# INDIAN CRICKET TEAM DATABASE

**Mini Database Project Report**

***Submitted in partial fulfilment of the requirements for award of the degree of***

**Bachelor of Technology (B. Tech)**

**in**

**COMPUTER SCIENCE AND ENGINEERING**

**By**


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**T. ADITYAN (19AG1A05B3)**


**Under the Esteemed Guidance of**

**Mr. M. RAMESH**

**Associate Professor**



## Department of Computer Science and Engineering

## ACE ENGINEERING COLLEGE

**An Autonomous Institution**

(NBA ACCREDITED B.TECH COURSES: EEE, ECE, MECH, CIVIL & CSE, ACCORDED NAAC 'A'GRADE)

**(Affiliated to Jawaharlal Nehru Technological University, Hyderabad,Telangana)**

**Ghatkesar, Hyderabad - 501 301**


**July 2021**

# ACE

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**Website: www.aceec.ac.inE-mail: info@aceec.ac.in**


## CERTIFICATE

This is to certify that the Mini Database project work entitled **"INDIAN CRICKET TEAM DATABASE SYSTEM"** is being submitted by **G. SWAJAN REDDY (19AG1A0578) and T. ADITYAN (19AG1A05B3)** in partial fulfilment for the award of Degree of **BACHELOR OF TECHNOLOGY in COMPUTER SCIENCE AND ENGINEERING** to the Jawaharlal Nehru Technological University, Hyderabad during the academic year 2020- 2021 is a record of bona-fide work carried out by them under our guidance and supervision.

The results embodied in this report have not been submitted by the students to any other university or institution for the award of any degree or diploma.

**Internal guide**
**Mr. M.RAMESH**
**Associate Professor**

**Head of the Department**
**Prof. K. JAYABHARATHI**
**Professor and Head**
**Dept. of CSE**

# ACKNOWLEDGEMENT

We would like to express our gratitude to all the people behind the screen who have helped us to transform an idea into a real time application.

We would like to express our heart-felt gratitude to our parents without whom we would not have been privileged to achieve and fulfill our dreams.

A special thanks to our Secretary, **Prof. Y. V. GOPALA KRISHNA MURTHY**, for having founded such an esteemed institution. We are also grateful to our beloved principal, **Dr.B.L.RAJU** for permitting us to carry out this project.

We profoundly thank **Prof. K. JAYA BHARATHI**, Head of the Department of Computer Science & Engineering, who has been an excellent guide and a great source of inspiration to my work.

We are very much thankful to our internal guide **Mr. M. RAMESH**, Associate Professor of Computer Science and Engineering who has been an excellent and given continuous support for the completion of our project work.

The satisfaction and euphoria the accompany the successful completion of the task would be great, but incomplete without the mention of the people who made it possible, whose guidance and encouragement crown all the efforts with success. In this context, we would like to thank all the other staff members, both teaching and non-teaching, which have extended their timely help and easier our task.

**G. SWAJAN REDDY (19AG1A0578)**

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# Abstract

## Indian Cricket Team Database

Indian cricket team is managed by BCCI, one of the greatest cricket boards in the world. An organized and systematic manner is required to store the data about the team activities. The administration needs to maintain all the records and modules by which the team operates. there are many records that tells about a player. The basic data can be like speciality, name, salary, etc. They need to organize the data about their whole team consisting about various players, coaches, staff, etc. There are modules that are interdependent like players and matches played etc. for example if we want to know the statistics about a player then we need to know about the number of matches he played, total runs he scored in particular format of match, highest scores in each format, average and strike rates. So it needs to connect modules like players, matches, etc.

Database management system is perfect to store, organize and access the data. This database for Indian cricket system will consists data about all the members including coaches and staff in the team. This database contains all the details of coaches like their name, age, id, experience and speciality. Players statistics and their general data is stored in the database. The database also contains information about all matches played by the team and upcoming matches schedules. In general, this project aims to enhance efficiency and at the same time maintain information accurateness. Our work is useful for easy user interface. We are planning to utilize the powerful database management, data retrieval and data manipulation.

TEAM ALBERT EINSTEIN
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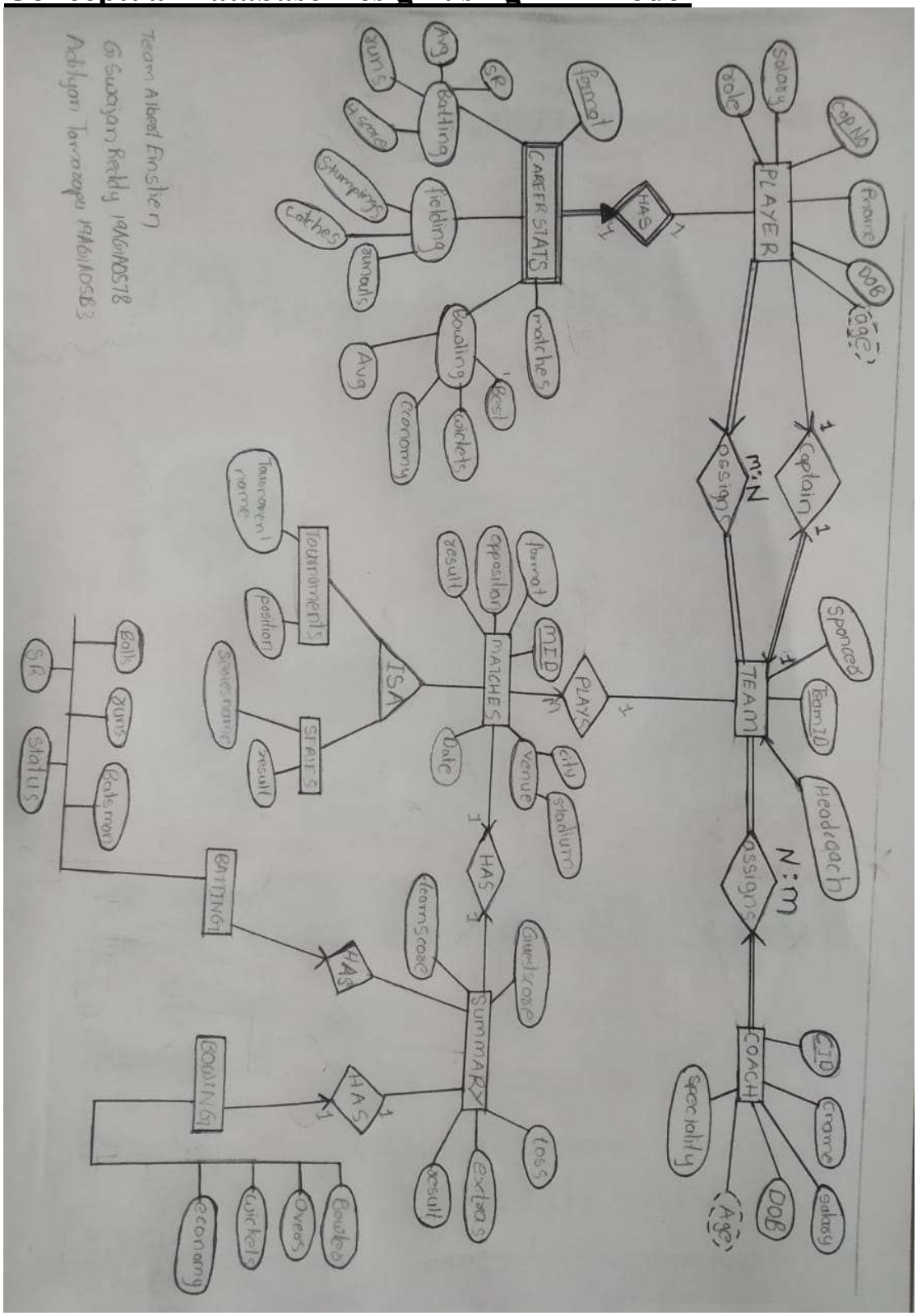
# Conceptual Database Design using E-R model



# Logical Database Design using Relational model

## TABLES:

1. Team(TeamID, captain, headcoach, sponcer)
   Primary key : teamID  Foreign key : headcocah, captain

2. Player(capno, name,role,DOB, age, salary)
   Primary key : capno

3. Playerassigns(capno, teamID)
   Primary key : capno,teamID  Foreign key : capno, teamID

4. Playerstats(capno, format, matches, runs, batavg, strikerate, stumpings, runouts, catches)
   Primary key : capno, format

5. Coach(cid, name, speciality, age, salary)
   Primary key : cid

6. Coachassigns(cid, teamID)
   Primary key : cid, teamID  Foreign key: cid, teamID

7. Matchesplay(MID, TID, format, opposition, date, city, stadium)
   Primary key : MID,TID  Foreign key: TID

8. Series(MID, seriesname, seriesresult)
   Primary key : MID  Foreign key : MID

9. Tournments(MID, Tname, position, result)
   Primary key : MID  Foreign key : MID

10. Matchsummary(MID, homescore, guestscore, toss, result)
    Primary key : MID  Foreign key : MID

11. Batting(MID, batsman, runs, balls, sr, status)
    Primary key : MID, batsman  Foreign key : MID, batsman

12. Bowling(MID, bowler, overs, wickets, runs, eco)
    Primary key : MID, bowler  Foreign key : MID, bowler

# TABLES / DATA

Team

| Team ID | Captain | Coach | Sponsor |
|---|---|---|---|
| 1 | 25 | 1 | Oppo |
| 2 | 25 | 3 | Byjus |
| 3 | 21 | 1 | Byjus |
| 4 | 30 | 3 | Byjus |
| 5 | 25 | 1 | Byjus |

Player assigns

| Team ID | Cap No |
|---|---|
| 1 | 21 |
| 1 | 22 |
| 1 | 25 |
| 1 | 30 |
| 2 | 31 |
| 2 | 33 |
| 2 | 28 |
| 1 | 29 |
| 2 | 25 |

Players

| Cap No | Name | Role | DoB | Age | Salary |
|---|---|---|---|---|---|
| 21 | Rohit | Batsman | 1-1-87 | 32 | 1.5 |
| 22 | Dhawan | Batsman | 2-2-87 | 32 | 1.2 |
| 23 | Pant | Wk | 3-3-97 | 24 | 0.5 |
| 24 | Rahul | Wk | 4-4-97 | 28 | 1 |
| 25 | Virat | Batsman | 5-3-97 | 31 | 1.5 |
| 26 | Bhumrah | Bowler | 6-8-97 | 24 | 1.5 |
| 27 | Bhuvi | Bowler | 7-8-90 | 30 | 1 |
| 28 | Jadeja | All-rounder | 12-8-97 | 30 | 1 |
| 29 | Ashwin | All-rounder | 12-2-97 | 25 | 1 |
| 30 | Shreyas | Batsman | 12-6-89 | 28 | 1 |
| 31 | Hardik | All-rounder | 13-6-98 | 22 | 1 |
| 32 | Dehabar | Bowler | 14-7-96 | 24 | 0.5 |
| 33 | Shardul | Bowler | 14-6-90 | 25 | 0.5 |

Player Stats

| Cap no | For mat | matc hes | runs | bata rg | SR | stumpi ngs | remo us | calch es | bowle do | wick ets | bowla vg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | Test | 38 | 2615 | 46.7 | 584 | 0 | 1 | 41 | 350 | 2 | 1120 |
| 21 | ODI | 227 | 9905 | 490 | 88 a | 78 | is | 0 | 521 | 8 | |
| 21 | T20 | 111 | 2864 | 37.5 | 1390 | 0 | 5 | 41 | 9.97 | 1 | 644 1130 |
| 25 | Test | 91 | 7490 | 594 | 571 | | | | | | |
| Is | ODI | 254 | 1216 9 | | | 0 | 4 | 8g | 2.88 | 0 | - |
| 25 | T20 | 90 | 3159 | 591 52.6 | 93.2 139.0 | 0 | 21 7 | 132 42 | 6.22 8.15 | 4 4 | 1662 49.5 |
| 26 | Test | 19 | 43 | 25 | 22.5 | 0 | 0 | 5 | 7.70 | 83 | 19.1 |
| 26 | ODI | 67 | 19 | 3.2 | 38.8 | 0 | S | 17 | 4.65 | 108 | 253 |
| 26 | T2O | so | 8 | 40 | 615 | 0 | 2 | 7 | 666 | 59 | 202 |
| 28 | Test | S1 | 1954 | 36.2 | 62.5 | 0 | 7 | 38 | 2.44 | 290 | 99.3 |
| 98 | ODI | 168 | 2411 | 39.6 | 87/ | 0 | 21 | 60 | 4.92 | 188 | 37.4 |
| 28 | T20 | so | 217 | ISS | 1124 | 0 | 7 | 21 | 7/0 | 39 | 29.5 |
| 23 | Test | 20 | 1358 | 453 | 115 | 7 | 0 | is | - | - | - |
| 83 | ODI | 18 | 599 | 331 | 1142 | - | 0 | 9 | - | - | - |
| 23 | T20 | 33 | SI2 | 21.3 | 123.1 | 5 | 1 | 9 | - | - | - |
| 31 | Test | Il | 532 | 313 | 739 | 0 | 2 | 7 | 3.38 | 31./ | 17 |
| 31 | ODI | 60 | 1267 | 34.2 | 117.3 | 0 | 5 | 23 | 556 | 412 | Ss |
| 31 | T20 | 48 | 474 | 19.8 | | 0 | 3 | 30 | 8.17 | 76.7 | 41 |

coach

| CID | name | speciality | DOB | Age | salary tos |
|---|---|---|---|---|---|
| 1 | Ravis | batting | 4-6-57 | 65 | 1.5 |
| 2 | Ojha | bowling | 18-3-72 | S1 | 1.0 |
| 3 | kumble | fielding | 19-4-63 | 57 | 1.0 |
| 4 | Zaheer | bowling | 12-8-82 | 41 | 1.0 |

Coach assigns

| CID | Team ID |
|---|---|
| 1 | 1 |
| 1 | 3 |
| 3 | 2 |
| 3 | 4 |

Matches play

| M ID | TID | Format | Opposition | Date | City | Stadium |
|---|---|---|---|---|---|---|
| 31 | 1 | ODI | England | 4-4-18 | Hyderabad | RajvGarnchi |
| 32 | 1 | ODI | England | 14-4-18 | Bangalore | Chinaswami |
| 33 | 1 | ODI | England | 19-4-18 | Chennai | Chepak |
| 331 | 2 | T20 | Australia | 16-5-18 | Chennai | Chepak |
| 34 | 2 | T20 | Australia | 21-5-18 | Ahmedabad | Narendarn |
| 35 | 2 | T20 | Australia | 21-5-18 | Mumbai | Wakharde |
| 36 | 1 | T20 | Sri Lanka | 18-6-18 | Melboure | Melboure |

Tournament match

| M ID | T name | Position | T Result |
|---|---|---|---|
| 36 | T20 world p 18 | 3 | Not Yet |
| 37 | T20 world p 18 | 3 | Not Yet |
| 38 | T20 world p 18 | 3 | Not Yet |

Series Matches

| MID | Series Name | Series result |
|---|---|---|
| 31 | Paytm ODI | Win |
| 32 | Paytm ODI | Win |
| 33 | Paytm ODI | Win |
| 35 | Paytm T20 | Win |
| 331 | Paytm T20 | Win |

Match Summary

| M ID | Home Score | Guest Score | Toss | Extras | Result |
|---|---|---|---|---|---|
| 31 | 295 | 302 | India | 28 | Lost |
| 32 | 341 | 278 | England | 10 | Won |
| 33 | 300 | 303 | England | 12 | Won |
| 34 | 171 | 172 | India | 8 | Won |
| 35 | 178 | 160 | Australia | 12 | Lost |
| 331 | 169 | 180 | Australia | 10 | Won |
| 36 | 156 | 157 | India | 10 | Won |

| MID | Batsman | Runs | Balls | SR | Status |
|---|---|---|---|---|---|
| 31 | 21 | 98 | 110 | 92 | Out |
| 31 | 22 | 8 | 12 | 92 | Out |
| 31 | 25 | 78 | 61 | 120 | Out |
| 31 | 30 | 79 | 79 | 100 | Out |
| 31 | 31 | 51 | 61 | 110 | Out |

Batting

Bowling

| MID | Bowler | Overs | Runs | Wickets | Economy |
|---|---|---|---|---|---|
| 31 | 33 | 10 | 69 | 3 | 6.1 |
| 31 | 32 | 10 | 51 | 3 | 5.6 |
| 31 | 29 | 10 | 62 | 1 | 6.0 |
| 31 | 28 | 10 | 44 | 1 | 4.0 |
| 31 | 27 | 10 | 49 | 1 | 4.1 |

# Normalization:-

1) Team(TeamID,captain,Headcoach,Sponcer)

Functional Dependencies:(TeamID)->captain,headcoach,sponser
Ck:(TeamID)
Team is in BCNF.

2) Player(capNo,name,role,dob,age,salary)

Fd:capNO->name,role,dob,age,salary
Ck:capNO
=>player is in BCNF

3) Playerassings(cpaNo,TeamID)
FD:- No nontrival functional dependencies
Ck:-capNo,TeamID
=>playerassigns is in BCNF.w

4) Playerstats(capNo,format,matches,runs,batavg,S.R,stumpings,runouts,catches,bowleco ,wickets,bowlavg)

FD:- (capNo,Format)->matches,runs,batavg,S.R, stumpings, runouts , catches, bowleco, wickets,bowlavg )
ck:capNo ,format
=>playerstats is in BCNF

5) coach(CID,name,speciality,dob,age,salary)
FD:- CID->name,speciality,dob,age,salary
CK:CID
=>Coach is in BCNF

6)coachassigns(CID,TeamID)
FD:- No Nontrivial Functional Dependencies
CK:- MID
= > matchesplay is in BCNF

7)matchesplay(MID,TeamID,format,opposition,date,city,stadium,tournamentID,seriesID)
FD:-MID-> TeamID, format,opposition,date,city,stadium,tournamentID,seriesID)
CK:MID
= >matches is in BCNF

8)tounamentDetails(TournamentID,T.name,position,result)
FD:TournamentID->T.name, position,result
CK:TournmentID
= > TournmentID is in BCNF

9) SeriesDetails(SeriesID,seriesname,result)
FD:- SeriesID->seriesname,result
CK:- SeriresID
= > SeriesID is in BCNF

10)matchsummary(MID,IndianScore,Oppositionscore,toss,result,extras)
FD:- MID->IndianScore,Oppositionscore,toss,result,extras
CK:-MID
= > matchsummary is in BCNF

11)Batting(MID,batsmanID,runs balls,SA,status,innings1,innings2)
FD:- (MID,batsmanID)->,runs balls,SA,status,innings1,innings2
CK:- MID,batsmanID
= >batting is in BCNF

12)bowling(M.I.D,bowlerID,overs,suns,wickets,eco,Innings,Innings2)
FD:- (M.I.D,bowlerID)->,overs,suns,wickets,eco,Innings,Innings2
CK:- M.I.D,bowlerID
=>Bowling is in BCNF

# DATABASE CREATION

1) Create player table :

Query :

```
create table player(capno int,name char(20),role char(10),age int,salary float,primary
 key(capno));
```

output :

table created

2) Insert data into the player table :

Query:

```
insert into player values(20,'MSdhoni','wk',37,1.5);
```

output:

```
1 row(s) inserted.
```

3) Displaying player table data :

Query:

```
select * from player;
```

output :

| CAPNO | NAME | ROLE | AGE | SALARY |
|---|---|---|---|---|
| 21 | rohit | batsman | 32 | 1.5 |
| 22 | dhawan | batsman | 32 | 1.5 |
| 24 | rahul | wk | 28 | 1 |
| 25 | virat | batsman | 31 | 1.5 |
| 26 | bhumrah | bowler | 24 | 1.5 |
| 27 | bhuvaneshwar | bowler | 28 | 1 |
| 28 | Ravindra jadeja | allrounder | 30 | 1 |
| 29 | ravi ashwin | allrounder | 30 | 1 |
| 30 | shreyas | batsman | 25 | .5 |
| 31 | hardik | allrounder | 28 | 1 |
| More than 10 rows available. Increase rows selector to view more rows. | | | | |

10 rows returned in 0.01 seconds Download

4) Create table coach :

Query:

```
create table coach(cid int,name char(20),speciality char(10),age int,SalaryINcrores
 float,primary key(cid));
```

output:

Table created.

5) Insert data into coach table :

Query:

```
insert into coach values(1,'ravi shastry','batting',65,1.5);
```

output:

```
1 row(s) inserted.
```

6) Displaying data from coach table :

Query:

```
select * from coach;
```

output:

| CID | NAME | SPECIALITY | AGE | SALARYINCRORES |
|---|---|---|---|---|
| 1 | ravi shastry | batting | 65 | 1.5 |
| 2 | dravid | batting | 51 | 1.5 |
| 3 | kumble | fielding | 52 | 1 |
| 4 | zaheer khan | bowling | 42 | 1 |
| 5 | gary | batting | 65 | 1.5 |

7) Create table team :

Query:

```
create table team(teamid int,captain int,headcoach int,sponser char(10), primary key(teamid) ,foreign key(captain) references player(capno),foreign key(headcoach) references coach(cid));
```

output:

Table created.

8) Insert data into team table :

Query :

```
insert into team values(1,25,1,'oppo');
```

output:

```
1 row(s) inserted.
```

9) Displaying team data:

Query:

```
select * from team;
```

output:

| TEAMID | CAPTAIN | HEADCOACH | SPONSER |
|---|---|---|---|
| 1 | 25 | 1 | oppo |
| 2 | 25 | 3 | byjus |
| 3 | 21 | 1 | byjus |
| 4 | 30 | 2 | byjus |
| 5 | 25 | 1 | byjus |

10) Create table playerassigns :

Query :

```
create table playerassigns(teamid int, capno int,primary key(capno,teamid),foreign key(capno) references player(capno),foreign key(teamid) references team(teamid));
```

output:

Table created.

11) Insert data into playerassigns table :

Query:

```
insert into playerassigns values(1,21);
```

output:

```
1 row(s) inserted.
```

12) Displaying playerassigns table data :

Query:

select * from playerassigns;

output:

| TEAMID | CAPNO |
|---|---|
| 1 | 21 |
| 1 | 22 |
| 1 | 25 |
| 2 | 25 |
| 2 | 28 |
| 2 | 29 |
| 1 | 30 |
| 2 | 31 |
| 2 | 33 |

13) Create table coachassigns:

Query:

create table coachassigns(teamid int, cid int,primary key(cid,teamid),foreign key(cid) references coach(cid),foreign key(teamid) references team(teamid));

output:

Table created.

14) Insert data into coachassigns:

Query:

insert into coachassigns values(1,1);

output:

```
1 row(s) inserted.
```

15) Diaplaying data from coachassigns :

Query:

select * from coachassigns;

output:

| TEAMID | CID |
|---|---|
| 1 | 1 |
| 3 | 1 |
| 5 | 2 |
| 2 | 3 |
| 4 | 3 |

16) Create table tournament_details :

Query:

create table tournamentdetails(tournamentid int,tname char(20),position int ,result char(6),primary key(tournamentid));

output:

Table created.

17) Insert data into tournament_details :

Query:

insert into tournamentdetails values(2,'T20 WORLDCUP 2007',1,'won');

output:

```
1 row(s) inserted.
```

18) Displaying data from tournament_details:

Query:

select * from tournamentdetails;

output:

| TOURNAMENTID | TNAME | POSITION | RESULT |
|---|---|---|---|
| 1 | T20 WORLDCUP 2018 | 3 | notyet |
| 2 | T20 WORLDCUP 2007 | 1 | won |
| 3 | ODI WORLDCUP 2011 | 2 | won |
| 4 | ODI WORLDCUP 2015 | 3 | lost |

19) Create table series_details:

Query:

create table seriesdetails(seriesid int,sname char(20),result char(7),primary key(seriesid));

output:

Table created.

20) Insert data into series_details:

Query:

insert into seriesdetails values(1,'paytm odi','win');

output:

```
1 row(s) inserted.
```

21) Displaying data from series_details table:

Query:

select * from seriesdetails;

output:

| SERIESID | SNAME | RESULT |
|---|---|---|
| 1 | paytm odi | win |
| 2 | paytm T20 | win |

22) Create table matches_play :

Query:

create table matchesplay(mid int,tid int, format char(5),opposition char(15),matchday date,city char(15),stadium char(40),tournamentid int,seriesid int,primary key(mid),foreign key(tid) references team(teamid),foreign key(tournamentid) references tournamentdetails(tournamentid),foreign key(seriesid) references seriesdetails(seriesid));

output:

Table created.

23) Insert data into matches_play:

Query:

insert into matchesplay values(31,1,'odi','england','4-4-2018','hyderabad','rajiv gandhi international',null,1);

output:

```
1 row(s) inserted.
```

24) Displaying matches_play data:

Query:

```
select * from matchesplay;
```

output:

| MID | TID | FORMAT | OPPOSITION | MATCHDAY | CITY | STADIUM | TOURNAMENTID | SERIESID |
|---|---|---|---|---|---|---|---|---|
| 31 | 1 | odi | england | 04/04/2018 | hyderabad | rajiv gandhi international | - | 1 |
| 32 | 1 | odi | england | 04/14/2018 | bangalour | chinna swammy stadium | - | 1 |
| 33 | 1 | odi | england | 04/19/2018 | chennai | M.A. Chidambaram chepauk stadium | - | 1 |
| 331 | 2 | t20 | australia | 05/16/2018 | chennai | M.A. Chidambaram chepauk stadium | - | 2 |
| 34 | 1 | t20 | australia | 05/21/2018 | hyderabad | rajiv gandhi international | - | 2 |
| 35 | 1 | t20 | australia | 05/26/2018 | delhi | delhi international cricket stadium | - | 2 |
| 36 | 2 | odi | srilanka | 04/04/2011 | mumbai | wankhande stadium | 3 | - |
| 70 | 2 | odi | southafrica | 06/08/2015 | melbourn | melbourn cricket stadium | 4 | - |

25) Create match_summary table:

Query:

```
create table matchsummary(mid int,IndianScore int,oppositionScore int, toss char(5),result
char(5));
alter table matchsummary add primary key(mid) add foreign key(mid) references
matchesplay(mid);
```

output:

Table created.

26) Insert data into match_summary:

Query:

```
insert into matchsummary values(32,341,278,'lost','won');
```

output:

```
1 row(s) inserted.
```

27) Displaying match_summary table data:

Query:

```
select * from matchsummary;
```

output:

| MID | INDIANSCORE | OPPOSITIONSCORE | TOSS | RESULT |
|---|---|---|---|---|
| 31 | 292 | 302 | won | lost |
| 32 | 341 | 278 | lost | won |
| 33 | 303 | 300 | lost | won |
| 34 | 172 | 171 | won | won |
| 35 | 160 | 178 | lost | lost |
| 331 | 180 | 169 | lost | won |
| 36 | 157 | 156 | won | won |
| 70 | 298 | 248 | lost | won |

28) Create table batting scorecard of india in matches:

Query:

```
create table batting(mid int,batsman int,runs int,balls int, sr int, status char(10),innings
int,primary key(mid,batsman),foreign key(mid) references matchesplay(mid),foreign
key(batsman) references player(capno));
```

output:

Table created.

29) Insert data into batting scorecards :

Query:

```
insert into batting values(31,21,98,110,92,'out',2);
```

output:

```
1 row(s) inserted.
```

30) Displaying data of batting scorecards of indian team :

Query:

```
select * from batting;
```

output:

| MID | BATSMAN | RUNS | BALLS | SR | STATUS | INNINGS |
|---|---|---|---|---|---|---|
| 31 | 21 | 98 | 110 | 92 | out | 2 |
| 31 | 22 | 8 | 12 | 92 | out | 2 |
| 31 | 25 | 78 | 61 | 120 | out | 2 |
| 31 | 30 | 5 | 2 | 214 | out | 2 |
| 31 | 31 | 51 | 61 | 110 | out | 2 |
| 33 | 21 | 48 | 55 | 92 | out | 1 |
| 33 | 22 | 121 | 101 | 120 | out | 1 |
| 33 | 25 | 68 | 48 | 120 | out | 1 |
| 33 | 24 | 47 | 29 | 160 | out | 1 |

31) Create Indian team bowling scorecard table for matches played:

Query:

```
create table bowling(mid int, bowler int, overs float, runs int, wickets int, economy float,
innings int, primarykey(mid,bowler),foreign key(mid) references matchesplay(mid),foreign
key(bowler) references player(capno));
```

output:

Table created.

32) Insert data into bowling scorecards :

Query:

```
insert into bowling values(31,33,10,69,3,6.1,1);
```

output:

```
1 row(s) inserted.
```

33) Displaying data of bowling scorecards of Indian team:

Query:

```
Select * from bowling;
```

Output:

| MID | BOWLER | OVERS | RUNS | WICKETS | ECONOMY | INNINGS |
|---|---|---|---|---|---|---|
| 31 | 33 | 10 | 69 | 3 | 6.1 | 1 |
| 31 | 32 | 10 | 51 | 3 | 5.6 | 1 |
| 31 | 29 | 10 | 62 | 2 | 6 | 1 |
| 31 | 28 | 10 | 44 | 1 | 4 | 1 |
| 31 | 27 | 10 | 49 | 1 | 4.1 | 1 |

34) Create table players_stats:

Query:

```
CREATE TABLE  "PLAYERSTATS" (
        "CAPNO" NUMBER,
        "FORMAT" CHAR(5),
        "MATCHES" NUMBER,
        "RUNS" NUMBER,
        "BATTING_AVG" FLOAT(126),
        "BATTING_STRIKERATE" FLOAT(126),
        "STUMPINGS" NUMBER,
        "RUNOUTS" NUMBER,
        "CATCHES" NUMBER,
        "BOWLING_ECONOMY" FLOAT(126),
        "WICKETS" NUMBER,
        "BOWLING_AVG" FLOAT(126),
         PRIMARY KEY ("CAPNO", "FORMAT") ENABLE
 ) ;
ALTER TABLE  "PLAYERSTATS" ADD CONSTRAINT "PLAYERSTATS_FK1" FOREIGN KEY
("CAPNO")  REFERENCES  "PLAYER" ("CAPNO") ON DELETE CASCADE ENABLE;
```

output:

Table created.

35) Insert data into player_stats:

Query:

```
insert into playerstats values(23,'test',20,1358,45.3,71.5,7,0,75,null,null,null);
```

output:

```
1 row(s) inserted.
```

36) Displaying data of player_stats table :

Query:

```
Select * from playerstats;
```

Output:

| CAPNO | FORMAT | MATCHES | RUNS | BATTING_AVG | BATTING_STRIKERATE | STUMPINGS | RUNOUTS | CATCHES | BOWLING_ECONOMY | WICKETS | BOWLING_AVG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | test | 38 | 2615 | 46.7 | 58.4 | 0 | 1 | 41 | 3.5 | 2 | 112 |
| 21 | odi | 227 | 9205 | 49 | 88.9 | 78 | 15 | 0 | 5.21 | 8 | 64.4 |
| 21 | t20 | 111 | 2864 | 32.5 | 139 | 0 | 5 | 41 | 9.97 | 1 | 113 |
| 25 | test | 91 | 7490 | 52.4 | 57.1 | 0 | 4 | 88 | 2.88 | 0 | - |
| 25 | odi | 254 | 12169 | 59.1 | 93.2 | 0 | 21 | 132 | 6.22 | 4 | 166.2 |
| 25 | t20 | 90 | 3159 | 52.6 | 139 | 0 | 7 | 42 | 8.15 | 4 | 49.5 |
| 26 | test | 19 | 43 | 2.5 | 22.5 | 0 | 0 | 5 | 2.7 | 83 | 22.1 |
| 26 | odi | 67 | 19 | 3.2 | 38.8 | 0 | 5 | 17 | 4.65 | 108 | 25.3 |
| 26 | t20 | 50 | 8 | 4 | 61.5 | 0 | 2 | 7 | 6.66 | 59 | 20.2 |
| 28 | test | 51 | 1954 | 36.2 | 62.5 | 0 | 7 | 38 | 2.44 | 220 | 24.3 |
| 28 | odi | 168 | 2411 | 32.6 | 87.1 | 0 | 21 | 60 | 4.92 | 188 | 37.4 |
| 28 | t20 | 50 | 217 | 15.5 | 112.4 | 0 | 7 | 21 | 7.1 | 39 | 29.5 |
| 31 | test | 11 | 532 | 31.3 | 73.8 | 0 | 2 | 7 | 3.38 | 31.1 | 17 |
| 31 | odi | 60 | 1267 | 34.2 | 117.3 | 0 | 5 | 23 | 5.56 | 41.2 | 55 |
| 31 | t20 | 48 | 474 | 19.8 | 147.7 | 0 | 3 | 30 | 8.17 | 26.7 | 41 |

# SQL QUERYS , SELECT WITH WHERE

1. Find all the players whose salary is 1.5cr

Query:

```
select name
from player
where salary=1.5;
```

Output:

| NAME |
|---|
| rohit |
| dhawan |
| virat |
| bhumrah |
| MSdhoni |

2. Find all the batsman from players list whose age is below 30

Query:

```
select name
from player
where role='batsman' and age<30;
```

Output:

| NAME |
|---|
| shreyas |

3. Find opposition from ODI and T20 matches played by India

Query:

```
select opposition,format
from matchesplay
where format='odi' or format='t20';
```

Output:

| OPPOSITION | FORMAT |
|---|---|
| england | odi |
| england | odi |
| england | odi |
| australia | t20 |
| australia | t20 |
| australia | t20 |
| srilanka | odi |
| southafrica | odi |

4. Find coaches name whose speciality is not bowling

Query:

```
select name
from coach
where speciality <> 'bowling';
```

Output:

| NAME |
|---|
| ravi shastry |
| dravid |
| kumble |
| gary |

5. Display stadium names of located in cities ‘’hyderabad’’,”chennai”

Query:

```
select city,stadium
from matchesplay
where city in ('hyderabad','chennai');
```

Output:

| CITY | STADIUM |
|---|---|
| hyderabad | rajiv gandhi international |
| chennai | M.A. Chidambaram chepauk stadium |
| chennai | M.A. Chidambaram chepauk stadium |
| hyderabad | rajiv gandhi international |

6. Display team -ID of Indian team whose sponcer is not ‘byjus’ or ‘star’

Query:

```
select teamid
from team
where sponser not in ('oppo','star');
```

Output:

| TEAMID |
|---|
| 2 |
| 3 |
| 4 |
| 5 |

7. Find player cap-no whose Test batting average is above 40 below 55

Query:

```
select capno , batting_avg
from playerstats
where format='test' and batting_avg between 40 and 55;
```

Output:

| CAPNO | BATTING_AVG |
|---|---|
| 21 | 46.7 |
| 23 | 45.3 |
| 25 | 52.4 |

8. Find players of age below 25 and above 20

Query:

```
select name
from player
where age between 20 and 25;
```

Output:

| NAME |
|---|
| bhumrah |
| shreyas |
| deepak chahar |
| shardul |
| rishab pant |

9. Find players capno whose bowling average is null and specify format

Query:

```
select capno,format
from playerstats
where bowling_avg is null;
```

Output:

| CAPNO | FORMAT |
|---|---|
| 25 | test |
| 23 | test |
| 23 | odi |
| 23 | t20 |

10. Find t20 tournaments in that are played by India

Query:

```
select tname
from tournamentdetails
where tname like '%T20%';
```

Output:

| TNAME |
|---|
| T20 WORLDCUP 2018 |
| T20 WORLDCUP 2007 |

11. Find result of odi series that india played

Query:

```
select sname as series , result
from seriesdetails
where sname like '%odi%';
```

Output:

| SERIES | RESULT |
|---|---|
| paytm odi | win |

# SQL queries with order by , aggregate functions and set manipulation operators

Order by:

1. Display player names in alphabetical order

Query:

```
select name
from player
order by name asc;
```

Output:

| NAME |
|---|
| Bhumrah |
| Bhuvaneshwar |
| Deepak chahar |
| Dhawan |
| Hardik |
| MSdhoni |
| Rahul |
| Ravi ashwin |
| Ravindra jadeja |
| Rishab pant |
| More than 10 rows available. Increase rows selector to view more rows. |

2. Display coach names with their age in decreasing order

Query:

```
select name, age
from coach
order by age desc;
```

Output:

| NAME | AGE |
|---|---|
| ravi shastry | 65 |
| gary | 65 |
| kumble | 52 |
| dravid | 51 |
| zaheer khan | 42 |

3. Display player names alphabetical order and decreasing order of their salary

Query:

```
select name, salary as SalaryInCR
from player
order by name asc ,salary desc;
```

Output:

| NAME | SALARYINCR |
|---|---|
| Bhumrah | 1.5 |
| Bhuvaneshwar | 1 |
| Deepak chahar | .5 |
| Dhawan | 1.5 |
| Hardik | 1 |
| MSdhoni | 1.5 |
| Rahul | 1 |
| Ravi ashwin | 1 |
| Ravindra jadeja | 1 |
| Rishab pant | .5 |
| More than 10 rows available. Increase rows selector to view more rows. | |

4. Display details of India matches played in the order of the match date and format

Query:

```
select *
from matchesplay
order by matchday asc , format asc;
```

Output:

| MID | TID | FORMAT | OPPOSITION | MATCHDAY | CITY | STADIUM | TOURNAMENTID | SERIESID |
|---|---|---|---|---|---|---|---|---|
| 36 | 2 | odi | srilanka | 04/04/2011 | mumbai | wankhande stadium | 3 | - |
| 70 | 2 | odi | southafrica | 06/08/2015 | melbourn | melbourn cricket stadium | 4 | - |
| 31 | 1 | odi | england | 04/04/2018 | hyderabad | rajiv gandhi international | - | 1 |
| 32 | 1 | odi | england | 04/14/2018 | bangalour | chinna swammy stadium | - | 1 |
| 33 | 1 | odi | england | 04/19/2018 | chennai | M.A. Chidambaram chepauk stadium | - | 1 |
| 331 | 2 | t20 | australia | 05/16/2018 | chennai | M.A. Chidambaram chepauk stadium | - | 2 |
| 34 | 1 | t20 | australia | 05/21/2018 | hyderabad | rajiv gandhi international | - | 2 |
| 35 | 1 | t20 | australia | 05/26/2018 | delhi | delhi international cricket stadium | - | 2 |

Aggregate functions:

5. Find how many times India lost toss in how many matches

Query:

```
select count(toss) as losttoss
from matchsummary
where toss='lost';
```

Output:

| LOSTTOSS |
|---|
| 5 |

6. Find total matches played by player cap-no 21

Query:

```
select sum(matches) as matches
from playerstats
where capno=21;
```

Output:

| MATCHES |
|---|
| 376 |

7. Find total wickets picked by player cap-no 26 across all formats

Query:

```
select sum(wickets) as wickets
from playerstats
where capno=26;
```

Output:

| WICKETS |
|---|
| 250 |

8. Find highest score and minimum score by Indian batsman scored in match whose match-id is 31

Query:

```
select max(runs),min(runs)
```

```
from batting
where mid=31;
```

Output:

| MAX(RUNS) | MIN(RUNS) |
|---|---|
| 98 | 5 |

9. Find average Indian score in odi matches

Query:

```
select avg(indianscore)
from matchsummary s,matchesplay m
where m.mid=s.mid and m.format='odi';
```

Output:

| AVG(INDIANSCORE) |
|---|
| 278.2 |

10. Find average age of players

Query:

```
select avg(age)
from player;
```

Output:

| AVG(AGE) |
|---|
| 28.2 |

Set manipulation operators:

11. Find player names whose role is batsman and salary is above 1 crore

Query:

```
select name
from player
where role='batsman'

INTERSECT
select name
from player
where salary>1;
```

Output:

| NAME |
|---|
| Dhawan |
| Rohit |
| ViratKohli |

12. Find coaches whose speciality is batting or age is above 55 or both

Query:

```
select name
from coach
where speciality='batting'
UNION
select name
from coach
where age > 55;
```

Output:

| NAME |
| --- |
| dravid |
| gary |
| ravi shastry |

13. Find players cap-no whose batting average is above 35 but bowling economy is not above 89 in T20 matches and display them

Query:

```
select capno,batting_avg,bowling_economy
from playerstats
where batting_avg>30 and format='t20'
MINUS
select capno,batting_avg,bowling_economy
from playerstats
where bowling_economy>9 and format='t20';
```

Output:

| CAPNO | BATTING_AVG | BOWLING_ECONOMY |
| --- | --- | --- |
| 25 | 52.6 | 8.15 |

# SQL QUERIES USING ( GROUB BY AND HAVING )

1. Find how many matches played in each city

Query:

```
select city , count(mid) as MatchesPlayed
from matchesplay
group by city;
```

Output:

| CITY | MATCHESPLAYED |
|---|---|
| mumbai | 1 |
| hyderabad | 2 |
| melbourn | 1 |
| chennai | 2 |
| bangalour | 1 |
| delhi | 1 |

2. Find average Indian score in ODI won and lost matches

Query:

```
select result, cast(avg(indianscore) as decimal(10,2)) as AvgScore
from matchsummary s, matchesplay m
where s.mid=m.mid and m.format='odi'
group by result;
```

Output:

| RESULT | AVGSCORE |
|---|---|
| won | 274.75 |
| lost | 292 |

3. Find number of catches players took in across all 3 formats

Query:

```
select capno , sum(catches) as catches
from playerstats
group by capno;
```

Output:

| CAPNO | CATCHES |
|---|---|
| 21 | 82 |
| 23 | 93 |
| 25 | 262 |
| 26 | 29 |
| 28 | 119 |
| 31 | 60 |

4. Find number of batsman ,bowlers , wicket keepers and all rounders in the team

Query:

```
select role , count(role) as totalplayers
from player
group by role;
```

Output:

| ROLE | TOTALPLAYERS |
|---|---|
| batsman | 4 |
| wk | 3 |
| bowler | 5 |
| allrounder | 3 |

5. Find players CapNo and their total runs scored across all formats who played at least overall 200 matches

Query:

```
select capno , sum(runs)
from playerstats
group by capno
having sum(matches)>200;
```

Output:

| CAPNO | SUM(RUNS) |
|---|---|
| 21 | 14684 |
| 25 | 22818 |
| 28 | 4582 |

6. Find how many matches played against opposition teams if at least more than one match is played across all formats

Query:

```
select opposition , count(opposition) as matchesplayed
from matchesplay
group by opposition
having count(opposition)>1;
```

Output:

| OPPOSITION | MATCHESPLAYED |
|---|---|
| england | 3 |
| australia | 3 |

7. Find how many batsman are out and notout in matches given more than 4 wickets have been fallen and display respective match id

Query:

```
select mid,status,count(status) as total
from batting
group by mid,status
having count(status)>4;
```

Output:

| MID | STATUS | TOTAL |
|---|---|---|
| 31 | out | 5 |

# JOINS

1. Find Indian team captains and team-id

Query:

```
select name as captain,teamid
from team t, player p
where t.captain=p.capno;
```

Output:

| CAPTAIN | TEAMID |
|---|---|
| Rohit | 3 |
| ViratKohli | 5 |
| ViratKohli | 2 |
| ViratKohli | 1 |
| Shreyas | 4 |
| MSdhoni | 6 |

2. Find bowlers who picked 3 wickets in matchid 31

Query:

```
select name , wickets
from bowling b , player p
where b.bowler=p.capno and mid=31 and wickets=3;
```

Output:

| NAME | WICKETS |
|---|---|
| Deepak chahar | 3 |
| Shardul | 3 |

3. Find batsman who scored a century in match-id=33

Query:

```
select name as batsman , runs
from batting b innerjoin player p
where b.batsman=p.capno and b.mid=33 and runs>=10;
```

Output:

| BATSMAN | RUNS |
|---|---|
| Dhawan | 121 |

4. Find places where the PAYTM ODI series held against England

Query:

```
select city
from seriesdetails s join matchesplay m on s.seriesid=m.seriesid
where s.sname='paytm odi' and m.opposition='england';
```

Output:

| CITY |
|---|
| hyderabad |
| bangalour |
| chennai |

5. Display batsman name and batting average whose batting average is greater than or equal to 45 in ODI matches

Query:

```
select p.name as player , s.batting_avg as average
from player p join playerstats s on p.capno=s.capno
where s.format='odi' and s.batting_avg>=45;
```

Output:

| PLAYER | AVERAGE |
|---|---|
| Rohit | 49 |
| ViratKohli | 59.1 |

6. Display all the teams and matches if the team has played any

Query:

```
select teamid,mid
from team t left outer join matchesplay m on t.teamid=m.tid;
```

Output:

| TEAMID | MID |
|---|---|
| 1 | 31 |
| 1 | 32 |
| 1 | 33 |
| 2 | 331 |
| 1 | 34 |
| 1 | 35 |
| 2 | 36 |
| 2 | 70 |
| 6 | - |
| 5 | - |

More than 10 rows available. Increase rows selector to view more rows.

7. Display all the coaches and the teams if the coach has been optioned has the headcoach

Query:

```
select teamid,name
from team t right outer join coach c on t.headcoach=c.cid;
```

Output:

| TEAMID | NAME |
|---|---|
| 1 | ravi shastry |
| 3 | ravi shastry |
| 5 | ravi shastry |
| 6 | ravi shastry |
| 4 | dravid |
| 2 | kumble |
| - | zaheer khan |
| - | gary |

8. Display all the matches and tournament names if the match is played in any tournament

Query:

```
select m.mid as matchid,t.tname as tournament
from matchesplay m full outer join tournamentdetails t on
    m.tournamentid=t.tournamentid;
```

Output:

| MATCHID | TOURNAMENT |
|---|---|
| 31 | - |
| 32 | - |
| 33 | - |
| 331 | - |
| 34 | - |
| 35 | - |
| 36 | ODI WORLDCUP 2011 |
| 70 | ODI WORLDCUP 2015 |
| - | T20 WORLDCUP 2018 |
| - | T20 WORLDCUP 2007 |

9. Find players with salary 1 crore whose capno is equal to any other players age

Query:

```
select p1.name
from player p1, player p2
where p1.capno=p2.age and p1.salary=1;
```

Output:

| NAME |
|---|
| Ravindra jadeja |
| Hardik |
| Rahul |
| Ravindra jadeja |
| Ravindra jadeja |
| Rahul |
| Ravindra jadeja |
| Rahul |

# Views

1. Create a view containing players batting statistics like capno, format, matches, batting avg, runs, strike rate

Query:

```
Create view batstats(capno, format, matches, runs, batting_avg, strike_rate) as
Select b.capno , b.format, b.matches, b.runs, b.batting_avg, b.battingstrikerate
from playerstats b;
```

Output:

```
View created.
```

a) Display the view

Query:

```
select * from batstats;
```

Output:

| CAPNO | FORMAT | MATCHES | RUNS | BATTING_AVG | STRIKE_RATE |
|---|---|---|---|---|---|
| 21 | test | 38 | 2615 | 46.7 | 58.4 |
| 21 | odi | 227 | 9205 | 49 | 88.9 |
| 21 | t20 | 111 | 2864 | 32.5 | 139 |
| 25 | test | 91 | 7490 | 52.4 | 57.1 |
| 25 | odi | 254 | 12169 | 59.1 | 93.2 |
| 25 | t20 | 90 | 3159 | 52.6 | 139 |
| 26 | test | 19 | 43 | 2.5 | 22.5 |
| 26 | odi | 67 | 19 | 3.2 | 38.8 |
| 26 | t20 | 50 | 8 | 4 | 61.5 |
| 28 | test | 51 | 1954 | 36.2 | 62.5 |

More than 10 rows available. Increase rows selector to view more rows.

b) Find total runs in all formats scored by each player

Query:

```
select capno,sum(runs) as total_runs
from batstats
group by capno;
```

Output:

| CAPNO | TOTAL_RUNS |
|---|---|
| 21 | 14684 |
| 23 | 2399 |
| 25 | 22818 |
| 26 | 70 |
| 28 | 4582 |
| 31 | 2273 |

c) Query the view to display players capno who have scored more than 8000 runs in ODIs

Query:

```
select capno,runs
from batstats
where runs>8000 and format='odi';
```

Output:

| CAPNO | RUNS |
|---|---|
| 21 | 9205 |
| 25 | 12169 |

d) Update the view to increase ODI matches played by 1 and display capno, format, matches, runs, batting avg, strike rate from the playerstats table to find the difference

Query:

```
update batstats
set matches = matches + 1
where format='odi';
```

Query:

```
select capno,format,matches,runs,batting_avg,batting_strikerate
from playerstats;
```

Output:

| CAPNO | FORMAT | MATCHES | RUNS | BATTING_AVG | BATTING_STRIKERATE |
|---|---|---|---|---|---|
| 21 | test | 38 | 2615 | 46.7 | 58.4 |
| 21 | odi | 228 | 9205 | 49 | 88.9 |
| 21 | t20 | 111 | 2864 | 32.5 | 139 |
| 25 | test | 91 | 7490 | 52.4 | 57.1 |
| 25 | odi | 255 | 12169 | 59.1 | 93.2 |
| 25 | t20 | 90 | 3159 | 52.6 | 139 |
| 26 | test | 19 | 43 | 2.5 | 22.5 |
| 26 | odi | 68 | 19 | 3.2 | 38.8 |
| 26 | t20 | 50 | 8 | 4 | 61.5 |
| 28 | test | 51 | 1954 | 36.2 | 62.5 |

More than 10 rows available. Increase rows selector to view more rows.

2. Create a view to find captain name, teamID and sponcer of that team

Query:

```
create view teams(team_ID, captain, sponcer) as
select t.teamID , p.name, t.sponser
from team t, player p
where t.captain=p.capno;
```

Output:

```
View created.
```

a) Display the view

Query:

```
select * from teams;
```

Output:

| TEAM_ID | CAPTAIN | SPONCER |
|---|---|---|
| 3 | Rohit | byjus |
| 5 | ViratKohli | byjus |
| 2 | ViratKohli | byjus |
| 1 | ViratKohli | oppo |
| 4 | Shreyas | byjus |
| 6 | MSdhoni | star |

b) Find captain names when the team sponcer is Oppo

Query:

```
select captain,sponcer
from teams
where sponcer='oppo';
```

Output:

| CAPTAIN | SPONCER |
|---|---|
| ViratKohli | oppo |

c) Find how many teams are played under each sponcership

Query:

```
select sponcer , count(*) as no_of_teams
```

```
from teams
group by sponcer;
```

Output:

| SPONCER | NO_OF_TEAMS |
|---|---|
| oppo | 1 |
| star | 1 |
| byjus | 4 |

d) Insert a record <7,25,1,'oppo'> into team table and execute the above c query again to see the difference

Query:

```
select sponcer , count(*) as no_of_teams
from teams
group by sponcer;
```

Output:

| SPONCER | NO_OF_TEAMS |
|---|---|
| oppo | 2 |
| star | 1 |
| byjus | 4 |

3. Create a view containing match_ID, bowler name, bowling economy and wickets from that match

Query:

```
Create view bowl(match_id, bowler, wickets, economy) as
select b.mid, p.name, b.wickets, b.economy
from bowling b, player p
where b.bowler=p.capno;
```

Output:

```
View created.
```

a) Display the view

Query:

```
select * from bowl;
```

Output:

| MATCH_ID | BOWLER | WICKETS | ECONOMY |
|---|---|---|---|
| 31 | Bhuvaneshwar | 1 | 4.1 |
| 31 | Ravindra jadeja | 1 | 4 |
| 31 | Ravi ashwin | 2 | 6 |
| 31 | Deepak chahar | 3 | 5.6 |
| 31 | Shardul | 3 | 6.1 |

b) Find how many bowlers picked 3 or more wickets in each match

Query:

```
select match_ID, count(bowler) as no_of_bowlers
from bowl
where wickets>2
group by match_ID;
```

Output:

| MATCH_ID | NO_OF_BOWLERS |
|---|---|
| 31 | 2 |

c) Find bowlers and match_ID in which the bowler bowling_economy < 4.5

Query:

```
select match_ID, bowler
from bowl
where economy<4.5;
```

Output:

| MATCH_ID | BOWLER |
|---|---|
| 31 | Ravindra jadeja |
| 31 | Bhuvaneshwar |

# Oracle functions

1. Display player names and capno with even capno

Query:

```
select name , capno
from player
where mod(capno,2)=0;
```

Output:

| NAME | CAPNO |
|---|---|
| Dhawan | 22 |
| Rahul | 24 |
| Bhumrah | 26 |
| Ravindra jadeja | 28 |
| Shreyas | 30 |
| Deepak chahar | 32 |
| MSdhoni | 20 |

2. Display player names and their batting average in tests (display batting average to the nearest integer value).

Query:

```
select p.name, round(s.batting_avg)
from player p, playerstats s
where p.capno=s.capno and s.format='test';
```

Output:

| NAME | ROUND(S.BATTING_AVG) |
|---|---|
| Rohit | 47 |
| ViratKohli | 52 |
| Bhumrah | 3 |
| Ravindra jadeja | 36 |
| Hardik | 31 |
| Rishab pant | 45 |

3. Display all the coaches names in lower case

Query:

```
select lower(name) as names
from coach;
```

Output:

| NAMES |
|---|
| ravi shastry |
| dravid |
| kumble |
| zaheer khan |
| gary |

4. Display all series names in upper case

Query:

```
select upper(sname) as series_names
from seriesdetails;
```

Output:

| SERIES_NAMES |
| --- |
| PAYTM ODI |
| PAYTM T20 |

5. Display all the player names with first letter in capital

Query:

```
select initcap(name) as player_name
from player;
```

Output:

| PLAYER_NAME |
| --- |
| Rohit |
| Dhawan |
| Rahul |
| Viratkohli |
| Bhumrah |
| Bhuvaneshwar |
| Ravindra Jadeja |
| Ravi Ashwin |
| Shreyas |
| Hardik |
| More than 10 rows available. Increase rows selector to view more rows. |

6. Display 4 letters of tournament_names from 3rd character.

Query:

```
select substr(tname,3,4) as sub_string

from tournamentdetails;
```

Output:

| SUB_STRING |
| --- |
| 0 WO |
| 0 WO |
| I WO |
| I WO |

7. Display player names and their salary in “$ crore’s” format.

Query:

```
select name,to_char((salary*10000000),'$0,00,00,000') as salary

from player;
```

Output:

| NAME | SALARY |
|---|---|
| Rohit | $1,50,00,000 |
| Dhawan | $1,50,00,000 |
| Rahul | $1,00,00,000 |
| ViratKohli | $1,50,00,000 |
| Bhumrah | $1,50,00,000 |
| Bhuvaneshwar | $1,00,00,000 |
| Ravindra jadeja | $1,00,00,000 |
| Ravi ashwin | $1,00,00,000 |
| Shreyas | $0,50,00,000 |
| Hardik | $1,00,00,000 |

More than 10 rows available. Increase rows selector to view more rows.

8. Display match ID and the match date in dd-mon-yyyy format

Query:

```
select mid as match_ID,to_char(matchday,'dd-mon-yyyy') as match_date

from matchesplay;
```

Output:

| MATCH_ID | MATCH_DATE |
|---|---|
| 31 | 04-apr-2018 |
| 32 | 14-apr-2018 |
| 33 | 19-apr-2018 |
| 331 | 16-may-2018 |
| 34 | 21-may-2018 |
| 35 | 26-may-2018 |
| 36 | 04-apr-2011 |
| 70 | 08-jun-2015 |

9. Display all the match_ID and captain name and year of that match in the order of their year of that match, which played before 2016

Query:

```
select m.mid as match_id,p.name as captain
    ,to_number(to_char(to_date(m.matchday,'mm/dd/yyyy'),'yyyy')) as year

from matchesplay m,team t, player p

where m.tid=t.teamid and p.capno=t.captain and
```

```
to_number(to_char(to_date(m.matchday,'mm/dd/yyyy'),'yyyy'))<2016

order by to_number(to_char(to_date(m.matchday,'mm/dd/yyyy'),'yyyy'));
```

Output:

| MATCH_ID | CAPTAIN | YEAR |
|---|---|---|
| 36 | ViratKohli | 2011 |
| 70 | ViratKohli | 2015 |

# NESTED QUERIES

1. Find captain name of Indian team ID = 3

Query:

```
select name as captain
from player
where capno in (select captain
                from team
                where teamid=3);
```

Output:

| CAPTAIN |
| --- |
| Rohit |

2. Find all player names whose economy is under 2.8 in Test career

Query:

```
select name as players
from player
where capno in (select capno
                from playerstats
                where format='test' and bowling_economy<2.8);
```

Output:

| PLAYERS |
| --- |
| Bhumrah |
| Ravindra jadeja |

3. Find name of the players whose batting average in ODIs is better than Rohit

Query:

```
select name as players
from player
where capno in (select capno
                from playerstats
                where format='odi' and batting_avg > (select batting_avg
                                                      from playerstats
                                                      where format='odi' and capno = (select capno
                                                                                      from player
                                                                                      where name='Rohit')));
```

Output:

| PLAYERS |
| --- |
| ViratKohli |

4. Create a copy of table team

Query:

```
create table team_copy as (select * from team);
```

Output:

```
Table created.
```

5. Create a table batsman_stats that contains only batsman records of the player stats table

Query:

```
create table batsman_stats as (select * from playerstats
                        where capno in (select capno
                                        from player
                                        where role='batsman'));
```

Output:

```
Table created.
```

6. Insert allrounders records from player stats table to batsman_stats table

Query:

```
insert into batsman_stats(select * from playerstats
                    where capno in (select capno
                                    from player
                                    where role='allrounder'));
```

Output:

```
6 row(s) inserted.
```

7. Delete record from batsman_stats having least batting average in test format

Query:

```
delete from batsman_stats where format= 'test' and batting_avg=(select
    min(batting_avg) from batsman_stats where format='test');
```

Output:

```
2 row(s) deleted.
```

8. Find players whose bowling average is less than All_Rounder's bowling average in T20 format

Query:

```
select name as players
from player
where role !='allrounder' and capno in (select capno
            from playerstats
            where format='t20' and bowling_avg < any(select bowling_avg
                                    from playerstats
                                    where format='t20' and capno in (select capno
                                                                    from player
                                                                    where role='allrounder')));
```

Output:

| PLAYERS |
| --- |
| Bhumrah |

# With clause, multicolumn subquery and correlated sub query

## MULTICOLUMN:

1. Find the player records whose capno is same as players age and vice versa

Query:

```
select *
from player
where (capno,age) in (select age,capno from player);
```

Output:

| CAPNO | NAME | ROLE | AGE | SALARY |
|---|---|---|---|---|
| 22 | Dhawan | batsman | 32 | 1.5 |
| 32 | Deepak chahar | bowler | 22 | .5 |

2. Find players who turned into coaches after retirement

Query:

```
select *
from player
where (name, age) in (select name, age from coach);
```

Output:

| CAPNO | NAME | ROLE | AGE | SALARY |
|---|---|---|---|---|
| 1 | ravi shastry | batting | 65 | - |
| 2 | dravid | batsman | 51 | - |
| 3 | kumble | allrounder | 52 | - |
| 4 | zaheer khan | bowler | 42 | - |

## WITH CLUASE :

3. Find all roles where average age of players in that role is greater than the average age of players in all roles

Query:

```
with spec(role, avg_age) as
      (select role,avg(age)
       from player
       group by role),
     role_age(average) as
      (select avg(avg_age)
       from spec)
select role
from spec,role_age
where avg_age > average;
```

Output:

| ROLE |
|---|
| batting |

4. Find team records under ‘oppo’ sponcership where team-ID is same as headcoach-ID

Query:

```
with abc(hc) as
(select headcoach
from team
where sponser='oppo')
select *
from team,abc
where teamid=hc;
```

Output:

| TEAMID | CAPTAIN | HEADCOACH | SPONSER | HC |
|---|---|---|---|---|
| 1 | 25 | 1 | oppo | 1 |
| 1 | 25 | 1 | oppo | 1 |

**WITHOUT WITH CLAUSE:**

5. Find all roles where average age of players in that role is less than the average age of players in all roles

Query:

```
select role
from player
group by role
having sum(age) < (select sum(age)/count(distinct role) from player);
```

Output:

| ROLE |
|---|
| wk |
| batting |

## correlated sub query

6. Find captain name of team ID 3

Query:

```
select name
from player
where 3 in (select teamid
            from team
            where player.capno=team.captain);
```

Output:

| NAME |
|---|
| Rohit |

7. Find players who played atleast 100 ODI matches

Query:

```
select p.name
from player p
where (select matches
       from playerstats s
       where p.capno=s.capno and format='odi')>99;
```

Output:

| NAME |
| --- |
| Rohit |
| ViratKohli |
| Ravindra jadeja |

## Exists:

8. Find captain of the match played on 19/4/2018

Query:

```
select p.name as captain
from player p , team t
where p.capno=t.captain and exists(select *
                                   from matchesplay m
                                   where m.tid=t.teamid and matchday='04/19/2018');
```

Output:

| CAPTAIN |
| --- |
| ViratKohli |

9. Find all players who are not a batsman

Query:

```
select p.name as players
from player p
where not exists(select *
        from player q
        where p.capno=q.capno and role='batsman');
```

Output:

| PLAYERS |
| --- |
| Bhumrah |
| kumble |
| Yuzi chahal |
| Deepak chahar |
| zaheer khan |
| Ravindra jadeja |
| Rishab pant |
| Shardul |
| ravi shastry |
| MSdhoni |
| More than 10 rows available. Increase rows selector to view more rows. |

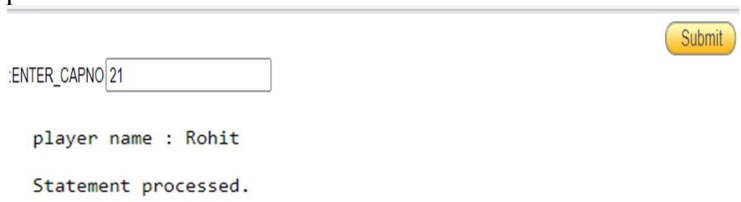
# PL/SQL PROGRAMS:

1. Display player name of given capno

Query:

```
declare
n player.name%TYPE;
c int:= :enter_capno;
begin
select name into n from player where capno=c;
dbms_output.put_line('player name : ' ||n);
end;
```

Output:




2. Find the no of players whose age is below 30

Query:

```
declare
n int;
begin
select count(*) into n from player where age<30;
dbms_output.put_line('number of players whose age is below 30 : ' ||n);
end;
```

Output:

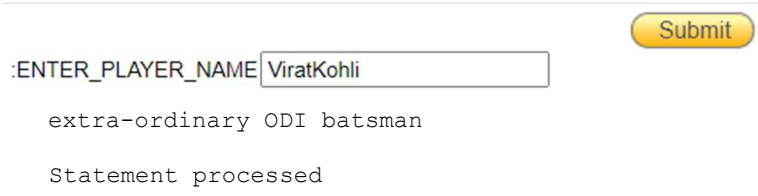
```
number of players whose age is below 30 : 9

Statement processed.
```

3. Program to read player name and display ‘extra-ordinary batsman’ if ODI batting average is above 50 and ‘excellent batsman’ if ODI batting average is above 45.

Query:

```
declare
b int;
c int;
n player.name%TYPE:= :enter_player_name;
begin
select capno into c from player where name=n;
select batting_avg into b from playerstats where capno=c and format='odi';
if (b>50) then
  dbms_output.put_line('extra-ordinary ODI batsman');
elsif (b>45 and b<=50) then
  dbms_output.put_line('excellent ODI batsman');
else
 dbms_output.put_line('good ODI batsman');
end if;
end;
```

Output:




4. Update Rohit statistics in ODI format, runs by 59 and matches by 1

Query:

```
declare
c int;
n player.name%TYPE := 'Rohit';
begin
select capno into c from player where name=n;
update playerstats set runs=runs+59 where capno=c and format='odi';
update playerstats set matches=matches+1 where capno=c and format='odi';
--comment line('x,rohits tuple updated');
end;
```

Output:

```
Statement processed.
```

## PROCEDURES:

5. Procedure to update salary of the given coach and display updated salary.

Query:

```
create procedure updatesalary(n in coach.name%TYPE,us in int, s out int) as
begin
update coach set salaryincrores=us where name=n;
select salaryincrores into s from coach where name=n;
end;
```

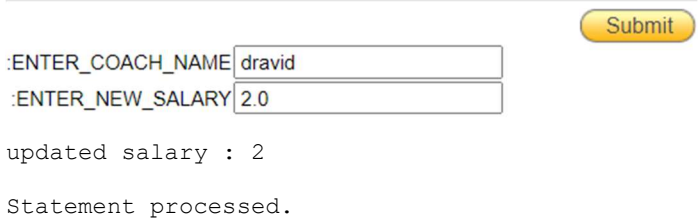
Output:

```
Procedure created.
```

Query:

```
declare
n coach.name%TYPE:= :enter_coach_name;
us int:= :enter_new_salary;
s int;
begin
updatesalary(n,us,s);
dbms_output.put_line('updated salary : '||s);
end;
```

Output:



6. Create a procedure to count no of batsman in the team.

Query:

```
create procedure noofbatsman as
n int;
begin
select count(*) into n from player where role='batsman';
dbms_output.put_line('number of batsman in the team : '||n);
end;
```

Output:

```
Procedure created.
```

Query:

```
begin
noofbatsman;
end;
```

Output:

```
number of batsman in the team : 5

Statement processed.
```

7. Create a procedure to know the result of the given match ID

Query:

```
create procedure knowresult(m in int,r out matchsummary.result%TYPE) as
begin
select result into r from matchsummary where mid=m;
end;
```

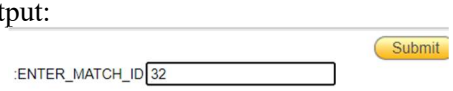
Output:

```
Procedure created.
```

Query:

```
declare
r matchsummary.result%TYPE;
m int:= :enter_match_ID;
begin
knowresult(m,r);
dbms_output.put_line('match result : '||r);
end;
```

Output:




```
match result : won

Statement processed.
```

# Functions :

1. Function to find age and salary of a given player

Query:

```
create function findsalaryage(n in player.name%TYPE ) return int as
a int;
s float;
begin
select age into a from player where name=n;
```

```
select salary into s from player where name=n;
dbms_output.put_line('player salary : '||a);
end;
```

Output:

```
Function created.
```

Query:

```
declare
a int;
begin
a := findsalaryage('Rohit');
dbms_output.put_line('age is : '||a);
end;
```

Output:

```
player salary : 1.5
age is : 32

Statement processed.
```

2. Function to find no of players went for batting in a certain match of the given match-ID

Query:

```
create function playersbat(m in int) return int as
n int;
begin
select count(*) into n from batting where mid=m group by(mid);
return n;
    end;
```

Output:

```
Function created.
```

Query:

```
declare
a int;
m int:= :enter_match_ID;
begin
a := playersbat(m);
dbms_output.put_line('Number of players went to batting in the match '||m ||' is: '||a);
end;
```

Output:


```
Number of players went to batting in the match 33 is: 4

Statement processed.
```

3. Function to find speciality of a given coach

Query:

```
create  or replace function coachrole(n in coach.name%TYPE) return
    coach.speciality%TYPE as
s coach.speciality%TYPE;
begin
select speciality into s from coach where name=n;
return s;
```

```
    end;
```

Output:

```
Function created.
```

Query:

```
    declare
    m coach.name%TYPE:= :enter_coach_name;
    a coach.speciality%TYPE;
    begin
    a := coachrole(m);
    dbms_output.put_line('Mr.'||m||' speciality is '||a);
    end;
```

Output:

```
Mr.gary speciality is batting

Statement processed.
```

# CURSORS:

1. Display match-ID , format, opponent , venue using cursor.

Queue:

```
declare
 m_id matchesplay.mid%type;
 opponent matchesplay.opposition%type;
 mf matchesplay.format%type;
 venue matchesplay.city%type;
 cursor matches is select mid,opposition,format,city from matchesplay;
begin
 open matches;
 loop
  fetch matches into m_id,opponent,mf,venue;
  dbms_output.put_line('matchID: '||m_id||'     opponent: '||opponent||'     format: '||mf||'
     venue: '||venue);
  exit when matches%notfound;
 end loop;
 close matches;
end;
```

Output:

```
matchID: 31      opponent: england             format: odi        venue: hyderabad
matchID: 32      opponent: england             format: odi        venue: bangalour
matchID: 33      opponent: england             format: odi        venue: chennai
matchID: 331     opponent: australia           format: t20        venue: chennai
matchID: 34      opponent: australia           format: t20        venue: hyderabad
matchID: 35      opponent: australia           format: t20        venue: delhi
matchID: 36      opponent: srilanka            format: odi        venue: mumbai
matchID: 70      opponent: southafrica         format: odi        venue: melbourn
matchID: 70      opponent: southafrica         format: odi        venue: melbourn

Statement processed.
```

2. Display current contract players and their crisis allowance of 10% of their salaries.

Query:

```
declare
 p_name player.name%type;
 ammount int;
 s float;
cursor crisis_allowance is select name,salary from player;
begin
 open crisis_allowance;
 loop
  fetch crisis_allowance into p_name,s;
  ammount:=0.1*(s*10000000);
  if (s>0) then
    dbms_output.put_line('name: '||p_name||'        crisis_allowance in rupees: '||ammount);
  end if;
  exit when crisis_allowance%notfound;
 end loop;
 close crisis_allowance;
end;
```

Output:

```
name: Rohit                    crisis_allowance in rupees: 1500000
name: Dhawan                   crisis_allowance in rupees: 1500000
name: Rahul                    crisis_allowance in rupees: 1000000
name: ViratKohli               crisis_allowance in rupees: 1500000
name: Bhumrah                  crisis_allowance in rupees: 1500000
name: Bhuvaneshwar             crisis_allowance in rupees: 1000000
name: Ravindra jadeja          crisis_allowance in rupees: 1000000
name: Ravi ashwin              crisis_allowance in rupees: 1000000
name: Shreyas                  crisis_allowance in rupees: 500000
name: Hardik                   crisis_allowance in rupees: 1000000
name: Deepak chahar            crisis_allowance in rupees: 500000
name: Shardul                  crisis_allowance in rupees: 500000
name: MSdhoni                  crisis_allowance in rupees: 1500000
name: Yuzi chahal              crisis_allowance in rupees: 1000000
name: Rishab pant              crisis_allowance in rupees: 500000
name: Rishab pant              crisis_allowance in rupees: 500000
```

## EXCEPTIONS:

3. Display player age of given player name , Raise an exception when age of the player is more than 30 .

Query:

```
declare
        e exception;
        n player.name%type:= :enter_player_name;
        a int;
begin
        select name,age into n,a from player where name=n;
        if a>30 then
            raise e;
        end if;
        dbms_output.put_line('name : '||n||'  age : '||a);
        exception
        when e then
            dbms_output.put_line('player age is more than 30, please enter another   player
             name...');
end;
```

Output:


```
player age is more than 30, please enter another player name...

Statement processed.
```

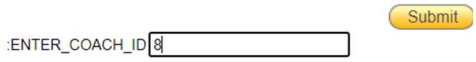
4. Display coach name of given coach-ID and raise no data found exception if coach-ID is wrong or no coach is assigned to given coach-ID.

Query:

```
declare
        n coach.name%type;
        a int:= :enter_coach_ID;
begin
```

```
        select name,cid into n,a from coach where cid=a;
        dbms_output.put_line('NAME : '||n||'  COACH-ID : '||a);
        exception
        when no_data_found then
            dbms_output.put_line('given coach ID does not exist...');
    end;
```

Output:




```
given coach ID does not exist...

Statement processed.
```

## TRIGGERS:

5. Enter the retired coaches details from table coach to another table using triggers.

Query:

Creating trigger :

```
    create or replace trigger del_coach
    before delete on coach
    for each row
    begin
    insert into retirecoach values(:OLD.CID, :OLD.NAME, :OLD.SPECIALITY,
        :OLD.AGE, :OLD.SALARYINCRORES);
    end;
```

deleting from coach:

```
        delete from coach where cid=6;
```

displaying table consists of retired coaches:

```
        select * from retirecoach;
```

Output:

| CID | NAME | SPECIALITY | AGE_WHEN_RETIRE | SALARY_WHEN_RETIRE |
|---|---|---|---|---|
| 6 | duncan | batting | 70 | 1 |

6. Update age of Shreyas (cap no=30) by 50 lakhs and display old and new salary using trigger.

Query:

```
    create or replace trigger change_player_salary
    before update of salary on player
    for each row
    begin
    dbms_output.put_line('old salary : '||:OLD.salary);
    dbms_output.put_line('new salary : '||:NEW.salary);
    end;

    update player set salary=1.0 where capno=30;
```

Output:

```
old salary : .5
new salary : 1

1 row(s) updated.
```