PROJECT Implementation REPORT

CRICKET LEAGUE MANAGEMENT SYSTEM

Abstract:

The project focusses on developing a database for cricket league which is one of the biggest tournament in the world. There exists a system which stores details about the matches but fails to take minute details about players and their skills. The main purpose of this database management system is to hold information about everyone involved with the cricket. This database will help team owners to keep a record of matches, teams and players shinning in the tournament. This database plans eliminate administrative work and provide records and statistics of players.

School of Information Studies
SYRACUSE UNIVERSITY

Table of Contents

IPL (CRICKET LEAGUE) MANAGEMENT SYSTEM-Project Summary:

The project focusses on developing a database for IPL cricket league which is one of the biggest tournament in the world. There exists a system which stores details about the matches but fails to take minute details about players and their skills. The main purpose of this database management system is to hold information about everyone involved with the IPL. This database will help team owners to keep a record of matches, teams and players shinning in the tournament. This database plans eliminate administrative work and provide records and statistics of players.

There are 10 teams participating in IPL tournament and each team has more than 30 players, so it's difficult to keep track of each player. Each player has runs, wickets, matches played which makes it more complex to keep a note on each player. So without a database it will be very difficult to keep track of all of this data. A database will make it easier for the leagues to manage its information about its team, matches played between teams and players in their respective teams. Currently, there are organization who has details about players, but they haven't computed the statistics. This database plan to optimize storage and provide the users with exact results and statistics.

Proposed Solution:

By designing this database project, I intend to provide my organization's management a structured set of all the information necessary to store and market the results to maximize profits. This information will help the users to place safe bets, be interested in the league and book tickets for the matches as well. Through this project, I am going to provide my organization a database to efficiently record the personal details about the players. This database is also going to have the records of all the teams in the IPL which are planning to buy people of desired skill sets. For example, if the officials want to reward a player who scored the highest number of runs in that particular season, it will be easy for them to reward that player by retrieving his number of runs scored attribute from the database. Secondly, the officials can to insert or update the details about the day, date, time and location of the matches that are going to be played by different teams. Thirdly, league officials can assign administrators to add/modify/delete records of players, teams and much more. Lastly, this data will be available to the idetails of the matches that are going to be played by their favorite teams. The fans can also purchase merchandise based on the performance of their favorite team or player. For example, if Virat Kohli (Player) scores the most number of runs in 2018 for his club, the sales of his jersey for his particular team for that particular year will be higher than the previous year where he was not the top run getter.

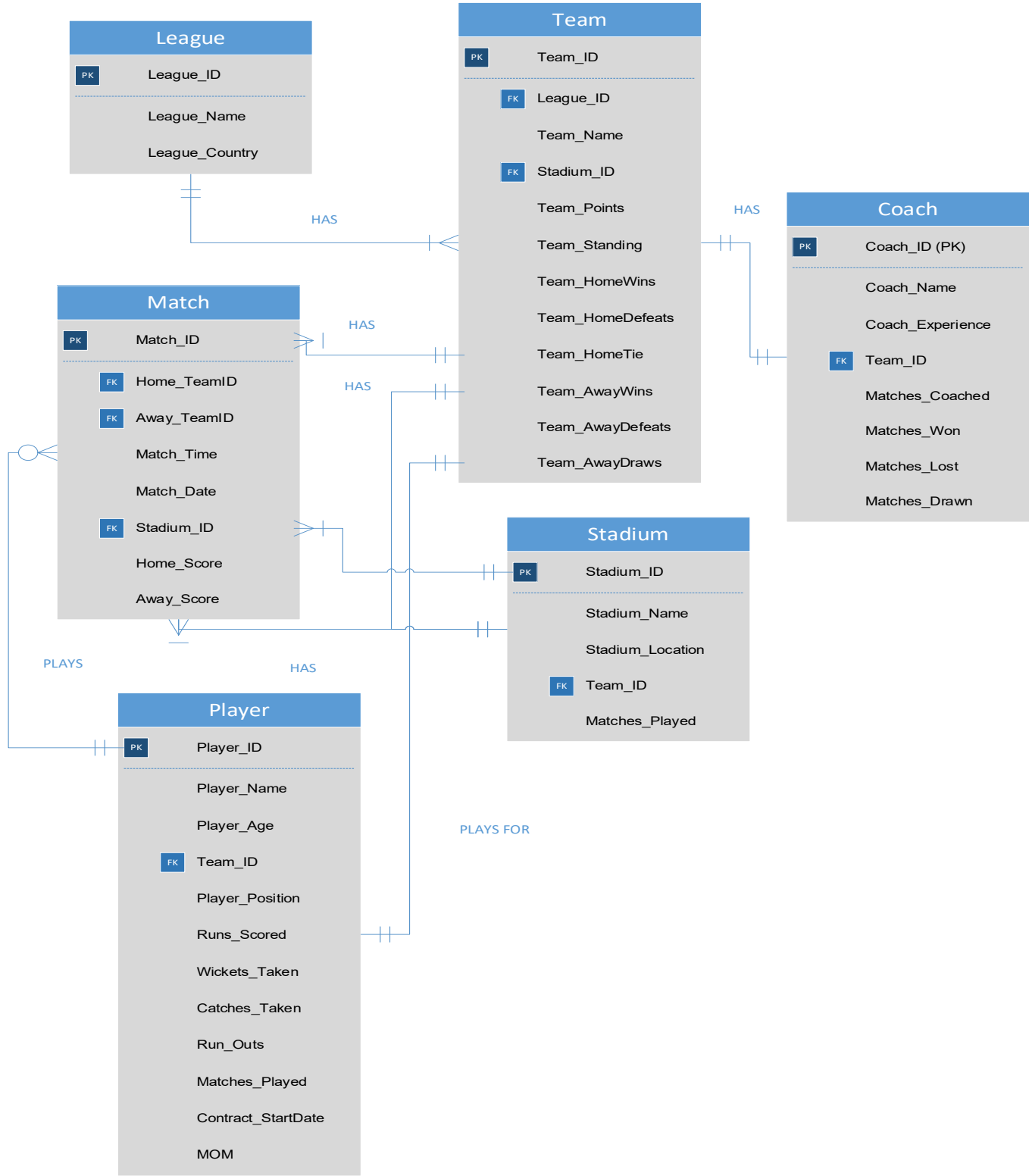So, illustrating the main functions of proposed system:

- Acquire and store the information about teams who are looking for buying players of desired skill.
- Acquire and store the information about players who are looking to play in IPL.
- Acquire the details of matches, stadium and officials.
- A database that records different statistics of players and team

Entities and Attributes Table:

Data object	Explanation
League	**It stores information about the league.**
League_ID (PK)	Unique ID to identify the kind of league
League_Name	It states the name of the league
League_Country	It describes the country in which the league is being played
Team	**It stores information about the team**
Team_ID (PK)	It should be unique
League_ID (FK)	It's a foreign key which describes about which team belongs to which league.
Team_Name	It holds the name of the team
Stadium_ID (FK)	It's a foreign key which holds information about which stadium belongs to which team
Team_Points	Number of points the team has earned in the tournament
Team_Standing	Rank of the team in the tournament
Team_HomeWins	Number of home wins of the team
Team_HomeDefeats	Number of home loses of the team
Team_HomeTie	Number of home ties of the team
Team_AwayWins	Number of away wins of the team
Team_AwayDefeats	Number of away loses of the team
Team_AwayDraws	Number of away ties of the team
Player	It holds information about the players
Player_ID (PK)	It should be unique
Player_Name	It stores the name of the player
Player_Age	It stores the age of the player
Team_ID (FK)	It's a foreign key which holds information about which player belongs to which team
Player_Position	It stores the position of player in the team(eg: captain, bowler, batsman)
Runs_Scored	Number of runs scored by a player
Wickets_Taken	Number of wickets taken by a player
Catches_Taken	Number of catches taken by a player
Run_Outs	Number of run outs by a player
Matches_Played	Number of games played y a team
Contract_StartDate	Contract start date of a player
MOM	Number of awards
Coach	**It holds information about the player**
Coach_ID (PK)	It should be unique
Coach_Name	It holds the name of the coach
Coach_Experience	It holds number of years of coaching
Team_ID (FK)	It's a foreign key which holds information about the team the coach is coaching
Matches_Coached	Number of games coached
Matches_Won	Number of games won under his coaching
Matches_Lost	Number of games lost under his coaching
Matches_Drawn	Number of games drawn under his coaching
Stadium	**It holds information about the stadium**
Stadium_ID (PK)	It must be unique
Stadium_Name	It holds the name of the stadium
Stadium_Location	It holds the location of the stadium

Team_ID (FK)	It's a foreign key which holds the information of the home stadium of a team
Matches_Played	Number of games played at the stadium
Match	**It holds information about a particular match**
Match_ID (PK)	It must be unique
Home_TeamID (FK)	It's a foreign key and holds the information about the home team playing the match
Away_TeamID (FK)	It's a foreign key and it holds the information about the away team playing the match
Match_Date	It hold the date at which the match was played
Match_Time	It holds the timing of the match played
Stadium_ID(FK)	It's a foreign key and holds information about the stadium at which it's played
Home_Score	It holds information about the home score
Away_Score	It holds information about the away score

Entity Relationship Diagram:

League
- PK League_ID
- League_Name
- League_Country

Team
- PK Team_ID
- FK League_ID
- Team_Name
- FK Stadium_ID
- Team_Points
- Team_Standing
- Team_HomeWins
- Team_HomeDefeats
- Team_HomeTie
- Team_AwayWins
- Team_AwayDefeats
- Team_AwayDraws

Coach
- PK Coach_ID (PK)
- Coach_Name
- Coach_Experience
- FK Team_ID
- Matches_Coached
- Matches_Won
- Matches_Lost
- Matches_Drawn

Match
- PK Match_ID
- FK Home_TeamID
- FK Away_TeamID
- Match_Time
- Match_Date
- FK Stadium_ID
- Home_Score
- Away_Score

Stadium
- PK Stadium_ID
- Stadium_Name
- Stadium_Location
- FK Team_ID
- Matches_Played

Player
- PK Player_ID
- Player_Name
- Player_Age
- FK Team_ID
- Player_Position
- Runs_Scored
- Wickets_Taken
- Catches_Taken
- Run_Outs
- Matches_Played
- Contract_StartDate
- MOM

HAS
HAS
HAS
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PLAYS
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PLAYS FOR

<u>BUSINESS RULES:</u>

• A TEAM can only be a part of one and only one league.

• A player can only play for one and only one TEAM

• A TEAM must have one and only one COACH

• A COACH can only COACH one TEAM

• A TEAM must have one and only one STADIUM.

• A STADIUM must belong to one and only one TEAM.

• A match is played between 2 teams only.

• A match must be played on one and only one stadium.

• A match must have 22 players.

• A player can only player 1 match on a particular day, date and time.

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Database Infrastructure:

The database infrastructure is based on client-server model. SQL server is used as the database engine and access is used as the interface design tool. Data is inserted, deleted, updated and queried from the SQL server database with the help of forms on Access. Useful data stored on SQL database can also be viewed with the help of reports generated through access.

SQL SCRIPTS FOR CREATING AND INSERTING SAMPLE DATA:

Create table Leagues

```
Create table Leagues
(
League_ID varchar(50) PRIMARY KEY,
League_Name    varchar (50) NOT NULL,
League_Country    varchar (50) NOT NULL
);
```

CREATE TABLE Teams

```
CREATE TABLE Teams
(

Team_ID varchar(50) Primary key,
League_ID varchar(50) not null,
Team_Name varchar(50) not null,
Stadium_ID varchar(50) not null,
Team_Points int not null,
Team_Standing int not null,
Team_HomeWins  int not null,
Team_HomeDefeats int not null,
Team_HomeTie int not null,
Team_AwayWins    int not null,
Team_AwayDefeats  int not null,
Team_AwayDraws int not null,

constraint Teams_FK_League_ID foreign key (League_ID) references Leagues(League_ID),
);
```

Create table Players

```
create table Players
(
Player_ID varchar(50) Primary key,
Player_Name  varchar(50) not null,
Player_Age            int not null,
Team_ID  varchar(50)  not null,
Player_Position varchar(50) not null,
Runs_Scored  int not null,
Recent_Runs_Scored  int not null,
Wickets_Taken  int not null,
Recent_Wickets_Taken  int not null,
Catches_Taken        int not null,
Recent_Catches_Taken  int not null,
Run_Outs  int not null,
Recent_Run_Outs  int not null,
```

```
Matches_Played   int not null,
Contract_StartDate date not null,
MOM              int not null,
constraint Players_FK_Teams_ID foreign key (Team_ID) references Teams(Team_ID),
);
```

CREATE TABLE Coaches

```
Create Table Coaches
(
Coach_ID varchar(50) PRIMARY KEY,
Coach_Name  varchar(50) not null,
Coach_Experience  int not null,
Team_ID varchar(50) not null,
Matches_Coached int not null,
Matches_Won int not null,
Matches_Lost int not null,
Matches_Drawn int not null,
constraint Coaches_FK_Teams_ID foreign key (Team_ID) references Teams(Team_ID),
);
```

CREATE TABLE Stadiums

```
Create table Stadiums
(
Stadium_ID varchar (50) primary key,
Stadium_Name varchar (50) not null,
Stadium_Location   varchar(50) not null,
Team_ID varchar(50) not null,
Matches_Played    int not null,

constraint Stadiums_FK_Teams_ID foreign key (Team_ID) references Teams(Team_ID),

);
```

CREATE TABLE Matches

```
Create table Matches
(
Match_ID varchar(50) primary key,
Home_TeamID varchar(50) not null,
Away_TeamID varchar(50) not null,
Match_Date     date not null,
Match_Time time not null,
Stadium_ID varchar(50) not null,
Home_Score int not null,
Away_Score int not null,

constraint Stadiums_FK_Home_TeamID foreign key (Home_TeamID) references Teams(Team_ID),
constraint Stadiums_FK_Away_TeamID foreign key (Away_TeamID) references Teams(Team_ID),
constraint Stadiums_FK_Stadium_ID foreign key (Stadium_ID) references
Stadiums(Stadium_ID),

);
```
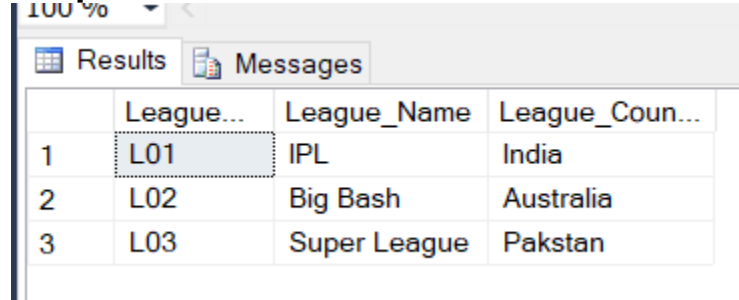
INSERT :

Leagues:

```sql
Create table Leagues
(
League_ID varchar(50) PRIMARY KEY,
League_Name   varchar (50) NOT NULL,
League_Country   varchar (50) NOT NULL
);
```

Output:

	League...	League_Name	League_Coun...
1	L01	IPL	India
2	L02	Big Bash	Australia
3	L03	Super League	Pakstan

Teams:

```sql
select * from Teams
Insert into Teams Values
('T01','L01','Chennai Super Kings','S01',32,1,8,0,0,8,0,0),
('T02','L01','Mumbai Indians','S02',28,2,7,1,0,7,1,0),
('T03','L01','Royal Challengers Mumbai','S03',25,3,6,2,1,6,2,0),
('T04','L01','Pune Warriors','S04',23,4,6,2,0,5,3,1),
('T05','L01','Delhi Daredevils','S05',22,5,3,3,2,7,1,0),
('T06','L02','Perth Scorchers','S06',26,1,7,1,0,6,2,0),
('T07','L02','Brisbane Heat','S07',24,2,8,0,0,4,4,0),
('T08','L02','Melbourne','S08',22,3,5,1,2,3,1,4),
('T09','L02','Sydney Sixers','S09',20,4,3,5,0,7,1,0),
('T10','L03','Karachi Kings','S10',30,1,8,0,0,7,0,0),
('T11','L03','Islamabad United','S11',28,2,7,1,0,6,1,1),
('T12','L03','Peshawar Zalmi','S12',26,3,4,2,2,7,0,2);
```

Output:

	Team_ID	League...	Team_Name	Stadium_...	Team_Poi...	Team_Stand...	Team_HomeW...	Team_HomeDefe...	Team_Home...	Team_AwayWi...	Team_AwayDefe...	Team_AwayDra...
1	T01	L01	Chennai Super Kings	S01	32	1	8	0	1	8	0	0
2	T02	L01	Mumbai Indians	S02	28	2	7	1	0	7	1	0
3	T03	L01	Royal Challengers Mumbai	S03	25	3	6	2	1	6	2	0
4	T04	L01	Pune Warriors	S04	23	4	6	2	0	5	3	1
5	T05	L01	Delhi Daredevils	S05	22	5	3	3	2	7	1	0
6	T06	L02	Perth Scorchers	S06	26	1	7	1	0	6	2	0
7	T07	L02	Brisbane Heat	S07	24	2	8	0	0	4	4	0
8	T08	L02	Melbourne	S08	22	3	5	1	2	3	1	4
9	T09	L02	Sydney Sixers	S09	20	4	3	5	0	7	1	0
10	T10	L03	Karachi Kings	S10	30	1	8	0	0	7	0	0
11	T11	L03	Islamabad United	S11	28	2	7	1	0	6	1	1
12	T12	L03	Peshawar Zalmi	S12	26	3	4	2	2	7	0	2

Stadiums:

```sql
INsert into Stadiums values
('S01','M A Chidambaram Stadium','Chennai','T01',8),
('S02','Wankhede','Mumbai','T02',8),
('S03','M Chinnaswamy','Bangalore','T03',8),
('S04','Sahara Cricket Assocition','Pune','T04',8),
('S05','Feroz Shah Kotla','Delhi','T05',8),
```

```
('S06','Optus Stadium','Perth','T06',8),
('S07','The Gabba','Brisbane','T07',8),
('S08','Melbourne Cricket Ground','Melbourne','T08',8),
('S09','Sydeney Cricket Ground','Sydney','T09',8),
('S10','Dubai Interational Crcket Ground','Dubai','T10',8),
('S11','Sharjah Cricket Association','Sharjah','T11',8),
('S12','Gaddafi Stadium','Lahore','T12',8);
```

Output:

	Stadium_ID	Stadium_Name	Stadium_Locat...	Team_...	Matches_Play...
1	S01	M A Chidambaram Stadium	Chennai	T01	8
2	S02	Wankhede	Mumbai	T02	8
3	S03	M Chinnaswamy	Bangalore	T03	8
4	S04	Sahara Cricket Assocition	Pune	T04	8
5	S05	Feroz Shah Kotla	Delhi	T05	8
6	S06	Optus Stadium	Perth	T06	8
7	S07	The Gabba	Brisbane	T07	8
8	S08	Melbourne Cricket Ground	Melbourne	T08	8
9	S09	Sydeney Cricket Ground	Sydney	T09	8
10	S10	Dubai Interational Crcket Ground	Dubai	T10	8
11	S11	Sharjah Cricket Association	Sharjah	T11	8
12	S12	Gaddafi Stadium	Lahore	T12	8

Coaches:

```
select * from Coaches
Insert  into Coaches values
('C01','Stephen Flemming',10,'T01',50,35,10,5),
('C02','Mahela Jayawardene',12,'T02',45,35,10,0),
('C03','Daniel Vettori',7,'T03',70,55,10,5),
('C04','Tom Moody',11,'T04',59,35,24,0),
('C05','Virender Sehwag',8,'T05',50,25,24,1),
('C06','Jacques Kallis',6,'T06',75,35,33,2),
('C07','Ricky Ponting',15,'T07',150,115,20,15),
('C08','Jason gillespie',12,'T08',100,56,44,0),
('C09','Matthew Hyden',18,'T09',50,20,25,5),
('C10','Shoab Akhtar',10,'T10',89,35,50,4),
('C11','Mohammed Asif',7,'T11',90,45,42,3),
('C12','Abdul Razzaq',4,'T12',30,28,1,1);
```

Output:

	Coach_ID	Coach_Name	Coach_Experie...	Team_...	Matches_Coac...	Matches_W...	Matches_L...	Matches_Dra...
1	C01	Stephen Flemming	10	T01	50	35	10	5
2	C02	Mahela Jayawardene	12	T02	45	35	10	0
3	C03	Daniel Vettori	7	T03	70	55	10	5
4	C04	Tom Moody	11	T04	59	35	24	0
5	C05	Virender Sehwag	8	T05	50	25	24	1
6	C06	Jacques Kallis	6	T06	75	35	33	2
7	C07	Ricky Ponting	15	T07	150	115	20	15
8	C08	Jason gillespie	12	T08	100	56	44	0
9	C09	Matthew Hyden	18	T09	50	20	25	5
10	C10	Shoab Akhtar	10	T10	89	35	50	4
11	C11	Mohammed Asif	7	T11	90	45	42	3
12	C12	Abdul Razzaq	4	T12	30	28	1	1

Players:

```
Insert into Players  values
('P01','MS Dhoni',36,'T01','Batsman',1470,25,0,0,25,5,17,2,38,'2016-11-11',8);

('P02','Virat Kohli',32,'T01','Batsman',2320,35,23,1,36,5,17,2,45,'2016-08-11',18),
('P03','Manish Pandey',26,'T01','Batsman',2678,25,3,1,45,5,10,2,48,'2016-12-11',8),
('P04','Sachin Tendulkar',28,'T02','Batsman',1234,23,0,0,25,5,17,2,38,'2016-05-11',8),
('P05','Anil Kumble',20,'T02','Bowler',470,5,100,2,15,1,7,1,48,'2016-04-11',8),

('P06','zaheer Khan',18,'T03','Bowler',356,15,30,2,45,1,12,0,58,'2016-01-11',8),

('P07','Dineh Karthik',29,'T03','Batsman',345,15,4,1,12,5,11,2,65,'2016-02-11',8),
('P08','Murali Vijay',36,'T03','Batsman',3470,25,10,1,13,5,7,1,44,'2016-03-11',8),
('P09','Rohit Sharma',34,'T04','Batsman',1473,22,22,2,18,3,17,2,77,'2016-04-11',8),
('P10','Bumrah',32,'T04','Bowler',170,3,29,2,22,2,18,0,45,'2016-05-11',8),
('P11','Chahal',16,'T05','Bowler',370,21,57,4,35,3,13,3,23,'2016-06-11',8),
('P12','Dhawan',19,'T05','Batsman',2347,57,1,1,22,3,14,2,15,'2016-10-11',8),
('P13','Pandya',32,'T05','Bowler',237,5,46,2,15,5,7,2,11,'2016-11-11',8),
('P14','Watson',27,'T06','Batsman',1280,33,3,0,12,2,17,1,38,'2016-09-11',8),
('P15','Brett Lee',39,'T06','Bowler',670,3,200,1,11,5,19,0,39,'2016-08-11',8),
('P16','Starc',24,'T07','Bowler',1210,19,34,2,18,2,14,2,48,'2016-07-11',8),

('P17','Warner',23,'T07','Batsman',2376,23,3,0,25,1,12,1,53,'2016-11-11',8),
('P18','Clarke',26,'T08','Batsman',1476,24,61,2,25,5,11,2,28,'2016-11-11',8),
('P19','Maxwell',29,'T08','Bowler',234,35,23,4,25,5,10,2,111,'2016-10-11',8),
('P20','Cummins',21,'T08','Batsman',3467,23,4,0,15,1,7,0,19,'2016-11-11',8),
('P21','Shehzad',18,'T09','Batsman',2250,11,2,2,22,2,9,3,28,'2016-10-11',8),
('P22','Ahmed',32,'T09','Bowler',474,22,100,0,23,2,9,2,78,'2016-10-11',8),
('P23','Salman',31,'T10','Batsman',4947,78,19,2,35,2,5,0,88,'2016-09-11',8),
('P24','Qurehi',29,'T10','Bowler',110,2,76,2,5,1,6,1,98,'2016-08-11',8),
('P25','Khan',26,'T11','Batsman',2337,28,0,0,25,0,13,2,46,'2016-08-11',8),
('P26','Javed',28,'T11','Bowler',122,23,18,1,5,2,18,1,74,'2016-06-11',8),
('P27','Pathan',25,'T12','Bowler',141,56,80,3,55,2,17,1,87,'2016-04-11',8);
```

Output:

	Player_ID	Player_Name	Player_A...	Team_...	Player_Positi...	Runs_Sco...	Recent_Runs_Sco...	Wickets_Ta...	Recent_Wickets_Ta...	Catches_Tak...	Recent_Catches_Ta...	Run_O...	Recent_Run_O...	Matches_Pl
1	P01	MS Dhoni	36	T01	Captain	1470	25	0	0	25	5	17	2	38
2	P02	Virat Kohli	32	T01	Batsman	2320	35	23	1	36	5	17	2	45
3	P03	Manish Pandey	26	T01	Batsman	2678	25	3	1	45	5	10	2	48
4	P04	Sachin Tendulkar	28	T02	Batsman	1234	23	0	0	25	5	17	2	38
5	P05	Anil Kumble	20	T02	Bowler	470	5	100	2	15	1	7	1	48
6	P06	zaheer Khan	18	T03	Bowler	356	15	30	2	45	1	12	0	58
7	P07	Dineh Karthik	29	T03	Batsman	345	15	4	1	12	5	11	2	65
8	P08	Murali Vijay	36	T03	Batsman	3470	25	10	1	13	5	7	1	44
9	P09	Rohit Sharma	34	T04	Batsman	1473	22	22	2	18	3	17	2	77
10	P10	Bumrah	32	T04	Bowler	170	3	29	2	22	2	18	0	45
11	P11	Chahal	16	T05	Bowler	370	21	57	4	35	3	13	3	23
12	P12	Dhawan	19	T05	Batsman	2347	57	1	1	22	3	14	2	15
13	P13	Pandya	32	T05	Bowler	237	5	46	2	15	5	7	2	11
14	P14	Watson	27	T06	Batsman	1280	33	3	0	12	2	17	1	38

Matches:

```sql
select * from Matches
iNSERT INTO Matches values
('M01','T01','T02','2018-06-07','7:00:00.0000000','S01',220,221),

insert into Matches values
('M02','T02','T01','2018-03-07','8:30:00.0000000','S02',212,123),
('M03','T03','T02','2018-04-07','6:45:00.0000000','S03',167,169),
('M04','T04','T03','2018-05-07','6:45:00.0000000','S04',167,123),
('M05','T02','T05','2018-06-07','6:45:00.0000000','S02',178,157),
('M06','T02','T04','2018-07-07','8:30:00.0000000','S02',122,123),
('M07','T01','T05','2018-10-07','7:00:00.0000000','S01',239,240),

('M08','T06','T07','2018-11-07','7:00:00.0000000','S06',145,132),
('M09','T07','T08','2018-12-07','8:30:00.0000000','S07',229,211),
('M10','T08','T07','2018-01-07','6:45:00.0000000','S08',125,123),
('M11','T08','T06','2018-02-07','8:30:00.0000000','S08',152,154),
('M12','T09','T06','2018-04-07','8:30:00.0000000','S09',174,176),
('M13','T06','T09','2018-05-07','7:00:00.0000000','S06',153,221),
('M14','T06','T08','2018-06-07','8:30:00.0000000','S06',138,211),
('M15','T07','T09','2018-08-07','7:00:00.0000000','S07',211,222),
('M16','T10','T11','2018-11-07','8:30:00.0000000','S10',127,221),
('M17','T11','T12','2018-12-07','6:45:00.0000000','S11',134,229),
('M18','T10','T12','2018-10-07','7:00:00.0000000','S10',212,173),
('M19','T11','T10','2018-06-07','6:45:00.0000000','S11',220,221),
('M20','T12','T10','2018-02-07','6:45:00.0000000','S12',119,222);
```

Output:

Results | Messages

	Match_ID	Home_Tea...	Away_Team...	Match_Date	Match_Time	Stadium_...	Home_Sc...	Away_Sco...
1	M01	T01	T02	2018-06-07	07:00:00.0000000	S01	220	221
2	M02	T02	T01	2018-03-07	08:30:00.0000000	S02	212	123
3	M03	T03	T02	2018-04-07	06:45:00.0000000	S03	167	169
4	M04	T04	T03	2018-05-07	06:45:00.0000000	S04	167	123
5	M05	T02	T05	2018-06-07	06:45:00.0000000	S02	178	157
6	M06	T02	T04	2018-07-07	08:30:00.0000000	S02	122	123
7	M07	T01	T05	2018-10-07	07:00:00.0000000	S01	239	240
8	M08	T06	T07	2018-11-07	07:00:00.0000000	S06	145	132
9	M09	T07	T08	2018-12-07	08:30:00.0000000	S07	229	211
10	M10	T08	T07	2018-01-07	06:45:00.0000000	S08	125	123
11	M11	T08	T06	2018-02-07	08:30:00.0000000	S08	152	154
12	M12	T09	T06	2018-04-07	08:30:00.0000000	S09	174	176
13	M13	T06	T09	2018-05-07	07:00:00.0000000	S06	153	221
14	M14	T06	T08	2018-06-07	08:30:00.0000000	S06	138	211
15	M15	T07	T09	2018-08-07	07:00:00.0000000	S07	211	222

Major Data Questions:

➡ **Who can Input the data**

➢ The league officials

➢ Administrative staff

➡ **Who can query the data**

➢ The League officials

➢ Administrative staff

➢ Team owners

➢ Fans

Why a fan queries the database:

 To find match fixtures between different teams, what day, date and time the matches are held.

To view which players play for which club.?

To view who is the most valuable player

To view the team with most points

To view the young players from a particular team with good number of runs

Why the league officials query the database:

 To set which players are playing which matches (on what day, date and time the match is between which teams and on which stadium the match is held and played by which player)

To reward the most valuable player

To reward the player from a particular team with most wins

To view the team with most points

Data Questions:

Teams with most number of wins in each league with their points.

Which team has won most number of matches?

Which player has won most number of matches?(n)

Which palyer has scored most number of runs in minimum number of matches ?

Which palyer has taken most number of wickets in minimum number of matches?

Which palyer has taken most number of catches in minimum number of matches**?**

RELATIONSHIP DIAGRAM:

ER Diagram - sql
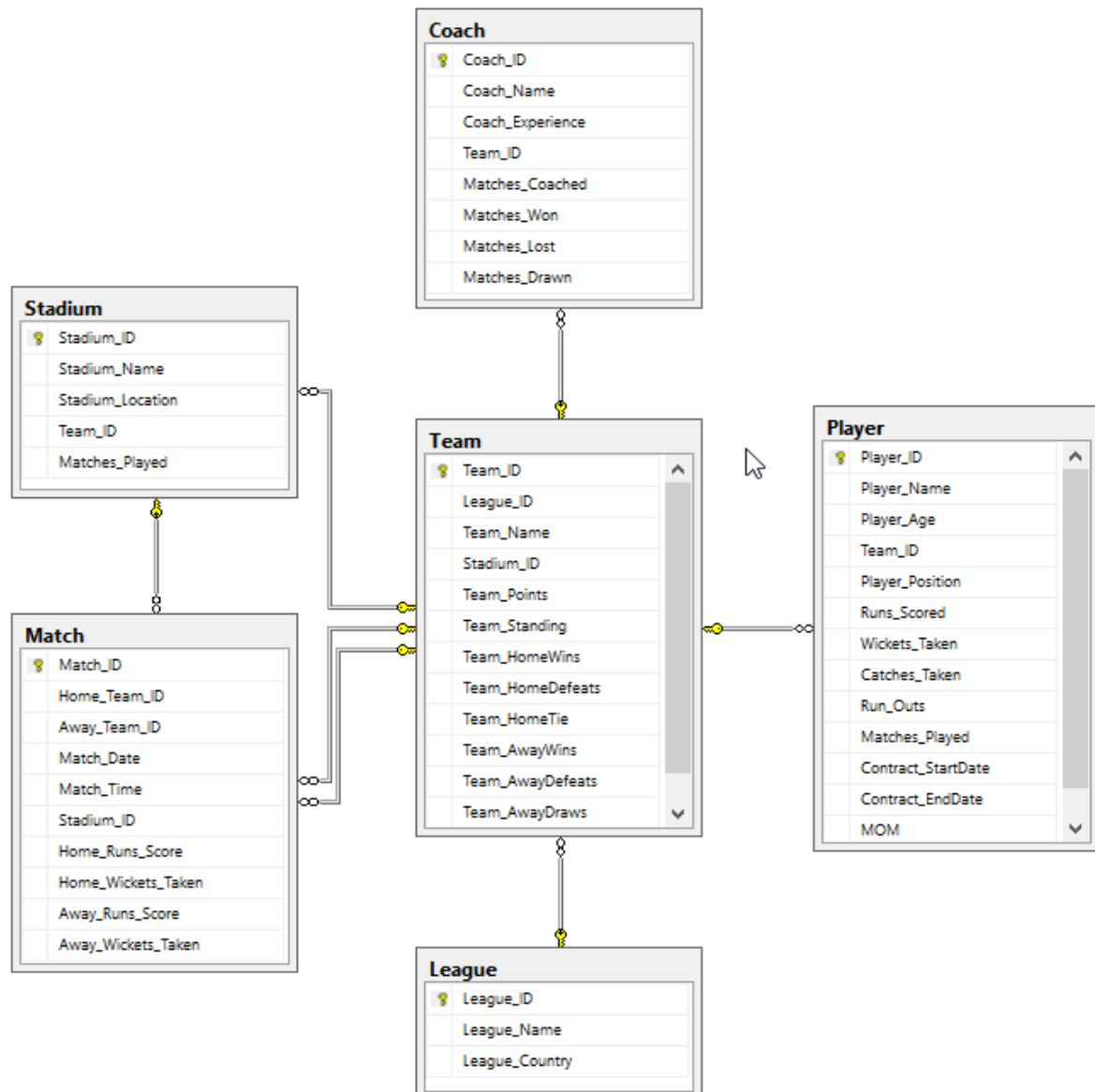
ER Diagram – Access Relationship Diagram
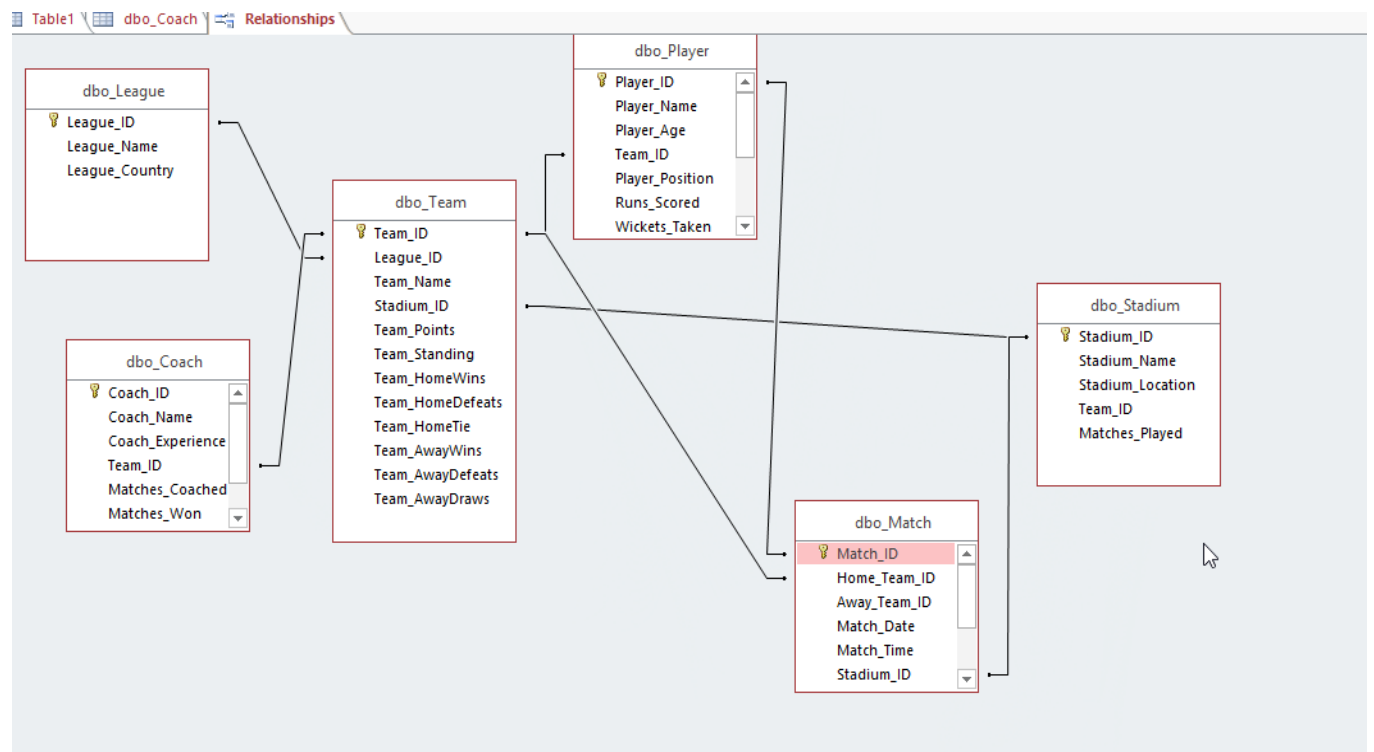
FORMS AND REPORTS:

Forms for Administration and Owners to enter new data about various entities:

Coaches:

Insert Coache Details

Coach_ID

Coach_Name

Coach_Experience

Team_ID

Matches_Coached

Matches_Won

Matches_Lost

Matches_Drawn

Teams:

Insert Teams

Team_ID

League_ID

Team_Name

Stadium_ID

Team_Points

Team_Standing

Team_HomeWins

Team_HomeDefeats

Team_HomeTie

Team_AwayWins

Team_AwayDefeats

Team_AwayDraws

Matches:

Insert Matche details

Match_ID	
Home_TeamID	
Away_TeamID	
Match_Date	
Match_Time	
Stadium_ID	
Home_Score	
Away_Score	

Players:

Insert Player details

Player_ID

Player_Name

Player_Age

Team_ID

Player_Position

Runs_Scored

Recent_Runs_Scored

Wickets_Taken

Recent_Wickets_Taken

Catches_Taken

Recent_Catches_Taken

Run_Outs

Recent_Run_Outs

Matches_Played

Contract_StartDate

Leagues:

Insert LeagueDetails

League_ID   L01

League_Name   IPL

League_Country   India

Team_Name   Chennai Super Kings

Stadiums:

Insert Stadium details

Stadium_ID

Stadium_Name

Stadium_Location

Team_ID

Matches_Played

Fan forms: Forms are made for fan to view players, teams coaches and details of the match. Forms are designed in such a way that only by entering one attribute of a particular entity all the details can be obtained.

Coach Form: On selecting the ID from the combo box, all the details related to that ID will be showed in the form. On clicking the button a report will be generated showing all the coaches in the leagues.

Coaches

Select Coach ID	C04

Coach_ID	C04
Coach_Name	Tom Moody
Coach_Experier	11
Team_ID	T04
Matches_Coach	59
Matches_Won	35
Matches_Lost	24
Matches_Drawn	0

Show all the Coaches

Report:

CoachDetails

Sunday, December 9, 2018
4:43:00 AM

Coach_ID	Coach_Name	Team_Name	ach_Experience	atches_Won	Matches_Lost	atches_Drawn
C01	Stephen Flemming	Chennai Super Kings	10	35	10	5
C02	Mahela Jayawardene	Mumbai Indians	12	35	10	0
C03	Daniel Vettori	Royal Challengers Mumbai	7	55	10	5
C04	Tom Moody	Pune Warriors	11	35	24	0
C05	Virender Sehwag	Delhi Daredevils	8	25	24	1
C06	Jacques Kallis	Perth Scorchers	6	35	33	2
C07	Ricky Ponting	Brisbane Heat	15	115	20	15
C08	Jason gillespie	Melbourne	12	56	44	0
C09	Matthew Hyden	Sydney Sixers	18	20	25	5
C10	Shoab Akhtar	Karachi Kings	10	35	50	4
C11	Mohammed Asif	Islamabad United	7	45	42	3
C12	Abdul Razzaq	Peshawar Zalmi	4	28	1	1

Page 1 of 1

Stdium Form: On selecting the ID from the combo box, all the details related to that ID will be showed in the form. On clicking the button a report will be generated showing all the stadium in the leagues.

Stadiums

Select the Stadium ID | S03 | [v] | **ALL Stadiums**

Stadium_ID   S03

Stadium_Name   M Chinnaswamy

Stadium_Locati(Bangalore

Team_ID   T03

Matches_Playe   8

Report:

StadiumDetails			Sunday, December 9, 2018 4:39:51 AM			
Stadium_ID	Stadium_Name	Stadium_Location	Team_ID	atches_Played	Team_Name	
S01	M A Chidambaram Stadium	Chennai	T01	8	Chennai Super Kings	
S02	Wankhede	Mumbai	T02	8	Mumbai Indians	
S03	M Chinnaswamy	Bangalore	T03	8	Royal Challengers Mumbai	
S04	Sahara Cricket Assocition	Pune	T04	8	Pune Warriors	
S05	Feroz Shah Kotla	Delhi	T05	8	Delhi Daredevils	
S06	Optus Stadium	Perth	T06	8	Perth Scorchers	
S07	The Gabba	Brisbane	T07	8	Brisbane Heat	
S08	Melbourne Cricket Ground	Melbourne	T08	8	Melbourne	
S09	Sydeney Cricket Ground	Sydney	T09	8	Sydney Sixers	
S10	Dubai Interational Crcket Ground	Dubai	T10	8	Karachi Kings	
S11	Sharjah Cricket Association	Sharjah	T11	8	Islamabad United	
S12	Gaddafi Stadium	Lahore	T12	8	Peshawar Zalmi	

Team Form: On selecting the ID from the combo box, all the details related to that ID will be showed in the form. On clicking the button a report will be generated showing all the teams in the leagues.

Select Team I   [T03] [▼]

Team_ID	T03		Team_Name	Royal Challengers Mumbai
League_ID	L01		Stadium_ID	S03
Team_HomeTie	1		Team_Points	25
Team_AwayWins	6		Team_Standing	3
Team_AwayDefe	2		Team_HomeWins	6
Team_AwayDraw	0		Team_HomeDefe	2

Players Form: On selecting the name from the combo box, all the details related to that player name will be showed in the form. On clicking the button a report will be generated showing all the players in the leagues.

Players

Player		Select Player Name	Sachin Tendulk [▼]				
Player_ID	P04	Recent_Runs_Score	23	MOM	8
Player_Name	Sachin Tendulkar	Wickets_Taken	0	Matches_F	38
Player_Age	28	Recent_Wickets_Tak	0		
Team_ID	T02	Catches_Taken	25		
Player_Position	Batsman	Recent_Catches_Tc	5		
Runs_Scored	1234	Run_Outs	17		
Contract_StartDate	2016-05-11	Recent_Run_Outs	2		

Report:

PlayerDetails				Sunday, December 9, 2018 4:45:00 AM				
Player_ID	Player_Name	Player_Age	Team_ID	Player_Position	Runs_Scored	cent_Runs_Scored	Wickets_Taken	nt_Wickets_Taken
P01	MS Dhoni	36	T01	Captain	1470	25	0	0
P02	Virat Kohli	32	T01	Batsman	2320	35	23	1
P03	Manish Pandey	26	T01	Batsman	2678	25	3	1
P04	Sachin Tendulkar	28	T02	Batsman	1234	23	0	0
P05	Anil Kumble	20	T02	Bowler	470	5	100	2
P06	zaheer Khan	18	T03	Bowler	356	15	30	2
P07	Dineh Karthik	29	T03	Batsman	345	15	4	1
P08	Murali Vijay	36	T03	Batsman	3470	25	10	1
P09	Rohit Sharma	34	T04	Batsman	1473	22	22	2
P10	Bumrah	32	T04	Bowler	170	3	29	2
P11	Chahal	16	T05	Bowler	370	21	57	4
P12	Dhawan	19	T05	Batsman	2347	57	1	1
P13	Pandya	32	T05	Bowler	237	5	46	2
P14	Watson	27	T06	Batsman	1280	33	3	0
P15	Brett Lee	39	T06	Bowler	670	3	200	1
P16	Starc	24	T07	Bowler	1210	19	34	2
P17	Warner	23	T07	Batsman	2376	23	3	0
P18	Clarke	26	T08	Batsman	1476	24	61	2

Matches Form: On selecting the date from the combo box, all the details related to that date will be showed in the form. On clicking the button a report will be generated showing all the coaches in the leagues.

Matches

Select the Match Date   2018-04-07   ⌄   All Match

2018-04-07
2018-05-07
2018-06-07
2018-07-07
2018-10-07
2018-11-07
2018-12-07

Match_ID   M03   2018-01-07
                         2018-02-07
Home_Team   T03   2018-04-07
                         2018-05-07
Away_Team   T02   2018-06-07
                         2018-08-07
Match_Date   2018-04-07 2018-11-07
                         2018-12-07
Match_Time   06:45:00.0 2018-10-07

Stadium_ID   S03

Report:

Match_ID	Home_TeamID	Expr1002	Match_Date	Match_Time	Away_TeamID
			MatchDetails	Sunday, December 9, 2018 4:41:04 AM	
M01	T01	T02	2018-06-07	07:00:00.0000000	T02
M02	T02	T01	2018-03-07	08:30:00.0000000	T01
M03	T03	T02	2018-04-07	06:45:00.0000000	T02
M04	T04	T03	2018-05-07	06:45:00.0000000	T03
M05	T02	T05	2018-06-07	06:45:00.0000000	T05
M06	T02	T04	2018-07-07	08:30:00.0000000	T04
M07	T01	T05	2018-10-07	07:00:00.0000000	T05
M08	T06	T07	2018-11-07	07:00:00.0000000	T07
M09	T07	T08	2018-12-07	08:30:00.0000000	T08
M10	T08	T07	2018-01-07	06:45:00.0000000	T07
M11	T08	T06	2018-02-07	08:30:00.0000000	T06
M12	T09	T06	2018-04-07	08:30:00.0000000	T06
M13	T06	T09	2018-05-07	07:00:00.0000000	T09
M14	T06	T08	2018-06-07	08:30:00.0000000	T08
M15	T07	T09	2018-08-07	07:00:00.0000000	T09
M16	T10	T11	2018-11-07	08:30:00.0000000	T11
M17	T11	T12	2018-12-07	06:45:00.0000000	T12
M18	T10	T12	2018-10-07	07:00:00.0000000	T12

Leagues Form: On selecting the ID from the combo box, all the details related to that ID will be showed in the form. On clicking the button a report will be generated showing all the leagues in the leagues.

Leagues

Select League	L02		Show League

League_ID	L02
League_Name	Big Bash
League_Coun	Australia

Report:

League_ID	League_Name	League_Country	Team_Name
L01	IPL	India	Chennai Super Kings
L01	IPL	India	Delhi Daredevils
L01	IPL	India	Mumbai Indians
L01	IPL	India	Pune Warriors
L01	IPL	India	Royal Challengers Mumbai
L02	Big Bash	Australia	Brisbane Heat
L02	Big Bash	Australia	Melbourne
L02	Big Bash	Australia	Perth Scorchers
L02	Big Bash	Australia	Sydney Sixers
L03	Super League	Pakstan	Islamabad United
L03	Super League	Pakstan	Karachi Kings
L03	Super League	Pakstan	Peshawar Zalmi

LeagueDetails — Sunday, December 9, 2018 — 4:41:53 AM

Various Forms and reports are made to find the statistics and answer major data questions:

Main Form:

All Player and Team Statistics

Highest Catches   Top Run scores   Top Wicket takers

Highest Run Outs   Top Teams
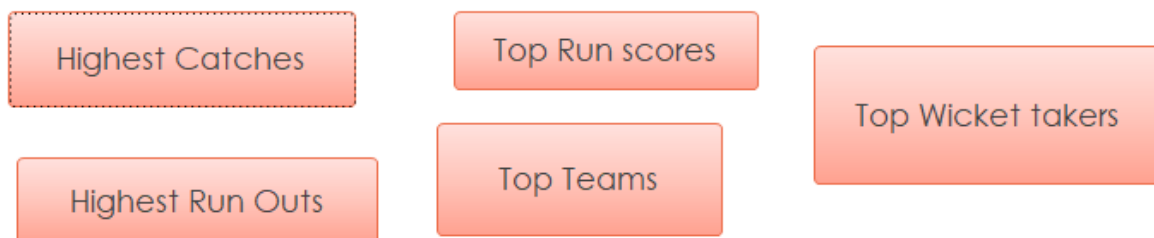
1. **Highest Run Scorers:**
   (
   SELECT dbo_Players.Player_Name, dbo_Players.Runs_Scored
   FROM dbo_Players
   ORDER BY dbo_Players.Runs_Scored DESC;
)

Top Run scorers1

Player_Name	Runs_Scored
Salman	4947
Murali Vijay	3470
Cummins	3467
Manish Pandey	2678
Warner	2376
Dhawan	2347
Khan	2337
Virat Kohli	2320
Shehzad	2250
Clarke	1476
Rohit Sharma	1473
MS Dhoni	1470
Watson	1280
Sachin Tendulkar	1234
Starc	1210
Brett Lee	670
Ahmed	474

2. **Highest Wicket Taker**
   (
   SELECT dbo_Players.Player_Name, dbo_Players.Runs_Scored
   FROM dbo_Players
   ORDER BY dbo_Players.Runs_Scored DESC;
)

Top Wicket takers2

Player_Name	Wickets_Taken
Brett Lee	200
Ahmed	100
Anil Kumble	100
Pathan	80
Qurehi	76
Clarke	61
Chahal	57
Pandya	46
Starc	34
zaheer Khan	30
Bumrah	29
Virat Kohli	23
Maxwell	23
Rohit Sharma	22
Salman	19
Javed	18
Murali Vijay	10

3. **Highest Catch Taker**
   (SELECT dbo_Players.Player_Name, dbo_Players.Catches_Taken
   FROM dbo_Players
   ORDER BY dbo_Players.Catches_Taken DESC;)

Highest Catches Taken2

Player_Name	Catches_Taken
Pathan	55
Manish Pandey	45
zaheer Khan	45
Virat Kohli	36
Chahal	35
Salman	35
Khan	25
Warner	25
Clarke	25
Maxwell	25
MS Dhoni	25
Sachin Tendulkar	25
Ahmed	23
Shehzad	22
Bumrah	22
Dhawan	22
Rohit Sharma	18

4. **Highest Run outs**
   (
   SELECT dbo_Players.Run_Outs, dbo_Players.Player_Name
   FROM dbo_Players
   ORDER BY dbo_Players.Run_Outs DESC;
)

Highest Run Outs

Run_Outs	Player_Name
19	Brett Lee
18	Bumrah
18	Javed
17	Pathan
17	MS Dhoni
17	Virat Kohli
17	Sachin Tendulkar
17	Rohit Sharma
17	Watson
14	Dhawan
14	Starc
13	Chahal
13	Khan
12	zaheer Khan
12	Warner
11	Clarke
11	Dineh Karthik

5. **Top Teams**
   (
   SELECT dbo_Teams.Team_Name, dbo_Teams.Team_Points
   FROM dbo_Teams
   ORDER BY dbo_Teams.Team_Points DESC;)

Top Teams1

Team_Name	Team_Points
Chennai Super Kings	32
Karachi Kings	30
Islamabad United	28
Mumbai Indians	28
Perth Scorchers	26
Peshawar Zalmi	26
Royal Challengers Mumbai	25
Brisbane Heat	24
Pune Warriors	23
Delhi Daredevils	22
Melbourne	22
Sydney Sixers	20

Top teams in each league with their points and standings:

Standings

League_ID	League_Name	League_Country	Team_ID	Team_Name	n_Points	ng
L01	IPL	India				
			T05	Delhi Daredevils	22	5
			T04	Pune Warriors	23	4
			T03	Royal Challenge	25	3
			T02	Mumbai Indians	28	2
			T01	Chennai Super Ki	32	1

Summary for 'League_ID' = L01 (5 detail records)

Max					32	5
L02	Big Bash	Australia				
			T09	Sydney Sixers	20	4
			T08	Melbourne	22	3
			T07	Brisbane Heat	24	2
			T06	Perth Scorchers	26	1

Summary for 'League_ID' = L02 (4 detail records)

Max					26	4
L03	Super League	Pakstan				
			T12	Peshawar Zalmi	26	3
			T11	Islamabad Unite	28	2
			T10	Karachi Kings	30	1

Summary for 'League_ID' = L03 (3 detail records)

Max					30	3

TRIGGERS:

Before Update:

Points are 27

	Team_ID	League_ID	Team_Name	Stadium_ID	Team_Points	Team_Standing	Team_HomeWins	Team_HomeDefeats	Team_HomeTie	Team_AwayWins	Team_AwayDefeats	Team_AwayDraws
1	T01	L01	Chennai Super Kings	S01	27	1	8	3	1	5	1	0
2	T02	L01	Mumbai Indians	S02	23	3	5	6	1	6	1	0
3	T03	L01	Pune Warriors	S03	25	1	7	3	1	5	1	0
4	T04	L02	Brisbane Heats	S04	19	1	4	3	1	5	1	0
5	T05	L02	Sydney Sixers	S05	15	3	2	3	0	5	1	1
6	T06	L03	Lahore Lions	S06	22	1	8	3	0	3	1	0
7	T07	L03	Islamabad Tigers	S07	18	2	3	1	1	5	1	1
8	T08	L04	Trindad Titans	S08	20	1	8	3	0	2	7	0
9	T09	L04	Jamaica Tallawahs	S09	12	3	3	6	1	2	5	1
10	T10	L05	Somerset Club	S10	32	1	8	3	0	8	2	0
11	T11	L05	Sussex11	S11	22	4	8	3	0	2	1	0
12	T12	L05	Yorkshire11	S12	26	2	8	4	0	5	4	0

Query executed successfully.   ist-s-students (12.0 SP2) | AD\hrdarji (183) | IST659_M002_hrdarji | 00:00:00 | 12 rows

Trigger:

select * from Player

SELECT * FROM Team

go

create trigger updateTeam

on Team

after update, insert

as

begin

declare @flag int

select @flag=i.Team_HomeTie from inserted i

update Team

SET Team_Points=Team_Points + @flag

where Team_ID in (select Team_ID

from inserted)

end

go

update Team Set Team_HomeTie=1 where Team_ID ='T01';

After Update:

Points are 28