# **CS-586 Introduction to Databases Winter 2019 Quarter**

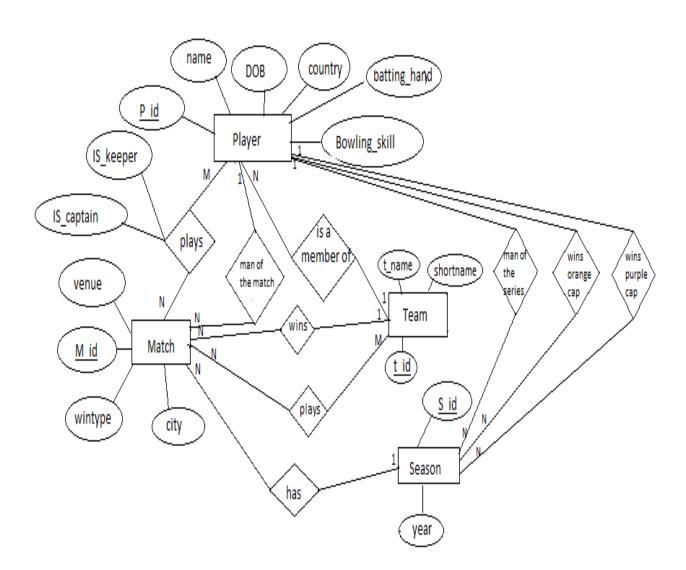
## **Graduate Project Database Implementation- part 3**

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### • ER-DIAGRAM:



(No changes has been made during the implementation process)

#### • CREATE TABLE STATEMENTS OF DIFFERENT TABLES

1) Create table season:

```
SELECT * FROM w19tdb35.season;
Submit
```

No rows found.

2) Create table player:

```
CREATE TABLE player ( p_id INT PRIMARY KEY,
name VARCHAR(50),
batting_hand VARCHAR(50),
bowling_skill VARCHAR(50),
country VARCHAR(30)
);
```

```
SELECT * FROM w19tdb35.player;
Submit
```

No rows found.

### 3) Create table team:

No rows found.

### 4) Create table match:

```
SELECT * FROM w19tdb35.match;
```

No rows found.

### 5) Create table player\_match

```
SELECT * FROM w19tdb35.player_match;

Submit
```

No rows found.

## 6) Create table player\_team

```
SELECT * FROM w19tdb35.player_team;
Submit
```

No rows found.

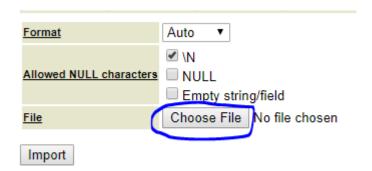
#### BRIEF DESCRIPTION ABOUT DATA POPULATION

The source of the data for the above tables is: <a href="https://www.kaggle.com/harsha547/indian-premier-league-csv-dataset/version/2">https://www.kaggle.com/harsha547/indian-premier-league-csv-dataset/version/2</a>. The data is in CSV format and is sufficient to populate the 5 created tables namely, player, team, season, player\_match and match.

I created a separate CSV file from the downloaded data to populate my sixth table player\_team. I used postgressql and accessed the database using <a href="https://dbclass.cs.pdx.edu/">https://dbclass.cs.pdx.edu/</a>. I have created my tables under the schema named w19tdb35. For populating the database inside the tables I hit the import button,



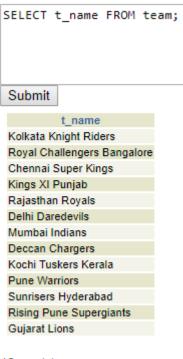
Then chose the file to import for the given table,



Finally, clicked the import button to import the chosen file.

### TRANSLATIONS TO SQL QUERIES:

1) Give the names of all teams participated in IPL seasons

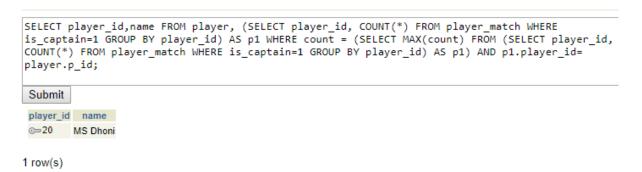


13 row(s)

2) Original query: Mention the names of the winner teams in each season.

Problem: There is no column in any table mentioning the winning team for each season. For computing the required data, I needed to have the winning team ID or name in the season table or atleast the match id describing it as final matches for all seasons.

New query: Name the player who has been the captain for maximum number of times for all seasons.



### 3) Name the team with most wins

SELECT match\_winner,count FROM(SELECT match\_winner, COUNT(\*) FROM match GROUP BY match\_winner)AS m1 WHERE count= (SELECT MAX(count) FROM (SELECT match\_winner, COUNT(\*) FROM match GROUP BY match\_winner)AS m1);

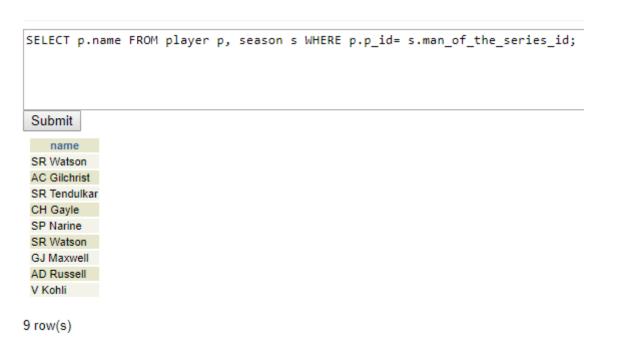
Submit

match\_winner count

07 80

1 row(s)

4) Name man of the series for each season.



5) Name the player who won man of the match title maximum number of times.

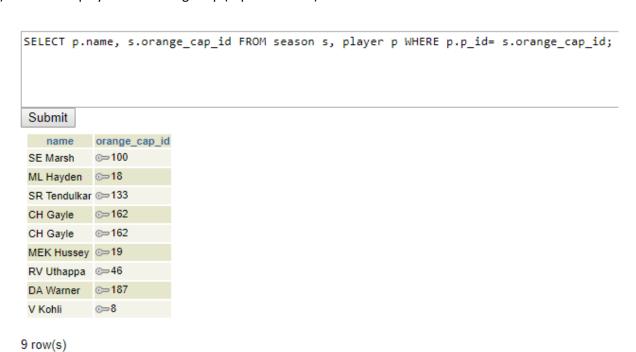
```
SELECT p.name, p.p_id FROM player p, (SELECT man_of_the_match_id FROM (SELECT man_of_the_match_id, COUNT(*) FROM match GROUP BY man_of_the_match_id)AS m1 WHERE count=(SELECT MAX(count) FROM (SELECT man_of_the_match_id, COUNT(*) FROM match GROUP BY man_of_the_match_id)AS m1))AS m2 WHERE p.p_id = m2.man_of_the_match_id;

Submit

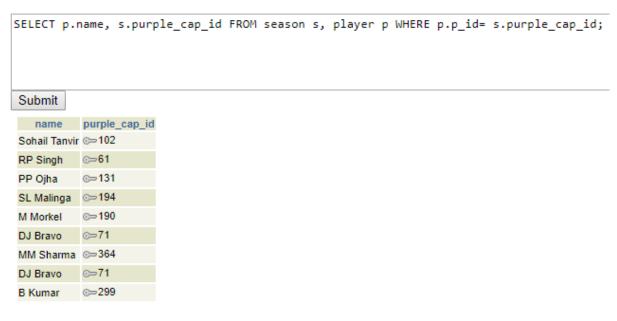
name p_id
CH Gayle 162

1 row(s)
```

6) Name the players with orange cap (top-run scorer) for different seasons.



7) Name the players with purple cap (top-wicket taker) for different seasons.



9 row(s)

## 8) List captains of all teams in season2

SELECT DISTINCT p.name FROM player\_match pm, match m,player p WHERE pm.match\_id=m.m\_id AND pm.is\_captain=1 AND m.season\_id=2 AND pm.player\_id= p.p\_id;

### Submit

name
MS Dhoni
KP Pietersen
V Sehwag
A Kumble
SR Tendulkar
Yuvraj Singh
SK Warne
BB McCullum
AC Gilchrist

G Gambhir

10 row(s)

There are supposed to be 8 rows but captains of two teams were replaced in midway. V sehwag by G Gambhir and KP Pieterson by A Kumble.

#### 9) List venues for all matches of season 1.

SELECT venue FROM match WHERE season\_id=1;

#### Submit

M Chinnaswamy Stadium Punjab Cricket Association Stadium, Mohali Feroz Shah Kotla Wankhede Stadium Eden Gardens Sawai Mansingh Stadium Rajiv Gandhi International Stadium, Uppal MA Chidambaram Stadium, Chepauk Rajiv Gandhi International Stadium, Uppal Punjab Cricket Association Stadium, Mohali M Chinnaswamy Stadium MA Chidambaram Stadium, Chepauk Dr DY Patil Sports Academy Punjab Cricket Association Stadium, Mohali M Chinnaswamy Stadium Eden Gardens Feroz Shah Kotla Rajiv Gandhi International Stadium, Uppal Sawai Mansingh Stadium MA Chidambaram Stadium, Chepauk Rajiv Gandhi International Stadium, Uppal Punjab Cricket Association Stadium, Mohali Dr DY Patil Sports Academy Sawai Mansingh Stadium M Chinnaswamy Stadium MA Chidambaram Stadium, Chepauk Dr DY Patil Sports Academy Feroz Shah Kotla Eden Gardens Sawai Mansingh Stadium

### 30 row(s)

SELECT venue FROM match WHERE season\_id=1;

#### Submit

venue M Chinnaswamy Stadium MA Chidambaram Stadium, Chepauk Raiiv Gandhi International Stadium, Uppal Sawai Mansingh Stadium Punjab Cricket Association Stadium, Mohali Eden Gardens Wankhede Stadium Punjab Cricket Association Stadium, Mohali Feroz Shah Kotla Wankhede Stadium Feroz Shah Kotla Sawai Mansingh Stadium Rajiv Gandhi International Stadium, Uppal Eden Gardens M Chinnaswamy Stadium Eden Gardens Wankhede Stadium MA Chidambaram Stadium, Chepauk Puniab Cricket Association Stadium, Mohali Feroz Shah Kotla MA Chidambaram Stadium, Chepauk M Chinnaswamy Stadium Eden Gardens Sawai Mansingh Stadium Rajiv Gandhi International Stadium, Uppal Wankhede Stadium Wankhede Stadium Dr DY Patil Sports Academy

28 row(s)

Total rows returned: 58

10) Give the details of the venue with maximum number of matches.

```
SELECT venue FROM (SELECT venue, COUNT(*) FROM match GROUP BY venue) AS venuedetail WHERE count=
(SELECT MAX(count) FROM (SELECT venue, COUNT(*) FROM match GROUP BY venue) AS venuedetail);

Submit

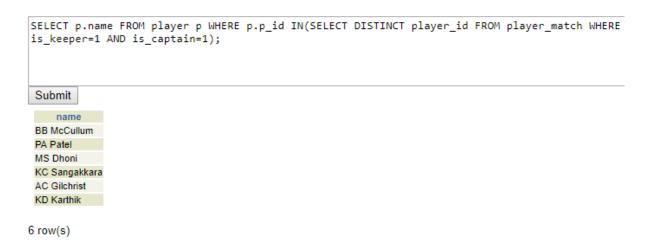
venue
M Chinnaswamy Stadium

1 row(s)
```

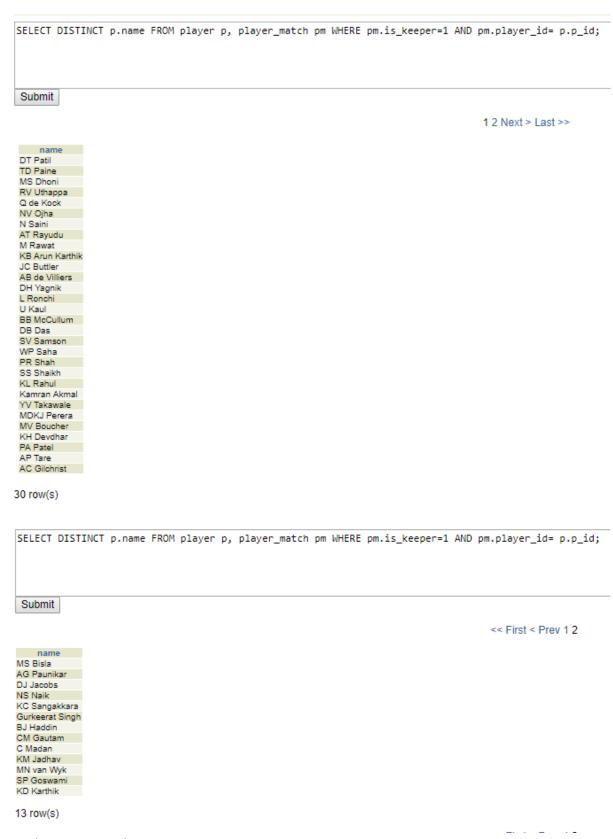
11) Original query: List the names of all players of the winning team in season 1.

Problem: We do not have ids or names of winning teams for seasons, thus it is not possible to find out the players names for it.

New query: Name the players who has been the both, keepers and captains for their teams.



### 12) List wicket keepers of all the teams



Total rows returned: 43

Wicket keepers can be changed through different seasons. Also, a team can have multiple wicket keepers in their full squad.

13) List the matches from all seasons which resulted in a tie.



6 row(s)

14) Give the names of players with right-arm off-break bowling skill.

```
SELECT name FROM player WHERE bowling_skill='Right-arm offbreak';

Submit
```

name DJ Hussey Mohammad Hafeez R Dravid W Jaffer SK Raina S Badrinath K Goel KC Sangakkara YK Pathan M Kaif V Sehwag S Dhawan Harbhajan Singh LRPL Taylor AC Gilchrist Y Venugopal Rao VVS Laxman A Symonds RG Sharma GC Smith Shoaib Malik SA Asnodkar Salman Butt BJ Hodge M Muralitharan A Chopra J Arunkumar SR Tendulkar TM Dilshan LA Pomersbach

30 row(s)

Continued..

SELECT name FROM player WHERE bowling\_skill='Right-arm offbreak';

Submit

name SD Chitnis VS Yeligati RR Powar JP Duminy KP Pietersen CH Gayle M Manhas BAW Mendis TL Suman M Vijay J Botha Y Nagar R Ashwin Mohammad Ashraful OA Shah AT Rayudu AA Jhunjhunwala AB Barath MD Mishra R Sharma KM Jadhav UBT Chand R Ninan S Randiv NL McCullum GJ Maxwell MN Samuels SA Yadav SP Narine DA Miller

30 row(s)

SELECT name FROM player WHERE bowling\_skill='Right-arm offbreak';

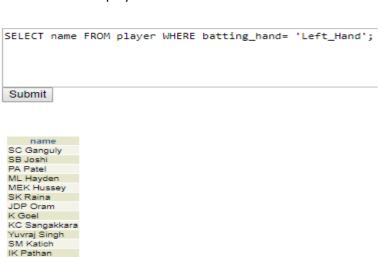
Submit

name
Gurkeerat Singh
A Chandila
Sunny Gupta
MC Juneja
KK Nair
GH Vihari
SMSM Senanayake
X Thalaivan Sargunam
Parvez Rasool
Sachin Baby
RR Rossouw
Shivam Sharma
VH Zol
DJ Hooda
KS Williamson
MJ Guptill
TM Head
J Yadav
HM Amla
N Rana
MB Parmar
B Aparajith

22 row(s)

Total rows returned: 82

## 15) Give the names of players who bat with left hand



AM Nayar
S Chanderpaul
AC Gilohrist
WPUJC Vaas
PP Chawla
GC Smith
SS Tiwary
M Kartik
TM Srivastava

DS Lehmann RA Jadeja

G Gambhir S Dhawan ST Jayasuriya AM Nayar

DNT Zoysa SE Marsh Sohail Tanvir Salman Butt

30 row(s)

SELECT name FROM player WHERE batting\_hand= 'Left\_Hand';

Submit

name
SP Fleming
S Vidyut
JA Morkel
Mohammad Asif
PP Ojha
SP Goswami
U Kaul
NK Patel
LA Pomersbach
Igbal Abdulla
Abdur Razzak
A Mukund
JP Duminy
T Thushara
JD Ryder
Kamran Khan
CH Gayle
KV Sharma
RJ Quiney
DL Vettori
LA Carseldine
SB Jakati
DA Wamer
M Morkel
Anirudh Singh
R MocLaren
A Uniyal
YA Abdulla
EJG Morgan
RS Gavaskar

30 row(s)

Continued..

```
SELECT name FROM player WHERE batting_hand= 'Left_Hand';
```

#### Submit

Name
MJ Lumb
S Narwal
Bipul Sharma
FY Fazal
DE Bollinger
S Sriram
Harmeet Singh
AL Menaria
WD Parnell
S Aravind
MS Wade
SB Wagh
JEC Franklin
Shakib Al Hasan
DH Yagnik
NLTC Perera
J Syed Mohammad
TR Birt
AG Murtaza
Harpreet Singh
AC Blizzard
CA Ingram
AA Chavan
BA Bhatt
Ankit Sharma
SP Narine
GB Hogg
DA Miller
P Negi
RJ Peterson

30 row(s)

SELECT name FROM player WHERE batting\_hand= 'Left\_Hand';

### Submit

name
MDKJ Perera
BMAJ Mendis
R Rampaul
BJ Rohrer
Q de Kock
MG Johnson
Sachin Baby
CJ Anderson
NJ Maddinson
AR Patel
JDS Neesham
MA Stare
BR Dunk
RR Rossouw
VH Zol
BE Hendricks
R Tewatia
J Suchith
MJ McClenaghan
Ishan Kishan
C Munro
KH Pandya
TM Head
RR Pant
UT Khawaja
BB Sran
N Rana
RA Shaikh
AA Kazi
P Prasanth

30 row(s)

## Continued..

SELECT name FROM player WHERE batting\_hand= 'Left\_Hand';
Submit

name
TP Sudhindra
K Santokie
GS Sandhu
Mustafizur Rahman
Kuldeep Yadav
RV Pawar

6 row(s)

Total rows returned= 126

## 16) List the total number of matches won by each team in all the seasons

SELECT t.t\_name,m1.count AS matches\_won FROM team t,(SELECT match\_winner, COUNT(\*) FROM match GROUP BY match\_winner) AS m1 WHERE m1.match\_winner = t.t\_id;

## Submit

| t_name                      | matches_won |
|-----------------------------|-------------|
| Kolkata Knight Riders       | 68          |
| Royal Challengers Bangalore | 70          |
| Chennai Super Kings         | 79          |
| Kings XI Punjab             | 63          |
| Rajasthan Royals            | 63          |
| Delhi Daredevils            | 56          |
| Mumbai Indians              | 80          |
| Deccan Chargers             | 29          |
| Kochi Tuskers Kerala        | 6           |
| Pune Warriors               | 12          |
| Sunrisers Hyderabad         | 34          |
| Rising Pune Supergiants     | 5           |
| Gujarat Lions               | 9           |

13 row(s)

### 17) Give the names of the teams with Australian player as the captain

```
SELECT DISTINCT t_name FROM player_team pt,(SELECT DISTINCT p.name, p.p_id FROM player p, player_match pm,player_team pt WHERE p.p_id= pm.player_id AND pm.is_captain=1 AND p.country='Australia') AS aus_cap, team t WHERE aus_cap.p_id= pt.player_id AND pt.team_id = t.t_id;
```

#### Submit

t\_name
Chennai Super Kings
Deccan Chargers
Delhi Daredevils
Mumbai Indians
Rajasthan Royals
Royal Challengers Bangalore
Sunrisers Hyderabad

7 row(s)

### 18) List teams which have played all seasons

```
SELECT t.t_id, t.t_name FROM team t, ((SELECT DISTINCT t1_id FROM match WHERE season_id=1)
INTERSECT
(SELECT DISTINCT t1_id FROM match WHERE season_id=2)
(SELECT DISTINCT t1_id FROM match WHERE season_id=3)
(SELECT DISTINCT t1_id FROM match WHERE season_id=4)
INTERSECT
(SELECT DISTINCT t1 id FROM match WHERE season id=5)
INTERSECT
(SELECT DISTINCT t1_id FROM match WHERE season_id=6)
INTERSECT
(SELECT DISTINCT t1_id FROM match WHERE season_id=7)
INTERSECT
(SELECT DISTINCT t1_id FROM match WHERE season_id=8)
INTERSECT
(SELECT DISTINCT t1_id FROM match WHERE season_id=9)) AS t1 WHERE t.t_id = t1.t1_id;
Submit
```

t\_id t\_name

1 Kolkata Knight Riders

2 Royal Challengers Bangalore

4 Kings XI Punjab

6 Delhi Daredevils

7 Mumbai Indians

5 row(s)

19) Give the names of different countries whose players participated in IPL



20) Names of Indian players with slow left arm orthodox bowling skill.

SELECT name FROM player WHERE bowling\_skill= 'Slow left-arm orthodox' AND country='India'; Submit name SB Joshi Yuvraj Singh RA Jadeja M Kartik S Vidyut PP Ojha Iqbal Abdulla KP Appanna SB Jakati RS Gavaskar Bipul Sharma S Sriram Harmeet Singh AL Menaria J Syed Mohammad AG Murtaza S Nadeem AA Chavan ND Doshi BA Bhatt Ankit Sharma P Negi AR Patel J Suchith KH Pandya Swapnil Singh AA Kazi P Prasanth RV Pawar 29 row(s)

### • CONTENTS OF ALL TABLES

## 1) Table match



### 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Next > Last >>

| Ac   | tions  | m_id   | venue                                      | t1_id     | t2_id     | wintype    | city       | man_of_the_match_id | match_winner     | season_id |
|------|--------|--------|--|-----------|-----------|------------|------------|---------------------|------------------|-----------|
| Edit | Delete | 335987 | M Chinnaswamy Stadium                      | ⊚2        | ⊚-1       | by runs    | Bangalore  | <sub>0</sub> ∞2     | ⊕1               | ⊚-1       |
| Edit | Delete | 335988 | Punjab Cricket Association Stadium, Mohali | ⊙⊸4       | ⊙=3       | by runs    | Chandigarh | <sub>0</sub> ⇒19    | ⊙=3              | <u></u> 1 |
| Edit | Delete | 335989 | Feroz Shah Kotla                           | ∞-6       | ⊕5        | by wickets | Delhi      | <sub>0</sub> ⇒90    | ⊕6               | ⊚-1       |
| Edit | Delete | 335990 | Wankhede Stadium                           | <u></u> 7 | ⊕2        | by wickets | Mumbai     | <sub>0</sub> ⇒11    | <u></u> 2        | <u></u> 1 |
| Edit | Delete | 335991 | Eden Gardens                               | ⊚-1       | ∞8        | by wickets | Kolkata    | <sub>0</sub> ∞4     | ⊚=1              | ⊚-1       |
| Edit | Delete | 335992 | Sawai Mansingh Stadium                     | ⊙=5       | ∞4        | by wickets | Jaipur     | ⊙=32                | <sub>0</sub> 5   | <u></u> 1 |
| Edit | Delete | 335993 | Rajiv Gandhi International Stadium, Uppal  | ∞8        | ∞6        | by wickets | Hyderabad  | <sub>⊙</sub> 41     | ⊕6               | <u></u> 1 |
| Edit | Delete | 335994 | MA Chidambaram Stadium, Chepauk            | ⊕3        | ⊕7        | by runs    | Chennai    | <sub>0</sub> ⇒18    | ⊙ <del>-</del> 3 | <u></u> 1 |
| Edit | Delete | 335995 | Rajiv Gandhi International Stadium, Uppal  | ⊚-8       | ⊕5        | by wickets | Hyderabad  | ⊚31                 | ⊕5               | ⊚-1       |
| Edit | Delete | 335996 | Punjab Cricket Association Stadium, Mohali | ∞4        | <u></u> 7 | by runs    | Chandigarh | <sub>0</sub> ∞26    | <u></u> 4        | <u></u> 1 |

Total rows: 577

# 2) Table player

SELECT \* FROM player;

Submit

123456789101

| Actions     | p_id | name            | dob        | batting_hand | bowling_skill         | country      |
|-------------|------|-----------------|------------|--------------|-----------------------|--------------|
| Edit Delete | 1    | SC Ganguly      | 1972-07-08 | Left_Hand    | Right-arm medium      | India        |
| Edit Delete | 2    | BB McCullum     | 1981-09-27 | Right_Hand   | Right-arm medium      | New Zealand  |
| Edit Delete | 3    | RT Ponting      | 1974-12-19 | Right_Hand   | Right-arm medium      | Australia    |
| Edit Delete | 4    | DJ Hussey       | 1977-07-15 | Right_Hand   | Right-arm offbreak    | Australia    |
| Edit Delete | 5    | Mohammad Hafeez | 1980-10-17 | Right_Hand   | Right-arm offbreak    | Pakistan     |
| Edit Delete | 6    | R Dravid        | 1973-01-11 | Right_Hand   | Right-arm offbreak    | India        |
| Edit Delete | 7    | W Jaffer        | 1978-02-16 | Right_Hand   | Right-arm offbreak    | India        |
| Edit Delete | 8    | V Kohli         | 1988-11-05 | Right_Hand   | Right-arm medium      | India        |
| Edit Delete | 9    | JH Kallis       | 1975-10-16 | Right_Hand   | Right-arm fast-medium | South Africa |
| Edit Delete | 10   | CL White        | 1983-08-18 | Right_Hand   | Legbreak googly       | Australia    |

Total rows: 471

# 3) Table player\_match



| Actions |        | match_id            | player_id  | is_keeper | is_captain |
|---------|--------|---------------------|------------|-----------|------------|
| Edit    | Delete | ⊚335987             | <u></u> 1  | 0         | 1          |
| Edit    | Delete | o⇒335987            | <u></u> 2  | 0         | 0          |
| Edit    | Delete | ⊚335987             | ⊚3         | 0         | 0          |
| Edit    | Delete | o⇒335987            | <u></u> 4  | 0         | 0          |
| Edit    | Delete | ⊚335987             | <u></u> 5  | 0         | 0          |
| Edit    | Delete | o⇒335987            | <b>⊕6</b>  | 0         | 1          |
| Edit    | Delete | ⊚335987             | ⊕7         | 0         | 0          |
| Edit    | Delete | o⇒335987            | <u></u> 8∞ | 0         | 0          |
| Edit    | Delete | ⊚335987             | ⊕9         | 0         | 0          |
| Edit    | Delete | <sub>0</sub> 335987 | <u></u> 10 | 0         | 0          |

Total rows: 12694

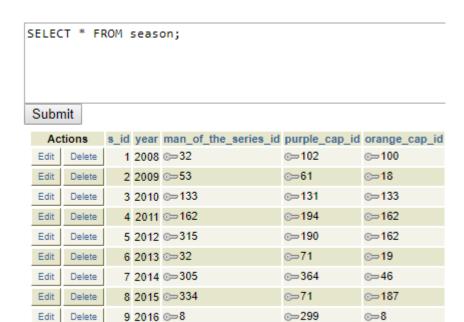
# 4) Table player\_team

```
SELECT * FROM player_team;
Submit
```

| Ac   | tions  | player_id        | team_id     |
|------|--------|------------------|-------------|
| Edit | Delete | ⊙≂1              | <u></u> 1   |
| Edit | Delete | <u></u> 0∞2      | <b>∞</b> 6  |
| Edit | Delete | ⊙∞3              | <b>⊕</b> 6  |
| Edit | Delete | ⊙≂ <b>4</b>      | <u></u> 7   |
| Edit | Delete | <sub>0</sub> ∞5  | <u></u> 0∞2 |
| Edit | Delete | 0∞6              | <u></u> 5   |
| Edit | Delete | <sub>0</sub> ∞7  | <u></u> 0∞2 |
| Edit | Delete | 0-8              | <u></u> 1   |
| Edit | Delete | <sub>0</sub> 9   | ⊙-4         |
| Edit | Delete | <sub>0</sub> ∞10 | <u></u> 8   |

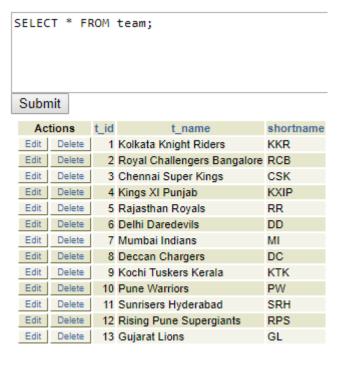
Total rows: 471

### 5) Table season



9 row(s)

### 6) Table team



13 row(s)