
17 ('G-16','M-8', 'FRA10', 'FRA'),
18 ('G-17','M-8', 'FRA5', 'FRA'),
19 ('G-18','M-8', 'FRA1', 'FRA'),
20 ('G-19','M-9', 'ESP8', 'ESP'),
21 ('G-20','M-9', 'ESP11', 'ESP'),
22 ('G-21','M-9', 'NED11', 'NED'),
23 ('G-22','M-10', 'JPN3', 'JPN'),
24 ('G-23','M-10', 'SWE3', 'SWE'),
25 ('G-24','M-10', 'SWE11', 'SWE'),

```

Action Output

	Time	Action	Response	Duration / Fetch Time
93	21:16:32	INSERT INTO Goal (GoalID, MatchID, PlayerID, ScoredforTeamID) VALU...	37 row(s) affected Records: 37 Duplicates: 0 Warnings: 0	0.0048 sec

Implementing indexes, views, temporary tables, triggers, stored procedures, and functions for the database

Views:

1. View 'TeamPerformance' created for viewing the Team's Performance which can be measured using their FIFA ranking and the Number of the matches played.

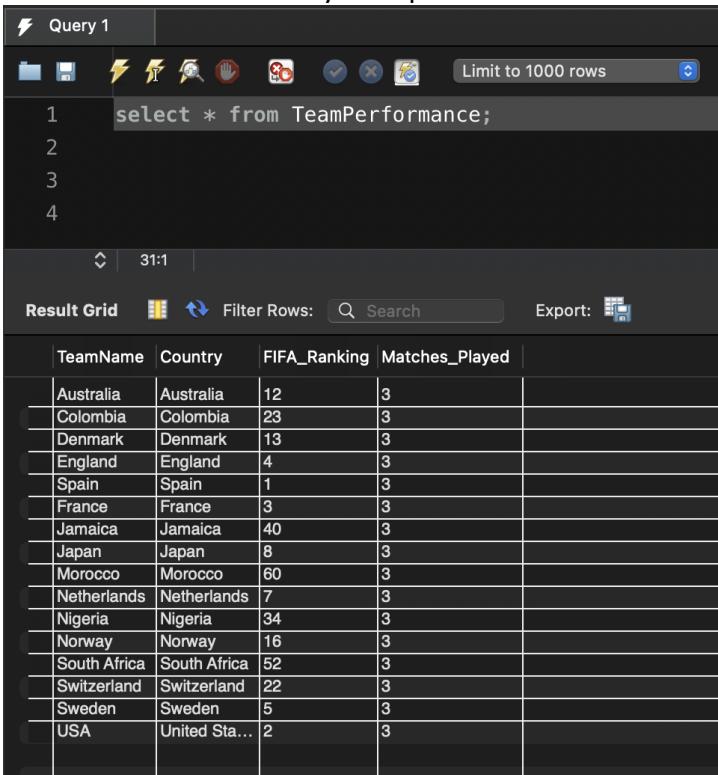
```

1 CREATE VIEW TeamPerformance AS
2 SELECT TeamName, Country, FIFA_Ranking, Matches_Played
3 FROM Team;
4
5

```

	Time	Action	Response	Duration / Fetch Time
99	13:47:55	CREATE VIEW TeamPerformance AS SELECT TeamName, Country, FIF...	0 row(s) affected	0.098 sec

Data loaded successfully as expected.



The screenshot shows the MySQL Workbench interface with a query editor titled "Query 1". The query executed is:

```
1 select * from TeamPerformance;
```

The results are displayed in a "Result Grid" table with the following columns: TeamName, Country, FIFA_Ranking, and Matches_Played. The data rows are:

TeamName	Country	FIFA_Ranking	Matches_Played
Australia	Australia	12	3
Colombia	Colombia	23	3
Denmark	Denmark	13	3
England	England	4	3
Spain	Spain	1	3
France	France	3	3
Jamaica	Jamaica	40	3
Japan	Japan	8	3
Morocco	Morocco	60	3
Netherlands	Netherlands	7	3
Nigeria	Nigeria	34	3
Norway	Norway	16	3
South Africa	South Africa	52	3
Switzerland	Switzerland	22	3
Sweden	Sweden	5	3
USA	United Sta...	2	3

2. View 'PlayerStats' created for viewing for Player Statistics:

This view aggregates player data based on total goals scored by each player to provide details on the individual performance.



The screenshot shows the MySQL Workbench interface with a query editor titled "Query 1". The query executed is:

```
1 • CREATE VIEW PlayerStats AS
2   SELECT
3     Player.FirstName,
4     Player.LastName,
5     Player.TeamID,
6     COALESCE(COUNT(Goal.GoalID), 0) AS GoalsScored
7   FROM Player
8   LEFT JOIN Goal ON Player.PlayerID = Goal.PlayerID
9   GROUP BY Player.PlayerID, Player.FirstName, Player.LastName, Player.TeamID;
```

	Time	Action	Response	Duration / Fetch Time
166	16:03:49	CREATE VIEW PlayerStats AS SELECT Player.FirstName, Player...	0 row(s) affected	0.010 sec

Data loaded successfully as expected.

The screenshot shows the MySQL Workbench interface with a dark theme. At the top, there are two tabs: "Query 1" and "SQL File 4*". Below the tabs is a toolbar with various icons for file operations, search, and navigation. A dropdown menu "Limit to 1000 rows" is open. The main area contains a SQL query: "SELECT * FROM PlayerStats;". Below the query is a result grid titled "Result Grid" with columns: FirstName, LastName, TeamID, and GoalsScored. The data grid contains 27 rows of player information. At the bottom of the grid, it says "PlayerStats 27".

	FirstName	LastName	TeamID	GoalsScored
1	Lydia	Williams	AUS	0
2	Sam	Kerr	AUS	1
3	Caitlin	Foord	AUS	1
4	Ellie	Carpenter	AUS	0
5	Alanna	Kennedy	AUS	0
6	Steph	Catley	AUS	0
7	Clare	Polkinghorne	AUS	0
8	Tameka	Yallop	AUS	0
9	Katrina	Gorry	AUS	0
10	Alex	Chidiac	AUS	0
11	Emily	van Egmond	AUS	1
12	Catalina	Pérez	COL	0
13	Maria	Camila Reyes	COL	0
14	Mayra	Ramírez	COL	0
15	Daniela	Arias	COL	0
16	Jorelyn	Carabalí	COL	0
17	Manuela	Vanegas	COL	0
18	Leicy	Santos	COL	1
19	Daniela	Montoya	COL	0
20	Carolina	Arias	COL	0
21	Catalina	Usme	COL	1
22	Linda	Caicedo	COL	0
23	Katrine	Larsen	DEN	0

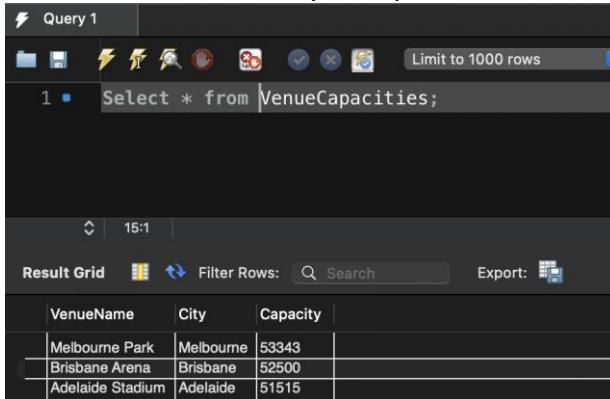
3. View for Venue Capacities:

This view looks for venues with a capacity of more than 50,000 which highlights the largest stadiums.

The screenshot shows the MySQL Workbench interface with a dark theme. At the top, there are two tabs: "Query 1" and "SQL File 4*". Below the tabs is a toolbar with various icons for file operations, search, and navigation. A dropdown menu "Limit to 1000 rows" is open. The main area contains a SQL script:
1 • CREATE VIEW VenueCapacities AS
2 SELECT VenueName, City, Capacity
3 FROM Venues
4 WHERE Capacity > 50000;

	Time	Action	Response	Duration / Fetch Time
114	14:07:17	CREATE VIEW VenueCapacities AS SELECT VenueName, City, Capacity FROM Venues WH...	0 row(s) affected	0.011 sec

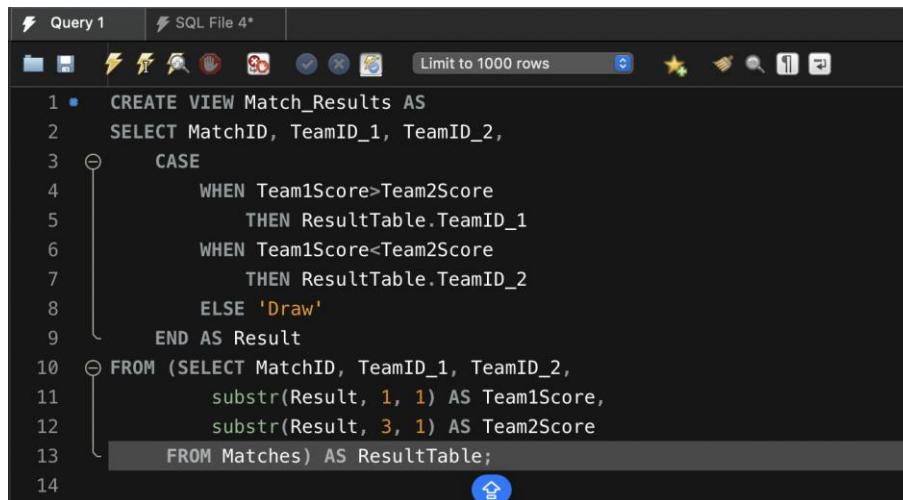
Data loaded successfully as expected.



The screenshot shows the MySQL Workbench interface. A query window titled 'Query 1' contains the SQL command: 'CREATE VIEW VenueCapacities AS SELECT VenueName, City, Capacity FROM Venues WH...'. Below the command, the results are displayed in a table:

VenueName	City	Capacity
Melbourne Park	Melbourne	53343
Brisbane Arena	Brisbane	52500
Adelaide Stadium	Adelaide	51515

4. View 'Match_Results' is created to view which team has won the match or if the match has ended up in a draw.



The screenshot shows the MySQL Workbench interface. A query window titled 'Query 1' contains the SQL command for creating the Match_Results view:

```

1 • CREATE VIEW Match_Results AS
2   SELECT MatchID, TeamID_1, TeamID_2,
3     CASE
4       WHEN Team1Score>Team2Score
5         THEN ResultTable.TeamID_1
6       WHEN Team1Score<Team2Score
7         THEN ResultTable.TeamID_2
8       ELSE 'Draw'
9     END AS Result
10    FROM (SELECT MatchID, TeamID_1, TeamID_2,
11      substr(Result, 1, 1) AS Team1Score,
12      substr(Result, 3, 1) AS Team2Score
13    FROM Matches) AS ResultTable;
14

```

	Time	Action	Response	Duration / Fetch Time
184	16:30:45	CREATE VIEW Match_Results AS SELECT MatchID, TeamID_1, TeamID... 0 row(s) affected		0.0048 sec

Data loaded successfully as expected.

The screenshot shows the MySQL Workbench interface with a query editor and a result grid. The query editor contains the following SQL code:

```
1 •  SELECT * FROM Match_Results;
```

The result grid displays the following data:

MatchID	TeamID_1	TeamID_2	Result
M-1	SUI	ESP	ESP
M-10	JPN	SWE	SWE
M-11	AUS	FRA	Draw
M-12	ENG	COL	ENG
M-13	ESP	SWE	ESP
M-14	AUS	ENG	ENG
M-15	SWE	AUS	SWE
M-16	ESP	ENG	ESP
M-2	JPN	NOR	JPN
M-3	NED	RSA	NED
M-4	SWE	USA	Draw
M-5	AUS	DEN	AUS
M-6	ENG	NGA	Draw
M-7	FRA	MOR	FRA
M-8	COL	JAM	COL
M-9	ESP	NED	ESP

5. View 'Upcoming_Matches' is created to view matches which are yet to take place.

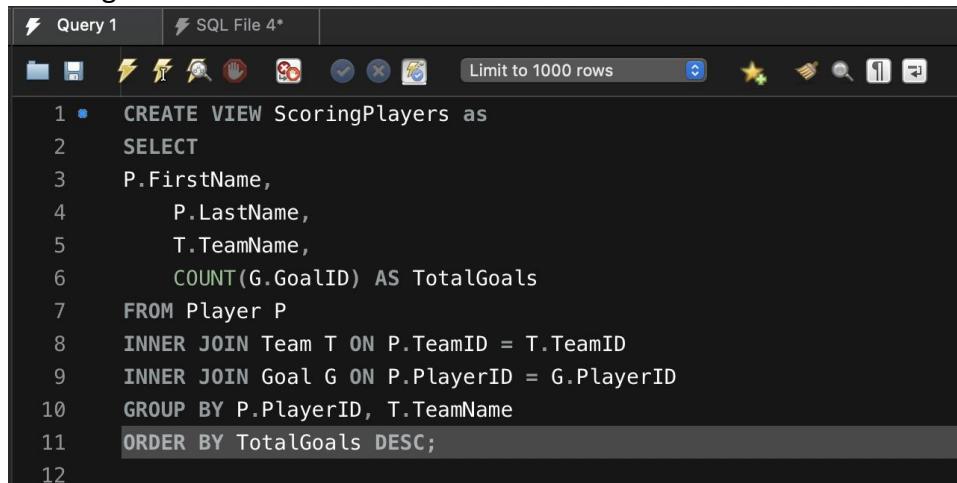
The screenshot shows the MySQL Workbench interface with a query editor and a status bar. The query editor contains the following SQL code:

```
1 •  CREATE VIEW Upcoming_Matches AS
2      SELECT MatchID, Match_Date, Location,
3             Team1.TeaName AS Team1Name,
4             Team2.TeaName AS Team2Name
5      FROM Matches
6     JOIN Team AS Team1 ON Matches.TeamID_1 = Team1.TeamID
7     JOIN Team AS Team2 ON Matches.TeamID_2 = Team2.TeamID
8    WHERE Match_Date >= CURRENT_DATE;
9
10
```

The status bar at the bottom shows the following information:

Time	Action	Response	Duration / Fetch Time
189 16:36:39	CREATE VIEW Upcoming_Matches AS SELECT MatchID, Match_Date...	0 row(s) affected	0.0065 sec

6. View 'ScoringPlayers' created to view all the players along with their team details who scored goals

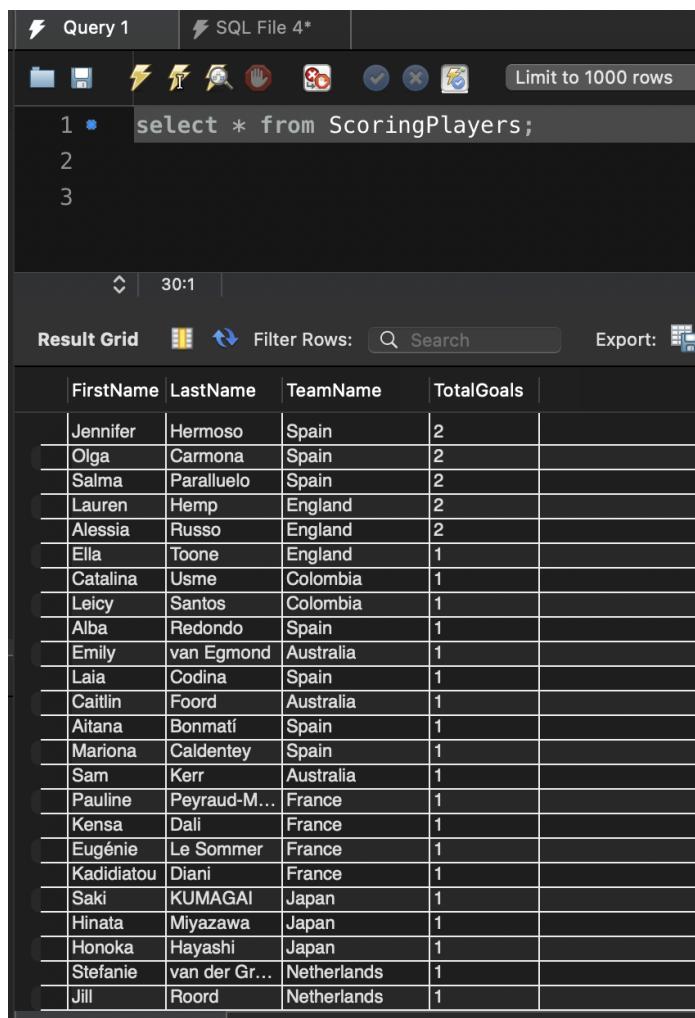


```

1 • CREATE VIEW ScoringPlayers AS
2     SELECT
3         P.FirstName,
4             P.LastName,
5                 T.TeamName,
6                     COUNT(G.GoalID) AS TotalGoals
7             FROM Player P
8                 INNER JOIN Team T ON P.TeamID = T.TeamID
9                 INNER JOIN Goal G ON P.PlayerID = G.PlayerID
10                GROUP BY P.PlayerID, T.TeamName
11                ORDER BY TotalGoals DESC;
12

```

	Time	Action	Response	Duration / Fetch Time
✓ 196	16:45:11	CREATE VIEW ScoringPlayers as SELECT P.FirstName, P.LastName, T.TeamName, COUNT(G.GoalID) AS TotalGoals FROM Player P INNER JOIN Team T ON P.TeamID = T.TeamID INNER JOIN Goal G ON P.PlayerID = G.PlayerID GROUP BY P.PlayerID, T.TeamName ORDER BY TotalGoals DESC;	0 row(s) affected	0.0069 sec



```

1 • select * from ScoringPlayers;
2
3

```

Result Grid

FirstName	LastName	TeamName	TotalGoals
Jennifer	Hermoso	Spain	2
Olga	Carmona	Spain	2
Salma	Paralluelo	Spain	2
Lauren	Hemp	England	2
Alessia	Russo	England	2
Ella	Toone	England	1
Catalina	Usme	Colombia	1
Leicy	Santos	Colombia	1
Alba	Redondo	Spain	1
Emily	van Egmond	Australia	1
Laia	Codina	Spain	1
Caitlin	Foord	Australia	1
Aitana	Bonmatí	Spain	1
Mariona	Caldentey	Spain	1
Sam	Kerr	Australia	1
Pauline	Peyraud-M...	France	1
Kensa	Dali	France	1
Eugénie	Le Sommer	France	1
Kadidiatou	Diani	France	1
Saki	KUMAGAI	Japan	1
Hinata	Miyazawa	Japan	1
Honoka	Hayashi	Japan	1
Stefanie	van der Gr...	Netherlands	1
Jill	Roord	Netherlands	1

7. View 'Fixture_Details' created to obtain the fixture information along with the match details and venue of it.

```
⚡ Query 1 ⚡ SQL File 4* | Limit to 1000 rows | ⭐ 🔍 🗂️ 🌐 🎯 📈 🕵️ 🏷️
```

```
1 • CREATE VIEW Fixture_Details AS
2     SELECT Fixture.FixtureID, Matches.MatchID, Matches.Match_Date, Fixture.Stage, Venues.VenueName
3     FROM Fixture
4     INNER JOIN Matches ON Fixture.MatchID = Matches.MatchID
5     INNER JOIN Venues ON Fixture.Location = Venues.City;
6
```

	Time	Action	Response	Duration / Fetch Time
✓ 206	16:53:59	CREATE VIEW Fixture_Details AS SELECT Fixture.FixtureID, Matches....	0 row(s) affected	0.0045 sec

```
⚡ Query 1 ⚡ SQL File 4* | Limit to 1000 rows | ⭐
```

```
1 • SELECT * FROM Fixture_Details;
```

⟳

31:1

Result GridFilter Rows:SearchExport:

FixtureID	MatchID	Match_Date	Stage	VenueName	
F-1	M-1	2023-08-05	Round of 16	Auckland Stadium	
F-10	M-10	2023-08-11	Quarter-final	Auckland Stadium	
F-11	M-11	2023-08-12	Quarter-final	Brisbane Arena	
F-12	M-12	2023-08-12	Quarter-final	Sydney Stadium	
F-13	M-13	2023-08-15	Semi-final	Auckland Stadium	
F-14	M-14	2023-08-16	Semi-final	Sydney Stadium	
F-15	M-15	2023-08-19	Third place	Brisbane Arena	
F-16	M-16	2023-08-20	Finals	Sydney Stadium	
F-2	M-2	2023-08-05	Round of 16	Wellington Park	
F-3	M-3	2023-08-06	Round of 16	Sydney Stadium	
F-4	M-4	2023-08-06	Round of 16	Melbourne Park	
F-5	M-5	2023-08-07	Round of 16	Sydney Stadium	
F-6	M-6	2023-08-07	Round of 16	Brisbane Arena	
F-7	M-7	2023-08-08	Round of 16	Adelaide Stadium	
F-8	M-8	2023-08-08	Round of 16	Melbourne Park	
F-9	M-9	2023-08-11	Quarter-final	Wellington Park	

INDEXES

1. Index '**idx_player_teamid**' is created as there will be lot of instances which often involves joining the Player table and the Team table via TeamID, an index on TeamID can improve performance.

The screenshot shows the MySQL Workbench interface. In the top bar, there are tabs for 'Query 1' and 'SQL File 4*'. Below the tabs are various icons for database management. A toolbar with icons for file operations, search, and refresh is visible. A dropdown menu says 'Limit to 1000 rows'. The main area contains a single query:

```
CREATE INDEX idx_player_teamid ON Player (TeamID);
```

	Time	Action	Response	Duration / Fetch Time
✓	209 17:04:03	CREATE INDEX idx_player_teamid ON Player (TeamID)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.106 sec

Result Grid														
Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression
Player	0	PRIMARY	1	PlayerID	A	163	NULL	NULL	BTREE				YES	NULL
Player	1	idx_player_teamid	1	TeamID	A	16	NULL	NULL	YES	BTREE			YES	NULL

2. Index '**idx_team_teamname**' is created as to get the team details faster when queried with teamname.

The screenshot shows the MySQL Workbench interface. In the top bar, there are tabs for 'Query 1' and 'SQL File 4*'. Below the tabs are various icons for database management. A toolbar with icons for file operations, search, and refresh is visible. A dropdown menu says 'Limit to 1000 rows'. The main area contains a single query:

```
CREATE INDEX idx_team_teamname ON Team(TeamName);
```

	Time	Action	Response	Duration / Fetch Time
✓	215 17:11:43	CREATE INDEX idx_team_teamname ON Team(TeamName)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.035 sec

Result Grid														
Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression
Team	0	PRIMARY	1	TeamID	A	16	NULL	NULL	BTREE				YES	NULL
Team	1	idx_team_teamname	1	TeamName	A	16	NULL	NULL	BTREE				YES	NULL

3. Index 'idx_goals_playerid' is created as this is useful for quickly locating all goals linked with a certain player, which is typical in searches that calculate total goals scored by each player.

```

    1
2 • CREATE INDEX idx_goals_playerid ON Goal (PlayerID);
3

```

	Time	Action	Response	Duration / Fetch Time
221	17:18:17	CREATE INDEX idx_goals_playerid ON Goal (PlayerID)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.067 sec

```

7 • show index from Goal where key_name='idx_goals_playerid';
R
8 | 58:7 | 1 error found
Result Grid Filter Rows: Search Export: 
Table Non_unique Key_name Seq_in_index Column_name Collation Cardinality Sub_part Packed Null Index_type Comment Index_comment Visible Expression
Goal 1 idx_goals_playerid 1 PlayerID A 32 NULL NULL YES BTREE | | YES NULL

```

4. Index 'idx_venues_city' is created to improves the retrieval of venue information depending on the city where the venue is located.

```

    1 • CREATE INDEX idx_venues_city ON Venues(City);
2

```

	Time	Action	Response	Duration / Fetch Time
225	17:26:46	CREATE INDEX idx_venues_city ON Venues(City)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.125 sec

```

3 • show index from Venues;
R
4 | 24:3 |
Result Grid Filter Rows: Search Export: 
Table Non_unique Key_name Seq_in_index Column_name Collation Cardinality Sub_part Packed Null Index_type Comment Index_comment Visible Expression
Venues 0 PRIMARY 1 VenueID A 16 NULL NULL YES BTREE | | YES NULL
Venues 1 idx_venues_city 1 City A 16 NULL NULL YES BTREE | | YES NULL

```

5. Index 'idx_fixture_matchid' is created to improve performance when accessing fixture information by comparing it to the associated match ID.

The screenshot shows the MySQL Workbench interface. In the top bar, there are two tabs: 'Query 1' and 'SQL File 4*'. Below the tabs is a toolbar with various icons. A dropdown menu 'Limit to 1000 rows' is open. The main area contains two numbered lines of SQL code:

```
1 • CREATE INDEX idx_fixture_matchid ON Fixture (MatchID);  
2
```

Time	Action	Response	Duration / Fetch Time
228 17:30:52	CREATE INDEX idx_fixture_matchid ON Fixture (MatchID)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.072 sec

The screenshot shows the MySQL Workbench interface. In the top bar, there are two tabs: 'Query 1' and 'SQL File 4*'. Below the tabs is a toolbar with various icons. A dropdown menu 'Limit to 1000 rows' is open. The main area contains three numbered lines of SQL code:

```
3 • show index from Fixture;
```

Below the code is a 'Result Grid' table showing the index details for the 'Fixture' table:

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression
Fixture	0	PRIMARY	1	FixtureID	A	16	HULL	HULL		BTREE			YES	HULL
Fixture	1	idx_fixture_matchid	1	MatchID	A	16	NULL	NULL	YES	BTREE			YES	NULL

6. Index 'idx_team_fifaranking' is created for quicker sorting and filtering of teams based on their FIFA rankings.

The screenshot shows the MySQL Workbench interface. In the top bar, there are two tabs: 'Query 1' and 'SQL File 4*'. Below the tabs is a toolbar with various icons. A dropdown menu 'Limit to 1000 rows' is open. The main area contains two numbered lines of SQL code:

```
1 • CREATE INDEX idx_team_fifaranking ON Team(FIFA_Ranking);
```

Time	Action	Response	Duration / Fetch Time
230 17:33:58	CREATE INDEX idx_team_fifaranking ON Team(FIFA_Ranking)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.039 sec

The screenshot shows the MySQL Workbench interface. In the top bar, there are two tabs: 'Query 1' and 'SQL File 4*'. Below the tabs is a toolbar with various icons. A dropdown menu 'Limit to 1000 rows' is open. The main area contains three numbered lines of SQL code:

```
3 • show index from TEAM where key_name='idx_team_fifaranking';
```

Below the code is a 'Result Grid' table showing the index details for the 'TEAM' table:

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression
Team	1	idx_team_fifaranking	1	FIFA_Ranking	A	16	HULL	HULL	YES	BTREE			YES	HULL

7. Index 'idx_matches_teamid1_teamid2' is created to optimize searches to get matches involving specified teams, regardless of whether they are playing as Team 1 or Team 2.

⚡ Query 1 ⚡ SQL File 4*

```
1
2 • CREATE INDEX idx_matches_teamid1_teamid2 ON Matches(TeamID_1, TeamID_2);
```

	Time	Action	Response	Duration / Fetch Time
✓ 232	17:38:40	CREATE INDEX idx_matches_teamid1_teamid2 ON Matches(TeamID_1, TeamID_2)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.048 sec

4 • show index from Matches where key_name='idx_matches_teamid1_teamid2';

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible
Matches	1	idx_matches_teamid1_teamid2	1	TeamID_1	A	9		NULL	YES	BTREE			YES
Matches	1	idx_matches_teamid1_teamid2	2	TeamID_2	A	16		NULL	YES	BTREE			YES

Temporary Tables

1. This temporary table ‘TempDetailedMatchInfo’ stores detailed match information including the date, which could be useful for detailed analysis or reporting that requires match dates alongside basic match details.

```
417 • CREATE TEMPORARY TABLE TempDetailedMatchInfo AS
418     SELECT MatchID, TeamID_1, TeamID_2, Result, Match_Date
419     FROM Matches;
420
421 • SELECT *
422     FROM TempDetailedMatchInfo;
```

Result Grid

MatchID	TeamID_1	TeamID_2	Result	Match_Date
M-1	SUI	ESP	1-5	2023-08-05
M-10	JPN	SWE	1-2	2023-08-11
M-11	AUS	FRA	0-0	2023-08-12
M-12	ENG	COL	2-1	2023-08-12
M-13	ESP	SWE	2-1	2023-08-15
M-14	AUS	ENG	1-3	2023-08-16
M-15	SWE	AUS	2-0	2023-08-19
M-16	ESP	ENG	1-0	2023-08-20
M-2	JPN	NOR	3-1	2023-08-05
M-3	NED	RSA	2-0	2023-08-06
M-4	SWE	USA	0-0	2023-08-06
M-5	AUS	DEN	2-0	2023-08-07
M-6	ENG	NGA	0-0	2023-08-07
M-7	FRA	MOR	4-0	2023-08-08
M-8	COL	JAM	1-0	2023-08-08
M-9	ESP	NED	2-1	2023-08-11

TempDetailedMatchInfo 13

2. This table ‘TempPlayerAchievements’ includes player positions and jersey numbers with their basic information, useful for detailed player statistics and achievement reports.

```

424 • CREATE TEMPORARY TABLE TempPlayerAchievements AS
425   SELECT PlayerID, FirstName, LastName, Position, JerseyNumber, TeamID
426   FROM Player;
427
428 • SELECT *
429   FROM TempPlayerAchievements;
  ↴

```

	PlayerID	FirstName	LastName	Position	JerseyNumber	TeamID
	AUS1	Lydia	Williams	Goalkeeper	1	AUS
	AUS10	Sam	Kerr	Forward	20	AUS
	AUS11	Caitlin	Foord	Forward	9	AUS
	AUS2	Ellie	Carpenter	Defender	21	AUS
	AUS3	Alanna	Kennedy	Defender	14	AUS
	AUS4	Steph	Catley	Defender	7	AUS
	AUS5	Clare	Polkinghorne	Defender	4	AUS
	AUS6	Tameka	Yallop	Midfielder	13	AUS
	AUS7	Katrina	Gorry	Midfielder	19	AUS
	AUS8	Alex	Chidiac	Midfielder	8	AUS
	AUS9	Emily	van Egmond	Midfielder	10	AUS
	COL1	Catalina	Pérez	Goalkeeper	1	COL
	COL10	Maria	Camila Reyes	Midfielder	7	COL
	COL11	Mayra	Ramírez	Forward	8	COL
	COL2	Daniel	Arias	Defender	3	COL
	COL3	Jorelyn	Caraballí	Defender	19	COL
	COL4	Manuela	Vanegas	Defender	2	COL
	COL5	Leicy	Santos	Midfielder	10	COL
	COL6	Daniela	Montoya	Midfielder	6	COL
	COL7	Carolina	Arias	Defender	17	COL
	COL8	Catalina	Usme	Forward	11	COL
	COL9	Linda	Caicedo	Forward	18	COL
	DEN1	Katrine	Larsen	Goalkeeper	16	DEN
	DEN10	Karen	Holmgård	Midfielder	6	DEN
	DEN11	Sofie	Svava	Defender	23	DEN
	DEN2	Rikke	Sevecke	Defender	4	DEN
	DEN3	Simone	Boye Søren...	Defender	5	DEN
	DEN4	Katrine	Veje	Defender	11	DEN
	DEN5	Nicoline	Sørensen	Midfielder	14	DEN
	DEN6	Emma	Snerup	Midfielder	8	DEN
	DEN7	Pernille	Harder	Forward	10	DEN
	DEN8	Marie	Madsen	Forward	17	DEN
	DEN9	Signe	Bruun	Forward	20	DEN
	ENG1	Mary	Earps	Goalkeeper	1	ENG
	ENG10	Georgia	Stanway	Midfielder	8	ENG
	ENG11	Alex	Greenwood	Defender	5	ENG
	ENG2	Lucy	Bronze	Defender	2	ENG
	ENG3	Millie	Bright	Defender	6	ENG
	ENG4	Niamh	Charles	Defender	3	ENG
	ENG5	Keira	Walsh	Midfielder	4	ENG
	ENG6	Ella	Toone	Midfielder	10	ENG
	ENG7	Chloe	Kelly	Forward	18	ENG
	ENG8	Alessia	Russo	Forward	23	ENG
	ENG9	Lauren	Hemp	Forward	11	ENG
	ESP1	Misa	Rodríguez	Goalkeeper	1	ESP

PlayerID	FirstName	LastName	Position	JerseyNumber	TeamID
ESP1	Misa	Rodriguez	Goalkeeper	1	ESP
ESP10	Alba	Redondo	Forward	7	ESP
ESP11	Salma	Paralluelo	Forward	18	ESP
ESP2	Irene	Paredes	Defender	4	ESP
ESP3	Lala	Codina	Defender	14	ESP
ESP4	Olga	Carmona	Defender	19	ESP
ESP5	Maria	Perez	Midfielder	16	ESP
ESP6	Alexia	Putellas	Midfielder	11	ESP
ESP7	Aitana	Bonmati	Midfielder	6	ESP
ESP8	Mariona	Caldentey	Forward	8	ESP
ESP9	Jennifer	Hermost	Forward	10	ESP
FRA1	Pauline	Peyraud-M...	Goalkeeper	16	FRA
FRA10	Kenza	Dali	Midfielder	15	FRA
FRA11	Sakina	Karchaoui	Defender	7	FRA
FRA2	Wendie	Renard	Defender	3	FRA
FRA3	Estelle	Cascarino	Defender	20	FRA
FRA4	Sandie	Toletti	Midfielder	6	FRA
FRA5	Eugénie	Le Sommer	Forward	9	FRA
FRA6	Amel	Majri	Midfielder	10	FRA
FRA7	Kadiatou	Diani	Forward	11	FRA
FRA8	Grace	Geyoro	Midfielder	8	FRA
FRA9	Viviane	Asseyi	Forward	18	FRA
JAM1	Sydney	Schneider	Goalkeeper	1	JAM
JAM10	Drew	Spenser	Midfielder	8	JAM
JAM11	Vyan	Sampson	Defender	3	JAM
JAM2	Chantelle	Swaby	Defender	4	JAM
JAM3	Deneisha	Blackwood	Defender	14	JAM
JAM4	Konya	Plummer	Defender	5	JAM
JAM5	Havana	Solaun	Midfielder	6	JAM
JAM6	Solai	Washington	Midfielder	2	JAM
JAM7	Kameron	Simmonds	Forward	9	JAM
JAM8	Khadija	Shaw	Forward	11	JAM
JAM9	Cheyna	Matthews	Forward	21	JAM
JPN1	Ayaka	Yamashita	Goalkeeper	1	JPN
JPN10	Saki	KUMAGAI	Defender	4	JPN
JPN11	Hinata	Miyazawa	Midfielder	7	JPN
JPN2	Risa	Shimizu	Defender	2	JPN
JPN3	Honoka	Hayashi	Midfielder	16	JPN
JPN4	Hikaru	Naomoto	Defender	8	JPN
JPN5	Hina	Sugita	Midfielder	6	JPN
JPN6	Yui	Hasegawa	Midfielder	14	JPN
JPN7	Maika	Hamano	Forward	20	JPN
JPN8	Riko	Ueki	Forward	9	JPN
JPN9	Mina	Tanaka	Forward	11	JPN
MOR1	Assia	Zouhair	Goalkeeper	12	MOR

PlayerID	FirstName	LastName	Position	JerseyNumber	TeamID
MOR1	Assia	Zouhair	Goalkeeper	12	MOR
MOR10	Anissa	Lahmari	Midfielder	16	MOR
MOR11	Yasim	Mrabet	Defender	21	MOR
MOR2	Zineb	Redouani	Defender	2	MOR
MOR3	Nauhaila	Benzina	Defender	3	MOR
MOR4	Nesryne	El Chad	Defender	5	MOR
MOR5	Sarah	Kassi	Midfielder	4	MOR
MOR6	Salma	Amani	Midfielder	8	MOR
MOR7	Ibtissam	Jraidi	Forward	9	MOR
MOR8	Fatima	Gharbi	Forward	15	MOR
MOR9	Fatima	Tagnaout	Forward	11	MOR
NED1	Daphne	van Domsela...	Goalkeeper	1	NED
NED10	Daniëlle	van der Donk	Midfielder	10	NED
NED11	Stefanie	van der Graft	Defender	8	NED
NED2	Dominique	Janssen	Defender	20	NED
NED3	Aniek	Nouwen	Defender	4	NED
NED4	Merel	van Dongen	Defender	5	NED
NED5	Sherida	Spits	Midfielder	8	NED
NED6	Jill	Roord	Midfielder	6	NED
NED7	Lieke	Martens	Forward	11	NED
NED8	Lineth	Beerensteyn	Forward	7	NED
NED9	Renate	Jansen	Forward	13	NED
NGA1	Tochukwu	Oluochi	Goalkeeper	1	NGA
NGA10	Christy	Ucheibe	Midfielder	10	NGA
NGA11	Evelyn	Nwabuoku	Defender	11	NGA
NGA2	Osinachi	Ohale	Defender	3	NGA
NGA3	Michelle	Alozie	Defender	22	NGA
NGA4	Onome	Ebi	Defender	5	NGA
NGA5	Hallinatu	Ayinde	Midfielder	18	NGA
NGA6	Toni	Payne	Midfielder	7	NGA
NGA7	Asisat	Oshoala	Forward	8	NGA
NGA8	Desire	Oparanozie	Forward	9	NGA
NGA9	Francisca	Ordega	Forward	17	NGA
NOR1	Maren	Mjelde	Defender	6	NOR
NOR10	Karina	Saevik	Forward	9	NOR
NOR11	Emilie	Haavi	Forward	20	NOR
NOR2	Caroline	Graham Ha...	Forward	10	NOR
NOR3	Ada	Hegerberg	Forward	14	NOR
NOR4	Guro	Reiten	Midfielder	11	NOR
NOR5	Ingrid	Syrstad En...	Midfielder	7	NOR
NOR6	Anja	Sonstebovold	Defender	2	NOR
NOR7	Cecilie	Fiskerstrand	Goalkeeper	1	NOR
NOR8	Vilde	Bæt Risa	Midfielder	8	NOR
NOR9	Sara	Horte	Defender	3	NOR
RSA1	Andile	Dlamini	Goalkeeper	16	RSA

PlayerID	FirstName	LastName	Position	JerseyNumber	TeamID
NOR9	Sara	Horte	Defender	3	NOR
RSA1	Andile	Dlamini	Goalkeeper	16	RSA
RSA10	Kholosa	Biyana	Midfielder	19	RSA
RSA11	Thembi	Kgatlana	Forward	11	RSA
RSA2	Lebohang	Ramalepe	Defender	2	RSA
RSA3	Noko	Matlou	Defender	4	RSA
RSA4	Bambanani	Mbane	Defender	13	RSA
RSA5	Fikile	Magama	Defender	5	RSA
RSA6	Refileoe	Jane	Midfielder	15	RSA
RSA7	Mapula	Kgoale	Forward	22	RSA
RSA8	Linda	Moithalo	Midfielder	10	RSA
RSA9	Hildah	Magaya	Forward	8	RSA
SUI1	Gaëlle	Thalmann	Goalkeeper	1	SUI
SUI10	Alisha	Lehmann	Forward	23	SUI
SUI11	Fabienne	Humm	Forward	20	SUI
SUI2	Noëlle	Maritz	Defender	5	SUI
SUI3	Julia	Stierli	Defender	2	SUI
SUI4	Luana	Bühler	Defender	15	SUI
SUI5	Lia	Wälti	Midfielder	13	SUI
SUI6	Coumba	Sow	Midfielder	11	SUI
SUI7	Amira	Arfaoui	Midfielder	7	SUI
SUI8	Ana-Maria	Crnogorčević	Forward	9	SUI
SUI9	Ramona	Bachmann	Forward	10	SUI
SWE1	Zecira	Musovic	Goalkeeper	1	SWE
SWE10	Jonna	Andersson	Defender	2	SWE
SWE11	Filippa	Angeldal	Midfielder	16	SWE
SWE2	Magdalena	Eriksson	Defender	6	SWE
SWE3	Amanda	Ilestedt	Defender	13	SWE
SWE4	Linda	Sembraat	Defender	3	SWE
SWE5	Kosovare	Asllani	Midfielder	9	SWE
SWE6	Caroline	Segez	Midfielder	17	SWE
SWE7	Sofia	Jakobsson	Forward	10	SWE
SWE8	Rebecka	Blomqvist	Forward	15	SWE
SWE9	Fridolina	Rolfö	Midfielder	18	SWE
USA1	Alyssa	Naeher	Goalkeeper	1	USA
USA10	Alex	Morgan	Forward	13	USA
USA11	Megan	Rapinoe	Forward	15	USA
USA2	Crystal	Dunn	Defender	19	USA
USA3	Alanna	Cook	Defender	12	USA
USA4	Emily	Fox	Defender	23	USA
USA5	Kelley	O'Hara	Defender	5	USA
USA6	Rose	Lavelle	Midfielder	16	USA
USA7	Ashley	Sanchez	Midfielder	2	USA
USA8	Julie	Ertz	Midfielder	8	USA
USA9	Lynn	Williams	Forward	6	USA

3. This table 'TempVenueEvents' counts events at each venue, offering insight into how often they're used, which is helpful for planning or analyzing venue usage.

```

431 • CREATE TEMPORARY TABLE TempVenueEvents AS
432   SELECT Venues.VenueID, Venues.VenueName, Venues.City, Venues.Capacity, COUNT(Matches.MatchID) AS EventCount
433   FROM Venues
434   JOIN Matches ON Venues.VenueID = Matches.VenueID
435   GROUP BY Venues.VenueID;
436
437 • SELECT *
438   FROM TempVenueEvents;

```

Result Grid					
VenueID	VenueName	City	Capacity	EventCount	
VEN1	Sydney Stadium	Sydney	45000	5	
VEN2	Melbourne Park	Melbourne	53343	2	
VEN3	Brisbane Arena	Brisbane	52500	3	
VEN4	Auckland Stadium	Auckland	50000	3	
VEN5	Wellington Park	Wellington	34500	2	
VEN7	Adelaide Stadium	Adelaide	51515	1	

Stored Procedures & Functions

1. This stored procedure updates the FIFA ranking of a team in the Team table

```
Query 1 | SQL File 4* | Limit to 1000 rows |       
```

```
2  CREATE PROCEDURE UpdateTeamRanking (
3      IN P_TeamID VARCHAR(3),
4      IN P_NewRanking INT
5  )
6  BEGIN
7      UPDATE Team
8          SET FIFA_Ranking = P_NewRanking
9          WHERE TeamID = P_TeamID;
10 END;
```

	Time	Action	Response	Duration / Fetch Time
✓ 242	22:00:05	CREATE PROCEDURE UpdateTeamRanking (IN P_TeamID VARCHAR(3), IN P...)	0 row(s) affected	0.027 sec

```
1 • CALL UpdateTeamRanking ('ENG', 5);
```

	Time	Action	Response	Duration / Fetch Time
✓ 243	22:01:29	CALL UpdateTeamRanking ('ENG', 5)	1 row(s) affected	0.027 sec

Before Calling Procedure

```
Query 1 | SQL File 4* | Limit to 1000 rows |       
```

```
1 • SELECT * FROM Team WHERE TeamID='ENG';
```

```
2
3
```

```
39:1
```

Result Grid Filter Rows: Search Edit: Export/Import:

TeamID	TeamName	Country	Coach	FIFA_Ranking	Matches_Played
ENG NULL	England NULL	England NULL	Wiegman NULL	4 NULL	3 NULL

After Calling Procedure:

The screenshot shows the MySQL Workbench interface. In the top tab bar, 'Query 1' is selected. Below the tabs, there are various icons for database management. A toolbar with buttons like 'Limit to 1000 rows' and 'Search' is visible. The main area contains the following SQL code:

```
1  SELECT *
2  FROM Team where TeamID='ENG';
```

Below the code, the status bar shows '9:1'. Underneath the status bar, there's a 'Result Grid' section with a table:

	TeamID	TeamName	Country	Coach	FIFA_Ranking	Matches_Played	
	ENG	England	England	Wiegman	5	3	

2. Achieving/Deleting Old Records as a process of removing old unwanted data.

The screenshot shows the MySQL Workbench interface. In the top tab bar, 'Query 1' is selected. Below the tabs, there are various icons for database management. A toolbar with buttons like 'Limit to 1000 rows' and 'Search' is visible. The main area contains the following SQL code:

```
1  DELIMITER $$
2
3  • CREATE PROCEDURE DeleteOldMatches(IN p_YearsAgo INT)
4  BEGIN
5      DELETE FROM Matches WHERE Match_Date < CURDATE() - INTERVAL p_YearsAgo YEAR;
6  END$$
7
8  DELIMITER $$
```

Below the code, the status bar shows '252 22:16:21'. A log table at the bottom provides details about the procedure creation:

	Time	Action	Response	Duration / Fetch Time
✓	252 22:16:21	CREATE PROCEDURE DeleteOldMatches(IN p_YearsAgo INT) BEGIN	DELETE FR... 0 row(s) affected	0.023 sec

The screenshot shows the MySQL Workbench interface. In the top tab bar, 'Query 1' is selected. Below the tabs, there are various icons for database management. A toolbar with buttons like 'Limit to 1000 rows' and 'Search' is visible. The main area contains the following SQL code:

```
1  • CALL DeleteOldMatches (2);
```

Below the code, the status bar shows '255 22:22:41'. A log table at the bottom provides details about the procedure call:

	Time	Action	Response	Duration / Fetch Time
✓	255 22:22:41	CALL DeleteOldMatches (2)	0 row(s) affected	0.011 sec

3. This Stored Procedure for inserting records for the new players.

```
1  DELIMITER $$  
2  
3  CREATE PROCEDURE InsertPlayer(  
4      IN p_PlayerID VARCHAR(10),  
5      IN p_FirstName VARCHAR(25),  
6      IN p_LastName VARCHAR(25),  
7      IN p_TeamID VARCHAR(3),  
8      IN p_Position VARCHAR(25),  
9      IN p_JerseyNumber int)  
10 BEGIN  
11     INSERT INTO Player VALUES (p_PlayerID, p_FirstName, p_LastName, p_TeamID,p_Position,p_JerseyNumber);  
12 END$$  
13  
14 DELIMITER ;  
15
```

	Time	Action	Response	Duration / Fetch Time
✓ 278	22:34:57	CREATE PROCEDURE InsertPlayer(IN p_PlayerID VARCHAR(10), IN p_FirstName V... 0 row(s) affected		0.0019 sec

```
CALL InsertPlayer ('ESP15','Neil', 'Cook','ESP','Defender',30) ;
```

	Time	Action	Response	Duration / Fetch Time
✓ 279	22:35:03	CALL InsertPlayer ('ESP15','Neil', 'Cook','ESP','Defender',30)	1 row(s) affected	0.0054 sec

4. This function 'count_match_in_city' counts and returns the number of matches played in a specified city within the Matches table of the FIFA database.

```
499  CREATE FUNCTION count_matches_in_city(city_name VARCHAR(20))  
500    RETURNS INT  
501    DETERMINISTIC  
502    BEGIN  
503        DECLARE match_count INT;  
504        SELECT COUNT(*) INTO match_count FROM Matches WHERE Location = city_name;  
505        RETURN match_count;  
506    END;  
507  
508    SELECT count_matches_in_city('Sydney') AS MatchCount;  
509
```

Result Grid		Filter Rows:	Search	Export:	
	MatchCount				
	5				

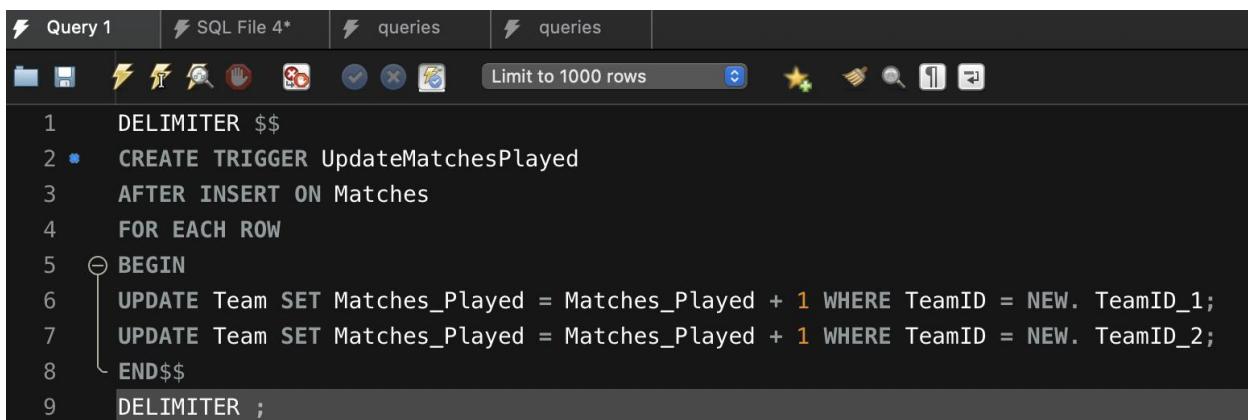
5. This function 'total_goals_by_team' calculates and returns the total number of goals scored by a specific team in the FIFA database.

```
512 •  CREATE FUNCTION total_goals_by_team(team_id VARCHAR(3))
513      RETURNS INT
514      DETERMINISTIC
515      BEGIN
516          DECLARE goals INT DEFAULT 0;
517          SELECT SUM(GoalCount) INTO goals
518          FROM (
519              SELECT COUNT(*) as GoalCount
520                  FROM Goal
521                  WHERE ScoredforTeamID = team_id
522          ) AS TeamGoals;
523          RETURN goals;
524      END;
525
526  SELECT total_goals_by_team('ENG') AS TotalGoals;
```

TotalGoals
5

Triggers

1. This trigger 'UpdateMatchesPlayed' increments the Matches_Played count in the Team table whenever a new match is added to the Matches table.



```
1  DELIMITER $$*
2  •  CREATE TRIGGER UpdateMatchesPlayed
3      AFTER INSERT ON Matches
4      FOR EACH ROW
5      BEGIN
6          UPDATE Team SET Matches_Played = Matches_Played + 1 WHERE TeamID = NEW.TeamID_1;
7          UPDATE Team SET Matches_Played = Matches_Played + 1 WHERE TeamID = NEW.TeamID_2;
8      END$$
9  DELIMITER ;
```

	Time	Action	Response	Duration / Fetch Time
✓ 298	23:17:01	CREATE TRIGGER UpdateMatchesPlayed AFTER INSERT ON Matches F...	0 row(s) affected	0.097 sec

Initial Record to validate the trigger

```
select * from Team where TeamID='ENG';
```

TeamID	TeamName	Country	Coach	FIFA_Ranking	Matches_Played
ENG	England	England	Wiegman	5	3

Inserting a record to check the trigger.

```
16 •  INSERT INTO Matches (MatchID, Match_Date, Location, TeamID_1, TeamID_2, Result, VenueID) VALUES  
17      ('M-18', '2023-09-05', 'Auckland', 'ENG', 'ESP', '1-5', 'VEN4');
```

	Time	Action	Response	Duration / Fetch Time
✓ 308	23:22:57	INSERT INTO Matches (MatchID, Match_Date, Location, TeamID_1, Team... 1 row(s) affected		0.0077 sec

Data updated successfully per the conditions of the trigger provided.

```
14 •  select * from Team where TeamID='ENG';  
15
```

Result Grid Filter Rows: Search Edit: Export/Import:

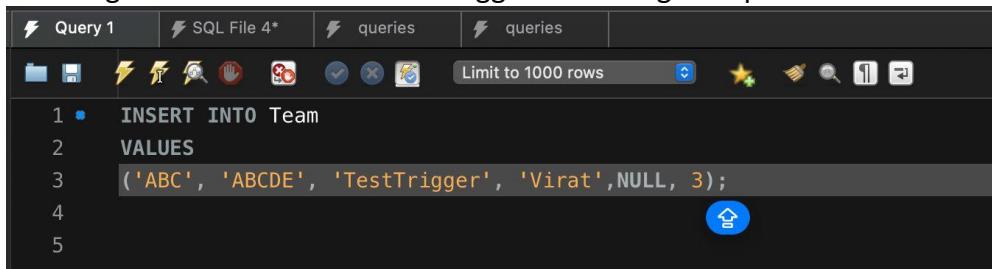
TeamID	TeamName	Country	Coach	FIFA_Ranking	Matches_Played
ENG	England	England	Wiegman	5	4

2. This trigger will automatically set the FIFA ranking for a newly added team to the last value of ranking when the FIFA ranking is not provided.

```
1 DELIMITER $$  
2 •  CREATE TRIGGER BeforeTeamInsertOrUpdate  
3 BEFORE INSERT ON team  
4 FOR EACH ROW  
5 BEGIN  
6     IF NEW.fifa_ranking IS NULL THEN  
7         SET NEW.fifa_ranking = (SELECT COALESCE(MAX(fifa_ranking), 0) + 1 FROM team);  
8     END IF;  
9 END$$  
10 DELIMITER ;  
11
```

	Time	Action	Response	Duration / Fetch Time
✓ 293	22:57:42	CREATE TRIGGER BeforeTeamInsertOrUpdate BEFORE INSERT ON team... 0 row(s) affected		0.011 sec

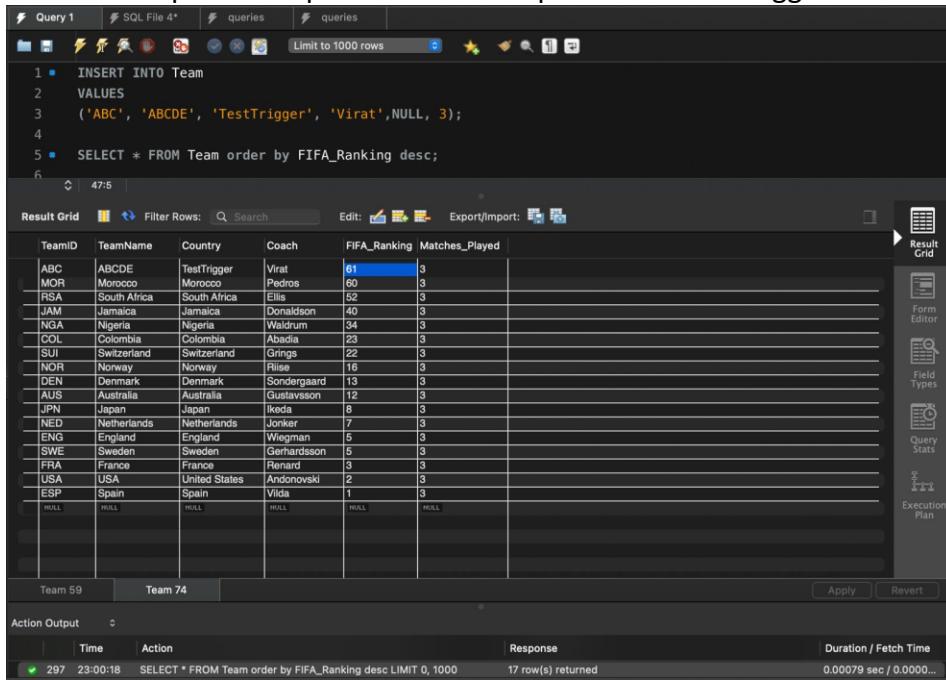
Inserting Record to validate if the trigger is working as expected.



```
1 • INSERT INTO Team
2 VALUES
3 ('ABC', 'ABCDE', 'TestTrigger', 'Virat',NULL, 3);
4
5
```

Time	Action	Response	Duration / Fetch Time
294 22:57:51	INSERT INTO Team VALUES ('ABC', 'ABCDE', 'TestTrigger', 'Virat',NULL,...	1 row(s) affected	0.0064 sec

The data is updated as per the condition provided in the trigger.



```
1 • INSERT INTO Team
2 VALUES
3 ('ABC', 'ABCDE', 'TestTrigger', 'Virat',NULL, 3);
4
5 • SELECT * FROM Team order by FIFA_Ranking desc;
```

Result Grid

TeamID	TeamName	Country	Coach	FIFA_Ranking	Matches_Played
ABC	ABCDE	TestTrigger	Virat	61	3
MOR	Morocco	Morocco	Pedros	60	3
RSA	South Africa	South Africa	Ellis	52	3
JAM	Jamaica	Jamaica	Donaldson	40	3
NGA	Nigeria	Nigeria	Waldrum	34	3
COL	Colombia	Colombia	Abadia	23	3
SUI	Switzerland	Switzerland	Grings	22	3
NOR	Norway	Norway	Riise	16	3
DEN	Denmark	Denmark	Sondergaard	13	3
AUS	Australia	Australia	Gustavsson	12	3
JPN	Japan	Japan	Ikeda	8	3
NED	Netherlands	Netherlands	Jonker	7	3
ENG	England	England	Wiegman	5	3
SWE	Sweden	Sweden	Gerhardsson	5	3
FRA	France	France	Renard	3	3
USA	USA	United States	Andonovski	2	3
ESP	Spain	Spain	Vilda	1	3
HULL	HULL	HULL	HULL	HULL	HULL

Action Output

Time	Action	Response	Duration / Fetch Time
297 23:00:18	SELECT * FROM Team order by FIFA_Ranking desc LIMIT 0, 1000	17 row(s) returned	0.00079 sec / 0.0000...