CRICKET LEAGUE MANAGEMENT SYSTEM

FINAL PROJECT ON SQL

NAME   : KRISHAN KUMAR SHARMA

STUDENT ID : #20261

PROJECT   : CRICKET LEAGUE MANAGEMENT
                            SYSTEM

ABSTRACT

The proposed Cricket Management system is an automated Management system built for cricket organizers. The proposed system allows the organizers to go through the data of various cricket teams worldwide. Less effort is required for maintaining the database. The margin of errors will be reduced and keeping track of participating teams will be a breeze . The database contains details of teams, players, umpires, coaches among others. All useful information about a tournament can be found in the given database. It also contains a technical diagram, the Entity Relationship diagram.

INTRODUCTION

A Cricket Management System is a software application designed to manage various aspects of a cricket tournament or league. It facilitates the organization, tracking, and reporting of data related to teams, players, matches, scores, and tournaments. This system is useful for managing both local and international cricket leagues and tournaments, providing an efficient way to store and retrieve information related to teams, matches, and performance statistics.

The primary goal of the Cricket Management System is to automate tasks related to match scheduling, team management, player statistics, and scoring. It helps tournament organizers, coaches, players, and fans stay updated with real-time information. Additionally, this system provides accurate and timely reporting of scores, player performance, rankings, and historical data.

We Have 7 Table In This Cricket League

1. PLAYER TABLE

2. TEAM TABLE

3. MATCH TABLE

4. UMPIRE TABLE

5. HEADCOACH TABLE

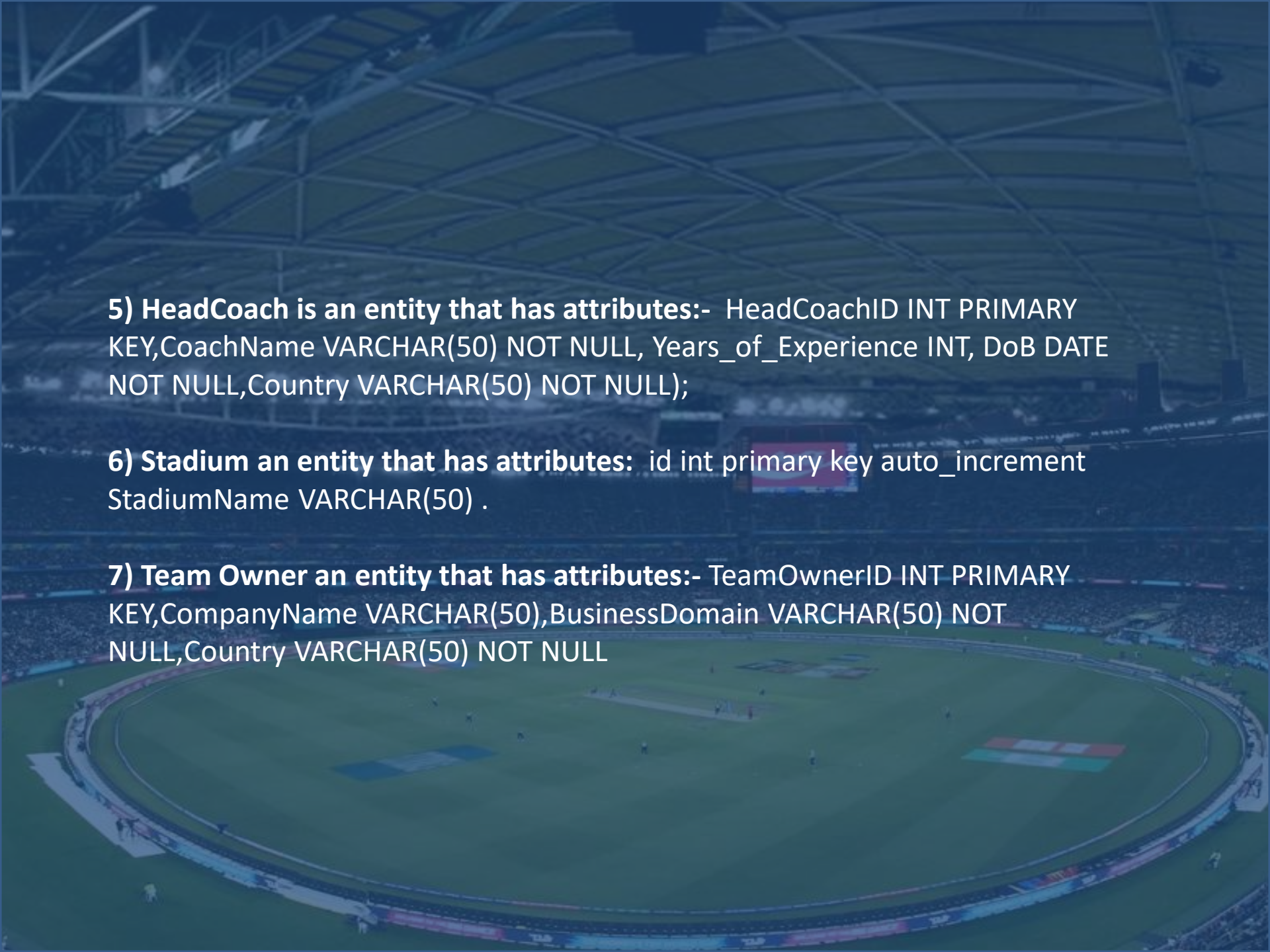6. Stadium TABLE

7. TEAM OWNER TABLE

ENTITIES AND ATTRIBUTES

1)**Team is entity that has attributes:- Team ID** (primary key), team_name(not null), Owner Company(Not Null), Head Coach ID (Foreign Key), Team OwnerID (Foreign Key),

2) **Players is entity that has an attribute:- PlayerID**(primary key), Name (Not Null), Nationality(Not Null), DOB DATE (NOT NULL), Role VARCHAR(50),StrikeRate DECIMAL(5,2),BowlingStyle VARCHAR(50),BattingStyle VARCHAR (50).

4) **Matches is an entity that has attributes:-** MatchID INT (PRIMARY KEY) ,MatchType VARCHAR(10) NOT NULL , match_Date DATE NOT NULL,StadiumName VARCHAR(50), team_1_name varchar(30),   team_2_name varchar(30),   loser varchar(30),   winner varchar(30),   UmpireID INT ,   manofthematch int ,foreign key(StadiumName) ,foreign key(UmpireID) , foreign key(manofthematch).

4) **Umpire is an entity that has attributes:-** UmpireID INT PRIMARY KEY, Name VARCHAR(50) NOT NULL, YearsOfExperience Country VARCHAR(50) NOT NULL
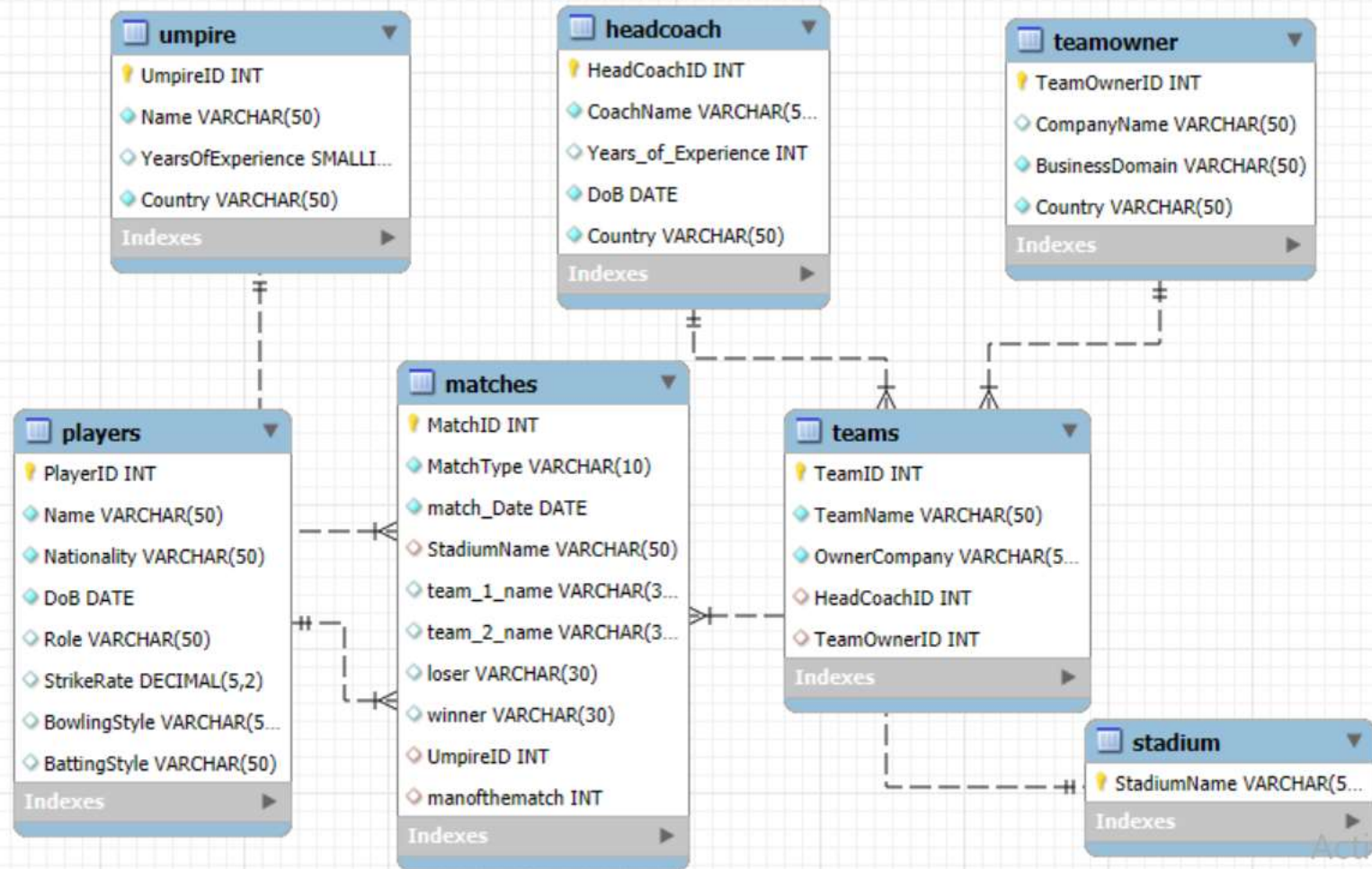
5) HeadCoach is an entity that has attributes:- HeadCoachID INT PRIMARY KEY,CoachName VARCHAR(50) NOT NULL, Years_of_Experience INT, DoB DATE NOT NULL,Country VARCHAR(50) NOT NULL);

6) Stadium an entity that has attributes: id int primary key auto_increment StadiumName VARCHAR(50) .

7) Team Owner an entity that has attributes:- TeamOwnerID INT PRIMARY KEY,CompanyName VARCHAR(50),BusinessDomain VARCHAR(50) NOT NULL,Country VARCHAR(50) NOT NULL

ER DIAGRAM :

1. PLAYER TABLE

```sql
7      -- 1.Player Table--------------
8    ⊖ CREATE TABLE Players(
9      PlayerID INT PRIMARY KEY,
10     Name VARCHAR(50) NOT NULL,
11     Nationality  VARCHAR(50) NOT NULL,
12     DoB DATE NOT NULL,
13     Role VARCHAR(50),
14     StrikeRate DECIMAL(5,2),
15     BowlingStyle  VARCHAR(50),
16     BattingStyle  VARCHAR(50)
17     );
18     DESC players;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
PlayerID	int	NO	PRI	NULL	
Name	varchar(50)	NO		NULL	
Nationality	varchar(50)	NO		NULL	
DoB	date	NO		NULL	
Role	varchar(50)	YES		NULL	
StrikeRate	decimal(5,2)	YES		NULL	
BowlingStyle	varchar(50)	YES		NULL	
BattingStyle	varchar(50)	YES		NULL	

2. TEAM TABLE :

```
-- 2.Teams--------------
CREATE TABLE Teams (
    TeamID INT PRIMARY KEY,
    TeamName VARCHAR(50) NOT NULL,
    OwnerCompany VARCHAR(50) NOT NULL,
    HeadCoachID INT ,
    TeamOwnerID INT,
    FOREIGN KEY(HeadCoachID) REFERENCES HeadCoach(HeadCoachID),
    FOREIGN KEY (TeamOwnerID) REFERENCES TeamOwner(TeamOwnerID)
);
DESC Teams;
```

rid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
TeamID	int	NO	PRI	NULL	
TeamName	varchar(50)	NO		NULL	
OwnerCompany	varchar(50)	NO		NULL	
HeadCoachID	int	YES	MUL	NULL	
TeamOwnerID	int	YES	MUL	NULL	

3. MATCH TABLE

```sql
CREATE TABLE Matches(
    MatchID INT PRIMARY KEY,
    MatchType VARCHAR(10) NOT NULL,
    match_Date DATE NOT NULL,
    StadiumName VARCHAR(50),
    team_1_name varchar(30),
    team_2_name varchar(30),
    loser varchar(30),
    winner varchar(30),
    UmpireID INT ,
    manofthematch int,
    foreign key(StadiumName) references Stadium(StadiumName),
    foreign key(UmpireID) references Umpire(UmpireID),
    foreign key(manofthematch) references Players(PlayerID)
```

Grid | Filter Rows: | Export: | Wrap Cell Content: IA

Field	Type	Null	Key	Default	Extra
winner	varchar(30)	YES		NULL	
UmpireID	int	YES	MUL	NULL	
team_2_name	varchar(30)	YES		NULL	
team_1_name	varchar(30)	YES		NULL	
StadiumName	varchar(50)	YES	MUL	NULL	
MatchType	varchar(10)	NO		NULL	
MatchID	int	NO	PRI	NULL	
match_Date	date	NO		NULL	
manofthematch	int	YES	MUL	NULL	

4. UMPIRE TABLE

```sql
-- 4.Umpire Table-------------
CREATE TABLE Umpire(
    UmpireID INT PRIMARY KEY,
    Name VARCHAR(50) NOT NULL,
    YearsOfExperience SMALLINT,
    Country VARCHAR(50) NOT NULL
);
DESC Umpire;
```

Grid | Filter Rows: | Export: | Wrap Cell Content: $\overline{A}$

Field	Type	Null	Key	Default	Extra
UmpireID	int	NO	PRI	NULL	
Name	varchar(50)	NO		NULL	
YearsOfExperi...	smallint	YES		NULL	
Country	varchar(50)	NO		NULL	

5. HEAD COACH TABLE :

```sql
-- 5.Head Coach----------
CREATE TABLE HeadCoach(
    HeadCoachID INT PRIMARY KEY,
    CoachName VARCHAR(50) NOT NULL,
    Years_of_Experience INT,
    DoB DATE NOT NULL,
    Country VARCHAR(50) NOT NULL
);
    DESC HeadCoach;
```

Grid | Filter Rows: | Export: | Wrap Cell Content: ⊼A

Field	Type	Null	Key	Default	Extra
HeadCoachID	int	NO	PRI	NULL	
CoachName	varchar(50)	NO		NULL	
Years_of_Exp...	int	YES		NULL	
DoB	date	NO		NULL	
Country	varchar(50)	NO		NULL	

6. STADIUM TABLE

```sql
-- 6.Stadium------------
CREATE TABLE Stadium(
    StadiumName VARCHAR(50) PRIMARY KEY

);
DESC Stadium;
```

Field	Type	Null	Key	Default	Extra
StadiumName	varchar(50)	NO	PRI	NULL	

7. TEAM OWNER TABLE

```sql
-- 7.Team Owner Table---
CREATE TABLE TeamOwner(
    TeamOwnerID INT PRIMARY KEY,
    CompanyName VARCHAR(50),
    BusinessDomain VARCHAR(50) NOT NULL,
    Country VARCHAR(50) NOT NULL
);
DESC TeamOwner;
```

Grid | Filter Rows: | Export: | Wrap Cell Content: IA

Field	Type	Null	Key	Default	Extra
TeamOwnerID	int	NO	PRI	NULL	
CompanyName	varchar(50)	YES		NULL	
BusinessDomain	varchar(50)	NO		NULL	
Country	varchar(50)	NO		NULL	

INSERT VALUES INTO TABLE:

1. PLAYER

```sql
INSERT INTO Players VALUES
(00001,'Rohot Shrma','India','1987-04-30','Batsman',157.6,'right-arm mediim','Right-handed'),
(00002,'Rashid Khan','Afghasnistan','1998-09-20','All-Rounder',156.7,'light-arm legbreak','Right-handed'),
(00003,'David Miller','South Africa','1988-06-10','Batsman',137.89,'right-arm offbreak','left-handed'),
(00004,'Vijay Shankar','India','1991-01-26','All-rounder',127.44,'right-arm medium','right-handed'),
(00005,'Shubman Gill','India','1999-09-08','Batsman',126.67,'right-arm offbreak','right-handed'),
(00006,'Rahul Tewatia','India','1993-05-20','All-rounder',130.19,'right-arm legbreak','left-handed'),
(00007,'Wridddhiman Saha','India','1984-10-24','Wicketkeeper',128.42,NULL,'right-handed'),
(00008,'Mohammad Shami','India','1990-09-03','Bowler',94.52,'right-arm fast-medium','right-handed'),
(00009,'Mohit Sharma','India','1988-09-18','Bowler',104.27,'right-arm fast-medium','right-handed'),
(00010,'Alzarri Joseph','Jamaica','1996-11-20','Bowler',100,'right-arm fast-medium','right-handed'),
(00011,'Kane Williamson','New Zealand','1990-08-08','Batsman',113.19,'right-arm offbreak','right-handed'),
(00012,'M S Dhoni','India','1981-07-07','Wicketkeeper',135.77,'right-arm medium','right-handed'),
(00013,'Ravindra Jadeja','India','1988-12-06','Bowler',127.62,'left-arm orthodox','left-handed'),
(00014,'Suresh Raina','India','1986-11-27','Batsman',136.73,'right-arm offbreak','left-handed'),
(00015,'Cheteshwar Pujara','India','1988-01-23','Batsman',99.74,'right-arm legbreak','right-handed'),
(00016,'Deepak Chahar','India','1992-07-07','Bowler',138.6,'right-arm medium','right-handed'),
(00017,'Mitchell Santner','New Zealand','1992-02-05','All-rounder',103.7,'left-arm orthodox','left-handed'),
(00018,'Dwayne Bravo','Jamaica','1983-10-07','Batsman',129.57,'right-arm fast-medium','right-handed'),
(00019,'Shardul Thakur','India','1991-12-16','Bowler',148.11,'right-arm fast-medium','right-handed'),
(00020,'Imran Tahir','South Africa','1979-03-27','Bowler',89.19,'right-arm legbreak','right-handed'),
(00021,'Moeen Ali','England','1987-06-18','Batsman',143.61,'right-arm offbreak','left-handed'),
(00022,'Faf Du Plesis','South Africa','1984-07-13','Batsman',132.87,'right-arm legbreak','right-handed'),
(00023,'Virat Kohli','India','1988-11-05','Batsman',129.67,'right-arm medium','right-handed'),
(00024,'Rajat Patidar','India','1993-06-01','Batsman',144.29,'right-arm offbreak','right-handed'),
```

2. TEAM INSERT

```sql
INSERT INTO Teams VALUES
(01, 'Royal Challengers Bangalore', 'United Spirits',101,1001),
(02, 'Mumbai Indians', 'Reliance Industry Ltd',102,1002),
(03, 'Chennai Super Kings', 'India Cements Ltd',103,1003),
(04, 'Gujarat Titans', 'CVC Capital Partners',104,1004),
(05, 'Rajasthan Royals', 'Emerging Media IPL Ltd',105,1005),
(06, 'Kolkata Knight Riders', 'Red Chillies Entertainment',106,1006),
(07, 'Punjab king', 'KPH Dream Private Limited',107,1007),
(08, 'Delhi Captials', 'GMR Group,JSW Group',108,1008),
(09, 'Lucknow Super Giants', 'RPSG Group',109,1009),
(10, 'Sinrisers Hyderabad', 'SUN Group',110,1010);
```

```sql
INSERT INTO Matches VALUES
(2001, 'League', '2015-03-27', 'Sawai Mansingh Stadium', 'LSG', 'DC', 'DC', 'LSG',00001,00061),
(2002, 'League', '2015-03-27', 'Narendra Modi Stadium', 'RCB', 'GT', 'GT', 'RCB',00002,00023),
(2003, 'League', '2015-03-27', 'I.S Bindra Association Stadium', 'KXIP', 'SRH', 'KXIP', 'SRH',00003,00021),
(2004, 'League', '2015-03-27', 'M.Chinnaswamy Stadium', 'RCB', 'MI', 'MI', 'RCB',00004,00035),
(2005, 'League', '2015-03-27', 'Eden Gardens', 'RR', 'KKR', 'KKR', 'RR',00005,00025),
(2006, 'League', '2015-03-27', 'Wankhede Stadium', 'KKR', 'MI', 'KKR', 'MI',00006,00042),
(2007, 'Qualifier1', '2025-05-19', 'Arun Jaitley Stadium', 'CSK', 'MI', 'CSK', 'MI',00007,00058),
(2008, 'Elimination', '2025-05-20', 'Rajiv Gandhi International Cricket Stadium', 'RCB','SRH', 'SRH', 'RCB',00008,00033)
(2009, 'Qualifier2', '2025-05-22', 'Narendra Modi Stadium', 'CSK', 'RCB', 'RCB', 'CSK',00009,00012),
(2010, 'Final', '2025-05-24', 'MA Chidambaram chennai', 'CSK', 'MI', 'CSK', 'MI',00010,00001);
```

4. UMPIRE INSERT

```sql
INSERT INTO Umpire VALUES
(00001,'Sundaram Ravi',15,'Inida'),
(00002,'Paul Reiffel',18,'Australia'),
(00003,'Nitin Menon',9,'India'),
(00004,'Christopher Columbus',25,'New Zealand'),
(00005,'Anil Chaudary',10,'Inida'),
(00006,'C. Shamshuddin',20,'India'),
(00007,'Arvindra Gohel',9,'USA'),
(00008,'Sumukh Chattopadhay',14,'India'),
(00009,'Gerard Abood',23,'Australia'),
(00010,'Afzal Ahmed',12,'India');
```

5. HEAD COACH INSERT

```sql
INSERT INTO HeadCoach VALUES
(101,'Andy Flower',5,'1968-04-28','Zimbabwe'),
(102,'Mahela Jayawardene',8,'1977-05-27','Sri Lanka'),
(103,'Stephen Fleming',18,'1973-04-01','New Zealand'),
(104,'Ashish Nehra',4,'1979-04-29','India'),
(105,'Rahul Dravid',16,'1973-01-11','India'),
(106,'Chandrakant Pandit',18,'1961-09-30','India'),
(107,'Sanjay Bangar',19,'1972-10-11','India'),
(108,'Ricky Ponting',13,'1974-12-19','Australian'),
(109,'Justin Langer',12,'1970-11-21','Australian'),
(110,'Danial Vettori','9','1979-01-27','New Zealand');
```

6. STADIUM INSERT

```sql
INSERT INTO Stadium VALUES
    ('Sawai Mansingh Stadium'),
    ('Narendra Modi Stadium'),
    ('I.S Bindra Association Stadium'),
    ('M.Chinnaswamy Stadium'),
    ('Eden Gardens'),
    ('Wankhede Stadium'),
    ('Arun Jaitley Stadium'),
    ('Rajiv Gandhi International Cricket Stadium'),
    ('MA Chidambaram chennai');
```

```sql
INSERT INTO TeamOwner VALUES
(1001,'United Spirits','Alcoholic Beverages Company','England'),
(1002,'Reliance Industry Ltd','Telecommunications, Energy','India'),
(1003,'India Cements Ltd', 'Cement Manufacturing','India'),
(1004,'CVC Capital Partners','Investment Advisory Firm','England'),
(1005,'Emerging Media IPL Ltd','Digital Venture Builder','England'),
(1006,'Red Chillies Entertainment','Film Industry','India'),
(1007,'KPH Dream Private Limited','Film Industry','India'),
(1008,'GMR Group,JSW Group','development company','India'),
(1009,'RPSG Group','Carbon Black,IT service,Media','India'),
(1010,'SUN Group','TV Network','India');
```

CONTENTS OF TABLES :

1. PLAYER :

PlayerID	Name	Nationality	DoB	Role	StrikeRate	BowlingStyle	BattingStyle
1	Rohot Shrma	India	1987-04-30	Batsman	157.60	right-arm mediim	Right-handed
2	Rashid Khan	Afghasnistan	1998-09-20	All-Rounder	156.70	light-arm legbreak	Right-handed
3	David Miller	South Africa	1988-06-10	Batsman	137.89	right-arm offbreak	left-handed
4	Vijay Shankar	India	1991-01-26	All-rounder	127.44	right-arm medium	right-handed
5	Shubman Gill	India	1999-09-08	Batsman	126.67	right-arm offbreak	right-handed
6	Rahul Tewatia	India	1993-05-20	All-rounder	130.19	right-arm legbreak	left-handed
7	Wridddhiman Saha	India	1984-10-24	Wicketkeeper	128.42	NULL	right-handed
8	Mohammad Shami	India	1990-09-03	Bowler	94.52	right-arm fast-medium	right-handed
9	Mohit Sharma	India	1988-09-18	Bowler	104.27	right-arm fast-medium	right-handed
10	Alzarri Joseph	Jamaica	1996-11-20	Bowler	100.00	right-arm fast-medium	right-handed
11	Kane Williamson	New Zealand	1990-08-08	Batsman	113.19	right-arm offbreak	right-handed
12	M S Dhoni	India	1981-07-07	Wicketkeeper	135.77	right-arm medium	right-handed
13	Ravindra Jadeja	India	1988-12-06	Bowler	127.62	left-arm orthodox	left-handed
14	Suresh Raina	India	1986-11-27	Batsman	136.73	right-arm offbreak	left-handed
15	Cheteshwar Pujara	India	1988-01-23	Batsman	99.74	right-arm legbreak	right-handed
16	Deepak Chahar	India	1992-07-07	Bowler	138.60	right-arm medium	right-handed
17	Mitchell Santner	New Zealand	1992-02-05	All-rounder	103.70	left-arm orthodox	left-handed
18	Dwayne Bravo	Jamaica	1983-10-07	Batsman	129.57	right-arm fast-medium	right-handed

1. PLAYER

PlayerID	Name	Nationality	DoB	Role	StrikeRate	BowlingStyle	BattingStyle
19	Shardul Thakur	India	1991-12-16	Bowler	148.11	right-arm fast-medium	right-handed
20	Imran Tahir	South Africa	1979-03-27	Bowler	89.19	right-arm legbreak	right-handed
21	Moeen Ali	England	1987-06-18	Batsman	143.61	right-arm offbreak	left-handed
22	Faf Du Plesis	South Africa	1984-07-13	Batsman	132.87	right-arm legbreak	right-handed
23	Virat Kohli	India	1988-11-05	Batsman	129.67	right-arm medium	right-handed
24	Rajat Patidar	India	1993-06-01	Batsman	144.29	right-arm offbreak	right-handed
25	Devdutt Padikal	India	2000-07-07	Batsman	123.01	right-arm offbreak	left-handed
26	Glenn Maxwell	Australia	1988-10-14	All-rounder	150.98	right-arm offbreak	right-handed
27	Tim David	Singapore	1996-03-16	All-rounder	179.74	right-arm medium	right-handed
28	Shahbaz Ahmed	India	1994-12-11	All-rounder	119.08	left-arm orthodox	left-handed
29	AB de Villiers	South Africa	1984-02-17	Wicketkeeper	151.69	right-arm medium	right-handed
30	Mohammed Siraj	India	1994-03-13	Bowler	88.07	right-arm fast-medium	right-handed
31	Navdeep Saini	India	1992-11-23	Bowler	88.19	right-a... right-arm fast-medium ...ded
32	Yuzvendra Chahal	India	1990-07-23	Bowler	43.02	right-arm legbreak	right-handed
33	Srikar Bharat	India	1993-10-03	Batsman	122.07	NULL	right-handed
34	Rohit Sharma	India	1987-04-30	Batsman	130.07	right-arm offbreak	right-handed
35	Suryakumar Yadav	India	1990-09-14	Batsman	136.87	right-arm offbreak	right-handed
36	Chris Lynn	Australia	1990-04-10	Batsman	140.63	left-arm orthodox	right-handed

2. TEAM

TeamID	TeamName	OwnerCompany	HeadCoachID	TeamOwnerID
1	Royal Challengers Bangalore	United Spirits	101	1001
2	Mumbai Indians	Reliance Industry Ltd	102	1002
3	Chennai Super Kings	India Cements Ltd	103	1003
4	Gujarat Titans	CVC Capital Partners	104	1004
5	Rajasthan Royals	Emerging Media IPL Ltd	105	1005
6	Kolkata Knight Riders	Red Chillies Entertainment	106	1006
7	Punjab king	KPH Dream Private Limited	107	1007
8	Delhi Captials	GMR Group,JSW Group	108	1008
9	Lucknow Super Giants	RPSG Group	109	1009
10	Sinrisers Hyderabad	SUN Group	110	1010

3. MATCH

MatchID	MatchType	match_Date	StadiumName	team_1_name	team_2_name	loser	winner	UmpireID	manofthematch
2001	League	2015-03-27	Sawai Mansingh Stadium	LSG	DC	DC	LSG	1	61
2002	League	2015-03-27	Narendra Modi Stadium	RCB	GT	GT	RCB	2	23
2003	League	2015-03-27	I.S Bindra Association Stadium	KXIP	SRH	KXIP	SRH	3	21
2004	League	2015-03-27	M.Chinnaswamy Stadium	RCB	MI	MI	RCB	4	35
2005	League	2015-03-27	Eden Gardens	RR	KKR	KKR	RR	5	25
2006	League	2015-03-27	Wankhede Stadium	KKR	MI	KKR	MI	6	42
2007	Qualifier1	2025-05-19	Arun Jaitley Stadium	CSK	MI	CSK	MI	7	58
2008	Elimation	2025-05-20	Rajiv Gandhi International Cricket Stadium	RCB	SRH	SRH	RCB	8	33
2009	Qualifier2	2025-05-22	Narendra Modi Stadium	CSK	RCB	RCB	CSK	9	12
2010	Final	2025-05-24	MA Chidambaram chennai	CSK	MI	CSK	MI	10	1

4. UMPIRE

UmpireID	Name	YearsOfExperience	Country
1	Sundaram Ravi	15	Inida
2	Paul Reiffel	18	Australia
3	Nitin Menon	9	India
4	Christopher Columbus	25	New Zealand
5	Anil Chaudary	10	Inida
6	C. Shamshuddin	20	India
7	Arvindra Gohel	9	USA
8	Sumukh Chattopadhay	14	India
9	Gerard Abood	23	Australia
10	Afzal Ahmed	12	India

5. HEAD COACH

HeadCoachID	CoachName	Years_of_Experience	DoB	Country
101	Andy Flower	5	1968-04-28	Zimbabwe
102	Mahela Jayawardene	8	1977-05-27	Sri Lanka
103	Stephen Fleming	18	1973-04-01	New Zealand
104	Ashish Nehra	4	1979-04-29	India
105	Rahul Dravid	16	1973-01-11	India
106	Chandrakant Pandit	18	1961-09-30	India
107	Sanjay Bangar	19	1972-10-11	India
108	Ricky Ponting	13	1974-12-19	Australian
109	Justin Langer	12	1970-11-21	Australian
110	Danial Vettori	9	1979-01-27	New Zealand

6. STADIUM

id	StadiumName
1	Sawai Mansingh Stadium
2	Narendra Modi Stadium
3	I.S Bindra Association Stadium
4	M.Chinnaswamy Stadium
5	Eden Gardens
6	Wankhede Stadium
7	Arun Jaitley Stadium
8	Rajiv Gandhi International Cricket Stadium
9	MA Chidambaram chennai

7. TEAM OWNER

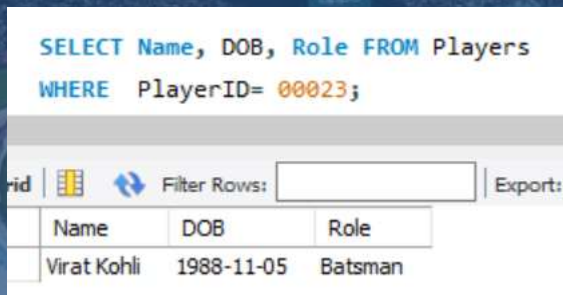| TeamOwnerID	CompanyName	BusinessDomain	Country
1001	United Spirits	Alcoholic Beverages Company	England
1002	Reliance Industry Ltd	Telecommunications, Energy	India
1003	India Cements Ltd	Cement Manufacturing	India
1004	CVC Capital Partners	Investment Advisory Firm	England
1005	Emerging Media IPL Ltd	Digital Venture Builder	England
1006	Red Chillies Entertainment	Film Industry	India
1007	KPH Dream Private Limited	Film Industry	India
1008	GMR Group,JSW Group	development company	India
1009	RPSG Group	Carbon Black,IT service,Media	India
1010	SUN Group	TV Network	India

WHERE CLAUSE

SELECT: Specifies the columns you want to retrieve in the result set.

WHERE: Specifies the condition that each row must satisfy to be included in the result set.

1. Equal Operator:

SELECT Name, DOB, Role
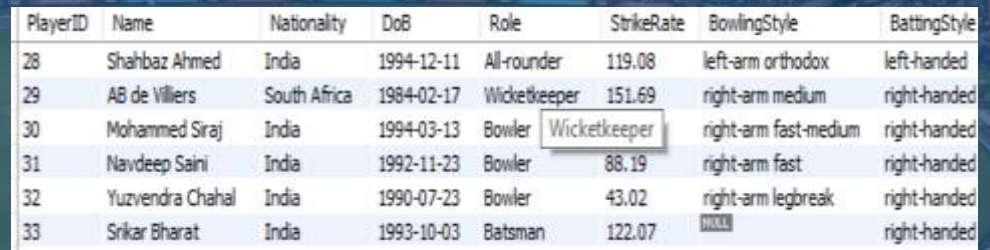**FROM** Players
WHERE Player ID = 00023;

2. Greater than or equal to (<=) Operator

SELECT * FROM Players
WHERE Player ID >= 00028;

```
SELECT Name, DOB, Role FROM Players
WHERE   PlayerID= 00023;
```

rid		Filter Rows:		Export:
Name	DOB	Role		
Virat Kohli	1988-11-05	Batsman		

PlayerID	Name	Nationality	DoB	Role	StrikeRate	BowlingStyle	BattingStyle
28	Shahbaz Ahmed	India	1994-12-11	All-rounder	119.08	left-arm orthodox	left-handed
29	AB de Villiers	South Africa	1984-02-17	Wicketkeeper	151.69	right-arm medium	right-handed
30	Mohammed Siraj	India	1994-03-13	Bowler Wicketkeeper		right-arm fast-medium	right-handed
31	Navdeep Saini	India	1992-11-23	Bowler	88.19	right-arm fast	right-handed
32	Yuzvendra Chahal	India	1990-07-23	Bowler	43.02	right-arm legbreak	right-handed
33	Srikar Bharat	India	1993-10-03	Batsman	122.07	NULL	right-handed

IS NULL

SELECT * FROM Players
WHERE BowlingStyle IS NULL;

PlayerID	Name	Nationality	DoB	Role	StrikeRate	BowlingStyle	BattingStyle
7	Wridddhiman Saha	India	1984-10-24	Wicketkeeper	128.42	NULL	right-handed
33	Srikar Bharat	India	1993-10-03	Batsman	122.07	NULL	right-handed
40	Quinton de Kock	South Africa	1992-12-17	Wicketkeeper	133.91	NULL	left-handed
41	Ishan Kishan	India	1998-07-18	Wicketkeeper	133.36	NULL	left-handed
49	Dinesh Karthik	India	1985-06-01	Wicketkeeper	132.71	NULL	right-handed
50	Sheldon Jackson	India	1986-09-27	Batsman	NULL	NULL	right-handed

Combination AND and OR Operator:

SELECT * FROM Players
WHERE Nationality= 'India' OR (Name = 'Rohit Sharma' AND Role='Batsman');

PlayerID	Name	Nationality	DoB	Role	StrikeRate	BowlingStyle	BattingStyle
1	Rohot Shrma	India	1987-04-30	Batsman	157.60	right-arm mediim	Right-handed
4	Vijay Shankar	India	1991-01-26	All-rounder	127.44	right-arm medium	right-handed
5	Shubman Gill	India	1999-09-08	Batsman	126.67	right-arm offbreak	right-handed
6	Rahul Tewatia	India	1993-05-20	All-rounder	130.19	right-arm legbreak	left-handed
7	Wridddhiman Saha	India	1984-10-24	Wicketkeeper	128.42	NULL	right-handed
8	Mohammad Shami	India	1990-09-03	Bowler	94.52	right-arm fast-medium	right-handed

LIMIT OFFSET CLAUSE

LIMIT clause used to select a limited number of records Offset used to skip mentioned numbered values and after that number we get Limit values.

SELECT PlayerID, Name, Nationality, DOB
FROM Players LIMIT 10 OFFSET 4;

PlayerID	Name	Nationality	DOB
5	Shubman Gill	India	1999-09-08
6	Rahul Tewatia	India	1993-05-20
7	Wridddhiman Saha	India	1984-10-24
8	Mohammad Shami	India	1990-09-03
9	Mohit Sharma	India	1988-09-18
10	Alzarri Joseph	Jamaica	1996-11-20
11	Kane Williamson	New Zealand	1990-08-08
12	M S Dhoni	India	1981-07-07
13	Ravindra Jadeja	India	1988-12-06
14	Suresh Raina	India	1986-11-27
NULL	NULL	NULL	NULL

BETWEEN Operator:

SELECT * FROM Team Owner
WHERE Team OwnerID BETWEEN 1004 AND 1010;

TeamOwnerID	CompanyName	BusinessDomain	Country
1004	CVC Capital Partners	Investment Advisory Firm	England
1005	Emerging Media IPL Ltd	Digital Venture Builder	England
1006	Red Chillies Entertainment	Film Industry	India
1007	KPH Dream Private Limited	Film Industry	India
1008	GMR Group,JSW Group	development company	India
1009	RPSG Group	Carbon Black,IT service,Media	India
1010	SUN Group	TV Network	India
NULL	NULL	NULL	NULL

LIKE operator and WILDCARDS

The LIKE operator is used in a WHERE clause to search for a specified pattern in a column.
Two Wildcards used with LIKE operator (%) Percentage Sign and (_) Underscore Sign.

SELECT * FROM Players
WHERE Name LIKE 'R%';

Result Grid		Filter Rows:		Edit:			Export/Import:		Wrap Cell Content:	
PlayerID	Name	Nationality	DoB	Role	StrikeRate	BowlingStyle	BattingStyle
1	Rohot Shrma	India	1987-04-30	Batsman	157.60	right-arm mediim	Right-handed
2	Rashid Khan	Afghasnistan	1998-09-20	All-Rounder	156.70	light-arm legbreak	Right-handed
6	Rahul Tewatia	India	1993-05-20	All-rounder	130.19	right-arm legbreak	left-handed
13	Ravindra Jadeja	India	1988-12-06	Bowler	127.62	left-arm orthodox	left-handed
24	Rajat Patidar	India	1993-06-01	Batsman	144.29	right-arm offbreak	right-handed
34	Rohit Sharma	India	1987-04-30	Batsman	130.07	right-arm offbreak	right-handed
44	Rahul Chahar	India	1999-08-04	Bowler	100.00	right-arm legbreak	right-handed
58	Ravichandran Ashwin	India	1986-09-17	All-rounder	118.52	right-arm offbreak	right-handed
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

ORDER BY

The ORDER BY keyword is used to sort the result-set in ascending or descending order

SELECT * FROM HeadCoach ORDER BY Years_of_Experience ASC;

HeadCoachID	CoachName	Years_of_Experience	DoB	Country
104	Ashish Nehra	4	1979-04-29	India
101	Andy Flower	5	1968-04-28	Zimbabwe
102	Mahela Jayawardene	8	1977-05-27	Sri Lanka
110	Danial Vettori	9	1979-01-27	New Zealand
109	Justin Langer	12	1970-11-21	Australian
108	Ricky Ponting	13	1974-12-19	Australian
105	Rahul Dravid	16	1973-01-11	India
103	Stephen Fleming	18	1973-04-01	New Zealand
106	Chandrakant Pandit	18	1961-09-30	India
107	Sanjay Bangar	19	1972-10-11	India
NULL	NULL	NULL	NULL	NULL

SELECT * FROM HeadCoach ORDER BY Years_of_Experience DESC;

HeadCoachID	CoachName	Years_of_Experience	DoB	Country
107	Sanjay Bangar	19	1972-10-11	India
103	Stephen Fleming	18	1973-04-01	New Zealand
106	Chandrakant Pandit	18	1961-09-30	India
105	Rahul Dravid	16	1973-01-11	India
108	Ricky Ponting	13	1974-12-19	Australian
109	Justin Langer	12	1970-11-21	Australian
110	Danial Vettori	9	1979-01-27	New Zealand
102	Mahela Jayawardene	8	1977-05-27	Sri Lanka
101	Andy Flower	5	1968-04-28	Zimbabwe
104	Ashish Nehra	4	1979-04-29	India
NULL	NULL	NULL	NULL	NULL

ALTER TABLE

ADD COLUMN

ALTER TABLE Teams
ADD COLUMN Captain VARCHAR(50) AFTER OwnerCompany;

Field	Type	Null	Key	Default	Extra
TeamID	int	NO	PRI	NULL	
TeamName	varchar(50)	NO		NULL	
OwnerCompany	varchar(50)	NO		NULL	
Captain	varchar(50)	YES		NULL	
HeadCoachID	int	YES	MUL	NULL	
TeamOwnerID	int	YES	MUL	NULL	

DROP COLUMN

ALTER TABLE Teams
DROP COLUMN Captain ;

Field	Type	Null	Key	Default	Extra
TeamID	int	NO	PRI	NULL	
TeamName	varchar(50)	NO		NULL	
OwnerCompany	varchar(50)	NO		NULL	
HeadCoachID	int	YES	MUL	NULL	
TeamOwnerID	int	YES	MUL	NULL	

MODIFY COLUMN

ALTER TABLE Teams
MODIFY COLUMN Captain INT;

Field	Type	Null	Key	Default	Extra
TeamID	int	NO	PRI	NULL	
TeamName	varchar(50)	NO		NULL	
OwnerCompany	varchar(50)	NO		NULL	
Captain	int	YES		NULL	
HeadCoachID	int	YES	MUL	NULL	
TeamOwnerID	int	YES	MUL	NULL	

TeamID	TeamName	OwnerCompany	Captain	HeadCoachID	TeamOwnerID
1	RCB	United Spirits	NULL	101	1001
2	Mumbai Indians	Reliance Industry Ltd	NULL	102	1002
3	Chennai Super Kings	India Cements Ltd	NULL	103	1003
4	Gujarat Titans	CVC Capital Partners	NULL	104	1004
5	Rajasthan Royals	Emerging Media IPL Ltd	NULL	105	1005
6	Kolkata Knight Riders	Red Chillies Entertainment	NULL	106	1006
7	Punjab king	KPH Dream Private Limited	NULL	107	1007
8	Delhi Captials	GMR Group,JSW Group	NULL	108	1008
9	Lucknow Super Giants	RPSG Group	NULL	109	1009
10	Sinrisers Hyderabad	SUN Group	NULL	110	1010
NULL	NULL	NULL	NULL	NULL	NULL

UPDATE

UPDATE Teams
SET TeamName = 'RCB'
WHERE TeamID = 1;

DELETE

The DELETE statement is used to delete existing records in a table.

DELETE FROM Players
WHERE PlayerID IN (00018,00019,00020);

	PlayerID	Name	Nationality	DoB	Role	StrikeRate	BowlingStyle	BattingStyle
	12	M S Dhoni	India	1981-07-07	Wicketkeeper	135.77	right-arm medium	right-handed
	13	Ravindra Jadeja	India	1988-12-06	Bowler	127.62	left-arm orthodox	left-handed
	14	Suresh Raina	India	1986-11-27	Batsman	136.73	right-arm offbreak	left-handed
	15	Cheteshwar Pujara	India	1988-01-23	Batsman	99.74	right-arm legbreak	right-handed
	16	Deepak Chahar	India	1992-07-07	Bowler	138.60	right-arm medium	right-handed
	17	Mitchell Santner	New Zealand	1992-02-05	All-rounder	103.70	left-arm orthodox	left-handed
	21	Moeen Ali	England	1987-06-18	Batsman	143.61	right-arm offbreak	left-handed
	22	Faf Du Plesis	South Africa	1984-07-13	Batsman	132.87	right-arm legbreak	right-handed
	23	Virat Kohli	India	1988-11-05	Batsman	129.67	right-arm medium	right-handed
	24	Rajat Patidar	India	1993-06-01	Batsman	144.29	right-arm offbreak	right-handed
	25	Devdutt Padikal	India	2000-07-07	Batsman	123.01	right-arm offbreak	left-handed
	26	Glenn Maxwell	Australia	1988-10-14	All-rounder	150.98	right-arm offbreak	right-handed
	27	Tim David	Singapore	1996-03-16	All-rounder	179.74	right-arm medium	right-handed
	28	Shahbaz Ahmed	India	1994-12-11	All-rounder	119.08	left-arm orthodox	left-handed
	29	AB de Villiers	South Africa	1984-02-17	Wicketkeeper	151.69	right-arm medium	right-handed
	30	Mohammed Siraj	India	1994-03-13	Bowler	88.07	right-arm fast-medium	right-handed
	31	Navdeep Saini	India	1992-11-23	Bowler	88.19	right-arm fast	right-handed
	32	Yuzvendra Chahal	India	1990-07-23	Bowler	43.02	right-arm legbreak	right-handed

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: 𝗜A

JOINS

INNER JOIN:

Returns rows from both tables where there is a match based on the specified join condition.

SELECT Teams.TeamName, HeadCoach.CoachName, TeamOwner.CompanyName **FROM** Teams
INNER JOIN TeamOwner
ON Teams.TeamOwnerID = teamOwner. TeamOwnerID
INNER JOIN HeadCoach
ON Teams.HeadCoachID = HeadCoach. HeadCoachID;

TeamName	CoachName	CompanyName
Royal Challengers Bangalore	Andy Flower	United Spirits
Mumbai Indians	Mahela Jayawardene	Reliance Industry Ltd
Chennai Super Kings	Stephen Fleming	India Cements Ltd
Gujarat Titans	Ashish Nehra	CVC Capital Partners
Rajasthan Royals	Rahul Dravid	Emerging Media IPL Ltd
Kolkata Knight Riders	Chandrakant Pandit	Red Chillies Entertainment
Punjab Kings	Sanjay Bangar	KPH Dream Private Limited
Delhi Capitals	Ricky Ponting	GMR Group & JSW Group
Lucknow Super Giants	Justin Langer	RPSG Group
Sunrisers Hyderabad	Danial Vettori	SUN Group

LEFT JOIN :

SELECT MatchID MatchType, date, StadiumName, team1,team2, loser, Winner,
Name as Manofthemantch
FROM   Matches as m
LEFT JOIN Players as p
ON m. Manofthemantch = p.PlayerID;

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ‡A

MatchType	date	StadiumName	team1	team2	loser	Winner	Manofthemantch
2001	2015-03-27	Sawai Mansingh Stadium	LSG	DC	DC	LSG	Jos Buttler
2002	2015-03-27	Narendra Modi Stadium	RCB	GT	GT	RCB	Virat Kohli
2003	2015-03-27	I.S Bindra Association Stadium	KXIP	SRH	KXIP	SRH	Moeen Ali
2004	2015-03-27	M.Chinnaswamy Stadium	RCB	MI	MI	RCB	Suryakumar Yadav
2005	2015-03-27	Eden Gardens	RR	KKR	KKR	RR	Devdutt Padikal
2006	2015-03-27	Wankhede Stadium	KKR	MI	KKR	MI	Jasprit Bumrah
2007	2025-05-19	Arun Jaitley Stadium	CSK	MI	CSK	MI	Ravichandran Ashwin
2008	2025-05-20	Rajiv Gandhi International Cricket Stadium	RCB	SRH	SRH	RCB	Srikar Bharat
2009	2025-05-22	Narendra Modi Stadium	CSK	RCB	RCB	CSK	M S Dhoni
2838	2025-05-24	MA Chidambaram chennai	CSK	MI	CSK	MI	Rohit Sharma

RIGHT JOIN :

SELECT CoachName, TeamName, OwnerCompany
FROM HeadCoach as h
RIGHT join Teams as t
on h.HeadCoachID = t.HeadCoachID;

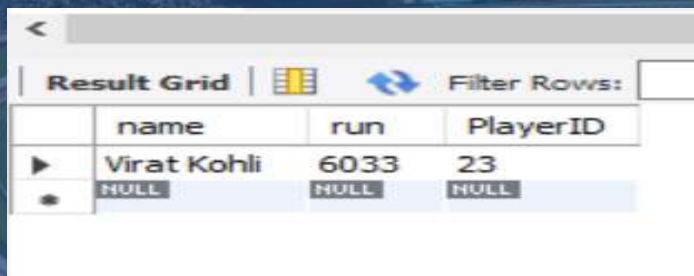| CoachName	TeamName	OwnerCompany
Andy Flower	Royal Challengers Bangalore	United Spirits
Mahela Jayawardene	Mumbai Indians	Reliance Industry Ltd
Stephen Fleming	Chennai Super Kings	India Cements Ltd
Ashish Nehra	Gujarat Titans	CVC Capital Partners
Rahul Dravid	Rajasthan Royals	Emerging Media IPL Ltd
Chandrakant Pandit	Kolkata Knight Riders	Red Chillies Entertainment
Sanjay Bangar	Punjab Kings	KPH Dream Private Limited
Ricky Ponting	Delhi Capitals	GMR Group & JSW Group
Justin Langer	Lucknow Super Giants	RPSG Group
Danial Vettori	Sunrisers Hyderabad	SUN Group

Subquery:

1. Single-Row Subquery:

A subquery that **returns only one row and one column**. It's typically used in conditions where a single value is expected.

1. Name of the player who scored the most runs.

```
SELECT name, run, PlayerID
FROM players
WHERE run = (SELECT Max(run) FROM players);
```

	name	run	PlayerID
▶	Virat Kohli	6033	23
*	NULL	NULL	NULL

Stored Procedures

A stored procedure is a wrapper of a set of SQL statements stored in the MySQL database server.
A stored procedure **can call other stored procedures or stored functions,** enabling you to **organize your code more effectively.**

Creating Stored Procedure:
Syntax:
DELIMITER //

CREATE PROCEDURE procedure_name (parameters)
BEGIN
   -- SQL statements
END //

DELIMITER ;

Parameters:

Stored procedures have parameters, making them more useful and reusable.

```
DELIMITER //
 CREATE PROCEDURE GetPlayerDetail(IN p_PlayerID INT)
BEGIN
SELECT * FROM Players WHERE PlayerID = p_PlayerID;
END //
DELIMITER ;

CALL GetPlayerDetail(00012);
```

PlayerID	Name	Nationality	DoB	Role	StrikeRate	BowlingStyle	BattingStyle
12	M S Dhoni	India	1981-07-07	Wicketkeeper	135.77	right-arm medium	right-handed

Trigger:

A trigger is a special kind of stored procedure that is invoked automatically in response to an event such as **insert, update,** or **delete** that occurs in the associated table

```
CREATE TABLE Players_log(
log_id int null,
PLayerID int,
Action varchar(50),
Action_time TIMESTAMP DEFAULT CURRENT_TIMESTAMP
);
DELIMITER //
 CREATE TRIGGER Get_after_Playersinsert
after INSERT ON Players
FOR EACH ROW
 BEGIN
INSERT INTO PlayerS_log (PlayerID, Action, Action_time)
Values  (NEW.PlayerID, 'INSERT', NOW());
END //
DELIMITER ;
```

SELECT * FROM Players_log;

SELECT * FROM Players;INSERT INTO Players(PlayerID, Name, Nationality, DOB, Role, StrikeRate, BowlingStyle, BattingStyle)
value(00066, 'Shashank Sing', 'India', '1999-04-23','Batsman', 167.3, 'right-arm medium','right-handed');

PlayerID	Name	Nationality	DoB	Role	StrikeRate	BowlingStyle	BattingStyle
59	Jason Holder	Barbados	1991-11-05	Bowler	123.38	right-arm fast-medium	right-handed
60	Sanju Samson	India	1994-11-11	Wicketkeeper	136.63	NULL	right-handed
61	Jos Buttler	England	1990-09-08	Batsman	150.49	NULL	right-handed
62	Trent Boult	New Zealand	1989-07-22	Bowler	108.16	left-arm fast-medium	right-handed
63	Sandeep Sharma	India	1993-05-18	Bowler	81.25	right-arm fast-medium	right-handed
64	Adam Zampa	Australia	1992-03-31	Bowler	66.67	right-arm legbreak	right-handed
65	Chris Gayle	Jamaica	1979-09-21	Batsman	189.65	right-arm fast-medium	left-haned
66	Shashank Sing	India	1999-04-23	Batsman	167.30	right-arm medium	right-handed
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

log_id	PLayerID	Action	Action_time
NULL	66	INSERT	2025-01-17 16:22:30
NULL			

THANK YOU