AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH

Semester: Spring 2022-23

Topic: Football Tournament Management

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Course: Introduction to Database

Section : K

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Case Study :

In a football tournament management system, there are many football teams. One team may have many players, but a player can only be a member of one team. A team is identified by a team ID, and the system also stores the team name, coach name, and the city where the team is located. Each player is identified by a player ID and has a name, position, and nationality. The system also stores information about the player's date of birth, height, and weight.

The system also stores information about football matches. A match is identified by a match ID, and each match involves two teams. For each match, the date, time, location, and the final score of the match are stored. Home Match and Away match can be generalized as match.

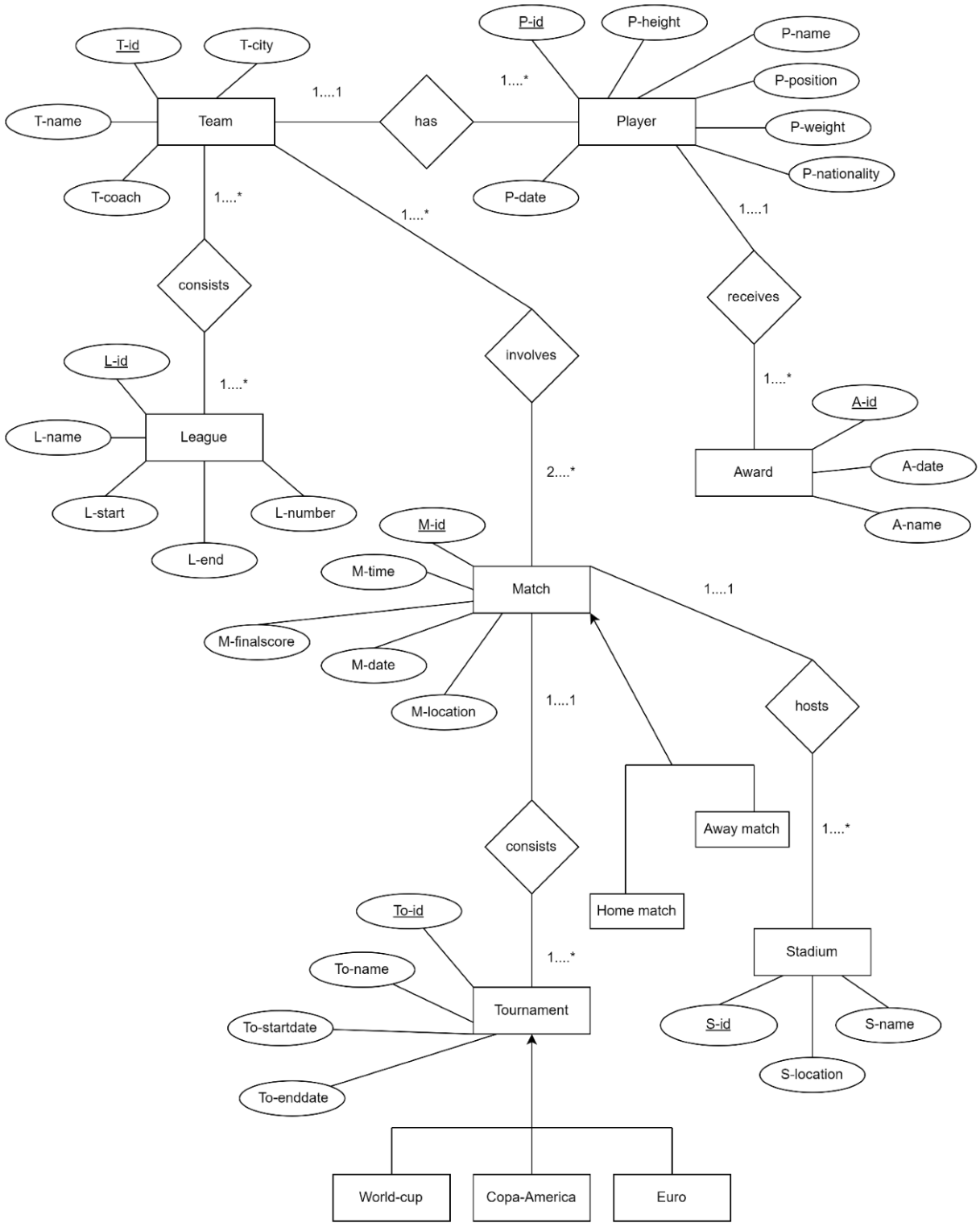
In addition to matches, the system also stores information about football tournaments. A tournament is identified by a tournament ID and has a name, start date, and end date. Each tournament consists of multiple matches, and each match is associated with a tournament. Tournament can be specialized into World cup, Euro and Copa America.

A football player may also receive awards, such as the player of the match, player of the season, or golden boot. Each award is identified by an award ID, and the system stores the name of the award, the player who received it, and the date when it was awarded.

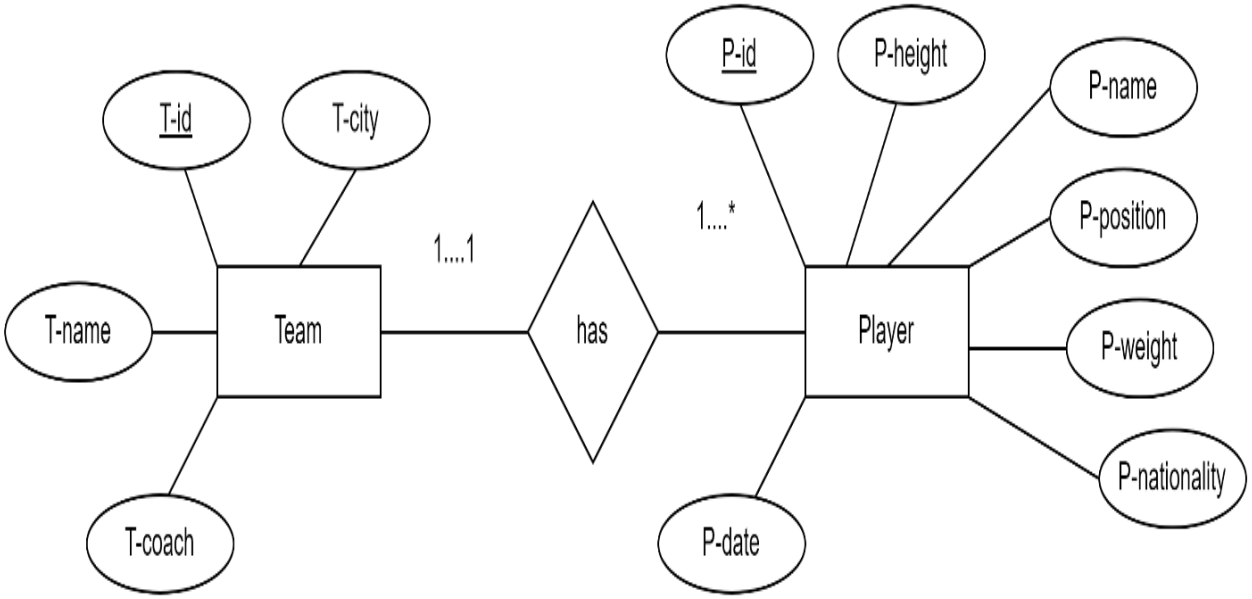
To identify a football stadium, the system stores stadium ID, name, and location. Each stadium can host many matches, but a match can only take place in one stadium.

Finally, the system also stores information about the football leagues. Each league is identified by a league ID and has a name, start date, and end date. Each league consists of multiple teams, and each team can participate in many leagues. The unique property of each league is the league number.

ER Diagram:


T-id
T-city
T-name
Team
T-coach
1....1
has
1....*
P-id
P-height
P-name
P-position
P-weight
P-nationality
Player
P-date
1....*
consists
1....*
1....*
involves
1....1
receives
1....*
L-id
L-name
League
L-start
L-number
L-end
2....*
A-id
A-date
A-name
Award
M-id
M-time
Match
M-finalscore
M-date
M-location
1....1
1....1
hosts
consists
Away match
1....*
Home match
To-id
To-name
To-startdate
To-enddate
Tournament
1....*
Stadium
S-id
S-name
S-location
World-cup
Copa-America
Euro

Normalization:



UNF:

(Has):

T-id , T-name, T-city, T-coach name, P-id, P-height, P-name, P-position, P-weight, P- nationality, P-date

1NF:

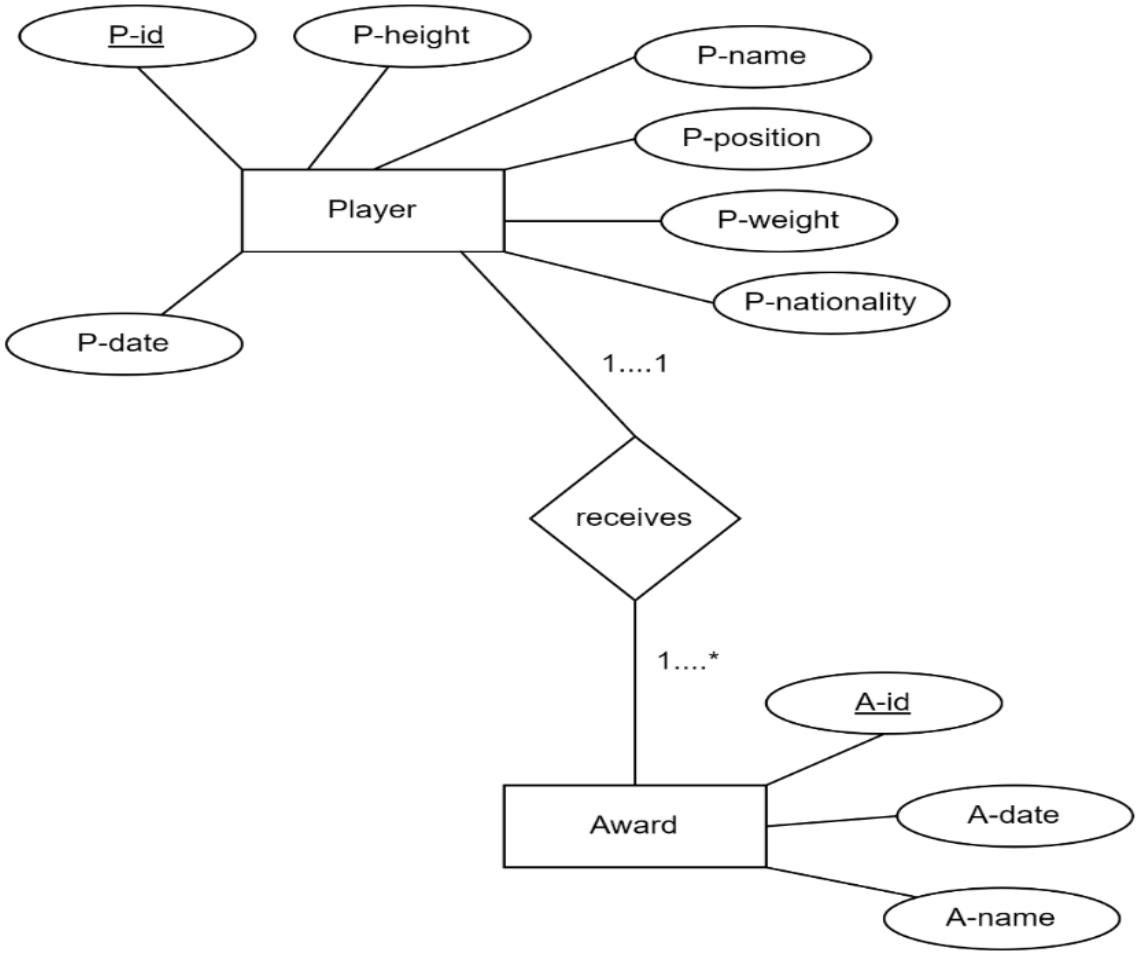
T-id , T-name, T-city, T-coach name, P-id, P-height, P-name, P-position, P-weight, P-nationality, P-date

2NF:

1. T-id ,T-name, T-city, T-coach name
2. $\underline{\text{P-id}}_{(PK)}$, P-height, P-name, P-position , P-weight, P-nationality, P-date, $\underline{\text{T-id}}_{(FK)}$

3NF:

As same as 2NF



UNF:

(Receives):

P-id, P-height, P-name, P-position, P-weight, P-nationality, P-date, A-id, A-date, A-name.

1NF:

P-id, P-height, P-name, P-position, P-weight, P-nationality, P-date, A-id , A-date, A-name.

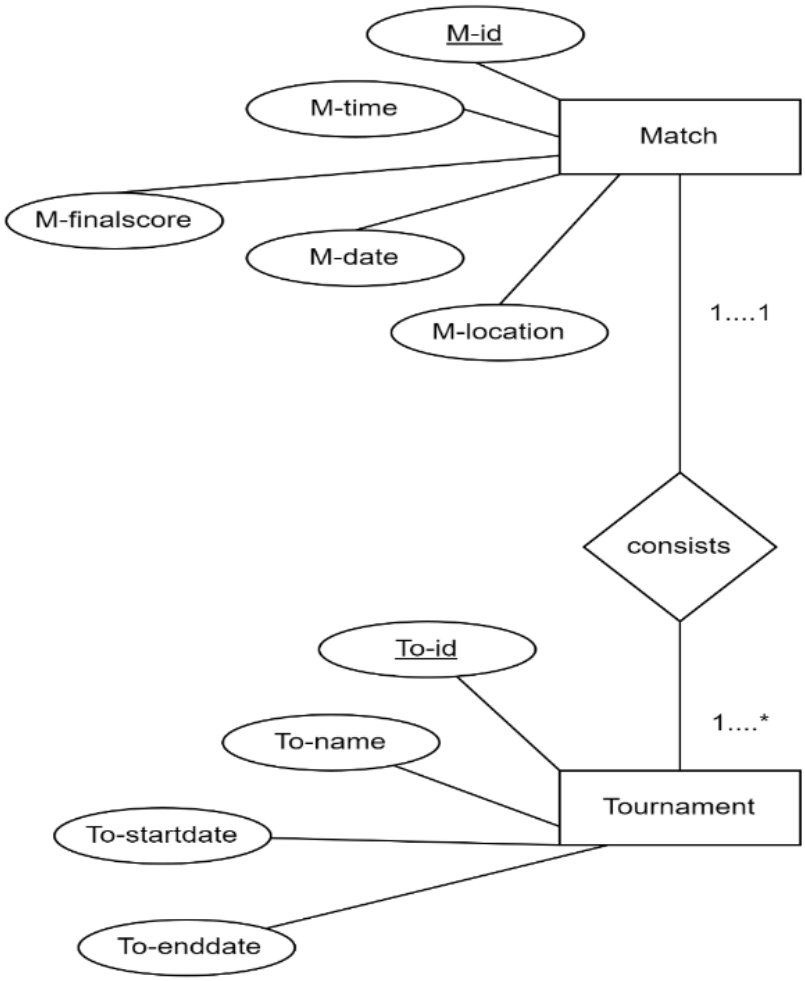
2NF:

1.P-id, P-height, P-name, P-position, P-weight, P-nationality, P-date

2.A-id$_{(PK)}$, A-date, A-name, P-id$_{(FK)}$

3NF:

As same as 2NF



UNF:

(Consists):

M-id, M-time, M-finalscore, M-date, M-location, To-id, To-name, To-startdate, To-enddate

1NF:

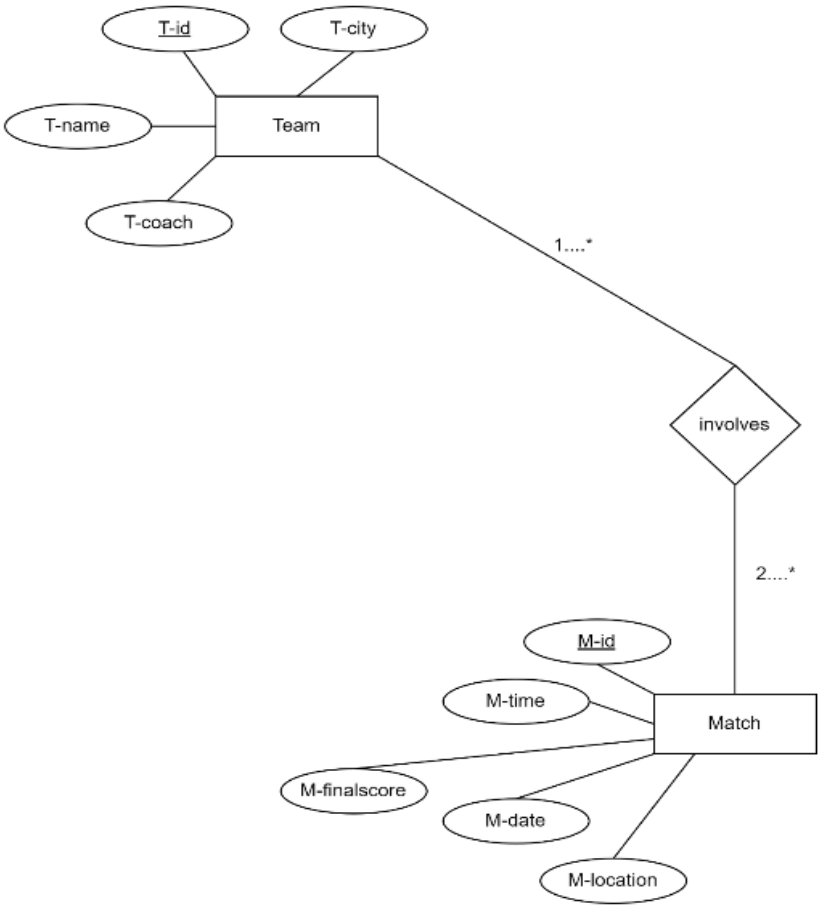
M-id, M-time, M-finalscore, M-date, M-location, To-id, To-name, To-startdate, To-enddate

2NF:

1. M-id, M-time, M-fainalscore, M-date, M-location
2. To-id(PK), To-name, To-startdate, To-enddate, M-id(FK)

3NF:

As same as 2NF



UNF:

(Involves):

T-id, T-name, T-city, T-coach name, M-id, M-time, M-data, M-location, M-finalscore.

1NF:

T-id, T-name, T-city, T-coach name, M-id, M-time, M-data, M-location, M-finalscore.

2NF:

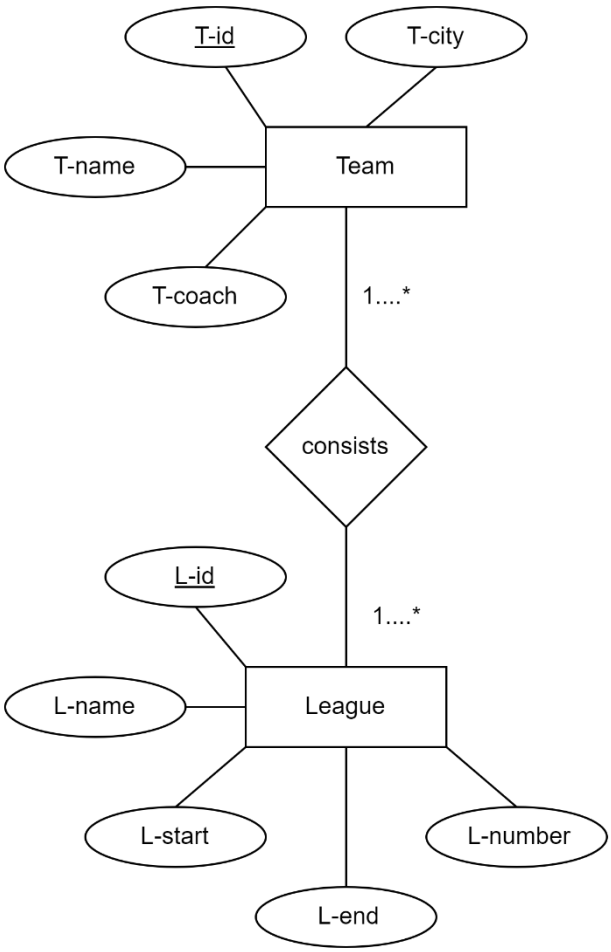
1.T-id, T-name, T-city, T-coach name.

2.M-id, M-time, M-data, M-location, M-finalscore.

3.T-id (PK), M-id (FK).

3NF:

As same as 2NF



UNF:

(Consists):

T-id, T-name, T-city, T-coach name, L-id, L-name,L-start, L-end, L-number.

1NF:

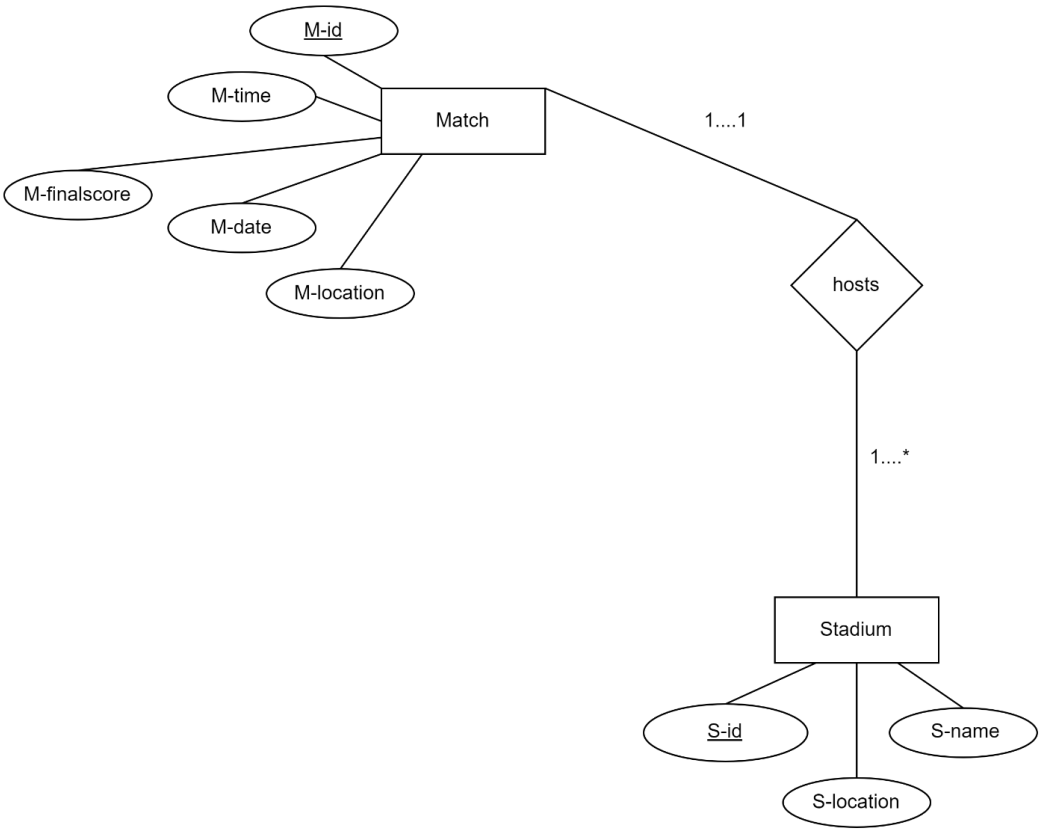
T-id, T-name, T-city, T-coach name, L-id, L-name, L-start, L-end, L-number.

2NF:

1. T-id, T-name, T-city, T-coach name.
2. L-id, L-name, L-start, L-end, L-number.
3. T-id (PK), L-id (FK).

3NF:

As same as 2NF.



UNF:

(Hosts):

M-id, M-time, M-data, M-location, M-finalscore, S-id, S-name, S-location.

1NF:

M-id, M-time, M-data, M-location, M-finalscore, S-id, S-name, S-location.

2NF:

1. M-id, M-time, M-data, M-location, M-finalscore.
2. S-id (PK), S-name, S-location, M-id (FK).

3NF:

As same as 2NF.

Finalization:

1. T-id, T-name, T-city, T-coach name.
2. P-id(PK), P-height, P-name, P-position, P-weight, P-nationality, P-date, T-id(FK) .
3. P-id, P-height, P-name, P-position, P-weight, P-nationality, P-date.
4. A-id(PK), A-date, A-name, P-id(FK).
5. M-id, M-time, M-data, M-location, M-finalscore.
6. T-id (PK), L-id (FK).
7. L-id, L-name, L-start, L-end, L-number.
8. T-id (PK), M-id (FK).
9. To-id(PK), To-name, To-startdate, To-enddate, M-id(FK).
10. S-id (PK), S-name, S-location, M-id (FK).

Table Creation and value insert:

1. create table team(team_id number (10) primary key, team_name varchar(50), team_coach_name varchar(50), team_city varchar(50));

describe team

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **TEAM**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
TEAM	TEAM_ID	Number	-	10	0	1	-	-	-
	TEAM_NAME	Varchar2	50	-	-	-	✓	-	-
	TEAM_COACH_NAME	Varchar2	50	-	-	-	✓	-	-
	TEAM_CITY	Varchar2	50	-	-	-	✓	-	-

1 - 4

insert into team values (200010, 'Argentina','Lionel Scaloni','Buenos Aires')
insert into team values (200011, 'Brazil','Tite','Brasília')
insert into team values (100010, 'Japan','Hajime Moriyasu','Tokyo')
insert into team values (300010, 'France','Didier Deschamps','Paris')
insert into team values (300011, 'Portugal','Roberto Martínez','Lisbon')

select * from team

Results Explain Describe Saved SQL History

TEAM_ID	TEAM_NAME	COACH_NAME	CITY
200010	Argentina	Lionel Scaloni	Buenos Aires
200011	Brazil	Tite	Brasília
100010	Japan	Hajime Moriyasu	Tokyo
300010	France	Didier Deschamps	Paris
300011	Portugal	Roberto Martínez	Lisbon

rows returned in 0.02 seconds CSV Export

2. create table player(player_id number(10) primary key, player_name varchar(100), position number (10),nationality varchar(100),date_of_birth varchar(100),height number(10),weight number(10),team_id number (10));

alter table player modify(height varchar(100))
alter table player modify(weight varchar(100))

describe player

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **PLAYER**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PLAYER	PLAYER_ID	Number	-	10	0	1	-	-	-
	PLAYER_NAME	Varchar2	100	-	-	-	✓	-	-
	POSITION	Number	-	10	0	-	✓	-	-
	NATIONALITY	Varchar2	100	-	-	-	✓	-	-
	DATE_OF_BIRTH	Varchar2	100	-	-	-	✓	-	-
	HEIGHT	Varchar2	100	-	-	-	✓	-	-
	WEIGHT	Varchar2	100	-	-	-	✓	-	-
	TEAM_ID	Number	-	10	0	-	✓	-	-

1 - 8

insert into player values (0010, 'Messi', 10,'Argentine','24-06-1987','1.7m','72kg',200010)
insert into player values (0011, 'Neymar', 10,'Brazilian','05-19-1992','1.75m','68kg',200011)
insert into player values (0009, 'Kaoru Mitoma', 09,'Japnese','20-05-1997','1.78m','73kg',100010)
insert into player values (0007, 'Kylian Mbappe', 07,'French','20-12-1998','1.78m','75kg',300010)
insert into player values (1007, 'Cristiano Ronaldo', 07,'Portuguese','05-02-1985','1.87m','85kg',300011)

select * from player

Results Explain Describe Saved SQL History

PLAYER_ID	PLAYER_NAME	POSITION	NATIONALITY	DATE_OF_BIRTH	HEIGHT	WEIGHT	TEAM_ID
10	Messi	10	Argentine	24-06-1987	1.7m	72kg	200010
11	Neymar	10	Brazilian	05-19-1992	1.75m	68kg	200011
9	Kaoru Mitoma	9	Japnese	20-05-1997	1.78m	73kg	100010
7	Kylian Mbappe	7	French	20-12-1998	1.78m	75kg	300010
1007	Cristiano Ronaldo	7	Portuguese	05-02-1985	1.87m	85kg	300011

5 rows returned in 0.00 seconds CSV Export

3. create table player_info(player_id number(10) primary key, player_name varchar(100), position number (10),nationality varchar(100),date_of_birth varchar(100),height varchar(100),weight varchar(100));

describe player_info

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **PLAYER_INFO**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PLAYER_INFO	PLAYER_ID	Number	-	10	0	1	-	-	-
	PLAYER_NAME	Varchar2	100	-	-	-	✓	-	-
	POSITION	Number	-	10	0	-	✓	-	-
	NATIONALITY	Varchar2	100	-	-	-	✓	-	-
	DATE_OF_BIRTH	Varchar2	100	-	-	-	✓	-	-
	HEIGHT	Varchar2	100	-	-	-	✓	-	-
	WEIGHT	Varchar2	100	-	-	-	✓	-	-

1 - 7

insert into player_info values (0010, 'Messi', 10,'Argentine','24-06-1987','1.7m','72kg')
insert into player_info values (0011, 'Neymar', 10,'Brazilian','05-19-1992','1.75m','68kg')
insert into player_info values (0009, 'Kaoru Mitoma', 09,'Japnese','20-05-1997','1.78m','73kg')
insert into player_info values (0007, 'Kylian Mbappe', 07,'French','20-12-1998','1.78m','75kg')
insert into player_info values(1007, 'Cristiano Ronaldo', 07,'Portuguese','05-02-1985','1.87m','85kg')

select*from player_info

Results Explain Describe Saved SQL History

PLAYER_ID	PLAYER_NAME	POSITION	NATIONALITY	DATE_OF_BIRTH	HEIGHT	WEIGHT
10	Messi	10	Argentine	24-06-1987	1.7m	72kg
11	Neymar	10	Brazilian	05-19-1992	1.75m	68kg
9	Kaoru Mitoma	9	Japnese	20-05-1997	1.78m	73kg
7	Kylian Mbappe	7	French	20-12-1998	1.78m	75kg
1007	Cristiano Ronaldo	7	Portuguese	05-02-1985	1.87m	85kg

5 rows returned in 0.00 seconds CSV Export

4. create table award(award_id number(4) primary key, award_name varchar(100),player_id number (15),awards_date varchar(50));

describe award

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **AWARD**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
AWARD	AWARD_ID	Number	-	4	0	1	-	-	-
	AWARD_NAME	Varchar2	100	-	-	-	✓	-	-
	PLAYER_ID	Number	-	15	0	-	✓	-	-
	AWARDS_DATE	Varchar2	50	-	-	-	✓	-	-

1 - 4

insert into award values (6931, 'Ballon d_Or',0010,'17-10-2022')
insert into award values (8975, 'Golden Boot',0007,'17-10-2022')
insert into award values (6831,'Golden Glove',1502,'17-10-2022')

select* from award

Results Explain Describe Saved SQL History

AWARD_ID	AWARD_NAME	PLAYER_ID	AWARDS_DATE
6931	Ballon d_Or	10	17-10-2022
8975	Golden Boot	7	17-10-2022
6831	Golden Glove	1502	17-10-2022

3 rows returned in 0.00 seconds CSV Export

5. create table match(match_id number(10) primary key,match_time varchar(100),match_location varchar(100),match_date varchar(100),match_finalscore varchar(100));

describe match

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **MATCH**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
MATCH	MATCH_ID	Number	-	10	0	1	-	-	-
	MATCH_TIME	Varchar2	100	-	-	-	✓	-	-
	MATCH_LOCATION	Varchar2	100	-	-	-	✓	-	-
	MATCH_DATE	Varchar2	100	-	-	-	✓	-	-
	MATCH_FINALSCORE	Varchar2	100	-	-	-	✓	-	-

1 - 5

insert into match values (1101,'10:30pm','Estadio Monumental','01-06-2023','5-2');

insert into match values (1102,'10:00pm','Parc des Princes','08-06-2023','7-4');
insert into match values (1104,'10:30am','Stade de France','11-06-2023','6-3');
select * from match

Results Explain Describe Saved SQL History

MATCH_ID	MATCH_TIME	MATCH_LOCATION	MATCH_DATE	MATCH_FINALSCORE
1101	10:30pm	Estadio Monumental	01-06-2023	5-2
1102	10:00pm	Parc des Princes	08-06-2023	7-4
1104	10:30am	Stade de France	11-06-2023	6-3

3 rows returned in 0.00 seconds CSV Export

6. create table team_match (team_id number (10) primary key,match_id number(10));

describe team_match

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **TEAM_MATCH**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
TEAM_MATCH	TEAM_ID	Number	-	10	0	1	-	-	-
	MATCH_ID	Number	-	10	0	-	✓	-	-

1 - 2

insert into team_match values (200010,1101)
insert into team_match values (200011,1102)
insert into team_match values (100010,1109)
insert into team_match values (300010,1104)
insert into team_match values (300011,1111)

select * from team_match

Results Explain Describe Saved SQL History

TEAM_ID	MATCH_ID
200010	1101
200011	1102
100010	1109
300010	1104
300011	1111

5 rows returned in 0.00 seconds CSV Export

7. create table league(league_id number (10) primary key, league_name varchar(100),start_date varchar (100), end_date varchar (100), league_number varchar(100))

describe league

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **LEAGUE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
LEAGUE	LEAGUE_ID	Number	-	10	0	1	-	-	-
	LEAGUE_NAME	Varchar2	100	-	-	-	✓	-	-
	START_DATE	Varchar2	100	-	-	-	✓	-	-
	END_DATE	Varchar2	100	-	-	-	✓	-	-
	LEAGUE_NUMBER	Varchar2	100	-	-	-	✓	-	-

1 - 5

insert into league values (3301,'La liga','12-08-2023','04-06-2024', '22-23');
insert into league values (3302,'Bundesliga','10-07-2023','07-05-2024', '22-23');
insert into league values (3303,'Ligue1','21-09-2023','10-07-2024', '22-23');

select* from league

Results Explain Describe Saved SQL History

LEAGUE_ID	LEAGUE_NAME	START_DATE	END_DATE	LEAGUE_NUMBER
3301	La liga	12-08-2023	04-06-2024	22-23
3302	Bundesliga	10-07-2023	07-05-2024	22-23
3303	Ligue1	21-09-2023	10-07-2024	22-23

3 rows returned in 0.00 seconds CSV Export

8. create table team_league (team_id number (10) primary key,league_id number (10))

describe team_league

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **TEAM_LEAGUE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
TEAM_LEAGUE	TEAM_ID	Number	-	10	0	1	-	-	-
	LEAGUE_ID	Number	-	10	0	-	✓	-	-

1 - 2

insert into team_league values (200010,3301)
insert into team_league values (200011,3302)
insert into team_league values (100010,3303)
insert into team_league values (300010,3306)
insert into team_league values (300011,3307)

select * from team_league

Results Explain Describe Saved SQL History

TEAM_ID	LEAGUE_ID
200010	3301
200011	3302
100010	3303
300010	3306
300011	3307

5 rows returned in 0.00 seconds CSV Export

9. create table tournament (tournament_id number(10) primary key, tournament_name varchar(100), start_date varchar (100), end_date varchar (100),match_id number(10))

describe tournament

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **TOURNAMENT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
TOURNAMENT	TOURNAMENT_ID	Number	-	10	0	1	-	-	-
	TOURNAMENT_NAME	Varchar2	100	-	-	-	✓	-	-
	START_DATE	Varchar2	100	-	-	-	✓	-	-
	END_DATE	Varchar2	100	-	-	-	✓	-	-
	MATCH_ID	Number	-	10	0	-	✓	-	-

1 - 5

insert into tournament values (5501, 'World Cup', '20-11-2022', '18-12-2022',1101)
insert into tournament values (5502, 'Euro', '14-06-2024', '14-07-2024',1102)
insert into tournament values (5503, 'Copa America', '14-06-2024', '14-07-2024',1109)

select * from tournament

Results Explain Describe Saved SQL History

TOURNAMENT_ID	TOURNAMENT_NAME	START_DATE	END_DATE	MATCH_ID
5501	World Cup	20-11-2022	18-12-2022	1101
5502	Euro	14-06-2024	14-07-2024	1102
5503	Copa America	14-06-2024	14-07-2024	1109

3 rows returned in 0.00 seconds CSV Export

10. create table stadium(stadium_id number(10) primary key,stadium_name varchar(100),stadium_location varchar(100),match_id number(10))

describe stadium

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **STADIUM**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STADIUM	STADIUM_ID	Number	-	10	0	1	-	-	-
	STADIUM_NAME	Varchar2	100	-	-	-	✓	-	-
	STADIUM_LOCATION	Varchar2	100	-	-	-	✓	-	-
	MATCH_ID	Number	-	10	0	-	✓	-	-

1 - 4

insert into stadium values (6601, 'Camp Nou','Barcelona Spain',1101)
insert into stadium values (6602, 'Santiago Bernabeu','Madrid Spain',1102)
insert into stadium values (6603, 'Old Trafford','Manchester United Kingdom',1104)

select * from stadium

Results Explain Describe Saved SQL History

STADIUM_ID	STADIUM_NAME	STADIUM_LOCATION	MATCH_ID
6601	Camp Nou	Barcelona Spain	1101
6602	Santiago Bernabeu	Madrid Spain	1102
6603	Old Trafford	Manchester United Kingdom	1104

3 rows returned in 0.00 seconds CSV Export

Query:

1. Show the player_id,player_name,position and team_id from the player_table.

- select player_id,player_name,position,team_id
  from player

Results Explain Describe Saved SQL History

PLAYER_ID	PLAYER_NAME	POSITION	TEAM_ID
10	Messi	10	200010
11	Neymar	10	200011
9	Kaoru Mitoma	9	100010
7	Kylian Mbappe	7	300010
1007	Cristiano Ronaldo	7	300011

5 rows returned in 0.01 seconds CSV Export

2. Show all data from the team_table .

- select * from team

Results Explain Describe Saved SQL History

TEAM_ID	TEAM_NAME	TEAM_COACH_NAME	TEAM_CITY
200010	Argentina	Lionel Scaloni	Buenos Aires
200011	Brazil	Tite	Brasília
100010	Japan	Hajime Moriyasu	Tokyo
300010	France	Didier Deschamps	Paris
300011	Portugal	Roberto Martínez	Lisbon

5 rows returned in 0.00 seconds CSV Export

3. Show the detail description of the player_info table

- describe player_info

Object Type **TABLE** Object **PLAYER_INFO**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PLAYER_INFO	PLAYER_ID	Number	-	10	0	1	-	-	-
	PLAYER_NAME	Varchar2	100	-	-	-	✓	-	-
	POSITION	Number	-	10	0	-	✓	-	-
	NATIONALITY	Varchar2	100	-	-	-	✓	-	-
	DATE_OF_BIRTH	Varchar2	100	-	-	-	✓	-	-
	HEIGHT	Varchar2	100	-	-	-	✓	-	-
	WEIGHT	Varchar2	100	-	-	-	✓	-	-

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4. Show the concatenation result of the player's name and date of birth and labeling it as "player" using the "player_info" table

- select player_name||date_of_birth AS "player"

  from player_info

Results Explain Describe Saved SQL History

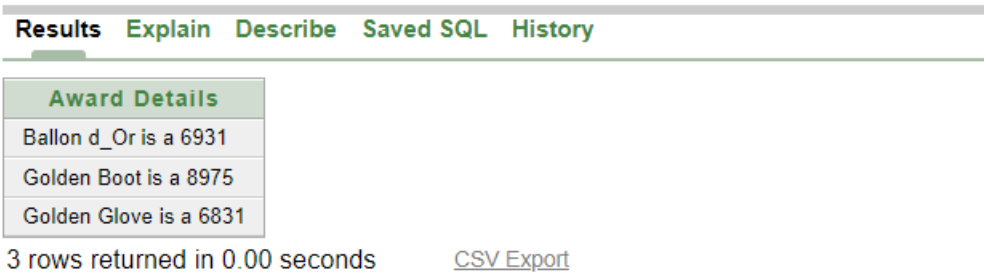
Player
Messi24-06-1987
Neymar05-19-1992
Kaoru Mitoma20-05-1997
Kylian Mbappe20-12-1998
Cristiano Ronaldo05-02-1985

5 rows returned in 0.00 seconds CSV Export

5. show the concatenation result of award name,use the string "is a" and award id as "Award Details"from the table award

- select award_name||' '||'is a'||' '||award_id AS "Award Details"

  from award



Results Explain Describe Saved SQL History

Award Details
Ballon d_Or is a 6931
Golden Boot is a 8975
Golden Glove is a 6831

3 rows returned in 0.00 seconds CSV Export

6. show match_id, match_time, and match_location from the table match, where the match_location is 'Estadio Monumental'

- select match_id,match_time,match_location

  from match

  where match_location='Estadio Monumental';

Results Explain Describe Saved SQL History

MATCH_ID	MATCH_TIME	MATCH_LOCATION
1101	10:30pm	Estadio Monumental

1 rows returned in 0.00 seconds CSV Export

7. show the league_id and league_number from the table league, where the league_id is between 3302 and 3303

- select league_id,league_number

  from league

  where league_id between 3302 and 3303;

Results Explain Describe Saved SQL History

MATCH_ID	MATCH_TIME	MATCH_LOCATION
1101	10:30pm	Estadio Monumental

1 rows returned in 0.00 seconds CSV Export

Joining Query:

1. Equi-joins joining

Write a query using Equijoins joining that retrieves the team name, team city, team ID, player ID, player nationality, and player team ID, by joining the "team" and "player" tables on the team ID.

- SELECT team.team_name, team.team_city, team.team_id,

  player.player_id, player.nationality, player.team_id

  FROM team, player WHERE team.team_id=player.team_id;

Results Explain Describe Saved SQL History

TEAM_NAME	TEAM_CITY	TEAM_ID	PLAYER_ID	NATIONALITY	TEAM_ID
Argentina	Buenos Aires	200010	10	Argentine	200010
Brazil	Brasília	200011	11	Brazilian	200011
Japan	Tokyo	100010	9	Japnese	100010
France	Paris	300010	7	French	300010
Portugal	Lisbon	300011	1007	Portuguese	300011

5 rows returned in 0.00 seconds CSV Export

2. Outer joining

Show team_name,team_city,team_id from team table and team_id,nationality from player table using outer joining condition.

- SELECT t.team_name, t.team_city, t.team_id, p.team_id, p.nationality

  FROM team t, player p

  WHERE t.team_id(+) = p.team_id

  ORDER BY t.team_id;

Results Explain Describe Saved SQL History

TEAM_NAME	TEAM_CITY	TEAM_ID	TEAM_ID	NATIONALITY
Japan	Tokyo	100010	100010	Japnese
Argentina	Buenos Aires	200010	200010	Argentine
Brazil	Brasília	200011	200011	Brazilian
France	Paris	300010	300010	French
Portugal	Lisbon	300011	300011	Portuguese

5 rows returned in 0.00 seconds CSV Export

Sub-query:

1. Single Row Subquery

Show player_name ,player_id from player table where the player's weight is greater than the weight of the player who plays in the position with the id of 9.

```
SELECT player_name,player_id
FROM   player
WHERE  weight>
            (SELECT weight
                  FROM   player  WHERE  position=9);
```

Results Explain Describe Saved SQL History

PLAYER_NAME	PLAYER_ID
Kylian Mbappe	7
Cristiano Ronaldo	1007

2 rows returned in 0.00 seconds CSV Export

2. Single Row Subquery

Show player_name,player_id,position from player_info table where the player's position is equal to the minimum position value in the player_info table.

```
SELECT player_name,player_id,position
FROM   player_info
WHERE  position=  (SELECT MIN(position)
                        FROM   player_info);
```

Results Explain Describe Saved SQL History

PLAYER_NAME	PLAYER_ID	POSITION
Kylian Mbappe	7	7
Cristiano Ronaldo	1007	7

2 rows returned in 0.00 seconds CSV Export

3. Multiple Row Subquery

Show player_id,player_name,team_id,nationality from player table where the team id is less than any team id associated with a French player and the player nationality is not French.

```
SELECT  player_id,player_name,team_id,nationality
FROM   player
WHERE   team_id< any
(SELECT  team_id
FROM   player  WHERE      nationality = 'French')
AND    nationality <> 'French';
```

Results Explain Describe Saved SQL History

PLAYER_ID	PLAYER_NAME	TEAM_ID	NATIONALITY
10	Messi	200010	Argentine
11	Neymar	200011	Brazilian
9	Kaoru Mitoma	100010	Japnese

3 rows returned in 0.00 seconds CSV Export

4.Multiple Row Subquery

Show award_id ,award_name,awards_date from award table where the award_id obtained from the subquery that selects the award_id from the award table with an award name other than “Golden Boot”

```
SELECT  award_id ,award_name,awards_date
FROM   award  WHERE   award_id< any
(SELECT  award_id    FROM  award
WHERE  award_name = 'Golden Boot')
AND  award_name <> 'Golden Boot';
```

Results Explain Describe Saved SQL History

AWARD_ID	AWARD_NAME	AWARDS_DATE
6931	Ballon d_Or	17-10-2022
6831	Golden Glove	17-10-2022

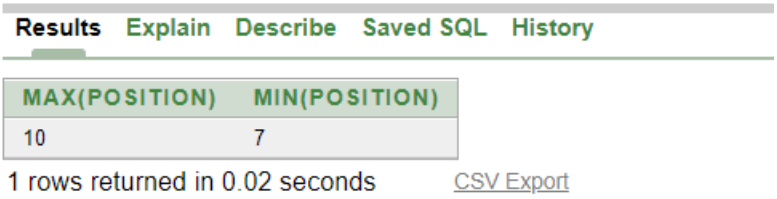
2 rows returned in 0.00 seconds CSV Export

Aggregate Fuction query:

show the Maximum and Minimum Positions of Players.

- SELECT MAX(position),MIN(position)

  FROM player



View:

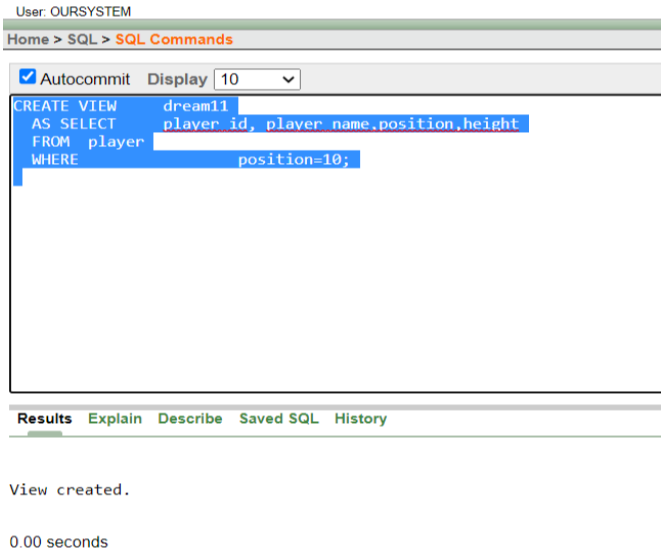
Create a View of Dream11 Players with Position 10

- CREATE VIEW dream11

  AS SELECT player_id, player_name,position,height

  FROM player

  WHERE position=10;



Show the detail description of the dream11 table

- describe dream11

Results Explain Describe Saved SQL History

Object Type **VIEW** Object **DREAM11**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
DREAM11	PLAYER_ID	Number	-	10	0	-	-	-	-
	PLAYER_NAME	Varchar2	100	-	-	-	✓	-	-
	POSITION	Number	-	10	0	-	✓	-	-
	HEIGHT	Varchar2	100	-	-	-	✓	-	-

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Show all data from the dream11_table

- select*from dream11

Results Explain Describe Saved SQL History

PLAYER_ID	PLAYER_NAME	POSITION	HEIGHT
10	Messi	10	1.7m
11	Neymar	10	1.75m

2 rows returned in 0.00 seconds CSV Export