**DATABASE MANAGEMENT SYSTEM**

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**Team Members:-**

**Abhijeet Senapati RA1811030010064**

**B. Sanchit Smarak RA1811030010070**

**Akshat Goel RA1811030010069**

Topic:- Cricket Tournament management system



**Project Name : Cricket Tournament**

**Introduction :**

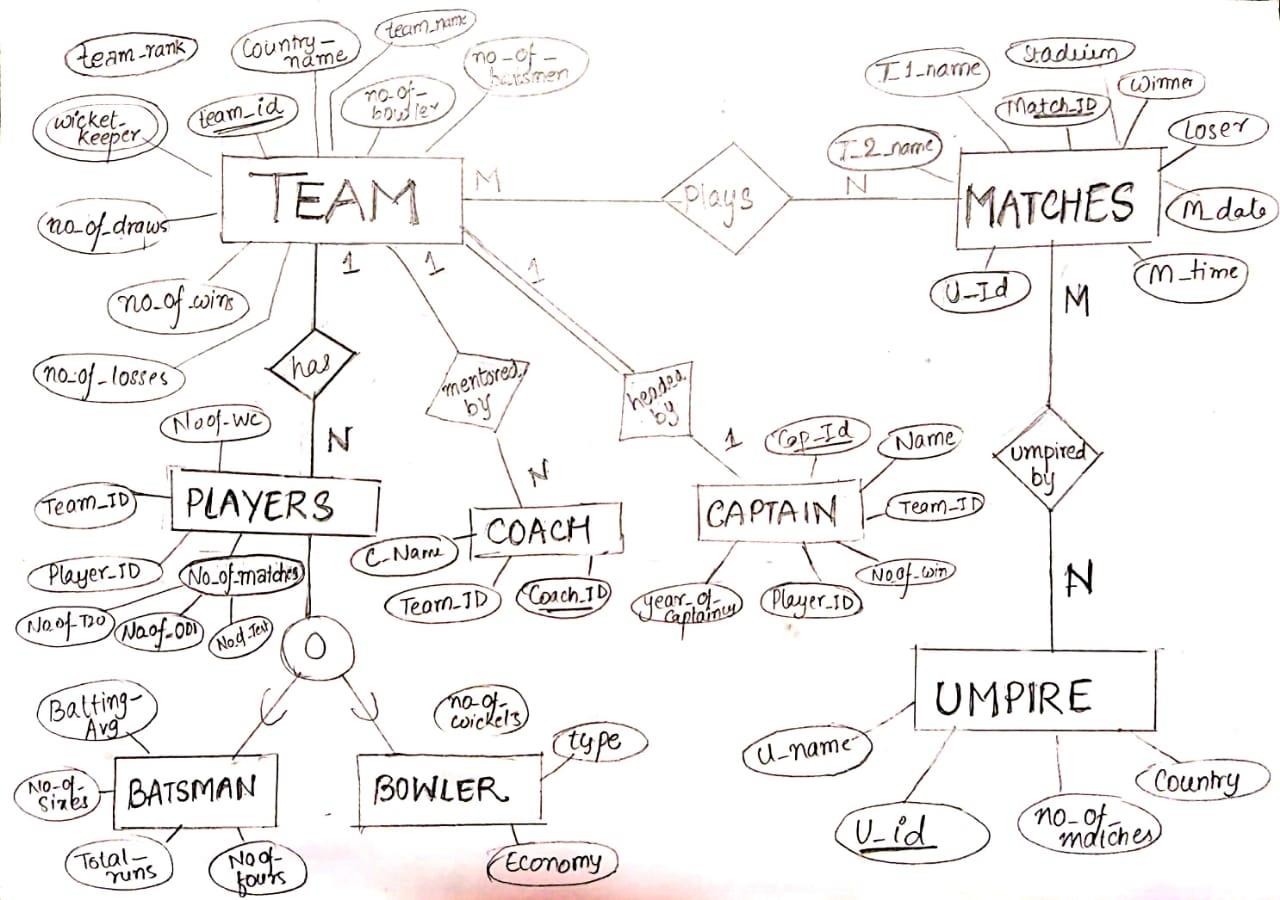
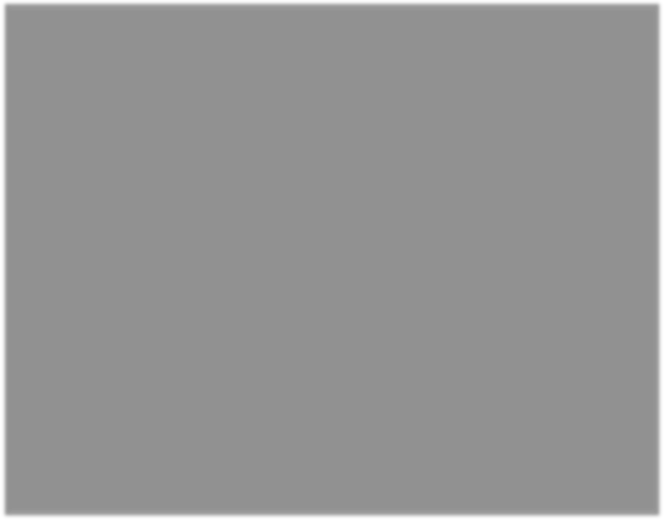
Our DBMS project is based on Cricket Tournament management. It provides various information about the various teams participating in the Tournament, in which all the major countries participate. It also provides us with information about the various players participating in the tournament . The database contains details of players, coaches and umpires among others. All the useful information about the entire Tournament can be found here.

##### Data Requirements:

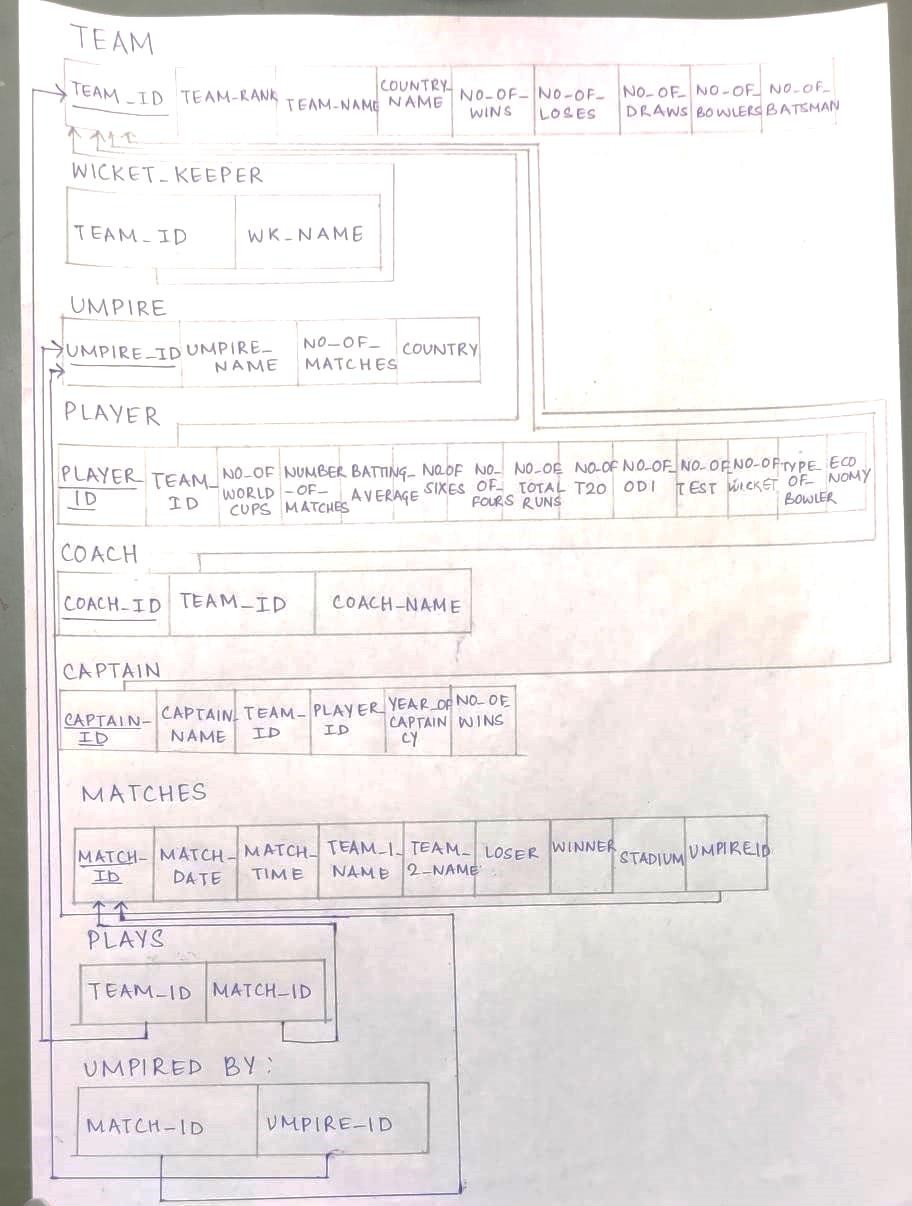
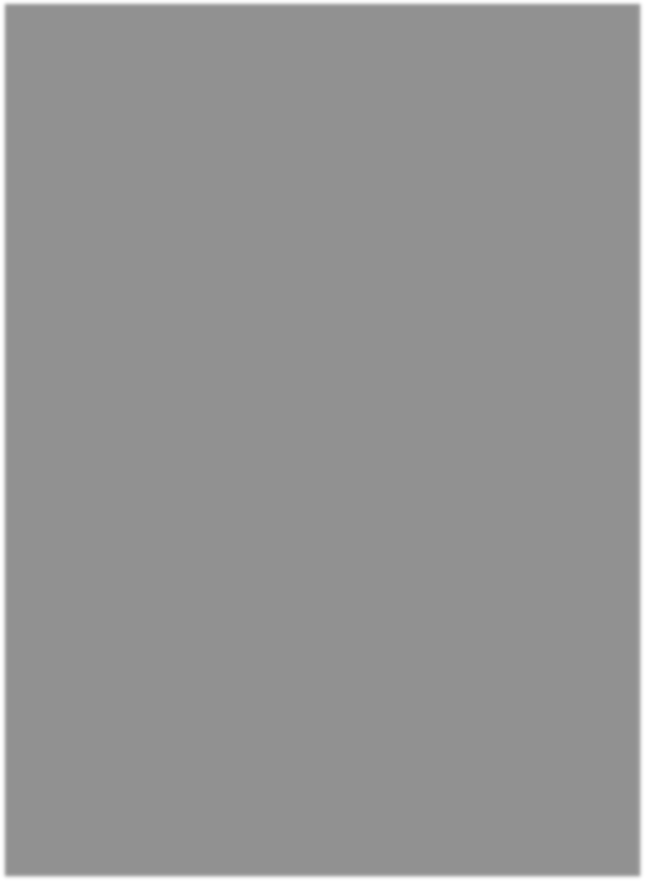
Entities:

1. **Team** is an entity type which has many attributes like Team Name which uses the data type varchar. Every team has been given a ***Team ID which is the primary key*** which is of data type varchar. Team Ranking, Number of Batsmen and Number of Bowlers are of the data type number. There is another attribute - Wicketkeeper which is of multivalued type and accepts varchar data type. Primary key cannot have null value.
2. **Players** is an entity type which has an attribute – Player Name which is of the data type varchar. ***It has a primary key, Player ID, which cannot have null value.*** It has a foreign key, Team ID which is the primary key of the entity, Team. There is a complex attribute, Number of matches played, which comprises of Number of Test Matches, Number of T20 Matches, Number of Tournament Matches and Number of ODIs.
3. **Batsman** is an entity type which has the attributes – Number of sixes hit, Number of Fours hit, the batting average, and the total runs scored. All of these attributes are of the data type number.
4. **Bowler** is an entity type which has the attribute – type of batsman with varchar data type. It also includes number of wickets and economy which are of the data type number.
5. **Umpire** is an entity type which has the attributes name and country of origin of data type varchar. ***The primary key of this is Umpire Id which is of varchar data type***. It also has an attribute Number of matches of data type number.
6. **Coach** is an entity type with a foreign key, Team ID, which is a primary key of entity type, Team. ***It has a primary key, Coach ID, of data type varchar***. It also has another attribute of data type varchar, Name.
7. **Captain** is an entity type with a **primary key, Captain ID of data type varchar**. It has two foreign keys, i) Player id from table Players and ii) Team ID from table Team. Number of years of captaincy and Number of wins are also attributes of this table of data type number.
8. **Matches** is an entity type with a ***primary key, match ID, of varchar data type.*** It has attributes like Team1 Name, Team2 Name, Stadium, Winner Team and Loser Team of data type varchar. Match date is an attribute which uses the datatype date. Match time is an attribute which is of the data type time.

**ERDiagram:-**



**Relational Schema:-**



**Create Tables:-**

TABLES

* Team
* Wicket\_Keeper
* Umpire
* Player
* Coach
* Captain
* Matches
* Plays
* Umpired\_By CODE TO CREATE TABLES:

create table TEAM(

team\_id varchar(30) primary key, team\_rank number(3),

team\_name varchar(20) not null, country\_name varchar(20), no\_of\_wins number(3), no\_of\_loses number(3), no\_of\_draws number(3), no\_of\_bowlers number(2), no\_of\_batsmans number(2)

);

create table WICKET\_KEEPER( team\_id references TEAM, wk\_name varchar(30)

);

create table UMPIRE(

umpire\_id varchar(30) primary key, umpire\_name varchar(30), no\_of\_matches number(4),

country varchar(20)

);

create table PLAYER(

player\_id varchar(30) primary key, team\_id references TEAM, no\_of\_worldcups number(2), number\_of\_matches number(3), batting\_average number(3),

no\_of\_sixes number(3),

no\_of\_fours number(3), no\_of\_totalruns number(4), no\_of\_t20 number(3), no\_of\_odi number(3), no\_of\_test number(3), no\_of\_wickets number(2), type\_of\_bowler varchar(30), economy number(3)

);

create table COACH(

coach\_id varchar(30) primary key, team\_id references TEAM, coach\_name varchar(30)

);

create table CAPTAIN(

captain\_id varchar(30) primary key, captain\_name varchar(30),

team\_id references TEAM, player\_id varchar(30), year\_of\_captaincy number(2), no\_of\_wins number(4)

);

create table MATCHES(

match\_id varchar(20) primary key, match\_date date,

match\_time timestamp(0), team\_1\_name varchar(30), team\_2\_name varchar(30), loser varchar(30), winner varchar(30), stadium varchar(30),

umpire\_id references umpire

);

create table PLAYS(

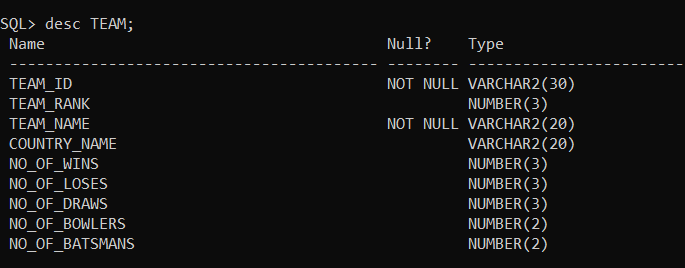
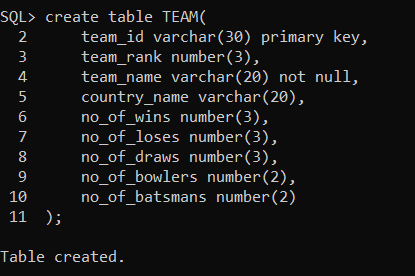
team\_id references TEAM, match\_id references MATCHES

);

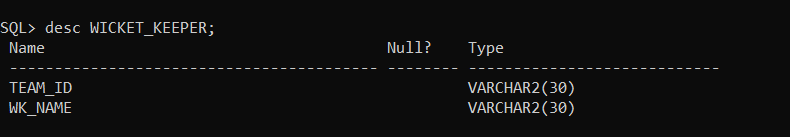
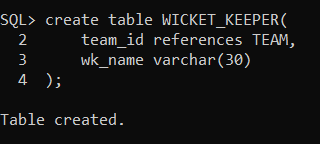
create table UMPIRED\_BY( match\_id references MATCHES, umpire\_id references UMPIRE

);

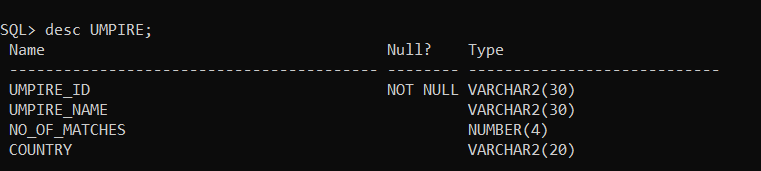
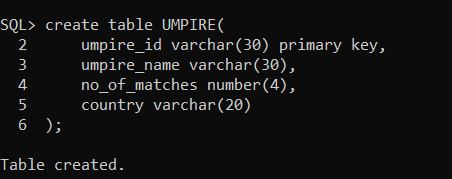
**TABLE TEAM:**



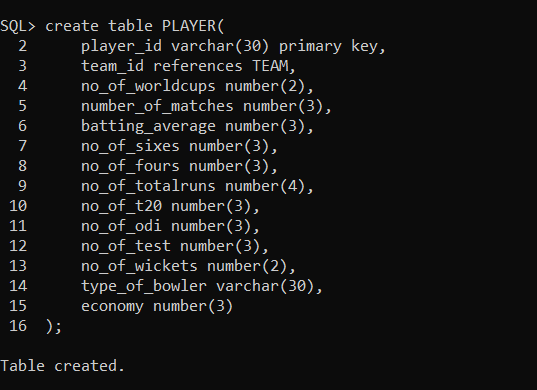
**TABLE WICKET\_KEEPER:**

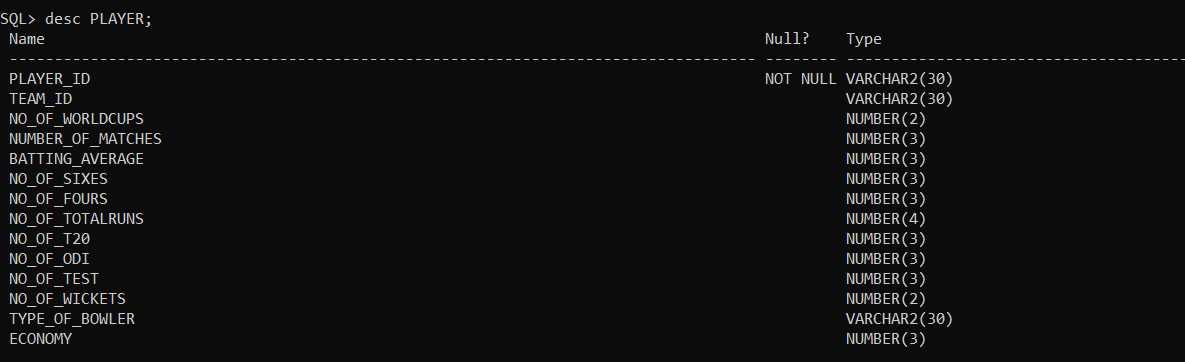


**TABLE UMPIRE:**

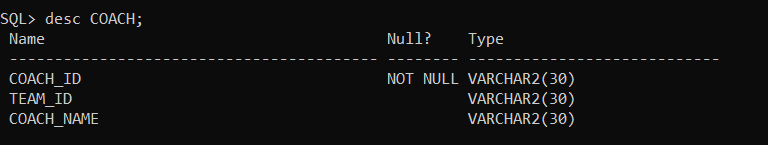
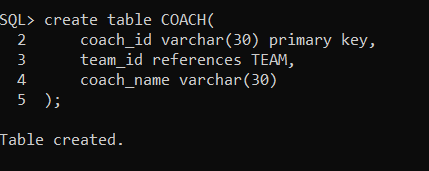


**TABLE PLAYER:**

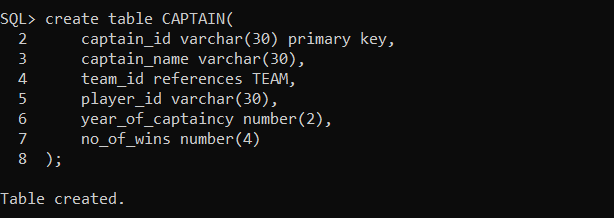


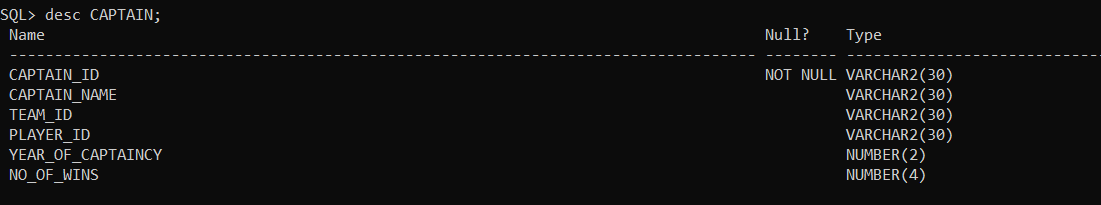


**TABLE COACH:**

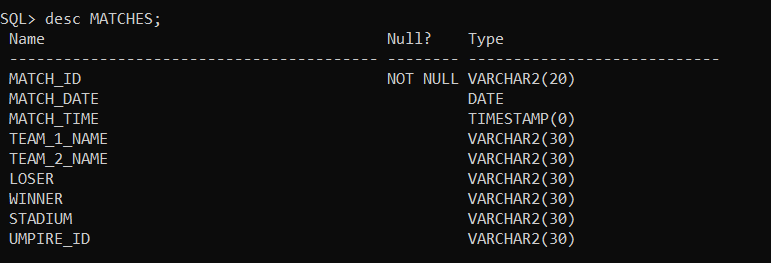
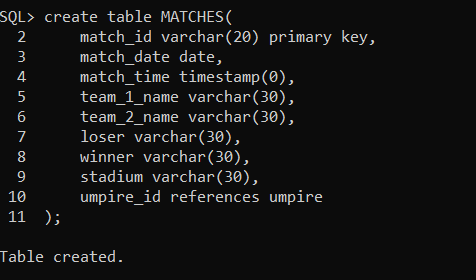


**TABLE CAPTAIN:**

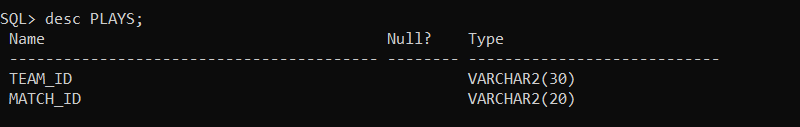
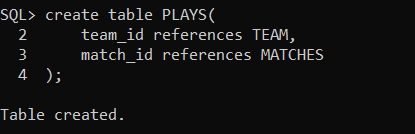




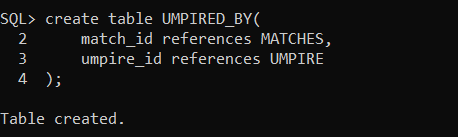
**TABLE MATCHES:**

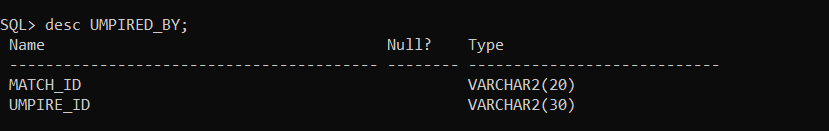


**TABLE PLAYS:**



**TABLE UMPIRED\_BY:**





## CODE TO INSERT VALUES TO TABLE:

### TEAM VALUES

insert into team values(

'IND1221', 1, 'MEN IN BLUE','INDIA', 5, 1, 0, 6, 7

);

Insert into team values(

'AUS2174', 4, 'KANGAROO','AUSTRAILA', 3, 3, 0, 5, 6

);

Insert into team values(

'SA5412', 3, 'PROTEA','SOUTH AFRICA', 3, 2, 1, 8, 5

);

Insert into team values(

'NZ5687', 2, 'BLACK CAPS','NEW ZEALAND', 4, 2, 0, 6, 7

);

Insert into team values(

'BAN9852', 5, 'TIGERS','BANGLADESH', 2, 4 , 0, 7, 7

);



### UMPIRE VALUES

insert into UMPIRE values (

'UMP41002', 'Kumar Dharmasena', 103, 'Sri Lanka'

);

insert into UMPIRE values (

'UMP74101', 'Aleem Dar', 207, 'Pakistan'

);

insert into UMPIRE values (

'Ump52410', 'Anil Chaudhary', 19, 'India'

);

insert into UMPIRE values (

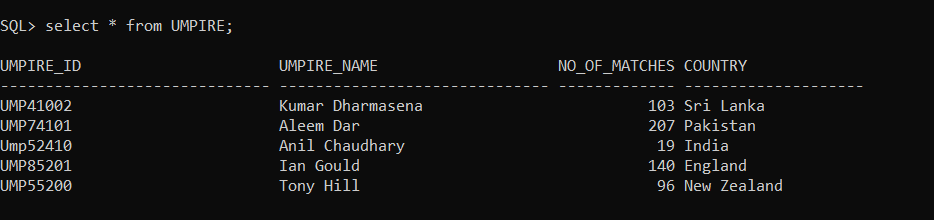
'UMP85201', 'Ian Gould', 140, 'England'

);

insert into UMPIRE values (

'UMP55200', 'Tony Hill', 96, 'New Zealand'

);



### COACH VALUES

insert into COACH values(

'CH417', 'IND1221', 'RAVI SHASTRI'

);

insert into COACH values(

'CH140', 'AUS2174', 'JUSTIN LANGER'

);

insert into COACH values(

'CH223', 'SA5412', 'OTTIS GIBSON'

);

insert into COACH values(

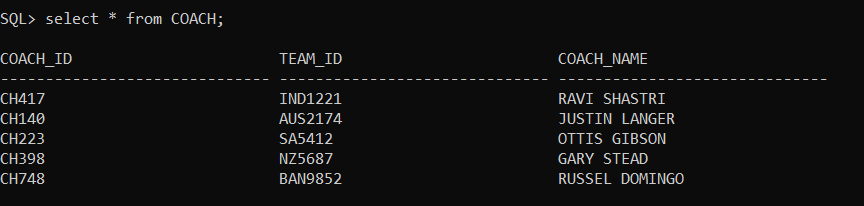
'CH398', 'NZ5687', 'GARY STEAD'

);

insert into COACH values(

'CH748', 'BAN9852', 'RUSSEL DOMINGO'

);



### CAPTAIN VALUES

insert into captain values(

'CAP11452', 'MS DHONI', 'IND1221','PLR44567', 4,56

);

insert into captain values(

'CAP21478', 'DALE STEYN', 'SA5412','PLR10235', 7,74

);

insert into captain values(

'CAP30214', 'MICHAEL CLARKE', 'AUS2174','PLR74138', 9,100

);

insert into captain values(

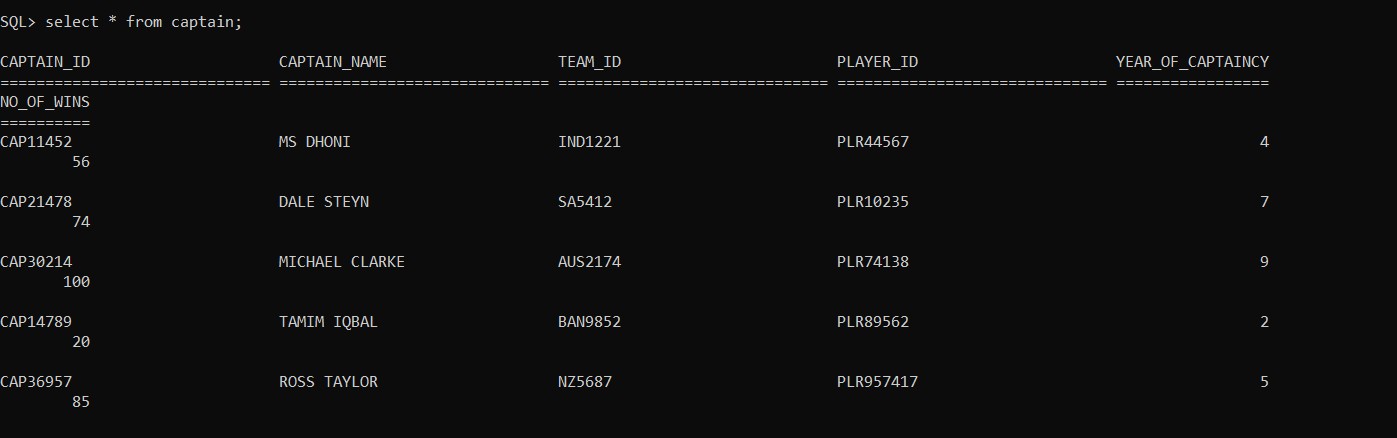
'CAP14789', 'TAMIM IQBAL', 'BAN9852','PLR89562',2,20

);

insert into captain values(

'CAP36957', 'ROSS TAYLOR', 'NZ5687','PLR957417', 5,85

);



### MATCHES VALUES

insert into MATCHES values(

'MAT101',to\_date('12-03-2011','dd-mm-

yyyy'),to\_timestamp('15:30','hh24:mi'),'India','Bangladesh','Bangladesh','India','Feroz Shah Kotla','UMP55200'

);

insert into MATCHES values( 'MAT201',to\_date('15-03-2011','dd-mm-

yyyy'),to\_timestamp('9:30','hh24:mi'),'England','Australia','England','Australia','Eden Gardens','UMP41002'

);

insert into MATCHES values(

'MAT301',to\_date('21-03-2011','dd-mm-yyyy'),to\_timestamp('11:30','hh24:mi'),'Sri Lanka','Bangladesh','Bangladesh','Sri Lanka','M.A. Chidambaram','UMP74101'

);

insert into MATCHES values(

'MAT401',to\_date('23-03-2011','dd-mm-yyyy'),to\_timestamp('15:30','hh24:mi'),'New Zealand','South Africa','South Africa','New Zealand','Sardar Patel','UMP85201'

);

insert into MATCHES values( 'MAT501',to\_date('26-03-2011','dd-mm-

yyyy'),to\_timestamp('8:30','hh24:mi'),'England','India','England','India','Wankhede','Ump524 10'

);



### PLAYER VALUES

insert into PLAYER values (

'PLR17410', 'IND1221', 2, 13, 58,7,24,800,74,120,20,1,'medium',3.2

);

insert into PLAYER values (

'PLR74203', 'AUS2174', 1, 6, 67, 10,39,463,41,210,140 ,1,'slow',8.5

);

insert into PLAYER values (

'PLR45987', 'SA5412', 3, 4, 99, 4, 47,985, 24,63,65,1,'medium-slow',11.2

);

insert into PLAYER values (

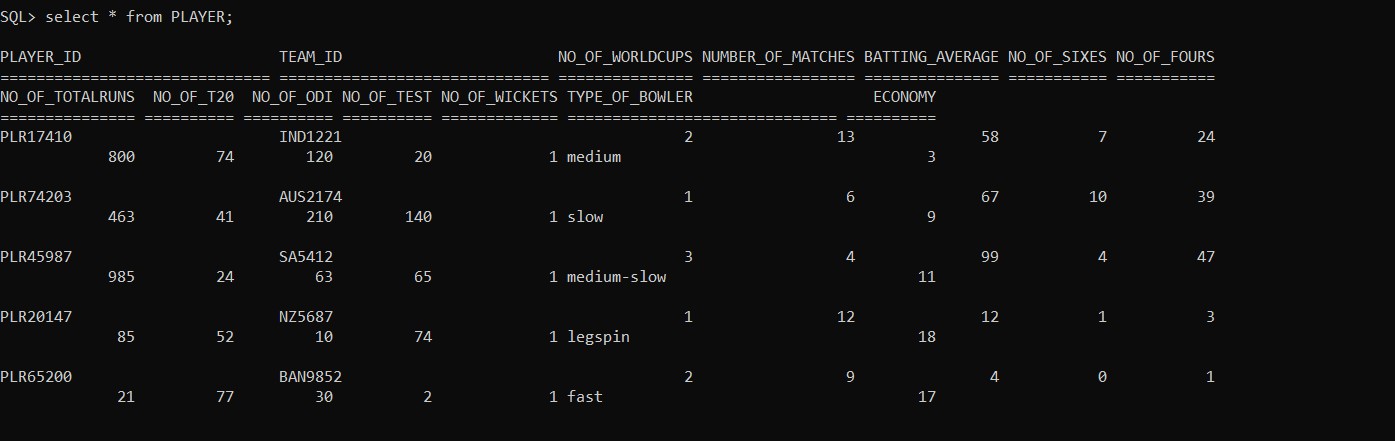
'PLR20147', 'NZ5687', 1, 12, 12, 1, 3,85, 52 ,10,74,1,'legspin',18.3

);

insert into PLAYER values (

'PLR65200', 'BAN9852', 2, 9, 4, 0,1 ,21,77, 30,2,1,'fast',17.3

);



### UMPIRED\_BY VALUES

insert into Umpired\_by values( 'MAT501','UMP55200'

);

insert into Umpired\_by values( 'MAT301','Ump52410'

);

insert into Umpired\_by values( 'MAT101','UMP41002'

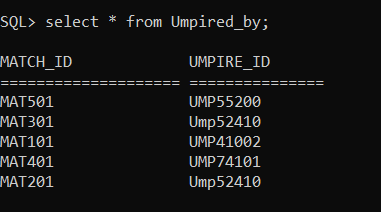
);

insert into Umpired\_by values( 'MAT401','UMP74101'

);

insert into Umpired\_by values( 'MAT201','Ump52410'

);



### PLAYS VALUES

insert into Plays values( 'IND1221','MAT101'

);

insert into Plays values( 'AUS2174','MAT201'

);

insert into Plays values( 'BAN9852','MAT301'

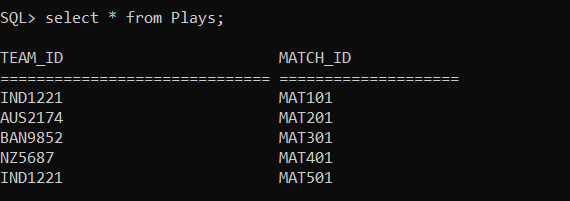
);

insert into Plays values( 'NZ5687','MAT401'

);

insert into Plays values( 'IND1221','MAT501'

);



### WICKET\_KEEPER VALUES

insert into WICKET\_KEEPER values( 'IND1221','MS Dhoni'

);

insert into WICKET\_KEEPER values( 'IND1221','Dinesh Kartik'

);

insert into WICKET\_KEEPER values( 'AUS2174','Tim Lee'

);

insert into WICKET\_KEEPER values( 'AUS2174','Peter Hegward'

);

insert into WICKET\_KEEPER values( 'AUS2174','Hefer Kingsly'

);



**DML:-**

Write down the necessary SQL statements for implementation of functional requirements through SQL query, delete and update statement.

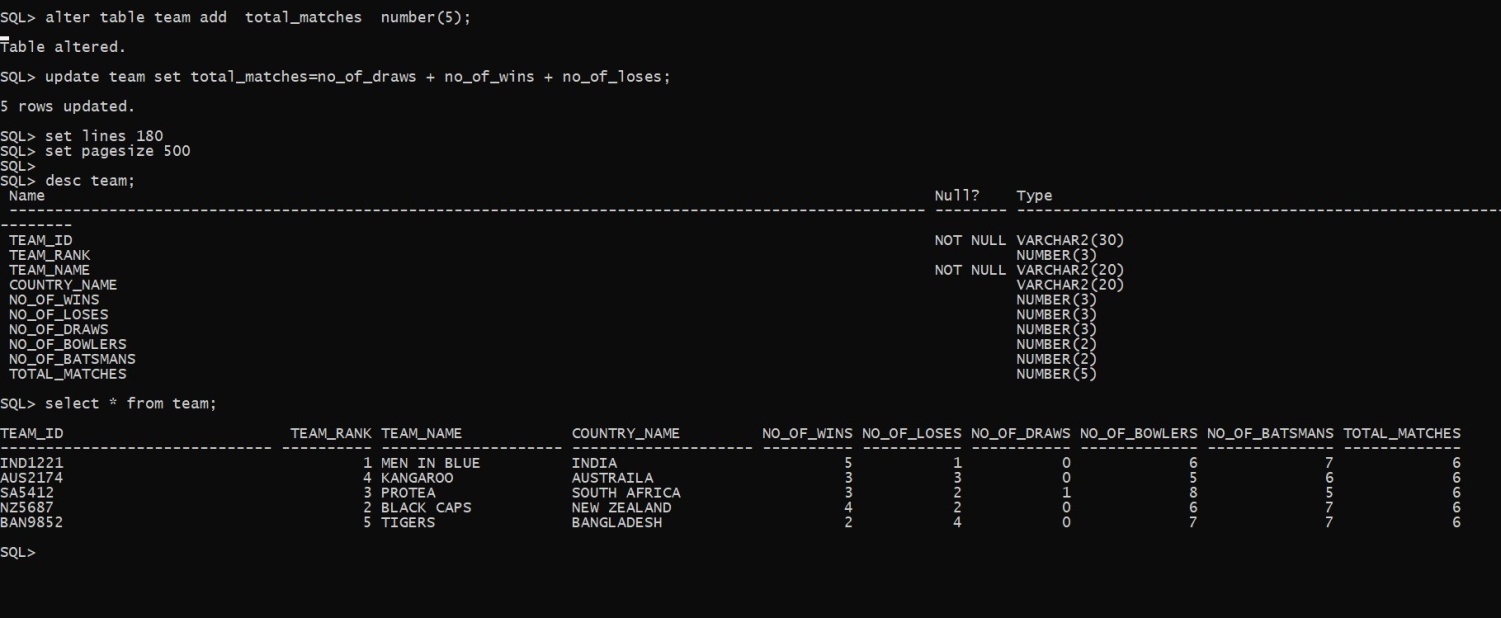
**UPDATE**

1. Add column of total matches in the table TEAM. Update the rows using total matches= number of WNS+ number of LOSES + number of DRAWS.

CODE:

alter table team add total\_matches number(5);

update team set total\_matches=no\_of\_draws + no\_of\_wins + no\_of\_loses;



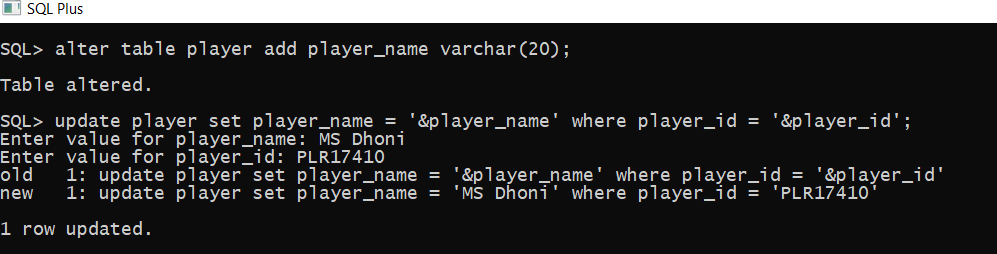
1. Add column named ‘PLAYER\_NAME’ in table

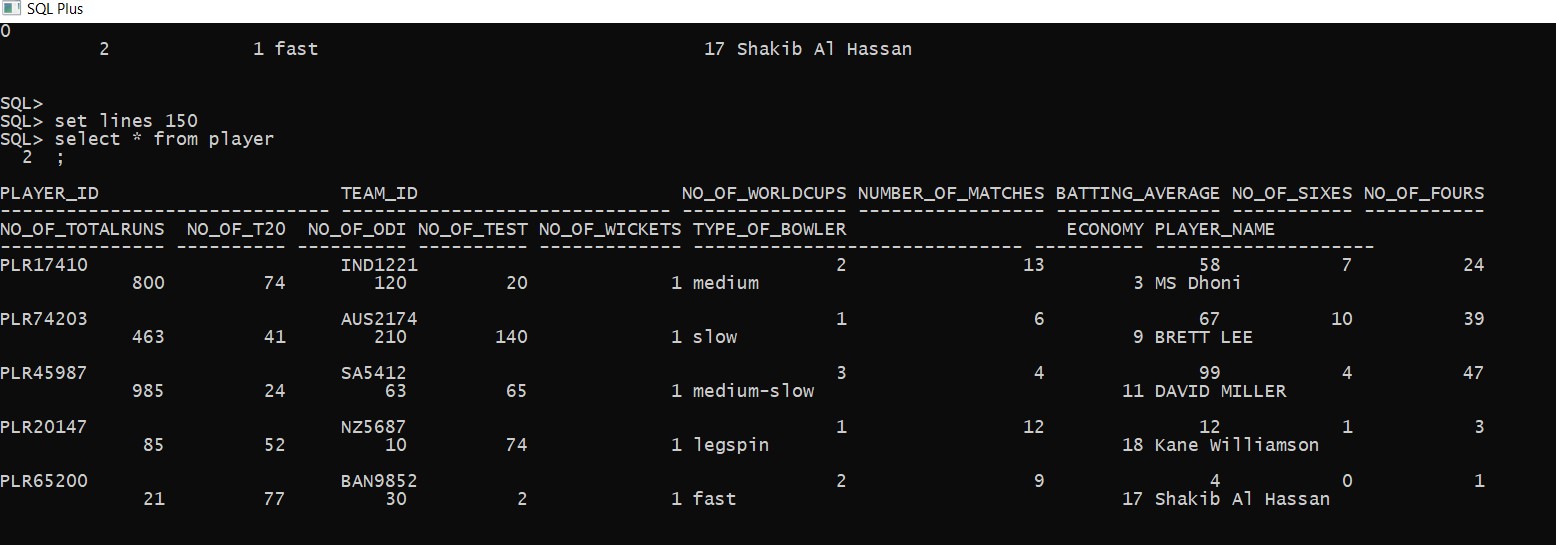
PLAYER. Using interactive updation.

CODE:

1. alter table player add player\_name varchar(20);
2. update player set player\_name = '&player\_name' where player\_id = '&player\_id';

OUTPUT:





## SQL QUERIES USING JOIN,SUB QUERY & SET OPERATIONS:-

1. Display the name of the umpires who have not umpired matches in eden gardens.

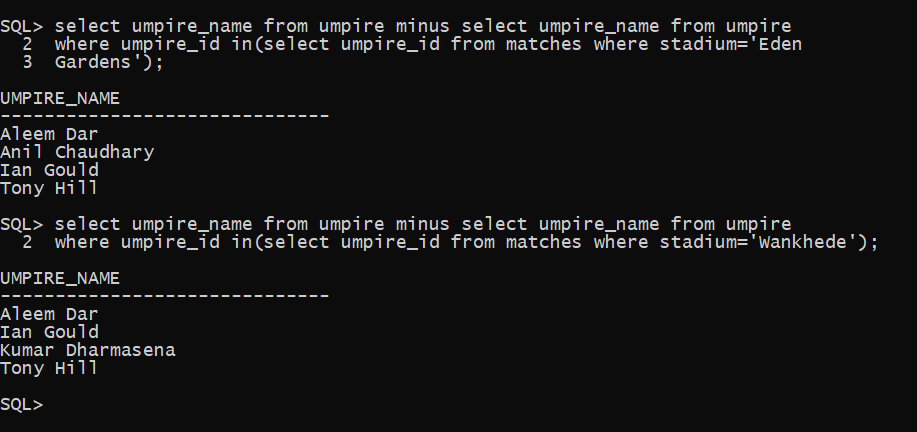
CODE:

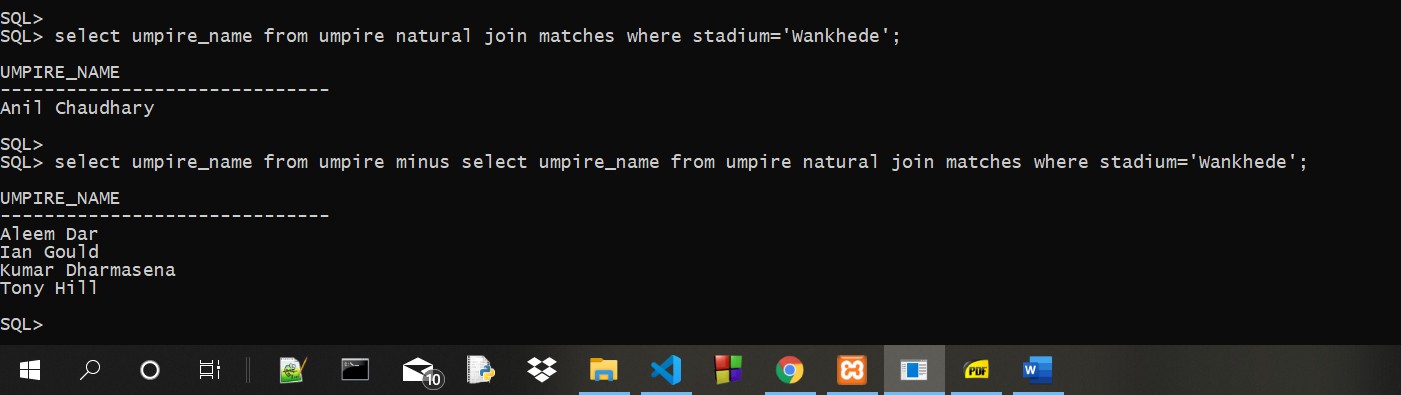
select umpire\_name from umpire minus select umpire\_name from umpire

where umpire\_id in(select umpire\_id from matches where stadium='Eden Gardens');

select umpire\_name from umpire minus select umpire\_name from umpire natural join mat ches where stadium='Wankhede';

OUTPUT:





1. (a)Display the country whose players have batting average greater than 60.

(b) Display the country whose players donot have batting average greater than 60.

CODE:

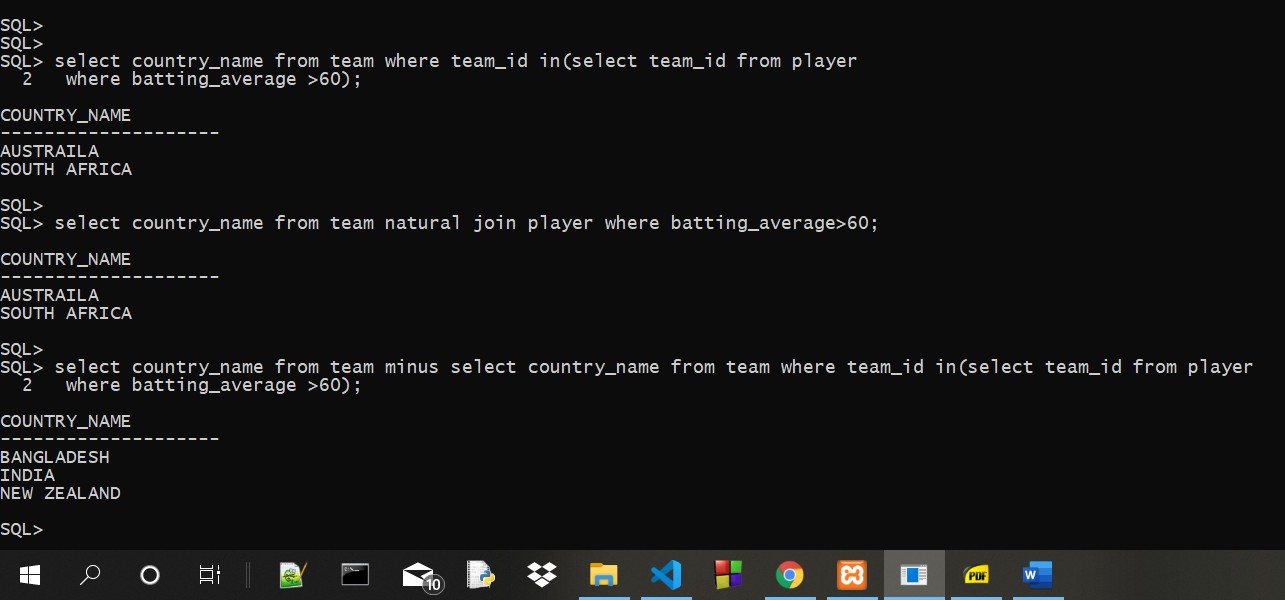
select country\_name from team where team\_id in(select team\_id from player where batting\_average >60);

select country\_name from team natural join player where batting\_average>60;

select country\_name from team minus select country\_name from team where team\_id in(s elect team\_id from player

where batting\_average >60);

OUTPUT:



1. Display name of coach who has coached a player with total\_runs greater than 500;

CODE:

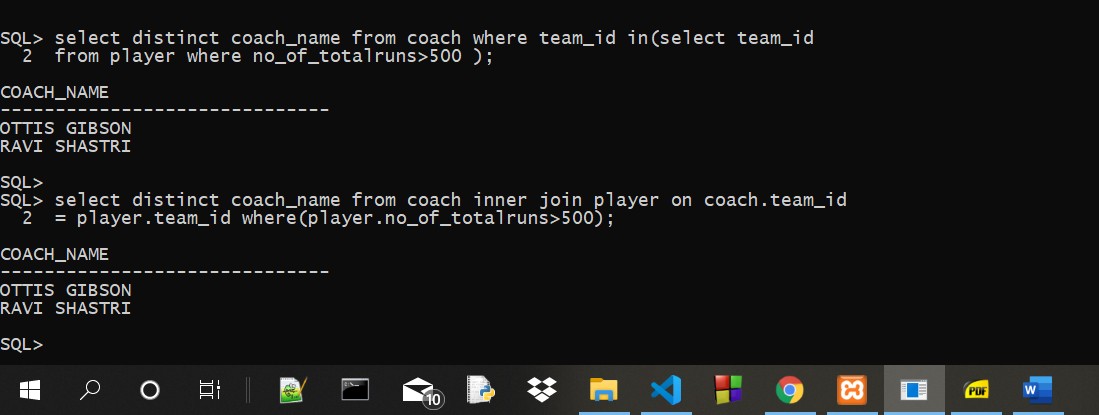
select distinct coach\_name from coach where team\_id in(select team\_id from player where no\_of\_totalruns>500 );

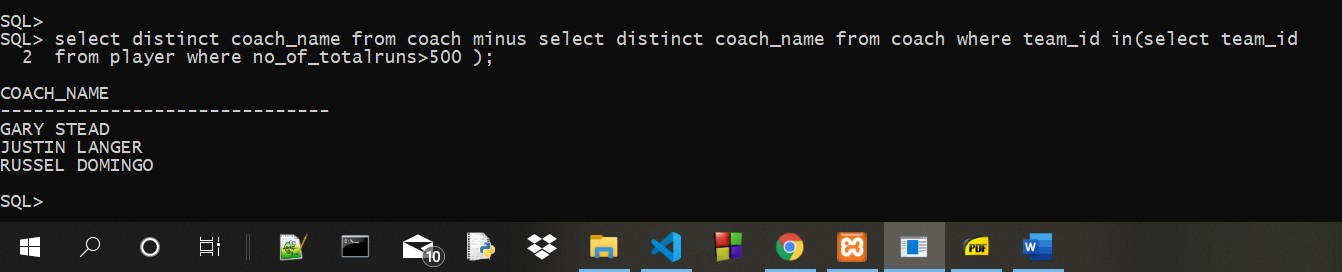
select distinct coach\_name from coach inner join player on coach.team\_id

= player.team\_id where(player.no\_of\_totalruns>500);

select distinct coach\_name from coach minus select distinct coach\_name from coach wh ere team\_id in(select team\_id from player where no\_of\_totalruns>500 );

OUTPUT:





1. Display name of wicket keeper who is also the captain of his team.

CODE:

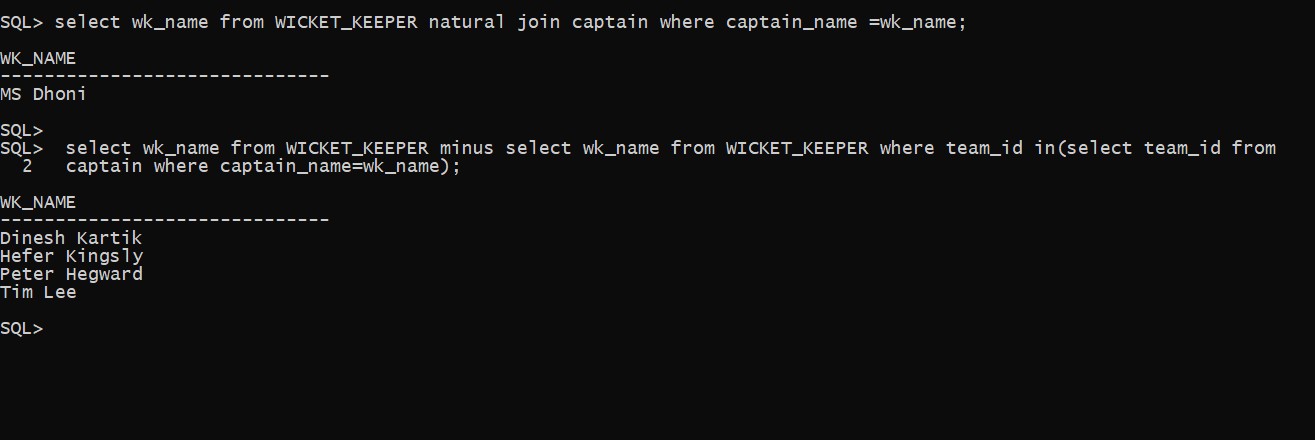
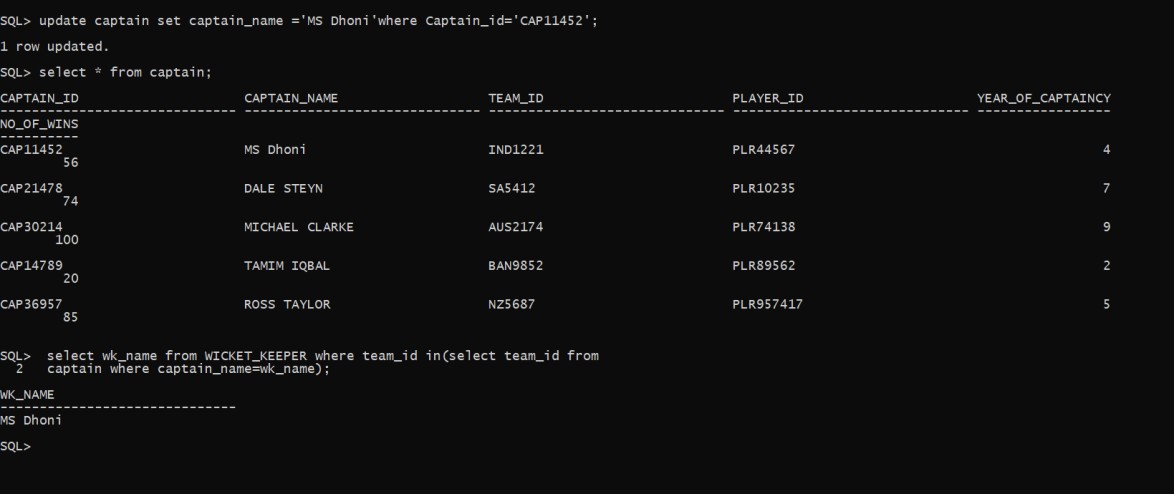
select wk\_name from WICKET\_KEEPER where team\_id in(select team\_id from captain where captain\_name=wk\_name);

select wk\_name from WICKET\_KEEPER natural join captain where captain\_name =wk\_name;

select wk\_name from WICKET\_KEEPER minus select wk\_name from WICKET\_KEEPER where tea m\_id in(select team\_id from

captain where captain\_name=wk\_name);

OUTPUT:



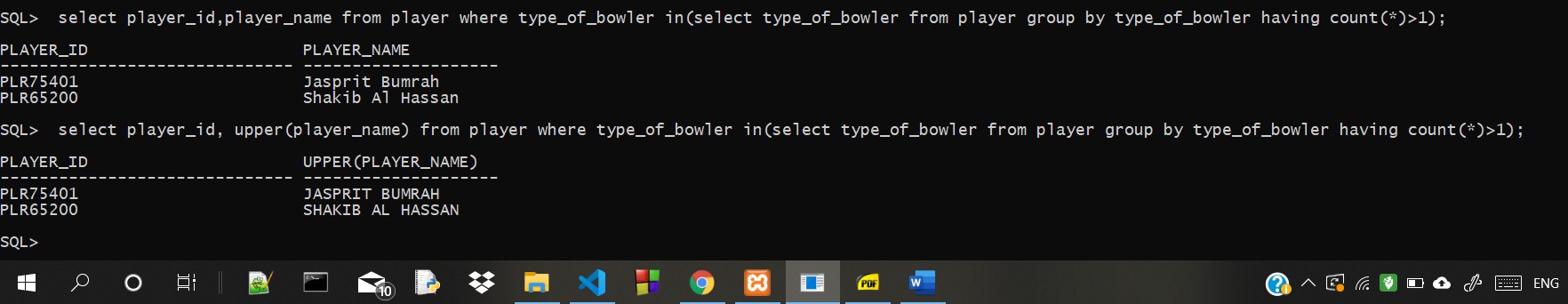
## GROUP BY HAVING CLAUSE QUERY:-

Display the name of players who have same bowling action CODE:

select player\_id, upper(player\_name) from player where type\_of\_bowler in(select type

\_of\_bowler from player group by type\_of\_bowler having count(\*)>1);

OUTPUT:



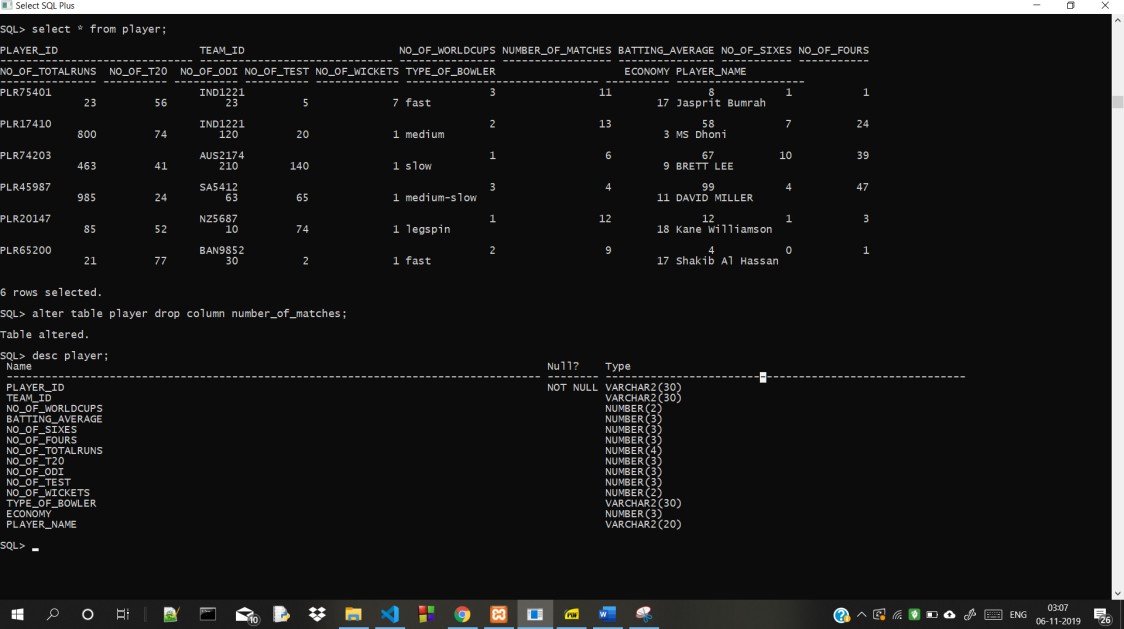
## DELETE:

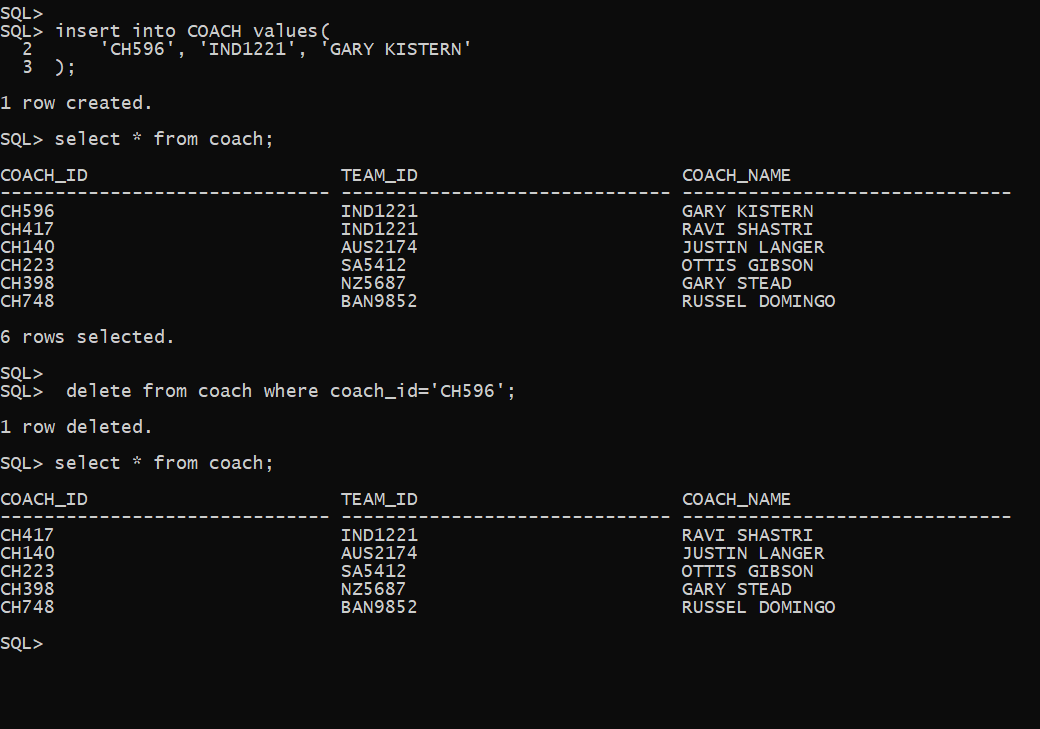
1. Deleting the column number\_of\_matches. CODE:

alter table player drop column no\_of\_matches;

delete from coach where coach\_id='CH596';

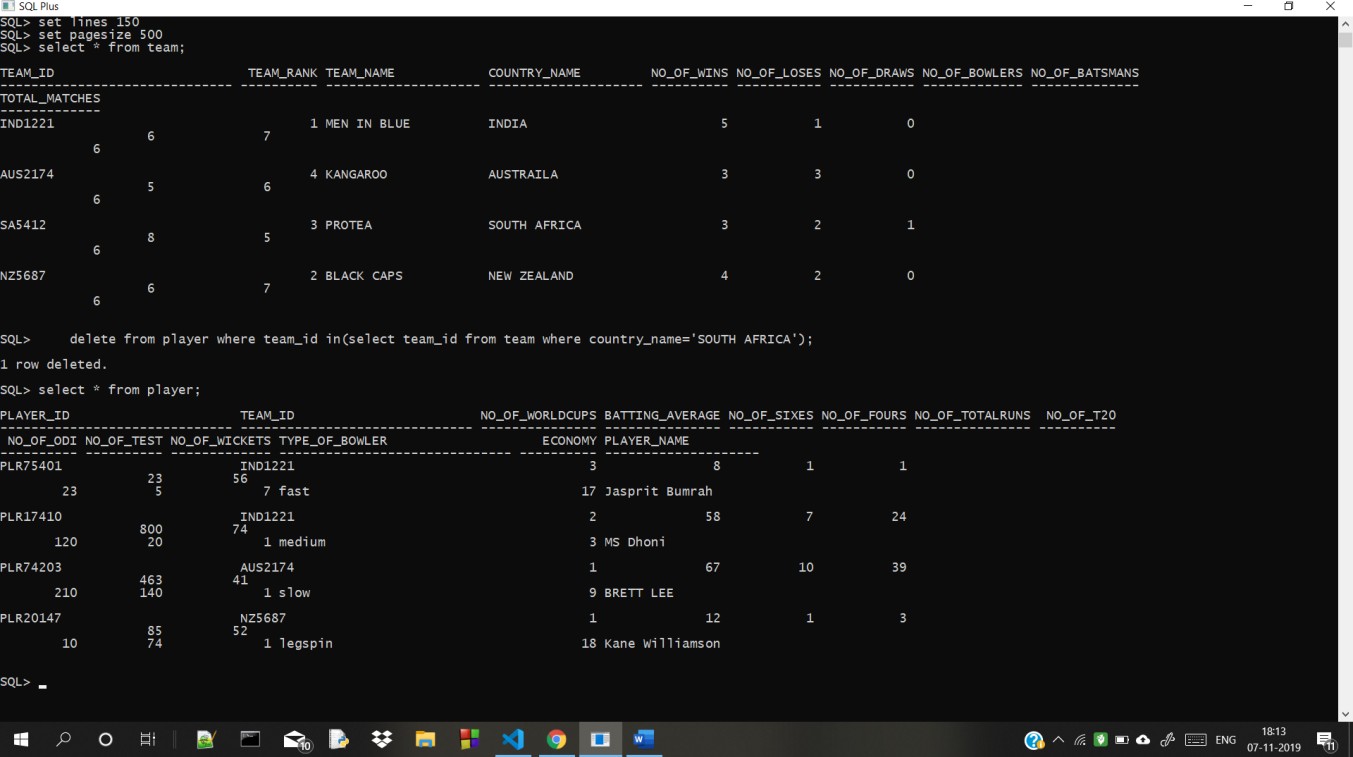
OUTPUT:





**Deletion with embedded select**

delete from player where team\_id in(select team\_id from team where countr y\_name='Australia');

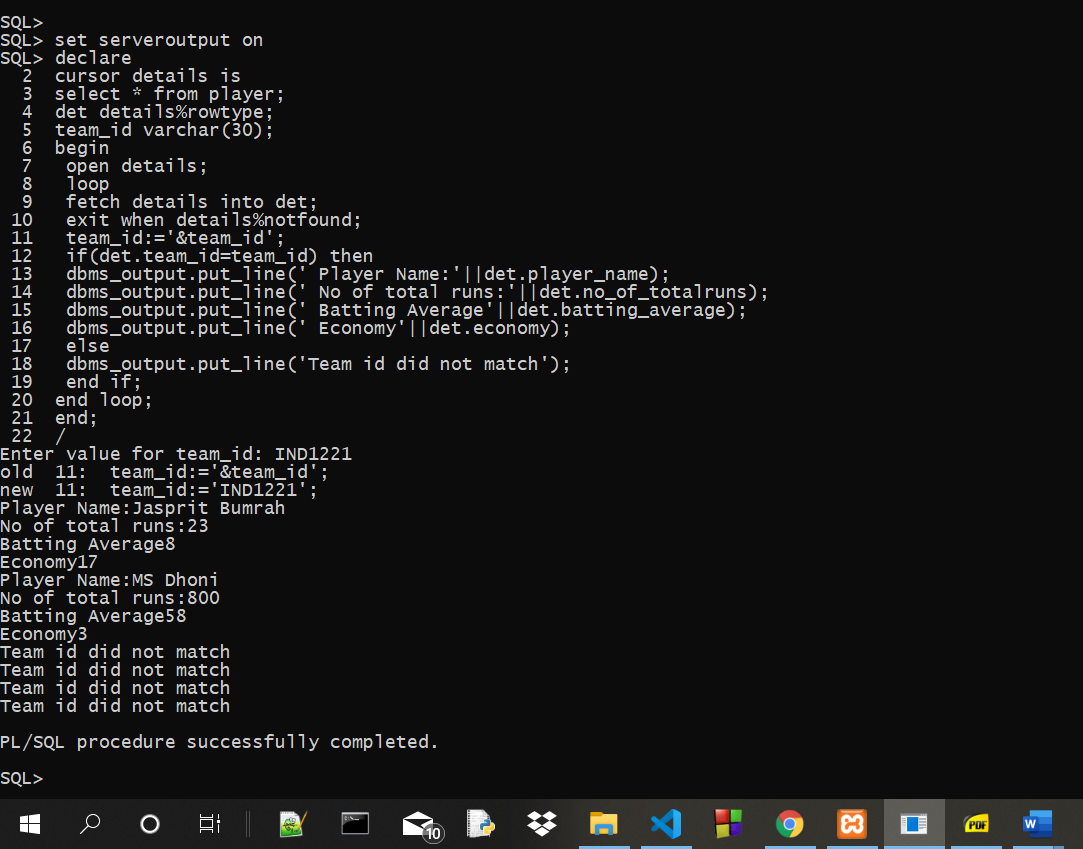


# PL/SQL:-

**PROCEDURE:**

User wants to predict the competition level of the next match by fetching the player details of a particular team.

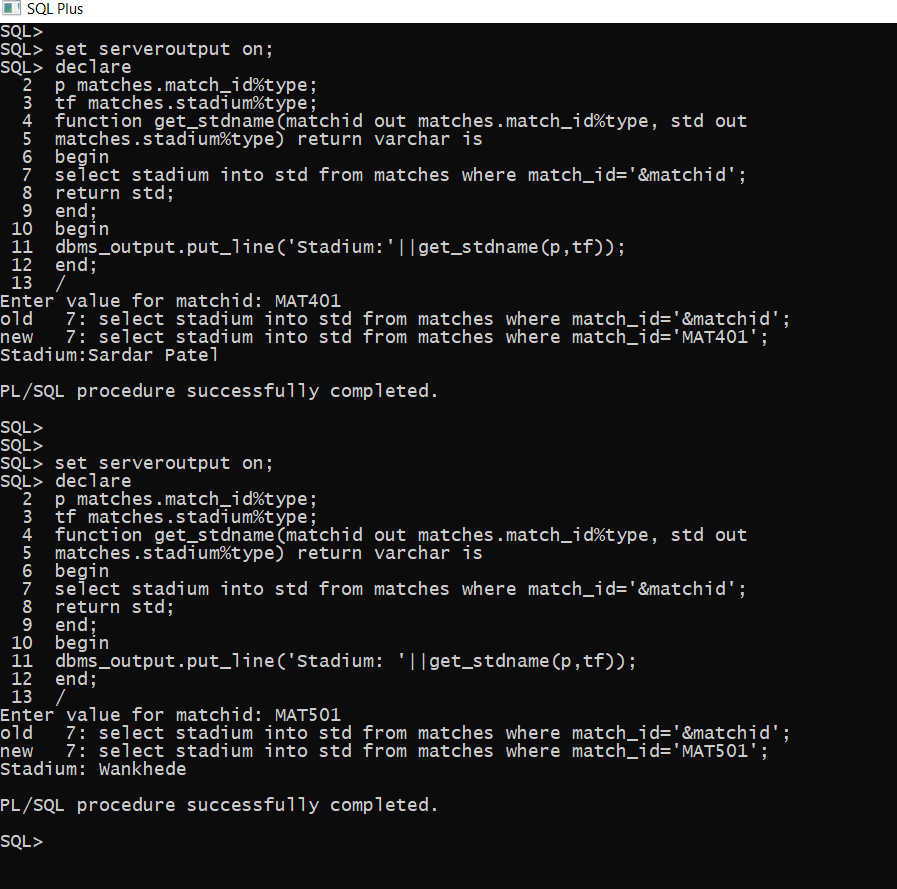
Use PL/SQL procedure to execute the same.



## FUNCTION:

User wants to book the tickets of an upcoming match

Create a PL/SQL function to display the stadium name on entering the desired Match.



# Cursor, Trigger:-

Define two business rules appropriate for the database under consideration and implement the rules using trigger.

**TRIGGER 1**

When a team is eliminated do the necessary process and update the elimination table.

CODE:

create table elimination (

teamid varchar(10) primary key, cntry\_name varchar(15),

rankk number(2), teamName varchar(15), noLoses number(2)

);

set serveroutput on

create or replace trigger trig2 after delete on team

referencing new as new old as old for each row

begin

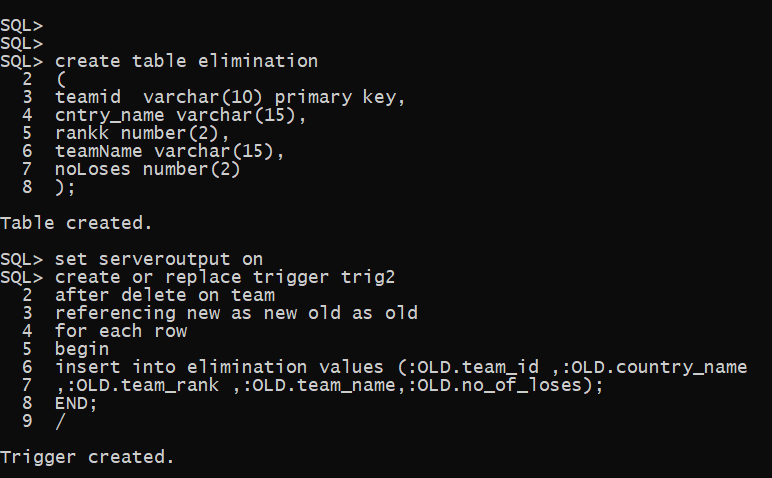
insert into elimination values (:OLD.team\_id ,:OLD.country\_name

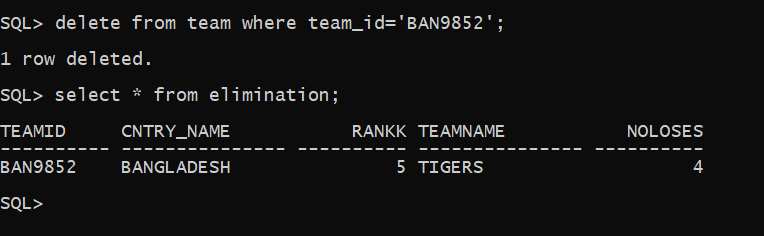
,:OLD.team\_rank ,:OLD.team\_name,:OLD.no\_of\_loses); END;

/

delete from team where team\_id='BAN9852'; select \*from elimination ;

OUTPUT





## TRIGGER 2

Due to some malpractices a team was banned for 2 years . After 2 years when it came back the board of cricket council order to change the team\_ID because of some reasons

CODE:

Create or replace trigger reference1 after update on team

for each row begin

update player set team\_id=:new.team\_id where team\_id=:old.team\_id;

update coach set team\_id=:new.team\_id where team\_id=:old.team\_id;

update captain set team\_id=:new.team\_id where team\_id=:old.team\_id;

update plays set team\_id=:new.team\_id where team\_id=:old.team\_id;

update wicket\_keeper set team\_id=:new.team\_id where team\_id=:old.team\_id;

end;

/

update team set team\_id= 'AUS7895' where team\_id='AUS2174';

select \* from player;

OUTPUT

