

**Symbiosis Institute of Technology**

**DBMS Project Report 2 on**

**IPL 2020**



Submitted by

**SIDDHARTH VYAS - 18070124067**

**SRIJAN CHADHA - 18070124069**

**VIBHOR BHARGAVA – 18070124076**

Under the Guidance of

**Mrs. SHRUTI PATIL**

**Department of Information Technology**

**SYMBIOSIS INSTITUTE OF TECHNOLOGY, PUNE (2018-2022)**

# Index

1) Functional Dependencies and Anomalies.....	(2)
2) Normalization.....	(16)
3) Implementation of Tables.....	(22)
4) Queries, Functions, Procedures and Triggers.....	(26)
4.1 Queries.....	(26)
4.2 Functions.....	(36)
4.3 Procedures.....	(39)
4.4 Triggers.....	(41)

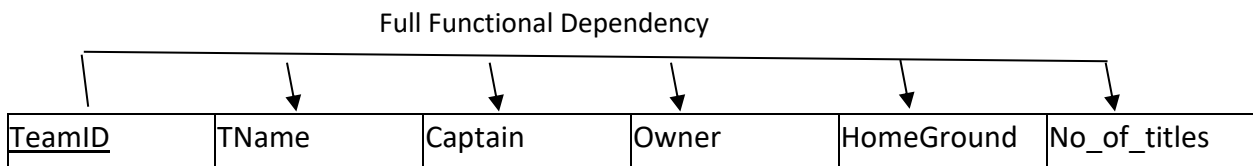
---

## 1) Functional Dependencies and Anomalies

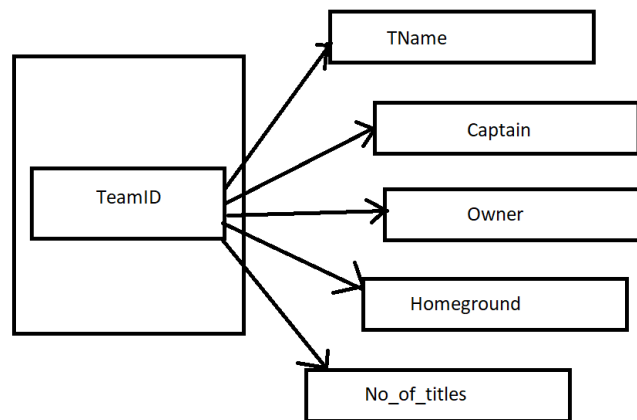
### i) Teams

<u>TeamID</u>	TName	Captain	Owner	HomeGround	No_of_titles
---------------	-------	---------	-------	------------	--------------

**Functional Dependencies:**



**Functional Dependency Chart:**



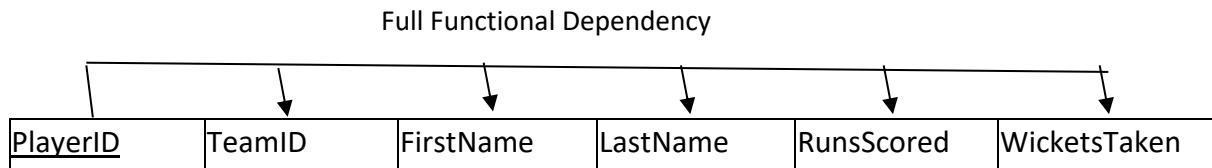
**Anomalies:**

Insertion	A new team cannot be added unless it has a TeamID.
Deletion	If we remove a team id we lose information about the existence of the team.
Modification	No modification anomaly.

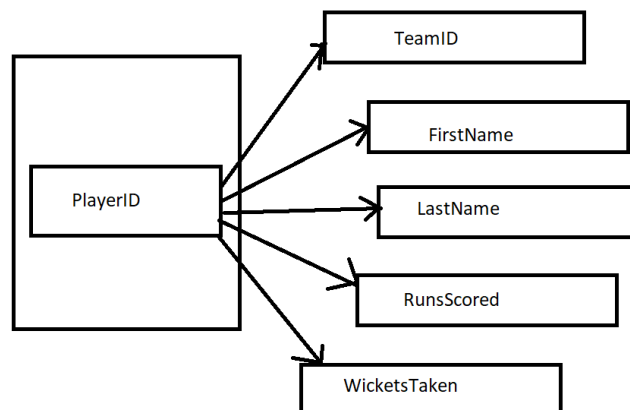
## ii) Players

<u>PlayerID</u>	TeamID	FirstName	LastName	RunsScored	WicketsTaken
-----------------	--------	-----------	----------	------------	--------------

### Functional Dependencies:



### Functional Dependency Chart:



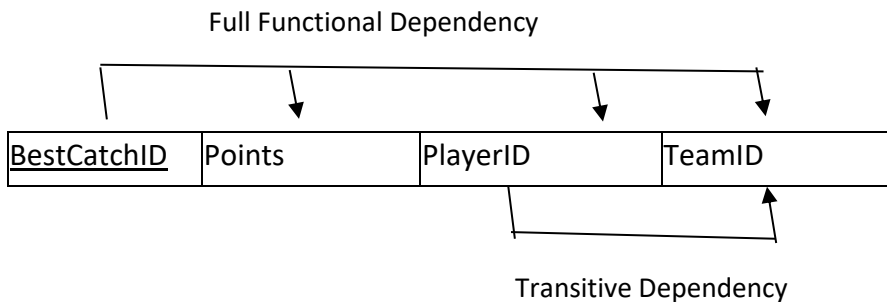
### Anomalies:

Insertion	A new player cannot be added unless it has a player id.
Deletion	If we remove a player id we lose information about that player.
Modification	No modification anomaly.

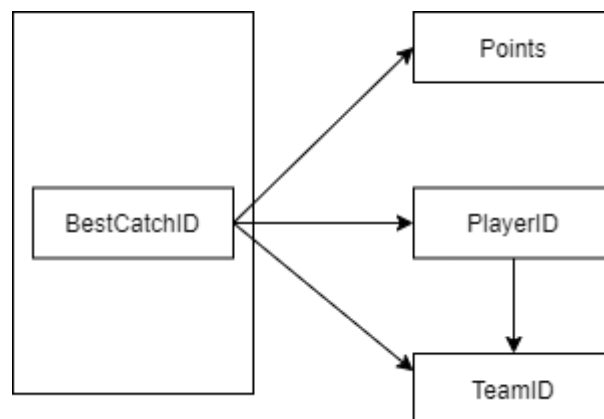
### iii) BestCatch

<u>BestCatch ID</u>	Points	PlayerID	TeamID
---------------------	--------	----------	--------

#### Functional Dependencies:



#### Functional Dependency Chart:



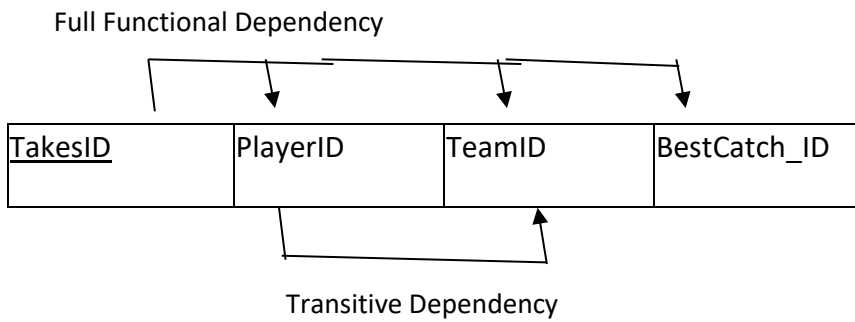
#### Anomalies:

Insertion	A new catch cannot be added unless it has a Best catch id.
Deletion	If we remove the Best catch id we lose information about that catch and by whom it was taken.
Modification	No modification anomaly.

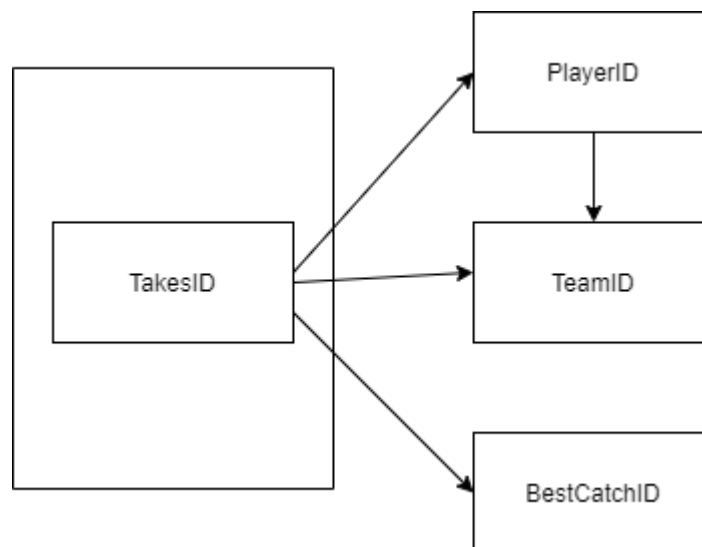
#### iv) Takes

<u>TakesID</u>	PlayerID	TeamID	BestCatch_ID
----------------	----------	--------	--------------

#### Functional Dependencies:



#### Functional Dependency Chart:



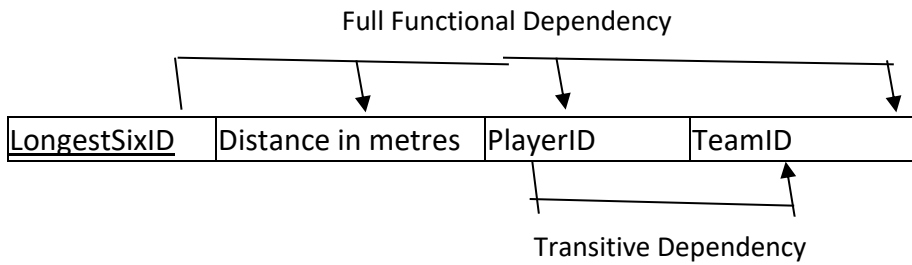
#### Anomalies:

Insertion	None
Deletion	None
Modification	None

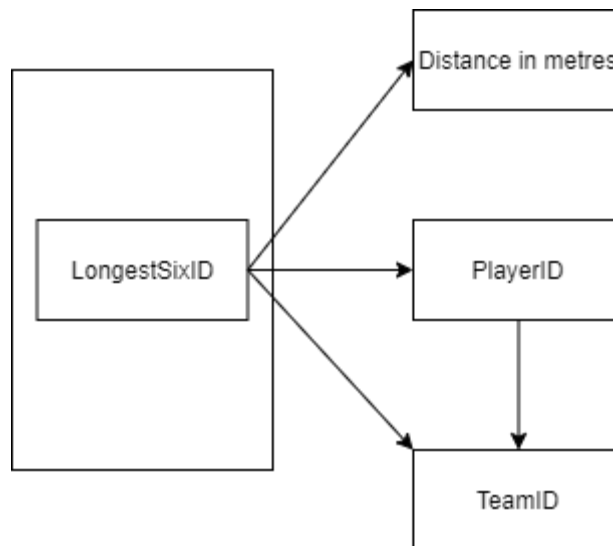
v) LongestSix

<u>LongSix_ID</u>	Distance in metres	PlayerID	TeamID
-------------------	--------------------	----------	--------

**Functional Dependencies:**



**Functional Dependency Chart:**



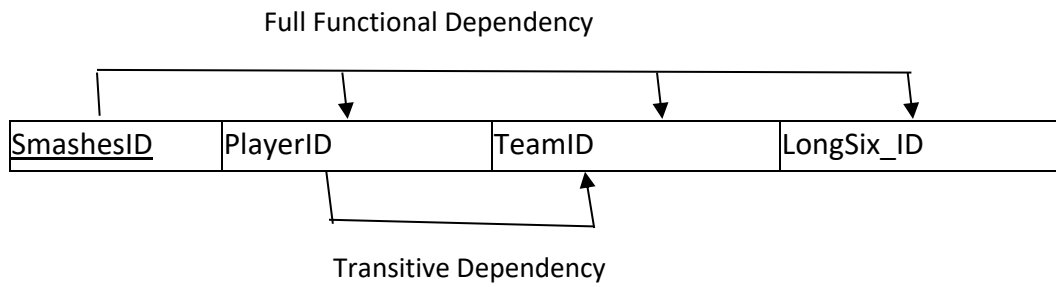
**Anomalies:**

Insertion	A new entry of a "six" cannot be added unless it has a LongestSix id.
Deletion	If we remove the LongestSix id we lose information about that six and by whom it was hit.
Modification	No modification anomaly.

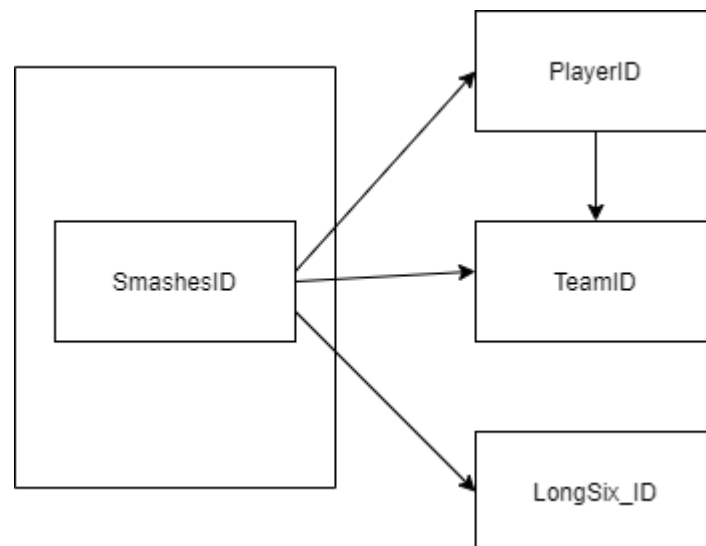
vi) Smashes

<u>SmashesID</u>	PlayerID	TeamID	LongSix_ID
------------------	----------	--------	------------

**Functional Dependencies:**



**Functional Dependency Chart:**



**Anomalies:**

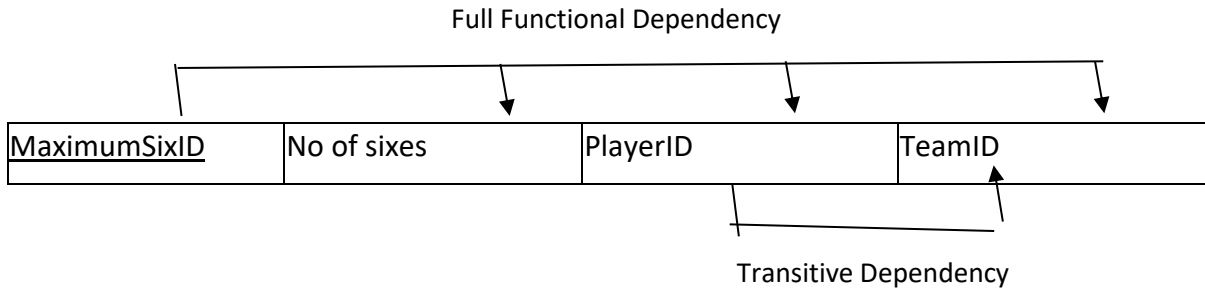
Insertion	None
Deletion	None
Modification	None



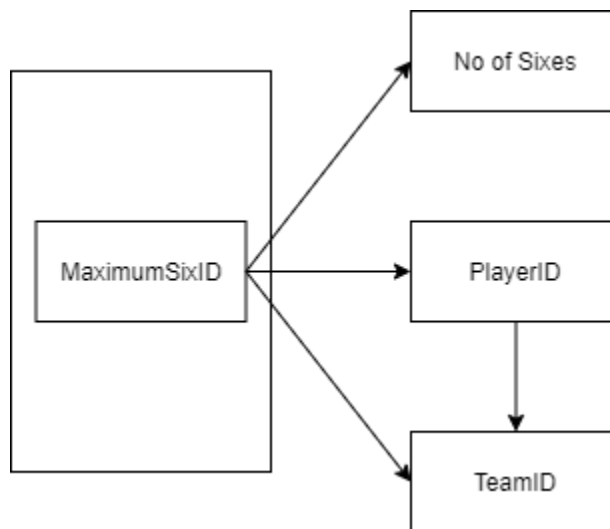
### vii) Maximum Sixes

<u>MaxSix_ID</u>	No of Sixes	PlayerID	TeamID
------------------	-------------	----------	--------

#### Functional Dependencies:



#### Functional Dependency Chart:



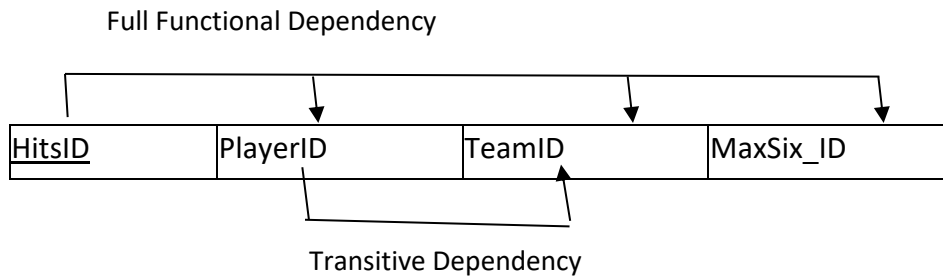
#### Anomalies:

Insertion	A new entry cannot be added unless it has a MaxSix id.
Deletion	If we remove the MaxSix id we lose information about number of sixes and by whom they were hit.
Modification	No modification anomaly.

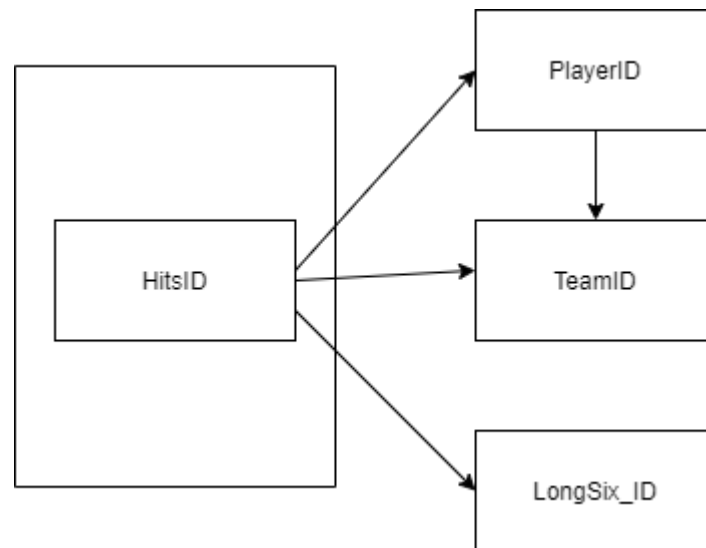
**viii) Hits**

<u>HitsID</u>	PlayerID	TeamID	MaxSix_ID
---------------	----------	--------	-----------

**Functional Dependencies:**



**Functional Dependency Chart:**



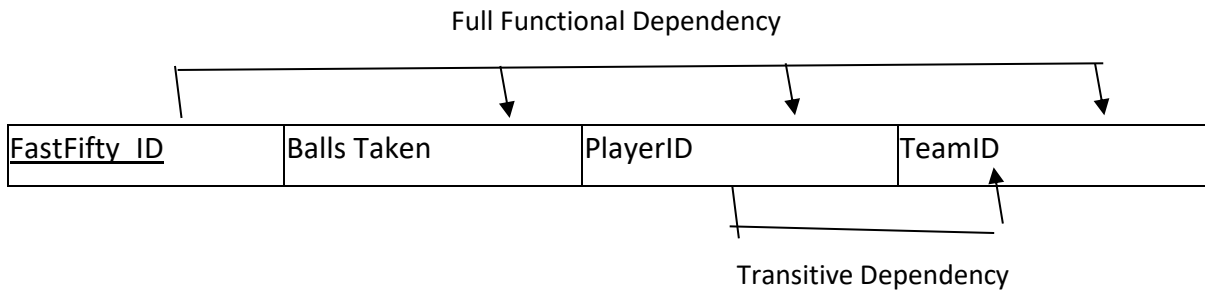
**Anomalies:**

Insertion	None
Deletion	None
Modification	None

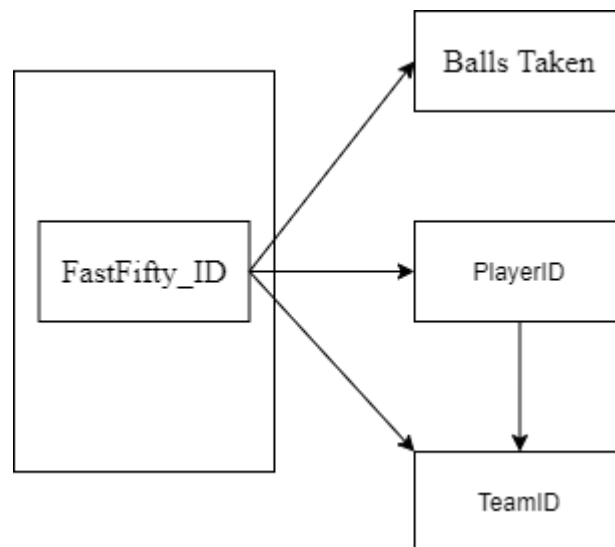
### ix) Fastest50

<u>FastFifty_ID</u>	Balls Taken	PlayerID	TeamID
---------------------	-------------	----------	--------

#### Functional Dependencies:



#### Functional Dependency Chart:



#### Anomalies:

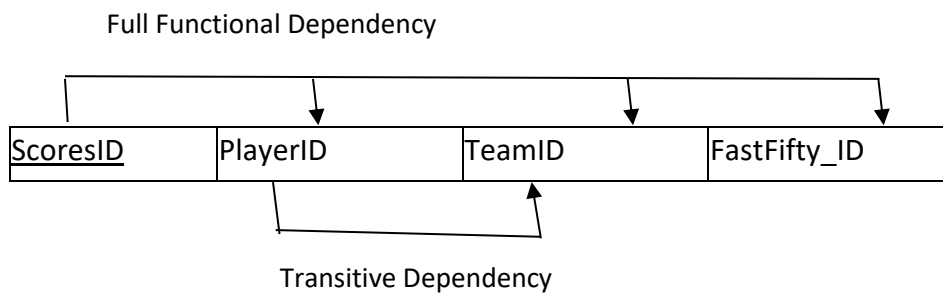
Insertion	A new entry about the Fastest fifty cannot be added unless it has a FastFifty id.
Deletion	If we remove the FastFiftyid we lose information about in how many balls was that fifty made and by whom.

Modification	No modification anomaly.
--------------	--------------------------

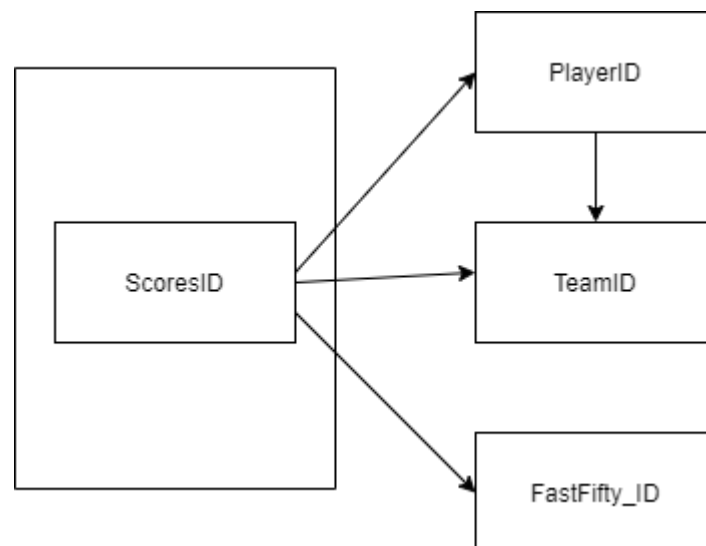
#### x) Scores

<u>ScoresID</u>	PlayerID	TeamID	FastFifty_ID
-----------------	----------	--------	--------------

#### Functional Dependencies:



#### Functional Dependency Chart:



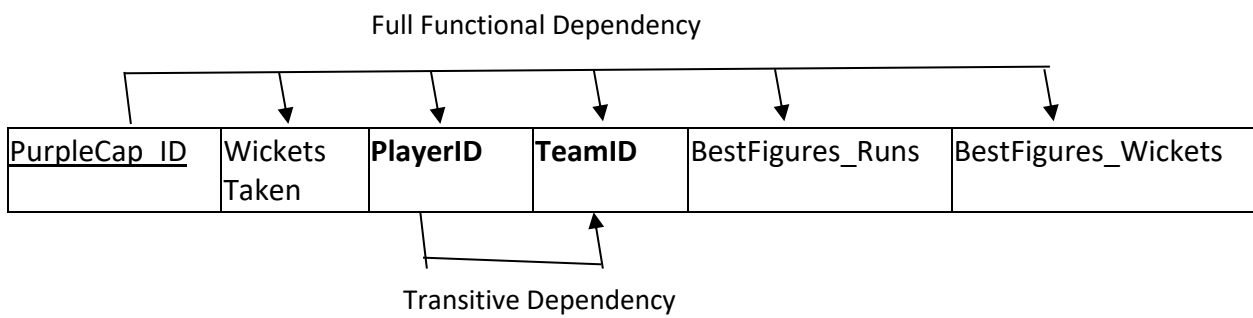
#### Anomalies:

Insertion	None
Deletion	None
Modification	None

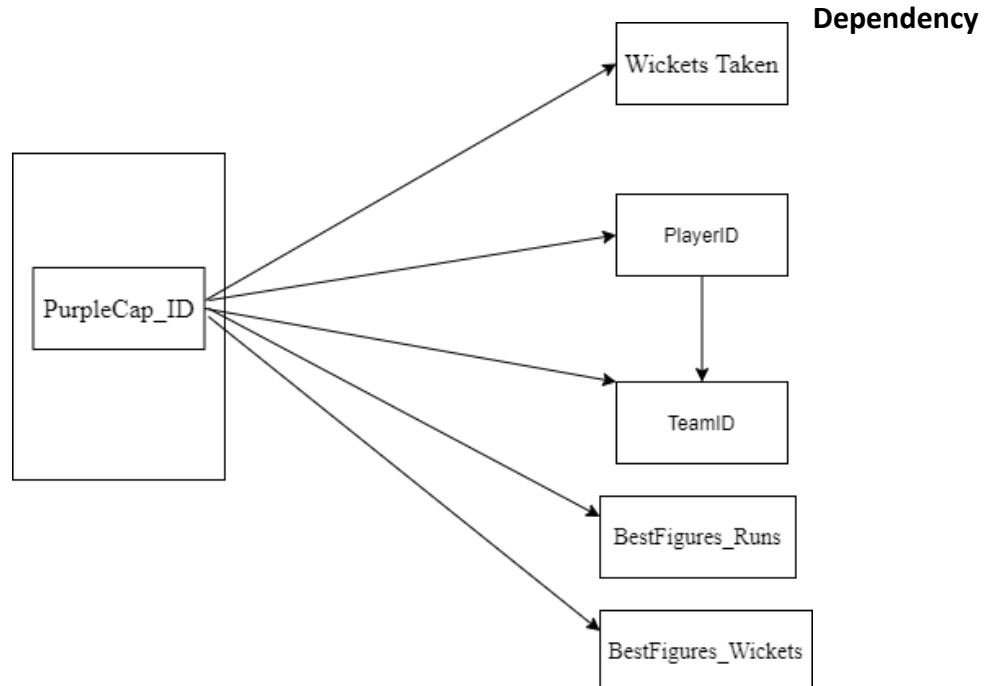
xi) Purple Cap

<u>PurpleCap_ID</u>	Wickets Taken	PlayerID	TeamID	BestFigures_Runs	BestFigures_Wickets

**Functional Dependencies:**



**Functional  
Chart:**



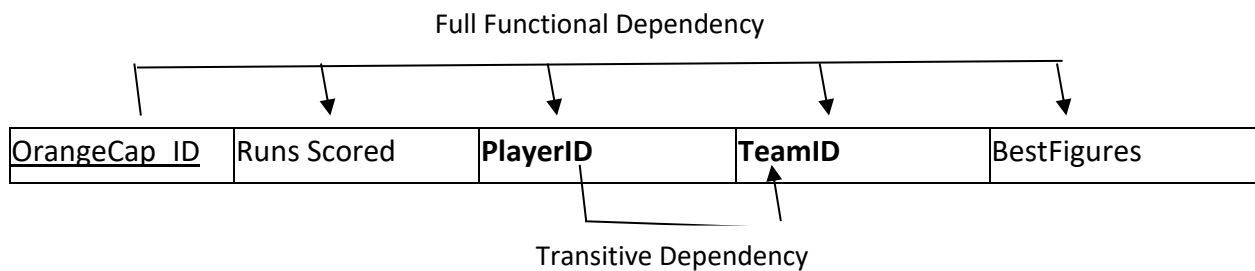
### Anomalies:

Insertion	A new entry cannot be added unless it has a PurpleCap id.
Deletion	If we remove the PurpleCap id we lose information about the number of wickets taken by a player
Modification	No modification anomaly.

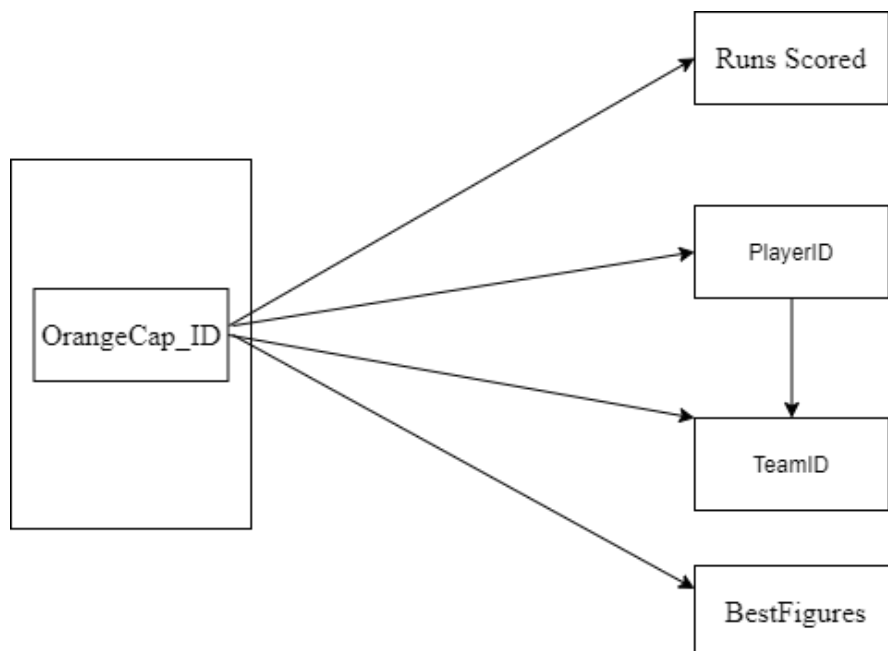
### xii) Orange Cap

<u>OrangeCap_ID</u>	Runs Scored	<b>PlayerID</b>	<b>TeamID</b>	BestFigures
---------------------	-------------	-----------------	---------------	-------------

### Functional Dependencies:



### Functional Dependency Chart:



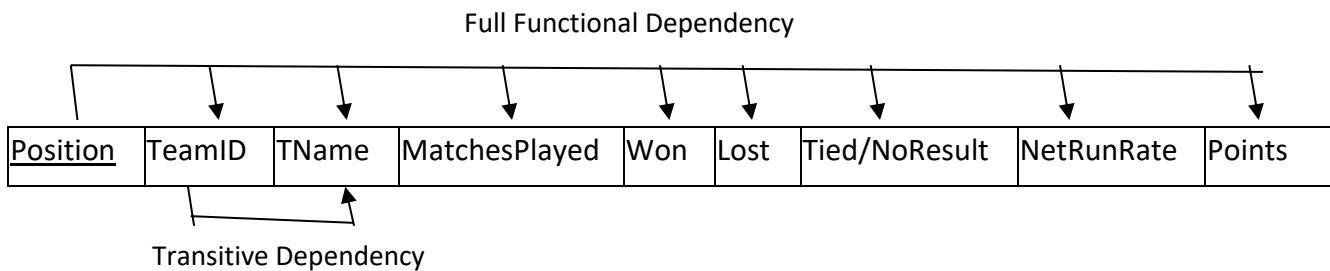
### Anomalies:

Insertion	A new entry cannot be added unless it has a OrangeCap id.
Deletion	If we remove the OrangeCap id we lose information about the number of runs scored by a player
Modification	No modification anomaly

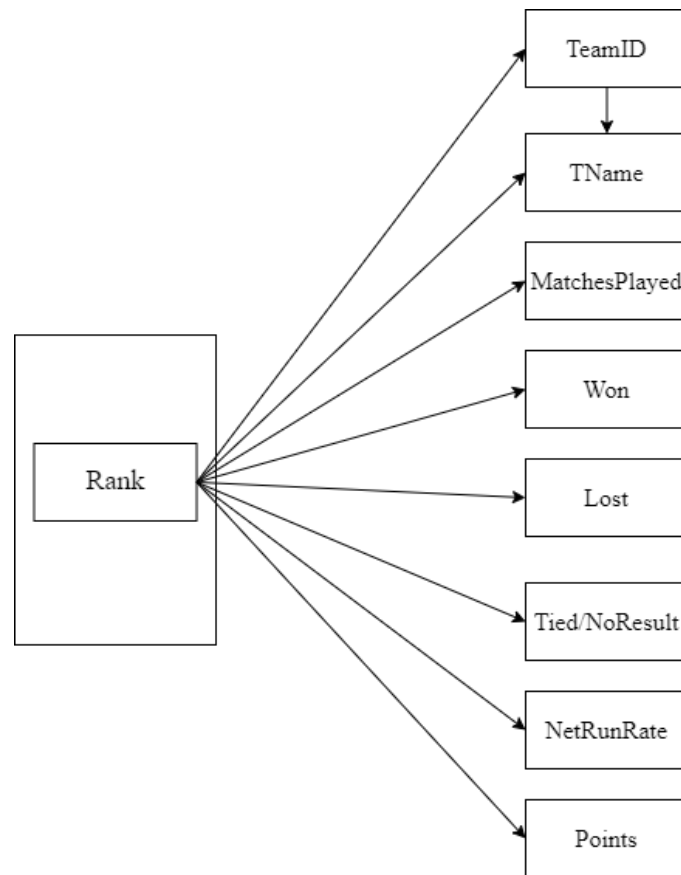
### xiii) Points Table

<u>Position</u>	TeamID	TName	MatchesPlayed	Won	Lost	Tied/NoResult	NetRunRate	Points
-----------------	--------	-------	---------------	-----	------	---------------	------------	--------

### Functional Dependencies:



### Functional Dependency Chart:



### Anomalies:

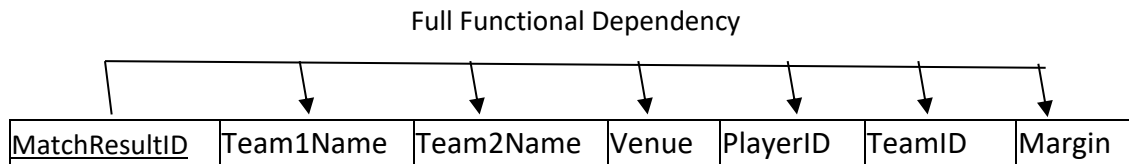
Insertion	A new entry cannot be added unless it has a Rank.
Deletion	If we remove the OrangeCap id we lose information about the number of runs scored by a player
Modification	No modification anomaly.

### xiv) Match Result

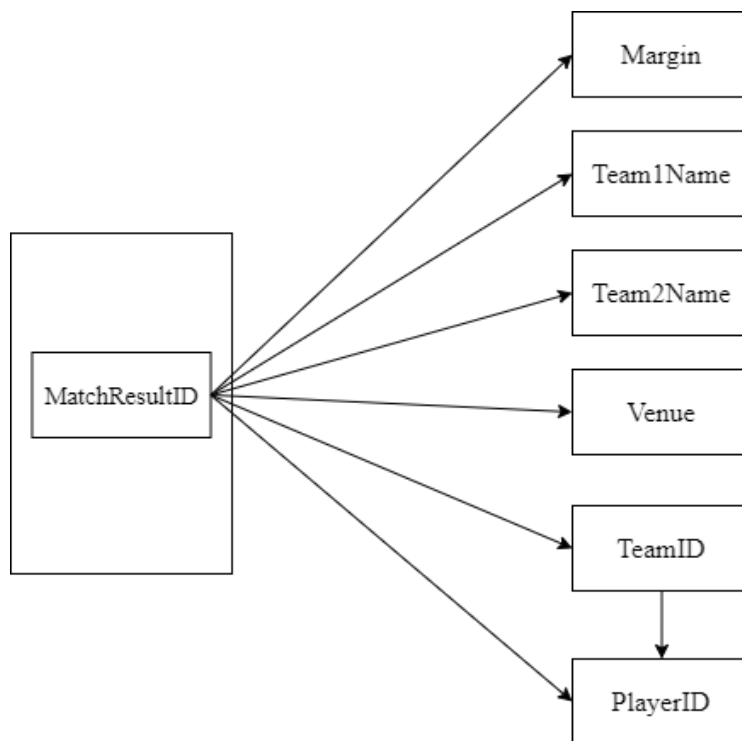
<u>MatchResultID</u>	Team1Name	Team2Name	Venue	<b>TeamID</b>	<b>PlayerID</b>	Margin
----------------------	-----------	-----------	-------	---------------	-----------------	--------



### Functional Dependencies:



### Functional Dependency Chart:



### Anomalies:

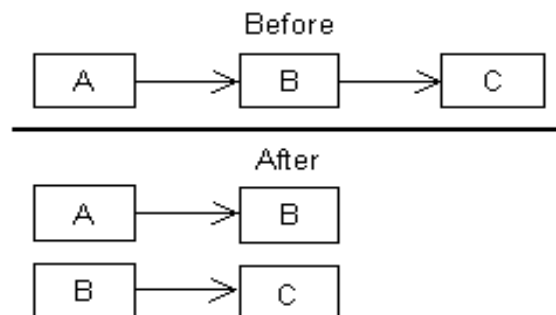
Insertion	A new entry about a match cannot be added unless it has a MatchResultID id.
Deletion	If we remove the MatchResultID id we lose information about that match.
Modification	No modification anomaly

## 2) Normalization

Since the IPL 2020 database has no repeating groups in it and also does not have any relations that have a composite primary key, it means that there are no instances of partial functional dependency. This proves the fact that the database is already in the Second Normal Form or 2NF.

However, there are multiple instances of transitive functional dependencies in the databases such as BestCatch, MaximumSixes, Fastest50, MatchResult, etc. A transitive dependency is of the form  $A \Rightarrow B \Rightarrow C$ . In each of these tables, 'A' is the corresponding Primary Key of that table, 'B' is PlayerID and C is 'TeamID' except one. In the PointsTable relation, B is 'TeamID' and C is 'TName'.

As per the rules to convert the database from 2NF to 3NF, these transitive dependencies have to be eliminated, i.e.,  $A \Rightarrow B \Rightarrow C$  has to be changed to  $A \Rightarrow B$  and  $B \Rightarrow C$  as given in the figure below.



Normalization from 2NF to 3NF :

### 1) BestCatch

Before ->

<u>BestCatch_ID</u>	Points	PlayerID	TeamID
---------------------	--------	----------	--------

After ->

<u>BestCatch_ID</u>	Points	<b>PlayerID</b>
---------------------	--------	-----------------

<u>PlayerID</u>	<b>TeamID</b>
-----------------	---------------

## 2) Takes

Before ->

<u>TakesID</u>	<b>PlayerID</b>	<b>TeamID</b>	<b>BestCatch_ID</b>
----------------	-----------------	---------------	---------------------

After ->

<u>TakesID</u>	<b>PlayerID</b>	<b>BestCatch_ID</b>
----------------	-----------------	---------------------

<u>PlayerID</u>	<b>TeamID</b>
-----------------	---------------

## 3) LongestSix

Before ->

<u>LongSix_ID</u>	Distance in metres	<b>PlayerID</b>	<b>TeamID</b>
-------------------	--------------------	-----------------	---------------

After ->

<u>LongSix_ID</u>	Distance in metres	<b>PlayerID</b>
-------------------	--------------------	-----------------

<u>PlayerID</u>	<b>TeamID</b>
-----------------	---------------

## 4) Smashes

Before ->

<u>SmashesID</u>	PlayerID	TeamID	LongSix_ID
------------------	----------	--------	------------

After ->

<u>SmashesID</u>	PlayerID	LongSix_ID
------------------	----------	------------

<u>PlayerID</u>	TeamID
-----------------	--------

### 5) MaximumSixes

Before ->

<u>MaxSix_ID</u>	No of Sixes	PlayerID	TeamID
------------------	-------------	----------	--------

After ->

<u>MaxSix_ID</u>	No of Sixes	PlayerID
------------------	-------------	----------

<u>PlayerID</u>	TeamID
-----------------	--------

### 6) Hits

Before ->

<u>HitsID</u>	PlayerID	TeamID	MaxSix_ID
---------------	----------	--------	-----------

After ->

<u>HitsID</u>	PlayerID	MaxSix_ID
---------------	----------	-----------

<u>PlayerID</u>	TeamID
-----------------	--------

### 7) Fastest50

Before ->

<u>FastFifty_ID</u>	Balls Taken	PlayerID	TeamID
---------------------	-------------	----------	--------

After ->

<u>FastFifty_ID</u>	Balls Taken	PlayerID
---------------------	-------------	----------

<u>PlayerID</u>	TeamID
-----------------	--------

## 8) Scores

Before ->

<u>ScoresID</u>	PlayerID	TeamID	FastFifty_ID
-----------------	----------	--------	--------------

After ->

<u>ScoresID</u>	PlayerID	FastFifty_ID
-----------------	----------	--------------

<u>PlayerID</u>	TeamID
-----------------	--------

## 9) PurpleCap

Before ->

<u>PurpleCap_ID</u>	Wickets Taken	PlayerID	TeamID	BestFigures_Runs	BestFigures_Wickets
---------------------	---------------	----------	--------	------------------	---------------------

After ->

<u>PurpleCap_ID</u>	Wickets Taken	PlayerID	BestFigures_Runs	BestFigures_Wickets
---------------------	---------------	----------	------------------	---------------------

<u>PlayerID</u>	TeamID
-----------------	--------

### 10) OrangeCap

Before ->

<u>OrangeCap_ID</u>	Runs Scored	<b>PlayerID</b>	<b>TeamID</b>	BestFigures
---------------------	-------------	-----------------	---------------	-------------

After ->

<u>OrangeCap_ID</u>	Runs Scored	<b>PlayerID</b>	BestFigures
---------------------	-------------	-----------------	-------------

<u>PlayerID</u>	<b>TeamID</b>
-----------------	---------------

### 11) PointsTable

Before ->

<u>Position</u>	<b>TeamID</b>	<b>TName</b>	MatchesPlayed	Won	Lost	Tied/NoResult	NetRunRate	Points
-----------------	---------------	--------------	---------------	-----	------	---------------	------------	--------

After ->

<u>Position</u>	<b>TeamID</b>	MatchesPlayed	Won	Lost	Tied/NoResult	NetRunRate	Points
-----------------	---------------	---------------	-----	------	---------------	------------	--------

<u>TeamID</u>	<b>TName</b>
---------------	--------------

For the relations namely BestCatch, Takes, LongestSix, Smashes, MaximumSixes, Hits, Fastest50, Scores, PurpleCap and OrangeCap, we obtained Relation 1 and for the relation PointsTable we obtained Relation 2.

<u>PlayerID</u>	<b>TeamID</b>
-----------------	---------------

**Relation 1**

<u>TeamID</u>	<b>TName</b>
---------------	--------------

**Relation 2**

Since we already have relations namely Players and Teams which have information about Relation 1 and Relation 2 respectively, we will not create these relations in the database.

### 3) Implementation of Tables

```
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.21 MySQL Community Server - GPL

Copyright (c) 2000, 2020, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| dbms_ipl_2020 |
| demo |
| information_schema |
| mysql |
| performance_schema |
| sakila |
| siulibrary |
| sys |
| world |
+-----+
9 rows in set (3.68 sec)

mysql> use dbms_ipl_2020;
Database changed
mysql> show tables;
+-----+
| Tables_in_dbms_ipl_2020 |
+-----+
| bestcatch |
| fastest50 |
| hits |
| longestsix |
| matchresult |
| maximumsixes |
| orangecap |
| players |
| pointstable |
| purplecap |
| scores |
| smashes |
| takes |
| teams |
+-----+
```

```
mysql> desc bestcatch;
```

Field	Type	Null	Key	Default	Extra
BestCatchId	int	NO	PRI	NULL	
Points	int	NO		NULL	
PlayerId	int	NO	MUL	NULL	

```
3 rows in set (0.55 sec)
```

```
mysql> desc fastest50;
```

Field	Type	Null	Key	Default	Extra
FastFiftyId	int	NO	PRI	NULL	
BallsTaken	int	NO		NULL	
PlayerId	int	NO	MUL	NULL	

```
3 rows in set (0.00 sec)
```

```
mysql> desc hits;
```

Field	Type	Null	Key	Default	Extra
HitsID	int	NO	PRI	NULL	
PlayerID	int	NO	MUL	NULL	
MaxSixID	int	NO	MUL	NULL	

```
3 rows in set (0.00 sec)
```

```
mysql> desc longestsix;
```

Field	Type	Null	Key	Default	Extra
LongestSixId	int	NO	PRI	NULL	
DistanceInMetres	int	NO		NULL	
PlayerId	int	NO	MUL	NULL	

```
3 rows in set (0.00 sec)
```



```
mysql> desc matchresult;
```

Field	Type	Null	Key	Default	Extra
MatchResultID	int	NO	PRI	NULL	
Team1Name	varchar(40)	NO		NULL	
Team2Name	varchar(40)	NO		NULL	
Venue	varchar(50)	NO		NULL	
TeamId	int	NO		NULL	
PlayerId	int	NO		NULL	
Margin	varchar(30)	NO		NULL	

```
7 rows in set (0.37 sec)
```

```
mysql> desc maximumsixes;
```

Field	Type	Null	Key	Default	Extra
MaxSixId	int	NO	PRI	NULL	
NoOfSixes	int	NO		NULL	
PlayerId	int	NO	MUL	NULL	

```
3 rows in set (0.30 sec)
```

```
mysql> desc orangecap;
```

Field	Type	Null	Key	Default	Extra
OrangeCapId	int	NO	PRI	NULL	
RunsScored	int	NO		NULL	
PlayerId	int	NO	MUL	NULL	
BestFigures	int	NO		NULL	

```
4 rows in set (0.00 sec)
```

```
mysql> desc players;
```

Field	Type	Null	Key	Default	Extra
PlayerId	int	NO	PRI	NULL	
TeamId	int	NO	MUL	NULL	
FirstName	varchar(100)	NO		NULL	
LastName	varchar(100)	YES		NULL	
RunsScored	int	YES		NULL	
WicketsTaken	int	YES		NULL	

```
6 rows in set (0.00 sec)
```

```
mysql> desc pointstable;
```

Field	Type	Null	Key	Default	Extra
Position	int	NO	PRI	NULL	
TeamId	int	NO	MUL	NULL	
MatchesPlayed	int	NO		NULL	
Won	int	NO		NULL	
Lost	int	NO		NULL	
TiedORNoResult	int	NO		NULL	
Points	int	NO		NULL	
NRR	varchar(20)	NO		NULL	

8 rows in set (0.00 sec)

```
mysql> desc purplecap;
```

Field	Type	Null	Key	Default	Extra
PurpleCapId	int	NO	PRI	NULL	
WicketsTaken	int	NO		NULL	
PlayerId	int	NO	MUL	NULL	
BestFigures_Runs	int	NO		NULL	
BestFigures_Wickets	int	NO		NULL	

5 rows in set (0.00 sec)

```
mysql> desc scores;
```

Field	Type	Null	Key	Default	Extra
ScoresID	int	NO		NULL	
PlayerID	int	NO	MUL	NULL	
FastFiftyID	int	NO	MUL	NULL	

3 rows in set (0.00 sec)

```
mysql> desc smashes;
```

Field	Type	Null	Key	Default	Extra
SmashesID	int	NO	PRI	NULL	
PlayerID	int	NO	MUL	NULL	
LongestSixID	int	NO	MUL	NULL	

3 rows in set (0.00 sec)

```
mysql> desc takes;
```

Field	Type	Null	Key	Default	Extra
TakesID	int	NO		NULL	
PlayerID	int	NO	MUL	NULL	
BestCatchID	int	NO	MUL	NULL	

3 rows in set (0.19 sec)

```
mysql> desc teams;
```

Field	Type	Null	Key	Default	Extra
TeamId	int	NO	PRI	NULL	
Tname	varchar(40)	NO		NULL	
Captain	varchar(30)	NO		NULL	
Owner	varchar(40)	NO		NULL	
Homeground	varchar(20)	NO		NULL	
No_of_titles	int	YES		NULL	

6 rows in set (0.00 sec)

## 4) Queries, Functions, Procedures and Triggers

### QUERIES:

#### 1. Show All Match results.

```
mysql> select * from matchresult;
```

MatchResultID	Team1Name	Team2Name	Venue	TeamId	PlayerId	Margin
1	Chennai Super Kings	Mumbai Indians	Sheikh Zayed Stadium, Abu Dhabi	1	101	5 wickets
2	Delhi Capitals	Kings XI Punjab	Dubai International Stadium, Dubai	2	218	Super Over
3	Sunrisers Hyderabad	Royal Challengers Bangalore	Dubai International Stadium, Dubai	7	712	10 runs
4	Rajasthan Royals	Chennai Super Kings	Sharjah Cricket Stadium, Sharjah	6	610	16 runs
5	Kolkata Knight Riders	Mumbai Indians	Sheikh Zayed Stadium, Abu Dhabi	5	500	49 runs
6	Kings XI Punjab	Royal Challengers Bangalore	Dubai International Stadium, Dubai	3	300	97 runs
7	Chennai Super Kings	Delhi Capitals	Dubai International Stadium, Dubai	2	209	44 runs
8	Kolkata Knight Riders	Sunrisers Hyderabad	Sheikh Zayed Stadium, Abu Dhabi	4	411	7 wickets
9	Rajasthan Royals	Kings XI Punjab	Sharjah Cricket Stadium, Sharjah	6	610	4 wickets
10	Royal Challengers Bangalore	Mumbai Indians	Dubai International Stadium, Dubai	7	701	Super Over
11	Delhi Capitals	Sunrisers Hyderabad	Sheikh Zayed Stadium, Abu Dhabi	8	809	15 runs
12	Rajasthan Royals	Kolkata Knight Riders	Dubai International Stadium, Dubai	4	410	37 runs
13	Kings XI Punjab	Mumbai Indians	Sheikh Zayed Stadium, Abu Dhabi	5	509	48 runs
14	Chennai Super Kings	Sunrisers Hyderabad	Dubai International Stadium, Dubai	8	819	7 runs
15	Royal Challengers Bangalore	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	7	712	8 wickets
16	Delhi Capitals	Kolkata Knight Riders	Sharjah Cricket Stadium, Sharjah	2	200	18 runs
17	Mumbai Indians	Sunrisers Hyderabad	Sharjah Cricket Stadium, Sharjah	5	516	34 runs
18	Kings XI Punjab	Chennai Super Kings	Dubai International Stadium, Dubai	1	116	10 wickets
19	Royal Challengers Bangalore	Delhi Capitals	Dubai International Stadium, Dubai	2	204	59 runs
20	Mumbai Indians	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	5	515	57 runs
21	Kolkata Knight Riders	Chennai Super Kings	Sheikh Zayed Stadium, Abu Dhabi	4	415	10 runs
22	Sunrisers Hyderabad	Kings XI Punjab	Dubai International Stadium, Dubai	8	805	69 runs
23	Rajasthan Royals	Delhi Capitals	Sharjah Cricket Stadium, Sharjah	2	210	46 runs
24	Kings XI Punjab	Kolkata Knight Riders	Sheikh Zayed Stadium, Abu Dhabi	4	400	2 runs
25	Chennai Super Kings	Royal Challengers Bangalore	Dubai International Stadium, Dubai	7	700	37 runs
26	Sunrisers Hyderabad	Rajasthan Royals	Dubai International Stadium, Dubai	6	608	5 wickets
27	Mumbai Indians	Delhi Capitals	Sheikh Zayed Stadium, Abu Dhabi	5	512	5 wickets
28	Royal Challengers Bangalore	Kolkata Knight Riders	Sharjah Cricket Stadium, Sharjah	7	701	82 runs
29	Sunrisers Hyderabad	Chennai Super Kings	Dubai International Stadium, Dubai	1	114	20 runs
30	Delhi Capitals	Rajasthan Royals	Dubai International Stadium, Dubai	2	220	13 runs
31	Royal Challengers Bangalore	Kings XI Punjab	Sharjah Cricket Stadium, Sharjah	3	300	8 wickets
32	Mumbai Indians	Kolkata Knight Riders	Sheikh Zayed Stadium, Abu Dhabi	5	512	8 wickets
33	Rajasthan Royals	Royal Challengers Bangalore	Dubai International Stadium, Dubai	7	701	7 wickets
34	Delhi Capitals	Chennai Super Kings	Sharjah Cricket Stadium, Sharjah	2	213	5 wickets
35	Sunrisers Hyderabad	Kolkata Knight Riders	Sheikh Zayed Stadium, Abu Dhabi	4	405	Super Over
36	Mumbai Indians	Kings XI Punjab	Dubai International Stadium, Dubai	3	300	Super Over
37	Chennai Super Kings	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	6	604	7 wickets
38	Kings XI Punjab	Delhi Capitals	Dubai International Stadium, Dubai	3	213	5 wickets
39	Kolkata Knight Riders	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	7	705	8 wickets
40	Rajasthan Royals	Sunrisers Hyderabad	Dubai International Stadium, Dubai	8	807	8 wickets
41	Chennai super kings	Mumbai Indians	Sharjah Cricket Stadium, Sharjah	5	516	10 wickets
42	Kolkata Knight Riders	Delhi Capitals	Sheikh Zayed Stadium, Abu Dhabi	4	416	59 runs
43	Kings XI Punjab	Sunrisers Hyderabad	Dubai International Stadium, Dubai	3	322	12 runs
44	Royal Challengers Bangalore	Chennai Super Kings	Dubai International Stadium, Dubai	1	115	8 wickets
45	Rajasthan Royals	Mumbai Indians	Sheikh Zayed Stadium, Abu Dhabi	6	602	8 wickets
46	Kolkata Knight Riders	Kings XI Punjab	Sharjah Cricket Stadium, Sharjah	3	302	8 wickets
47	Sunrisers Hyderabad	Delhi Capitals	Dubai International Stadium, Dubai	8	817	88 runs
48	Mumbai Indians	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	5	515	5 wickets
49	Chennai super kings	Kolkata Knight Riders	Dubai International Stadium, Dubai	1	115	6 wickets
50	Kings XI Punjab	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	6	602	7 wickets
51	Delhi Capitals	Mumbai Indians	Dubai International Stadium, Dubai	5	506	9 wickets
52	Royal Challengers Bangalore	Sunrisers Hyderabad	Sharjah Cricket Stadium, Sharjah	8	810	5 wickets
53	Chennai super kings	Kings XI Punjab	Sheikh Zayed Stadium, Abu Dhabi	1	115	9 wickets
54	Kolkata Knight Riders	Rajasthan Royals	Dubai International Stadium, Dubai	4	414	60 runs
55	Delhi Capitals	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	2	220	6 wickets
56	Sunrisers Hyderabad	Mumbai Indians	Sharjah Cricket Stadium, Sharjah	8	811	10 wickets
57	Mumbai Indians	Delhi Capitals	Dubai International Stadium, Dubai	5	507	57 runs
58	Sunrisers Hyderabad	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	8	806	6 wickets
59	Delhi Capitals	Sunrisers Hyderabad	Sheikh Zayed Stadium, Abu Dhabi	2	218	17 runs
60	Mumbai Indians	Delhi Capitals	Dubai International Stadium, Dubai	5	516	5 wickets

60 rows in set (0.00 sec)

## 2. Show details of the highest run scorer.

```
mysql> select * from players where playerid = (select playerid from orangecap where orangecapid = 1);
+-----+-----+-----+-----+-----+-----+
| PlayerId | TeamId | FirstName | LastName | RunsScored | WicketsTaken |
+-----+-----+-----+-----+-----+-----+
| 300 | 3 | KL | Rahul | 670 | 0 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.28 sec)
```

## 3. Show best figures of the highest wicket taker.

```
mysql> select bestfigures_wickets,bestfigures_runs from purplecap where purplecapid = 1;
+-----+-----+
| bestfigures_wickets | bestfigures_runs |
+-----+-----+
| 4 | 24 |
+-----+-----+
1 row in set (0.16 sec)
```

## 4. Show details of all the teams.

```
mysql> select * from teams ;
+-----+-----+-----+-----+-----+-----+
| TeamId | Tname | Captain | Owner | Homeground | No_of_titles |
+-----+-----+-----+-----+-----+-----+
| 1 | Chennai Super Kings | MS Dhoni | Indian Cements Ltd | Chennai | 3 |
| 2 | Delhi Capitals | Shreyas Iyer | GMR Sports Pvt .Ltd & JSW Sports Pvt Ltd | New Delhi | 0 |
| 3 | Kings XI Punjab | KL Rahul | KPH Dream Cricket Private Limited | Mohali | 0 |
| 4 | Kolkata Knight Riders | Dinesh Karthik | Knight Riders Sports Private Ltd | Kolkata | 2 |
| 5 | Mumbai Indians | Rohit Sharma | Reliance Industries Limited | Mumbai | 5 |
| 6 | Rajasthan Royals | Steven Smith | Royal Multisport Pvt. Ltd | Jaipur | 1 |
| 7 | Royal Challengers Bangalore | Virat Kohli | United Spirits Ltd | Bengaluru | 0 |
| 8 | Sunrisers Hyderabad | David Warner | SUN TV Network | Hyderabad | 1 |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

## 5. Show the distance of the longest six of the tournament.

```
mysql> select distanceinmetres from longestsix where longestsixid = 1;
+-----+
| distanceinmetres |
+-----+
| 106 |
+-----+
1 row in set (0.12 sec)
```

6. Show the final points table at the end of league stage.

```
mysql> select * from pointstable;
```

Position	TeamId	MatchesPlayed	Won	Lost	TiedORNoResult	Points	NRR
1	5	14	9	5	0	18	+1.107
2	2	14	8	6	0	16	-0.109
3	8	14	7	7	0	14	+0.608
4	7	14	7	7	0	14	-0.172
5	4	14	7	7	0	14	-0.214
6	3	14	6	8	0	12	-0.162
7	1	14	6	8	0	12	-0.455
8	6	14	6	8	0	12	-0.569

```
8 rows in set (0.11 sec)
```

7. Show the details of the player that won best catch award.

```
mysql> select * from players where playerid = (select playerid from bestcatch where bestcatchid = 1);
```

PlayerId	TeamId	FirstName	LastName	RunsScored	WicketsTaken
603	6	Jofra	Archer	113	20

```
1 row in set (0.02 sec)
```

8. Show details of all players whose firstname is 'Rahul'.

```
mysql> select * from players where firstname = 'Rahul';
```

PlayerId	TeamId	FirstName	LastName	RunsScored	WicketsTaken
415	4	Rahul	Tipathi	230	0
513	5	Rahul	Chahar	2	15
608	6	Rahul	Tewatia	255	10

```
3 rows in set (0.00 sec)
```

9. Display the average runs scored by the players in the season.

```
mysql> select avg(runsscored) from players where runsscored != 0;
```

avg(runsscored)
157.8889

```
1 row in set (0.09 sec)
```

10. Display the average wickets taken by the players in the season.

```
mysql> select avg(wicketstaken) from players where wicketstaken != 0;
+-----+
| avg(wicketstaken) |
+-----+
|          8.0128 |
+-----+
1 row in set (0.00 sec)
```

11. Show the squad of 'Chennai Super Kings'.

```
mysql> select * from players where playerid like '1%';
+-----+-----+-----+-----+-----+-----+
| PlayerId | TeamId | FirstName | LastName | RunsScored | WicketsTaken |
+-----+-----+-----+-----+-----+-----+
| 100 | 1 | MS | Dhoni | 200 | 0 |
| 101 | 1 | Ambati | Rayudu | 359 | 0 |
| 102 | 1 | KM | Asif | 0 | 0 |
| 103 | 1 | Deepak | Chahar | 0 | 12 |
| 104 | 1 | Dwayne | Bravo | 7 | 6 |
| 105 | 1 | Faf | du Plessis | 449 | 0 |
| 106 | 1 | Imran | Tahir | 13 | 1 |
| 107 | 1 | Narayan | Jagadeesan | 33 | 0 |
| 108 | 1 | Karn | Sharma | 0 | 5 |
| 109 | 1 | Kedar | Jadhav | 62 | 0 |
| 110 | 1 | Lungi | Ngidi | 0 | 9 |
| 111 | 1 | Mitchell | Santner | 0 | 2 |
| 112 | 1 | Monu | Singh | 0 | 0 |
| 113 | 1 | Murali | Vijay | 32 | 0 |
| 114 | 1 | Ravindra | Jadeja | 232 | 6 |
| 115 | 1 | Ruturaj | Gaikwad | 204 | 0 |
| 116 | 1 | Shane | Watson | 299 | 0 |
| 117 | 1 | Shardul | Thakur | 12 | 10 |
| 118 | 1 | Sam | Curran | 186 | 13 |
| 119 | 1 | Piyush | Chawla | 0 | 6 |
| 120 | 1 | Josh | Hazlewood | 0 | 1 |
| 121 | 1 | R Sai | Kishore | 0 | 0 |
+-----+-----+-----+-----+-----+-----+
22 rows in set (0.14 sec)
```

12. Show the net run rate of all the teams at the end of league stage.

```
mysql> select t.tname, p.nrr from teams t, pointstable p where t.teamid = p.teamid;
```

tname	nrr
Chennai Super Kings	-0.455
Delhi Capitals	-0.109
Kings XI Punjab	-0.162
Kolkata Knight Riders	-0.214
Mumbai Indians	+1.107
Rajasthan Royals	-0.569
Royal Challengers Bangalore	-0.172
Sunrisers Hyderabad	+0.608

8 rows in set (0.09 sec)

13. Show All the details of matches played by 'Kings XI Punjab'.

```
mysql> select * from matchresult where team1name = 'Kings XI Punjab' or team2name = 'Kings XI Punjab' ;
```

MatchResultID	Team1Name	Team2Name	Venue	TeamId	PlayerId	Margin
2	Delhi Capitals	Kings XI Punjab	Dubai International Stadium, Dubai	2	218	Super Over
6	Kings XI Punjab	Royal Challengers Bangalore	Dubai International Stadium, Dubai	3	300	97 runs
9	Rajasthan Royals	Kings XI Punjab	Sharjah Cricket Stadium, Sharjah	6	610	4 wickets
13	Kings XI Punjab	Mumbai Indians	Sheikh Zayed Stadium, Abu Dhabi	5	509	48 runs
18	Kings XI Punjab	Chennai Super Kings	Dubai International Stadium, Dubai	1	116	10 wickets
22	Sunrisers Hyderabad	Kings XI Punjab	Dubai International Stadium, Dubai	8	805	69 runs
24	Kings XI Punjab	Kolkata Knight Riders	Sheikh Zayed Stadium, Abu Dhabi	4	400	2 runs
31	Royal Challengers Bangalore	Kings XI Punjab	Sharjah Cricket Stadium, Sharjah	3	300	8 wickets
36	Mumbai Indians	Kings XI Punjab	Dubai International Stadium, Dubai	3	300	Super Over
38	Kings XI Punjab	Delhi Capitals	Dubai International Stadium, Dubai	3	213	5 wickets
43	Kings XI Punjab	Sunrisers Hyderabad	Dubai International Stadium, Dubai	3	322	12 runs
46	Kolkata Knight Riders	Kings XI Punjab	Sharjah Cricket Stadium, Sharjah	3	302	8 wickets
50	Kings XI Punjab	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	6	602	7 wickets
53	Chennai super kings	Kings XI Punjab	Sheikh Zayed Stadium, Abu Dhabi	1	115	9 wickets

14 rows in set (0.00 sec)

14. Display the details of all matches which ended with a Super Over.

```
mysql> select * from matchresult where margin = 'Super Over';
```

MatchResultID	Team1Name	Team2Name	Venue	TeamId	PlayerId	Margin
2	Delhi Capitals	Kings XI Punjab	Dubai International Stadium, Dubai	2	218	Super Over
10	Royal Challengers Bangalore	Mumbai Indians	Dubai International Stadium, Dubai	7	701	Super Over
35	Sunrisers Hyderabad	Kolkata Knight Riders	Sheikh Zayed Stadium, Abu Dhabi	4	405	Super Over
36	Mumbai Indians	Kings XI Punjab	Dubai International Stadium, Dubai	3	300	Super Over

4 rows in set (0.00 sec)

15. Display the details of Players of the matches that belong to 'Mumbai Indians'.

```
mysql> select * from players where playerid in (select playerid from matchresult where playerid like '5%');
```

PlayerId	TeamId	FirstName	LastName	RunsScored	WicketsTaken
500	5	Rohit	Sharma	332	0
509	5	Kieron	Pollard	268	4
516	5	Trent	Boult	0	25
515	5	Suryakumar	Yadav	480	0
512	5	Quinton	de Kock	503	0
506	5	Ishan	Kishan	516	0
507	5	Jaspreet	Bumrah	5	27

7 rows in set (0.11 sec)

**16. Display the no. of titles won by every team.**

```
mysql> select tname, no_of_titles from teams;
+-----+-----+
| tname          | no_of_titles |
+-----+-----+
| Chennai Super Kings |          3 |
| Delhi Capitals    |          0 |
| Kings XI Punjab  |          0 |
| Kolkata Knight Riders |          2 |
| Mumbai Indians   |          5 |
| Rajasthan Royals  |          1 |
| Royal Challengers Bangalore |          0 |
| Sunrisers Hyderabad |          1 |
+-----+-----+
8 rows in set (0.00 sec)
```

**17. Show the details of the teams that have not won any season of IPL.**

```
mysql> select * from teams where no_of_titles = 0;
+-----+-----+-----+-----+-----+-----+
| TeamId | Tname          | Captain | Owner                                     | Homeground | No_of_titles |
+-----+-----+-----+-----+-----+-----+
| 2      | Delhi Capitals | Shreyas Iyer | GMR Sports Pvt .Ltd & JSW Sports Pvt Ltd | New Delhi  |          0 |
| 3      | Kings XI Punjab | KL Rahul   | KPH Dream Cricket Private Limited       | Mohali     |          0 |
| 7      | Royal Challengers Bangalore | Virat Kohli | United Spirits Ltd                     | Bengaluru  |          0 |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

**18. Show the names and number of sixes of the top 5 maximum sixes award players.**

```
mysql> select p.firstname, p.lastname, m.noofsixes from players p, maximumsixes m where p.playerid in (select m.playerid from maximumsixes);
+-----+-----+-----+
| firstname | lastname | noofsixes |
+-----+-----+-----+
| Ishan     | Kishan   | 30        |
| Sanju     | Samson   | 26        |
| Hardik    | Pandya   | 25        |
| Nicholas  | Pooran   | 25        |
| Eoin      | Morgan   | 24        |
+-----+-----+-----+
5 rows in set (0.15 sec)
```

**19. Show the number of times 'Kolkata Knight Riders' players have won the Player of the match award.**

```
mysql> select count(*) from matchresult where playerid like '4%';
+-----+
| count(*) |
+-----+
|          7 |
+-----+
1 row in set (0.00 sec)
```



**20. Show the number of times 'KL Rahul' has won Player of the match award.**

```
mysql> select count(*) from matchresult where playerid = (select playerid from players where firstname = 'KL' and lastname = 'Rahul');
+-----+
| count(*) |
+-----+
|          3 |
+-----+
1 row in set (0.03 sec)
```

**21. Display the details of the teams that have a positive Net Run Rate.**

```
mysql> select * from teams where teamid in (select teamid from pointstable where nrr like '+%');
+-----+-----+-----+-----+-----+-----+
| TeamId | Tname          | Captain   | Owner                               | Homeground | No_of_titles |
+-----+-----+-----+-----+-----+-----+
| 5      | Mumbai Indians | Rohit Sharma | Reliance Industries Limited | Mumbai     | 5            |
| 8      | Sunrisers Hyderabad | David Warner | SUN TV Network              | Hyderabad  | 1            |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.02 sec)
```

22. Show all the players who have scored more 100 runs.

```
mysql> select * from players where runsscored > 100;
```

PlayerId	TeamId	FirstName	LastName	RunsScored	WicketsTaken
100	1	MS	Dhoni	200	0
101	1	Ambati	Rayudu	359	0
105	1	Faf	du Plessis	449	0
114	1	Ravindra	Jadeja	232	6
115	1	Ruturaj	Gaikwad	204	0
116	1	Shane	Watson	299	0
118	1	Sam	Curran	186	13
200	2	Shreyas	Iyer	519	0
201	2	Ajinkya	Rahane	113	0
204	2	Axar	Patel	117	9
209	2	Prithvi	Shaw	228	0
211	2	Rishabh	Pant	343	0
213	2	Shikhar	Dhawan	618	0
215	2	Shimron	Hetmyer	185	0
218	2	Marcus	Stoinis	352	13
300	3	KL	Rahul	670	0
302	3	Chris	Gayle	288	0
309	3	Mandeep	Singh	130	0
310	3	Mayank	Agarwal	424	0
314	3	Nicholas	Pooran	353	0
316	3	Glenn	Maxwell	108	3
318	3	Deepak	Hooda	101	0
400	4	Dinesh	Karthik	169	0
401	4	Eoin	Morgan	418	0
402	4	Andre	Russell	117	6
406	4	Nitish	Rana	352	0
411	4	Shubhman	Gill	440	0
413	4	Sunil	Narine	121	5
414	4	Pat	Cummins	146	12
415	4	Rahul	Tipathi	230	0
500	5	Rohit	Sharma	332	0
505	5	Hardik	Pandya	281	0
506	5	Ishan	Kishan	516	0
509	5	Kieron	Pollard	268	4
510	5	Krunal	Pandya	109	6
512	5	Quinton	de Kock	503	0
515	5	Suryakumar	Yadav	480	0
519	5	Saurabh	Tiwari	103	0
600	6	Steve	Smith	311	0
602	6	Ben	Stokes	285	2

603	6	Jofra	Archer	113	20
604	6	Jos	Buttler	328	0
608	6	Rahul	Tewatia	255	10
610	6	Sanju	Samson	375	0
614	6	Robin	Uthappa	196	0
700	7	Virat	Kohli	466	0
701	7	AB de	Villiers	454	0
702	7	Devdutt	Padikkal	473	0
709	7	Shivam	Dube	129	4
711	7	Washington	Sundar	111	8
713	7	Aaron	Finch	268	0
800	8	David	Warner	548	0
805	8	Jonny	Bairstow	345	0
806	8	Kane	Williamson	317	0
807	8	Manish	Pandey	425	0
817	8	Wriddhiman	Saha	214	0
819	8	Priyam	Garg	133	0
823	8	Abdul	Samad	111	1

+-----+-----+-----+-----+-----+-----+

58 rows in set (0.00 sec)

23. Show all players that have taken atleast 10 wickets.

```
mysql> select * from players where wicketstaken >= 10;
```

PlayerId	TeamId	FirstName	LastName	RunsScored	WicketsTaken
103	1	Deepak	Chahar	0	12
117	1	Shardul	Thakur	12	10
118	1	Sam	Curran	186	13
207	2	Kagiso	Rabada	56	30
210	2	Ravichandran	Ashwin	37	13
218	2	Marcus	Stoinis	352	13
220	2	Anrich	Nortje	7	22
311	3	Mohammad	Shami	2	20
313	3	Murugan	Ashwin	4	10
320	3	Ravi	Bishnoi	7	12
414	4	Pat	Cummins	146	12
416	4	Varun	Chakravathy	10	17
507	5	Jaspreet	Bumrah	5	27
513	5	Rahul	Chahar	2	15
516	5	Trent	Boult	0	25
523	5	James	Pattinson	15	11
603	6	Jofra	Archer	113	20
608	6	Rahul	Tewatia	255	10
612	6	Shreyas	Gopal	37	10
705	7	Mohammad	Siraj	17	11
712	7	Yuzvendra	Chahal	0	21
714	7	Chris	Morris	34	11
809	8	Rashid	Khan	35	20
810	8	Sandeep	Sharma	12	14
815	8	T	Natarajan	0	16
825	8	Jason	Holder	66	14

26 rows in set (0.00 sec)

#### 24. Show details of all the all rounders.

```
mysql> select * from players where RunsScored >= 100 and WicketsTaken >= 1;
```

PlayerId	TeamId	FirstName	LastName	RunsScored	WicketsTaken
114	1	Ravindra	Jadeja	232	6
118	1	Sam	Curran	186	13
204	2	Axar	Patel	117	9
218	2	Marcus	Stoinis	352	13
316	3	Glenn	Maxwell	108	3
402	4	Andre	Russell	117	6
413	4	Sunil	Narine	121	5
414	4	Pat	Cummins	146	12
509	5	Kieron	Pollard	268	4
510	5	Krunal	Pandya	109	6
602	6	Ben	Stokes	285	2
603	6	Jofra	Archer	113	20
608	6	Rahul	Tewatia	255	10
709	7	Shivam	Dube	129	4
711	7	Washington	Sundar	111	8
823	8	Abdul	Samad	111	1

```
16 rows in set (0.00 sec)
```

#### 25. Show the details of the player who has scored the Fastest50.

```
mysql> select * from players where playerid = (select playerid from fastest50 where fastfiftyid = 1);
```

PlayerId	TeamId	FirstName	LastName	RunsScored	WicketsTaken
314	3	Nicholas	Pooran	353	0

```
1 row in set (0.12 sec)
```

## **FUNCTIONS:**

### **1. Calculate the runs scored by the players of a particular team.**

```
mysql> delimiter //
mysql> create function sumRunsScored(id int) returns int reads sql data deterministic
-> begin
->   declare totalSum int;
->   set totalSum = (select sum(runsscored) from players where teamid = id);
->   return totalSum;
-> end //
Query OK, 0 rows affected (0.01 sec)

mysql> select sumRunsScored(2) as 'Total Runs Scored';
-> //
+-----+
| Total Runs Scored |
+-----+
|                2656 |
+-----+
1 row in set (0.01 sec)
```

### **2. Calculate the average wickets taken by the players of a particular team.**

```
mysql> delimiter //
mysql> create function avgWickets(tid int) returns float reads sql data deterministic
-> begin
->   declare avgWickets float;
->   set avgWickets = (select avg(wicketsTaken) from players where teamid = tid);
->   return avgWickets;
-> end //
Query OK, 0 rows affected (0.01 sec)

mysql> delimiter ;
mysql> select avgWickets(3);
+-----+
| avgWickets(3) |
+-----+
|             2.88 |
+-----+
1 row in set (0.01 sec)
```

### 3. Display the number of players of a particular team that had no contribution.

```
mysql> delimiter //
mysql> create function noContribution(name varchar(30)) returns int reads sql data deterministic
-> begin
-> declare p int;
-> set p = (select count(*) from players where (RunsScored = 0 and WicketsTaken = 0) and teamid = (s
select teamid from teams where tname = name));
-> return p;
-> end //
Query OK, 0 rows affected (0.01 sec)

mysql> select noContribution('Kings XI Punjab') as 'Number of Players with No Contribution';
-> //
+-----+
| Number of Players with No Contribution |
+-----+
| 7 |
+-----+
1 row in set (0.02 sec)
```

### 4. Display number of matches won by a particular team.

```
mysql> delimiter //
mysql> create function matchesWon(tid int) returns int reads sql data deterministic
-> begin
-> declare won int;
-> set won = (select count(*) from matchresult where teamid = tid);
-> return won;
-> end //
Query OK, 0 rows affected (0.01 sec)

mysql> delimiter ;
mysql> select matchesWon(5) as 'Matches Won';
+-----+
| Matches Won |
+-----+
| 11 |
+-----+
1 row in set (0.00 sec)
```

### 5. Display the number of Super Overs played by a team.

```
mysql> delimiter //
mysql> create function superOvers(name varchar(40)) returns int reads sql data deterministic
-> begin
-> declare so int;
-> set so = (select count(*) from matchresult where (team1name = name or team2name = name) and mar
gin = 'Super Over');
-> return so;
-> end //
Query OK, 0 rows affected (0.01 sec)

mysql> delimiter ;
mysql> select superOvers('Kings XI Punjab') as 'Super Overs Played';
+-----+
| Super Overs Played |
+-----+
| 2 |
+-----+
1 row in set (0.00 sec)
```

## PROCEDURES:

### 1. Show the details of the matches played on a particular ground.

```
mysql> delimiter //
mysql> create procedure matchesOnGround(IN gname varchar(50))
-> begin
-> select * from matchresult where Venue = gname;
-> end //
Query OK, 0 rows affected (0.01 sec)

mysql> call matchesOnGround('Sheikh Zayed Stadium, Abu Dhabi');
-> //
```

MatchResultID	TeamName	Team2Name	Venue	TeamId	PlayerId	Margin
1	Chennai Super Kings	Mumbai Indians	Sheikh Zayed Stadium, Abu Dhabi	1	101	5 wickets
5	Kolkata Knight Riders	Mumbai Indians	Sheikh Zayed Stadium, Abu Dhabi	5	300	49 runs
8	Kolkata Knight Riders	Sunrisers Hyderabad	Sheikh Zayed Stadium, Abu Dhabi	4	411	7 wickets
11	Delhi Capitals	Sunrisers Hyderabad	Sheikh Zayed Stadium, Abu Dhabi	8	809	15 runs
13	Kings XI Punjab	Mumbai Indians	Sheikh Zayed Stadium, Abu Dhabi	5	509	48 runs
15	Royal Challengers Bangalore	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	7	712	8 wickets
20	Mumbai Indians	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	5	515	57 runs
21	Kolkata Knight Riders	Chennai Super Kings	Sheikh Zayed Stadium, Abu Dhabi	4	415	10 runs
24	Kings XI Punjab	Kolkata Knight Riders	Sheikh Zayed Stadium, Abu Dhabi	4	400	2 runs
27	Mumbai Indians	Delhi Capitals	Sheikh Zayed Stadium, Abu Dhabi	5	512	5 wickets
32	Mumbai Indians	Kolkata Knight Riders	Sheikh Zayed Stadium, Abu Dhabi	5	512	8 wickets
35	Sunrisers Hyderabad	Kolkata Knight Riders	Sheikh Zayed Stadium, Abu Dhabi	4	405	Super Over
37	Chennai Super Kings	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	6	604	7 wickets
39	Kolkata Knight Riders	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	7	705	8 wickets
42	Kolkata Knight Riders	Delhi Capitals	Sheikh Zayed Stadium, Abu Dhabi	4	416	59 runs
45	Rajasthan Royals	Mumbai Indians	Sheikh Zayed Stadium, Abu Dhabi	6	602	8 wickets
48	Mumbai Indians	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	5	515	5 wickets
50	Kings XI Punjab	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	6	602	7 wickets
53	Chennai Super Kings	Kings XI Punjab	Sheikh Zayed Stadium, Abu Dhabi	1	115	9 wickets
55	Delhi Capitals	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	2	220	6 wickets
58	Sunrisers Hyderabad	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	8	806	6 wickets
59	Delhi Capitals	Sunrisers Hyderabad	Sheikh Zayed Stadium, Abu Dhabi	2	218	17 runs

```
22 rows in set (0.01 sec)
Query OK, 0 rows affected (0.23 sec)
```

### 2. Show the batsmen of a particular team.

```
mysql> delimiter //
mysql> create procedure batsmenOfTeam(IN team varchar(20))
-> begin
-> select * from players where teamid = (select teamid from teams where tname = team) and RunsScored >= 100;
-> end //
Query OK, 0 rows affected (0.01 sec)

mysql> delimiter ;
mysql> call batsmenOfTeam('Mumbai Indians');
```

PlayerId	TeamId	FirstName	LastName	RunsScored	WicketsTaken
500	5	Rohit	Sharma	332	0
505	5	Hardik	Pandya	281	0
506	5	Ishan	Kishan	516	0
509	5	Kieron	Pollard	268	4
510	5	Krunal	Pandya	109	6
512	5	Quinton	de Kock	503	0
515	5	Suryakumar	Yadav	400	0
519	5	Nusrath	Tiwari	103	0

```
8 rows in set (0.00 sec)
Query OK, 0 rows affected (0.07 sec)
```

### 3. Display the matches where the winning team won by 50 to 60 runs.

```
mysql> delimiter //
mysql> create procedure wonby50Margin()
-> begin
-> select * from matchresult where Margin like '5%' and Margin not like '%wickets';
-> end //
Query OK, 0 rows affected (0.01 sec)

mysql> delimiter ;
mysql> call wonby50Margin();
```

MatchResultID	TeamName	Team2Name	Venue	TeamId	PlayerId	Margin
19	Royal Challengers Bangalore	Delhi Capitals	Dubai International Stadium, Dubai	2	204	59 runs
20	Mumbai Indians	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	5	515	57 runs
42	Kolkata Knight Riders	Delhi Capitals	Sheikh Zayed Stadium, Abu Dhabi	4	416	59 runs
57	Mumbai Indians	Delhi Capitals	Dubai International Stadium, Dubai	5	507	57 runs

```
4 rows in set (0.01 sec)
Query OK, 0 rows affected (0.05 sec)
```



#### 4. Display the matches which were won by bowling first.

```
mysql> delimiter //
mysql> create procedure wonByBowlingFirst()
-> begin
-> select * from matchresult where Margin like 'wickets';
-> end //
Query OK, 0 rows affected (0.01 sec)

mysql> call wonByBowlingFirst();
-> //
```

MatchResultID	Team1Name	Team2Name	Venue	TeamId	PlayerId	Margin
1	Chennai Super Kings	Mumbai Indians	Sheikh Zayed Stadium, Abu Dhabi	1	101	5 wickets
8	Kolkata Knight Riders	Sunrisers Hyderabad	Sheikh Zayed Stadium, Abu Dhabi	4	411	7 wickets
9	Rajasthan Royals	Kings XI Punjab	Sharjah Cricket Stadium, Sharjah	6	610	4 wickets
15	Royal Challengers Bangalore	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	7	712	8 wickets
18	Kings XI Punjab	Chennai Super Kings	Dubai International Stadium, Dubai	1	116	10 wickets
26	Sunrisers Hyderabad	Rajasthan Royals	Dubai International Stadium, Dubai	6	608	5 wickets
27	Mumbai Indians	Delhi Capitals	Sheikh Zayed Stadium, Abu Dhabi	5	512	5 wickets
31	Royal Challengers Bangalore	Kings XI Punjab	Sharjah Cricket Stadium, Sharjah	3	300	8 wickets
32	Mumbai Indians	Kolkata Knight Riders	Sheikh Zayed Stadium, Abu Dhabi	5	512	8 wickets
33	Rajasthan Royals	Royal Challengers Bangalore	Dubai International Stadium, Dubai	7	701	7 wickets
34	Delhi Capitals	Chennai Super Kings	Sharjah Cricket Stadium, Sharjah	2	213	5 wickets
37	Chennai Super Kings	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	6	604	7 wickets
38	Kings XI Punjab	Delhi Capitals	Dubai International Stadium, Dubai	3	213	5 wickets
39	Kolkata Knight Riders	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	7	705	8 wickets
40	Rajasthan Royals	Sunrisers Hyderabad	Dubai International Stadium, Dubai	8	807	8 wickets
41	Chennai super Kings	Mumbai Indians	Sharjah Cricket Stadium, Sharjah	5	516	10 wickets
44	Royal Challengers Bangalore	Chennai Super Kings	Dubai International Stadium, Dubai	1	115	8 wickets
45	Rajasthan Royals	Mumbai Indians	Sheikh Zayed Stadium, Abu Dhabi	6	602	8 wickets
46	Kolkata Knight Riders	Kings XI Punjab	Sharjah Cricket Stadium, Sharjah	3	302	8 wickets
48	Mumbai Indians	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	5	515	5 wickets
49	Chennai super kings	Kolkata Knight Riders	Dubai International Stadium, Dubai	1	115	6 wickets
50	Kings XI Punjab	Rajasthan Royals	Sheikh Zayed Stadium, Abu Dhabi	6	602	7 wickets
51	Delhi Capitals	Mumbai Indians	Dubai International Stadium, Dubai	5	506	9 wickets
52	Royal Challengers Bangalore	Sunrisers Hyderabad	Sharjah Cricket Stadium, Sharjah	8	810	5 wickets
53	Chennai super Kings	Kings XI Punjab	Sheikh Zayed Stadium, Abu Dhabi	1	115	9 wickets
55	Delhi Capitals	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	2	220	6 wickets
56	Sunrisers Hyderabad	Mumbai Indians	Sharjah Cricket Stadium, Sharjah	8	811	10 wickets
58	Sunrisers Hyderabad	Royal Challengers Bangalore	Sheikh Zayed Stadium, Abu Dhabi	8	806	6 wickets
60	Mumbai Indians	Delhi Capitals	Dubai International Stadium, Dubai	5	516	5 wickets

29 rows in set (0.00 sec)

Query OK, 0 rows affected (0.38 sec)

#### 6. Show details of the teams which are captained by a foreign player.

```
mysql> create procedure captainedByForeignPlayer()
-> begin
-> select * from teams where Captain = 'Steven Smith' or Captain = 'David Warner';
-> end //
Query OK, 0 rows affected (0.01 sec)

mysql> delimiter ;
mysql> call captainedByForeignPlayer();
```

TeamID	TName	Captain	Owner	Homeground	no_of_titles
6	Rajasthan Royals	Steven Smith	Royal Multisport Pvt. Ltd	Jaipur	1
8	Sunrisers Hyderabad	David Warner	SUN TV Network	Hyderabad	1

2 rows in set (0.00 sec)

Query OK, 0 rows affected (0.02 sec)

## TRIGGERS:

### 1. Show error if RunsScored < 0(Before Insert) in players

```
mysql> delimiter //
mysql> create trigger before_insert_runs_players before insert on players for each row
-> begin
-> if NEW.RunsScored < 0 then
->   SIGNAL SQLSTATE '45000'
->   SET MESSAGE_TEXT = 'Cannot Enter Values as Runs Scored cannot be negative';
-> end if;
-> end //
Query OK, 0 rows affected (0.03 sec)
```

### 2. Show error if WicketsTaken < 0(Before Insert) in players

```
mysql> create trigger before_insert_wickets_players before insert on players for each row
-> begin
-> if NEW.WicketsTaken < 0 then
->   SIGNAL SQLSTATE '45000'
->   SET MESSAGE_TEXT = 'Cannot Enter Values as WicketsTaken cannot be negative';
-> end if;
-> end //
Query OK, 0 rows affected (0.01 sec)
```

### 3. Show tip if nooftitles < 0 (After Update) in teams

```
mysql> create trigger after_update_teams after update on teams for each row
-> begin
-> if NEW.no_of_titles < 0 then
->   SIGNAL SQLSTATE '45000'
->   SET MESSAGE_TEXT = 'Recheck Updated Values as Number Of Titles is negative';
-> end if;
-> end //
Query OK, 0 rows affected (0.02 sec)
```

### 4. Show error if TeamID > 8 (Before Insert) in matchresult

```
mysql> create trigger before_insert_matchresult before insert on matchresult for each row
-> begin
-> if NEW.TeamID > 8 then
->   SIGNAL SQLSTATE '45000'
->   SET MESSAGE_TEXT = 'Cannot Insert Values as Winning Team ID is not present in database';
-> end if;
-> end //
Query OK, 0 rows affected (0.02 sec)
```

## 5. Show tip if MatchesPlayed < 14 (After Update) in pointstable

```
mysql> create trigger after_update_pointstable after update on pointstable for each row
-> begin
->   if NEW.matchesplayed > 14 then
->     SIGNAL SQLSTATE '45000'
->     SET MESSAGE_TEXT = 'Recheck Updated Values as Matches Played by a team cannot exceed 14';
->   end if;
-> end //
Query OK, 0 rows affected (0.01 sec)
```