SQL-QUERIES

1. Set Theory & Logical Operators , Equi-join Operations.
2. Aggregate Functions, Group by and Having ClauseTheory.
3. Views, single row , Multiple row & Correlated operations.

PL/SQL-QUERIES

1. Triggers
2. Cursors
3. Procedures
4. Functions

* Problem-Statements Of SQL :-
* Set Theory & Logical Operators , Equi-join Operations.

1. Retrieve player names of teams Australia and India using set operation UNION.

QUERY:-

select player\_id,player\_name

from player

where player\_id like 'IND%'

union

select player\_id,player\_name

from player

where player\_id like 'AUS%' ;

OUTPUT:-

P.T.O



1. Retrieve names of the players from Australia and India who have played more than 50 test matches.

QUERY:-

select player\_id,player\_name

from player

where player\_id like 'IND%' and No\_of\_tests >50

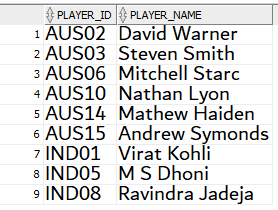
union

select player\_id,player\_name

from player

where player\_id like 'AUS%' and No\_of\_tests >50;

OUTPUT:-



1. Retrieve names of the umpires who have umpired the matches from 1 to 15 in the world cup and have umpired more than 75 matches in their career.

QUERY:-

select u\_name

from umpire

where number\_of\_matches > 100

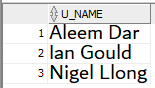
intersect

select u.u\_name

from umpire u,umpired\_by m

where u.u\_id=m.u\_id and m.match\_id between 1 and 15 ;

OUTPUT:-



1. Retrieve names of the umpires who have umpired the matches from 1 to 15 in the world cup and have umpired more than 75 matches in their career.

QUERY:-

select u.u\_name

from umpire u,umpired\_by m

where u.u\_id=m.u\_id and u.number\_of\_matches > 100 and m.match\_id between 1 and 15 ;

OUTPUT:-



1. Retrieve coach name and to those who do not belong to India and have experience of coaching for more than 3 years.

P.T.O

QUERY:-

select coach\_name,coach\_country

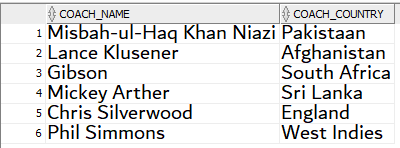
from coach

where coach\_country NOT LIKE 'India' and coach\_experience > ANY (select coach\_experience

from coach

where coach\_experience > 4)

OUTPUT:-



1. retrieve the names of the teams who are likely to qualify for the Semi-Final based on their current position in the points table where minimum points required to qualify is 10.

QUERY:-

select p.team\_id ,p.points,t.country\_name

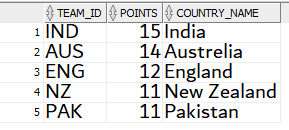
from points\_table p,team t

where p.team\_id=t.team\_id and points > any (select points

from points\_table

where points = 8 );

OUTPUT:-



1. Consider the match between INDIA and AUSTRALIA retrive the stats of bowler who is medium paced,spin and Leg-Spin who bowls to these countries

QUERY:-

select p.player\_name,b.economy

from player p ,bowler b

where p.player\_id=b.player\_id and

(b.player\_id like 'IND%' or b.player\_id like 'AUS%')

and

(b.bowler\_type like 'Medium%' or b.bowler\_type like 'Leg%' or b.bowler\_type like 'Sp%' ) ;

OUTPUT:-



EQUI-JOIN Statements

1. Retrieve the entire schedule of the world cup along with the venue in which it is taking place.

QUERY:-

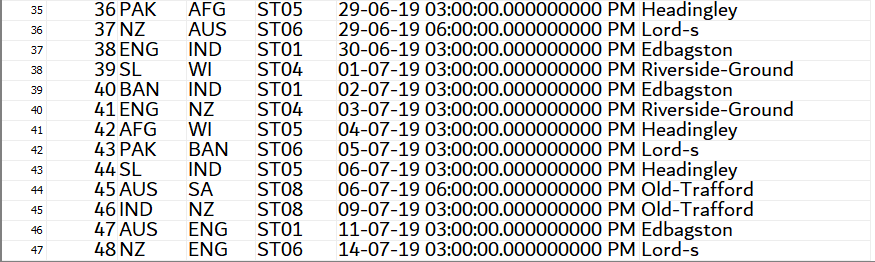
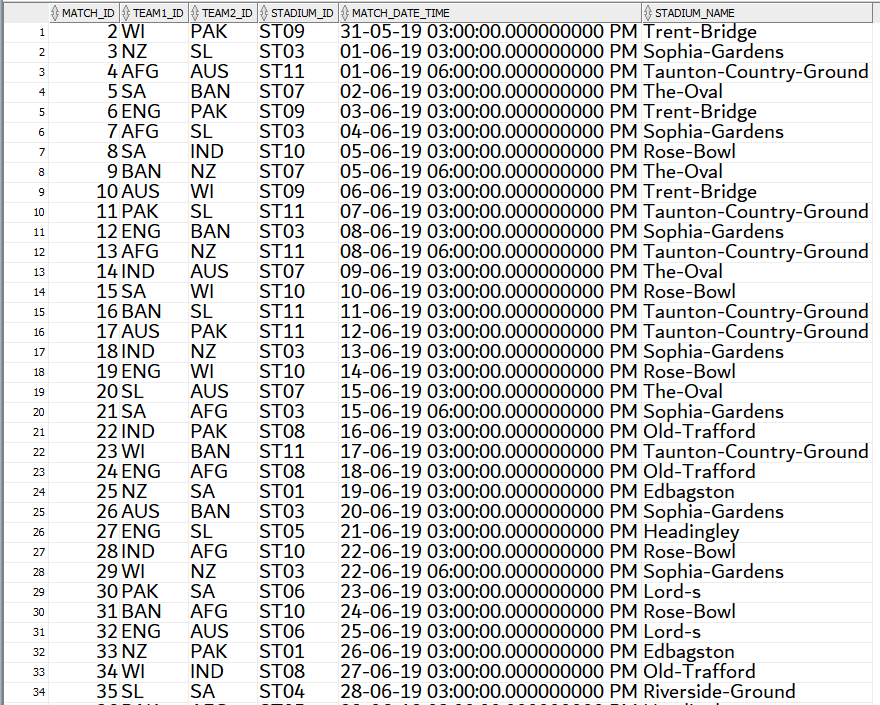
select m.\*,s.stadium\_name

from stadium s,matches m

where s.stadium\_id = m.stadium\_id;

OUTPUT:-

P.T.O



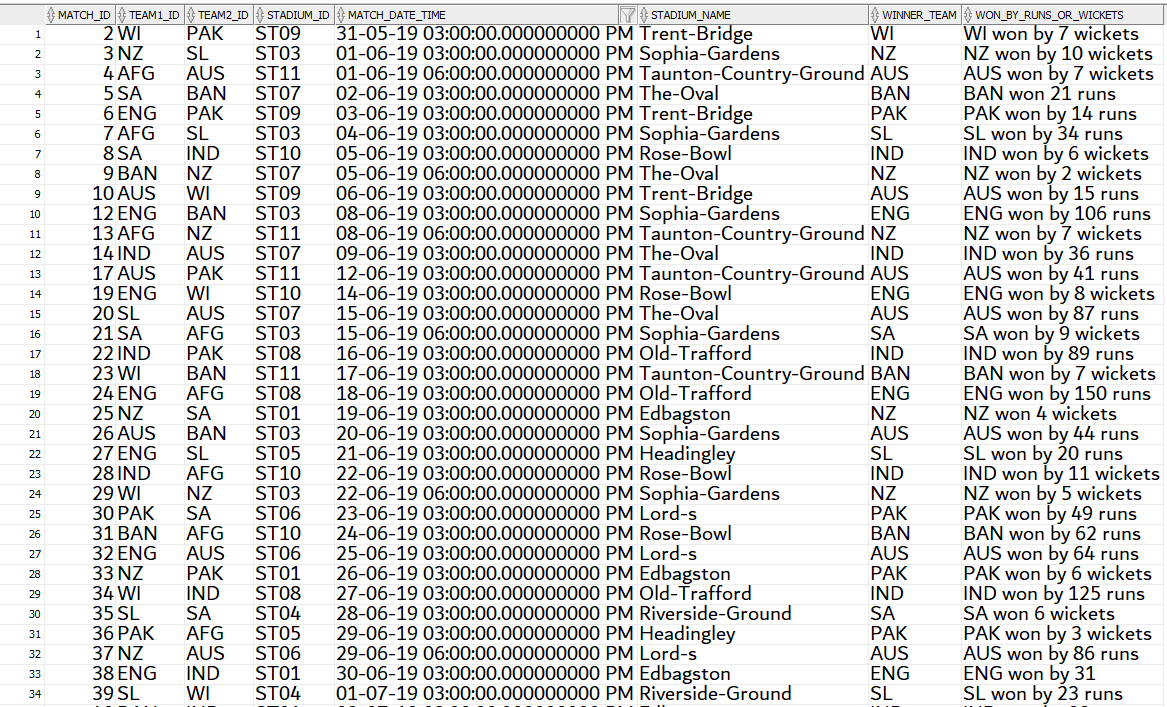
1. Retrieve the entire schedule of the world cup along with the venue in which it is taking place along with who won the match and by how many runs.

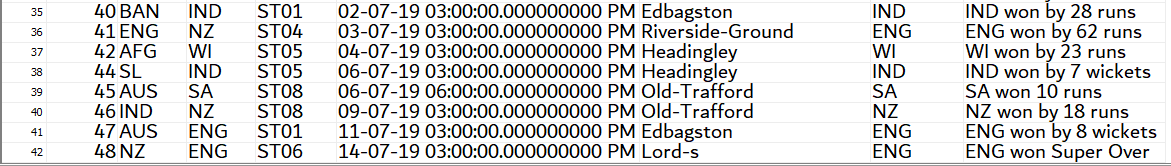
QUERY:-

select m.\*,s.stadium\_name,r.winner\_team,r.won\_by\_runs\_or\_wickets

from stadium s,matches m,results r

where s.stadium\_id = m.stadium\_id and r.match\_id=m.match\_id;

OUTPUT:-



1. Retrieve the entire schedule of world cup along with the venue in which it is taking place along with who won the match and by how many runs and man of that match.

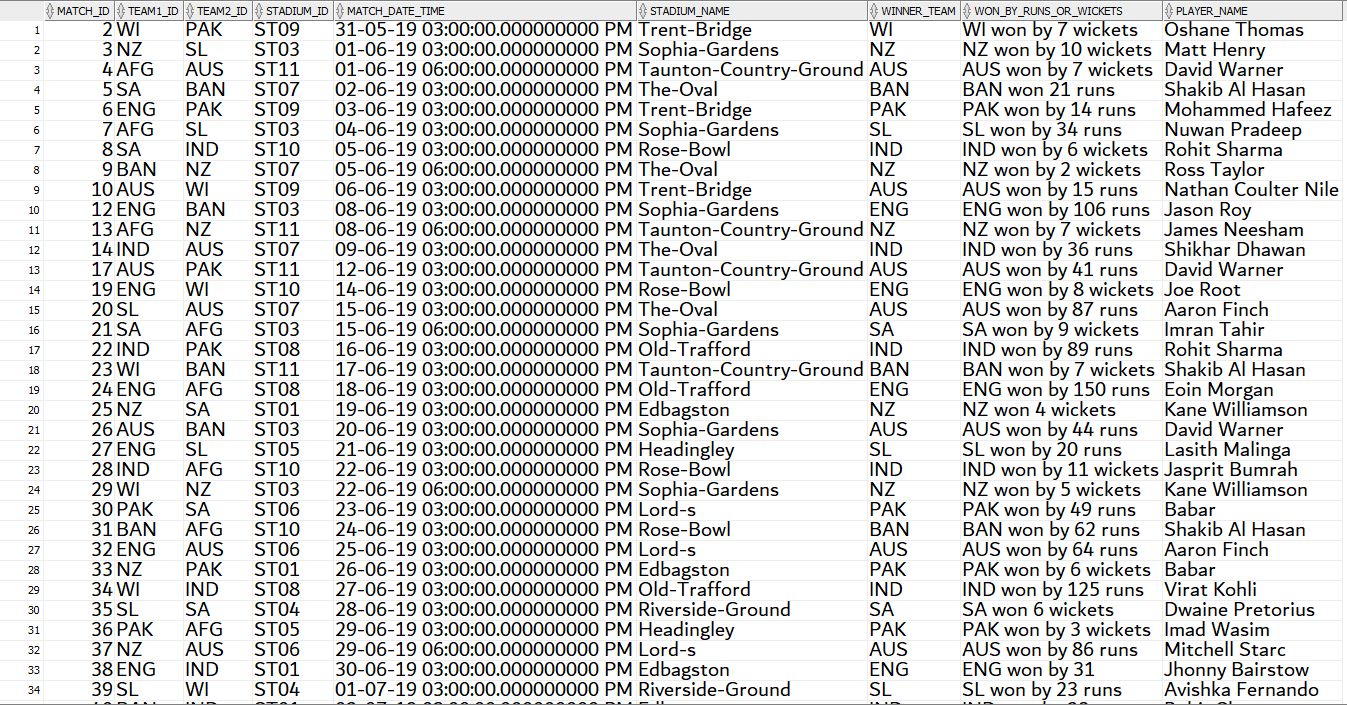
QUERY:-

select m.\*,s.stadium\_name,r.winner\_team,r.won\_by\_runs\_or\_wickets,p.player\_name

from stadium s,matches m,results r ,player p

where s.stadium\_id = m.stadium\_id and r.match\_id=m.match\_id and r.man\_of\_the\_match=p.player\_id;

OUTPUT:-



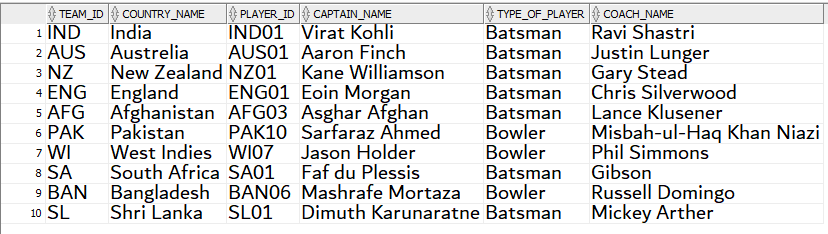
1. Retrieve details of the team along with their respective coaches and captains who belong to their respective countries.

QUERY:-

select T.team\_id,T.Country\_name,C.player\_id,C.Name as Captain\_Name,P.type\_of\_player ,CO.Coach\_name

from team T,captain C,Coach CO,player P

where T.team\_id=C.Team\_id and t.team\_id=co.team\_id and C.player\_id=P.player\_id ;

OUTPUT:-

1. Retrieve the names of the players who are all rounders of Australia along with their stats.

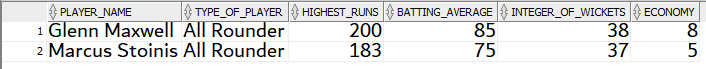
QUERY:-

select p.player\_name,p.type\_of\_player,ba.highest\_runs,ba.batting\_average,bo.number\_of\_wickets,bo.economy

from player p,batsman ba,bowler bo

where p.player\_id=ba.player\_id and p.player\_id like 'AUS%' and p.player\_id=bo.player\_id and ba.player\_id=bo.player\_id;

OUTPUT:-



* Aggregate Functions, Group by and Having ClauseTheory.

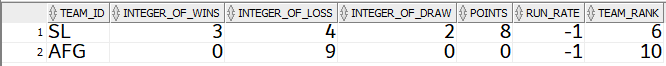
1. Display the number wins,loss and draw,points and team rank of 2 teams with least run\_rate\*/.

QUERY:-

select \* from(select \* from points\_table order by run\_rate asc)

where rownum<=2;

OUTPUT:-



1. Retrieve the list of stadiums and no.of matches played in each stadium.

QUERY:-

select stadium\_name,count(\*)

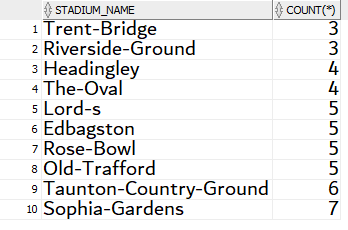
from stadium s,matches m

where s.stadium\_id=m.stadium\_id

group by stadium\_name

order by count(\*) asc;

OUTPUT:- P.T.O



1. Display the list of umpires who umpired matches IN WorldCup in which the winning team must be INDIA.

QUERY:-

SELECT U\_NAME,m.match\_id,COUNT(\*)

FROM UMPIRE U,UMPIRED\_BY UB,matches m

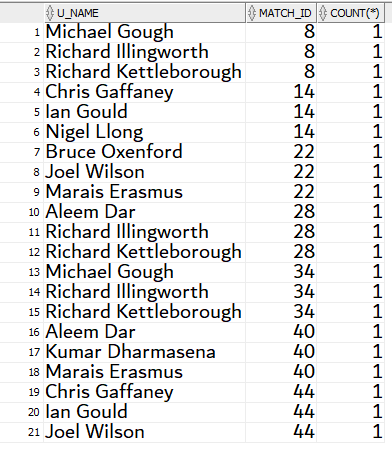
where u.u\_id=ub.u\_id and ub.match\_id=m.match\_id and m.match\_id in (select r.match\_id from results r where r.winner\_team='IND')

group by u\_name,m.match\_id

order by m.match\_id;

OUTPUT:-

P.T.O



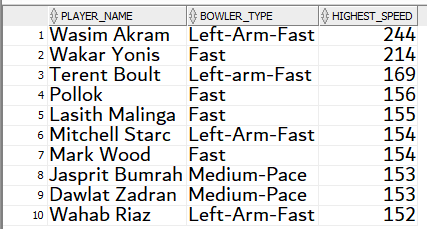
1. Display list of player\_name,bowler\_type top 10 highest bowling speed.

QUERY:-

select \* from(select p.player\_name,b.bowler\_type,b.highest\_speed from player p,bowler b where p.player\_id=b.player\_id order by b.highest\_speed desc)

where rownum<=10;

OUTPUT:-



1. Retrieve the teams who have won more than 5 matches.

QUERY:-

select t.team\_id,count(r.winner\_team)

from team t,results r

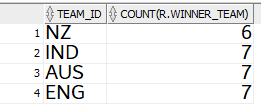
where t.team\_id=r.winner\_team

group by t.team\_id

having count(r.winner\_team)>=5

order by count(r.winner\_team);

OUTPUT:-



1. Retrieve the player details who have played more than 200 odi matches from IND.

QUERY:-

select p.player\_id,p.type\_of\_player,p.no\_of\_odis,p.team\_id

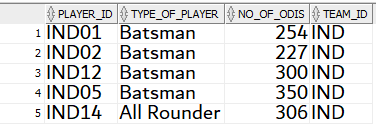
from player p

where p.team\_id='IND'

having no\_of\_odis>=200

group by p.player\_id,p.type\_of\_player,p.no\_of\_odis,p.team\_id;

OUTPUT:-



* Views, single row , Multiple row & Correlated operations.

1. Views.

a .Create a view of age\_info which contains the name, country and age of each player .

QUERY:-

create view age\_info as

select p.player\_name,t.country\_name, trunc(round((sysdate -to\_date(p.dob))/365.25,5))AS age

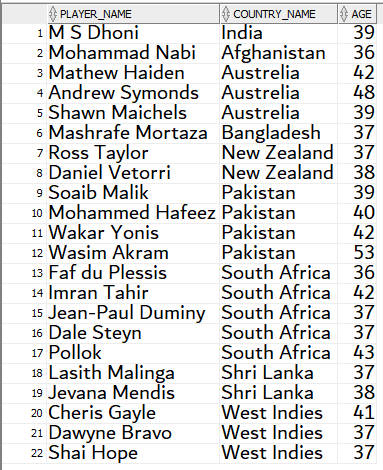
from player p,team t,dual

where p.team\_id=t.team\_id and trunc(round((sysdate -to\_date(dob))/365.25,5))>35;

select \* from age\_info;

OUTPUT:-

P.T.O



b .Create a view match\_info which contains name, country and number of odis played where odis played is more than 150 .

QUERY:-

create view match\_info as

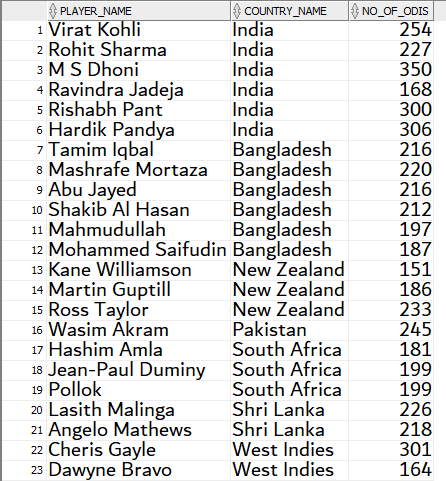
select p.player\_name,t.country\_name,p.no\_of\_odis

from player p,team t

where p.team\_id=t.team\_id and p.no\_of\_odis>150;

select \* from match\_info;

OUTPUT:-



c .Create a view wickets\_info which contains name, country,economy,bowler type and number of wickets taken where number of wickets taken is more than 100.

QUERY:-

create view wickets\_info as

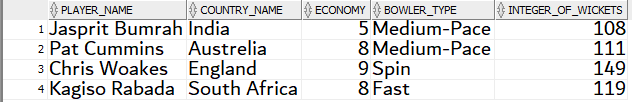
select p.player\_name,t.country\_name,b.economy,b.bowler\_type,b.number\_of\_wickets

from player p,bowler b,team t

where p.team\_id=t.team\_id and p.player\_id=b.player\_id and number\_of\_wickets>100;

select \* from match\_info;

OUTPUT:-



d .Create a view runs\_info which contains all information of batsmans with their name who have scored more than or equal to 8000 runs.

QUERY:-

create view runs\_info as

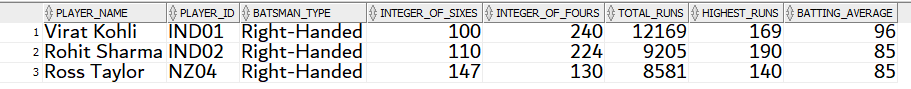
select p.player\_name,b.\*

from player p,batsman b

where p.player\_id=b.player\_id and b.total\_runs>=8000;

select \* from runs\_info;

OUTPUT:-



e .Create a view IND\_results which contains results of all matches played by india with name of man of the match.

P.T.O

QUERY:-

create view IND\_results as

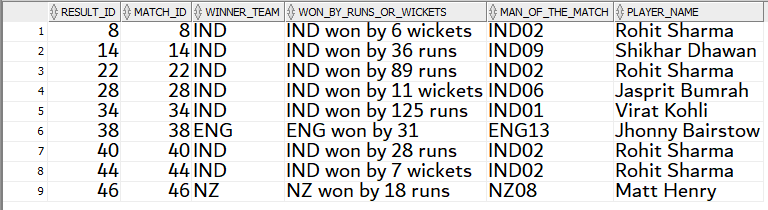
select r.\* , p.player\_name

from results r, player p

where r.man\_of\_the\_match=p.player\_id and r.match\_id in(select match\_id from matches where team1\_id ='IND' OR team2\_id ='IND');

select \* from IND\_results;

OUTPUT:-



1. Single-Row.

a .Display the details of winning team with points.

QUERY:-

select a.\*,p.\*

from team a,points\_table p

where a.team\_id=p.team\_id and a.team\_id in(select r.winner\_team from results r where r.match\_id=48);

OUTPUT:-



b .Retrive the umpire\_name,country, and his experience who has umpired the highest number of matches in World-cup.

QUERY:-

select \* from (select u\_name,u\_country,u\_experience,count(\*)

from umpire u,umpired\_by ub,matches m

where u.u\_id=ub.u\_id and ub.match\_id=m.match\_id

group by u\_name,u\_country,u\_experience

order by count(\*) desc)

where rownum<=1;

OUTPUT:-



c.Retrieve the details of the coach of team which won by 150 runs in match.

QUERY:-

select \* from (select u\_name,u\_country,u\_experience,count(\*)

from umpire u,umpired\_by ub,matches m

where u.u\_id=ub.u\_id and ub.match\_id=m.match\_id

group by u\_name,u\_country,u\_experience

order by count(\*) desc)

where rownum<=1;

OUTPUT:-



d.Retrieve the player details who played the highest no of ODIS.

QUERY:-

select \*

from player

where no\_of\_odis=(select max(no\_of\_odis) from player);

OUTPUT:-

e.Retrieve the details of the match held on 14-jul-2019 and its results.

QUERY:-

select m.\*,r.\*,c.name

from matches m,results r,captain c

where m.match\_id=r.match\_id and c.team\_id=r.winner\_team and m.match\_date\_time like '14-JUL-19%';

OUTPUT:-



3.Multiple row & Correlated operations.

a .Retrieve the details of the umpires who have umpired matches in Sophia-Gardens.

QUERY:-

select distinct(u.u\_id),u.u\_name,u.u\_country,u.number\_of\_matches,u.u\_experience

from umpire u,umpired\_by ub,matches m

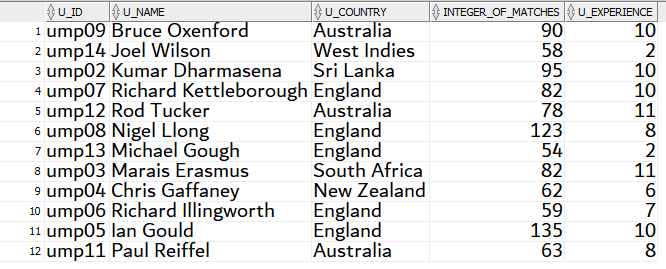
where u.u\_id=ub.u\_id and ub.match\_id=m.match\_id and

m.match\_id in (select match\_id

from matches m1,stadium st1

where m1.stadium\_id=st1.stadium\_id and lower(stadium\_name) like '%sophia%gardens%');

OUTPUT:-



b .Retrieve the country whose players have the batting average greater than 90.

QUERY:-

select country\_name

from team t

where team\_id in(select team\_id from player p,batsman b

where p.player\_id=b.player\_id and b.batting\_average >90);

OUTPUT:-



c .Retrieve the name of the captain who has won "man of the match" in at least one match.

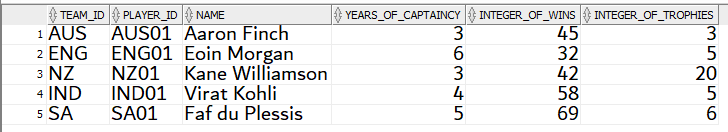
QUERY:-

select cap.\*

from captain cap,player p

where cap.player\_id = p.player\_id and p.player\_id in (select res.man\_of\_the\_match

from results res);

OUTPUT:-

d .Retrieve the details and results of the matches that team India played in a stadium that has Batting-Pitch.

QUERY:-

select m.match\_id,team1\_id,team2\_id,res.winner\_team,res.won\_by\_runs\_or\_wickets,p.player\_name

from matches m, results res, player p

where p.player\_id = res.man\_of\_the\_match

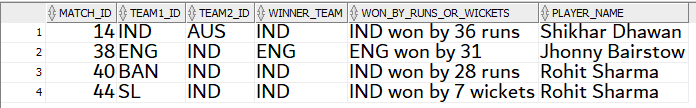
and (m.team1\_id like 'IND' or m.team2\_id like 'IND') and m.match\_id = res.match\_id and

m.match\_id in (select match\_id from matches m

where m.stadium\_id in(select Stadium\_id from stadium

where lower(pitch\_type) like '%batting%pitch%'));

OUTPUT:-



e .Retrieve the names of the coach and player who coached by him who has scored more than total runs of all the players coached by Lance Klusener.

QUERY:-

select (co.coach\_id),co.coach\_name,co.coach\_country, p1.player\_name

from coach co , player p1

where co.team\_id = p1.team\_id and

p1.player\_id in (select player\_id

from batsman

where total\_runs > (select max(ba.total\_runs)

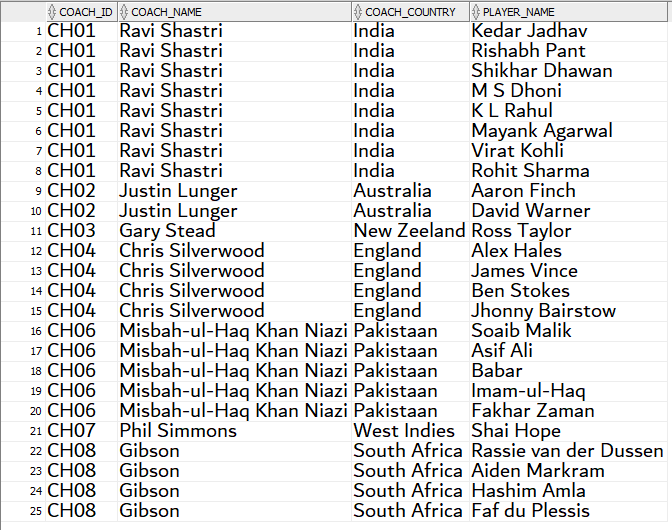
from batsman ba,coach co,player p

where co.team\_id=p.team\_id and p.player\_id = ba.player\_id

and lower(co.coach\_name) like '%lance%klusener%'))

order by co.coach\_id;

OUTPUT:-



4.CORRELATED ROW SUBQUERIES.

a .Retrieve the details of the Batsmen who belong to the country same as that of Virat Kohli.

QUERY:-

select p.\*,b.batsman\_type,b.number\_of\_sixes,b.number\_of\_fours,b.total\_runs,b.Highest\_runs,b.batting\_average

from player p,batsman b,team t

where p.player\_id = b.player\_id and

t.team\_id = p.team\_id and

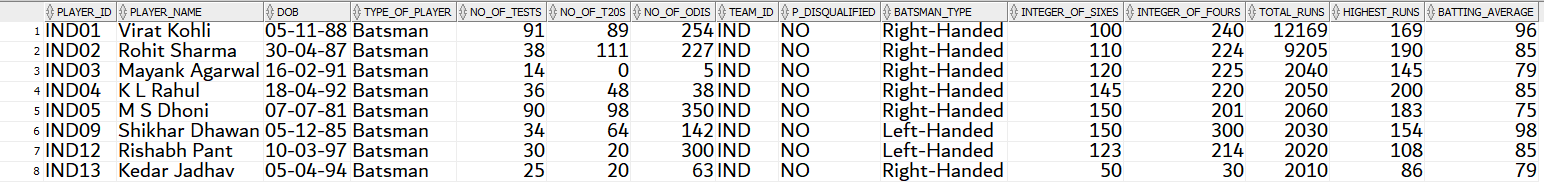
exists (select \*

from player p1,team t1

where t1.team\_id = p1.team\_id and lower(player\_name) like '%virat%'

and t.country\_name = t1.country\_name);

OUTPUT:-



b .Retrieve the Match ids of matches umpired by Kumar Dharmasena and names of all the umpires who umpired the matches along with him.

QUERY:-

select distinct(u.u\_name)

from matches m, umpired\_by ub, umpire u

where m.match\_id = ub.match\_id and u.u\_id = ub.u\_id and lower(u.u\_name) not like '%dha\_\_\_sena%' and

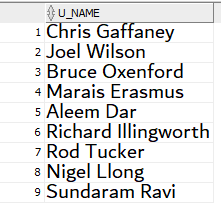
exists (select distinct(m1.match\_id)

from umpire u1,matches m1, umpired\_by ub1

where m.match\_id = m1.match\_id and u1.u\_id = ub1.u\_id and

m1.match\_id = ub1.match\_id and lower(u1.u\_name) like '%dha\_\_\_sena%');

OUTPUT:-



c .Details of the batsman whose total runs are greater than the average total runs of his own team.

QUERY:-

select p.player\_id,p.player\_name,ba.batsman\_type,ba.total\_runs,ba.number\_of\_sixes,ba.number\_of\_fours

from batsman ba, player p

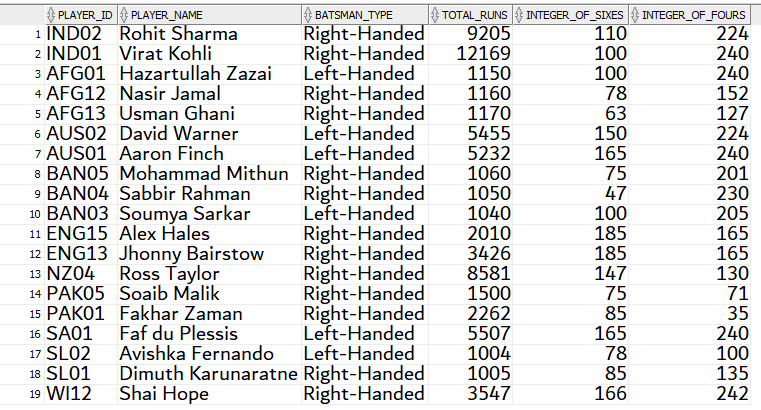
where ba.player\_id = p.player\_id and

ba.total\_runs > (select avg(ba2.total\_runs)

from batsman ba2,player p2

where ba2.player\_id = p2.player\_id and p2.team\_id = p.team\_id);

OUTPUT:-



d.Details of the teams which have won more than 3 matches.

QUERY:-

select t.\*

from team t

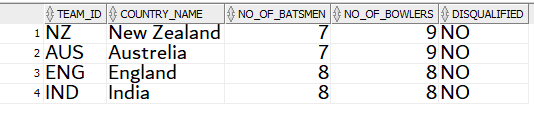
where team\_id in(select res.winner\_team

from results res

group by(winner\_team)

having count(\*)>4);

OUTPUT:-



e.Details of the bowlers whose economy is greater than the average economy of his own team.

QUERY:-

select p.player\_name,bo.\*

from bowler bo, player p

where bo.player\_id = p.player\_id and

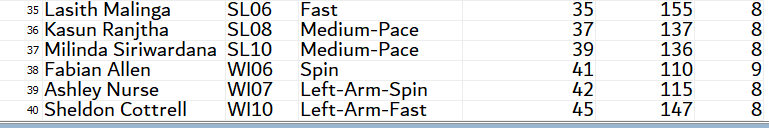
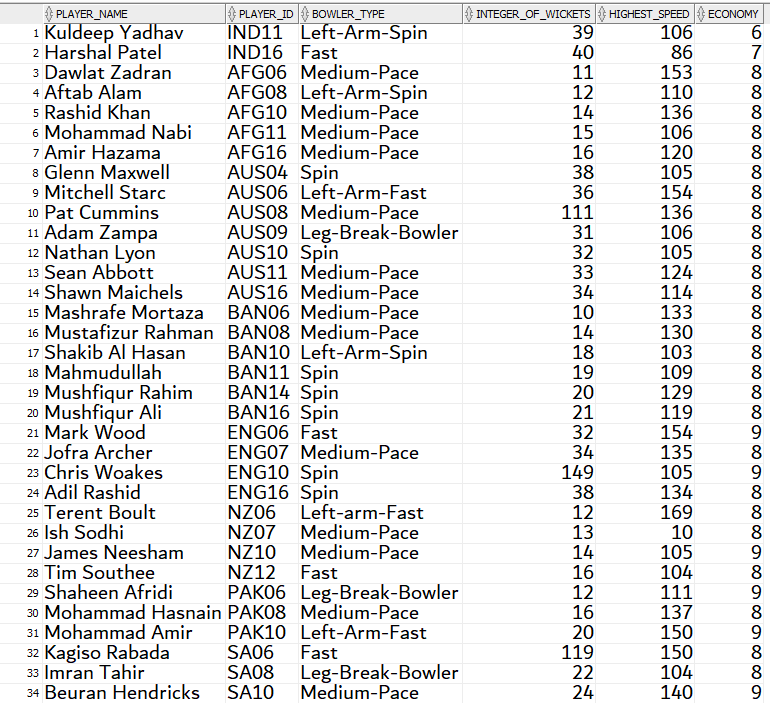
bo.economy > (select avg(bo2.economy)

from bowler bo2,player p2

where bo2.player\_id = p2.player\_id and p2.team\_id = p.team\_id);

OUTPUT:-

P.T.O



* Problem-Statements Of PL/SQL :-
* Triggers

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

/\*

drop table elimination;

create table elimination

(

team\_id varchar2(30) primary key,

country\_name varchar2(30),

no\_of\_batsmen number,

no\_of\_bowlers number

);

set serveroutput on

create or replace trigger eliminate\_team

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.no\_of\_batsmen ,:OLD.no\_of\_batsmen);

END;

/

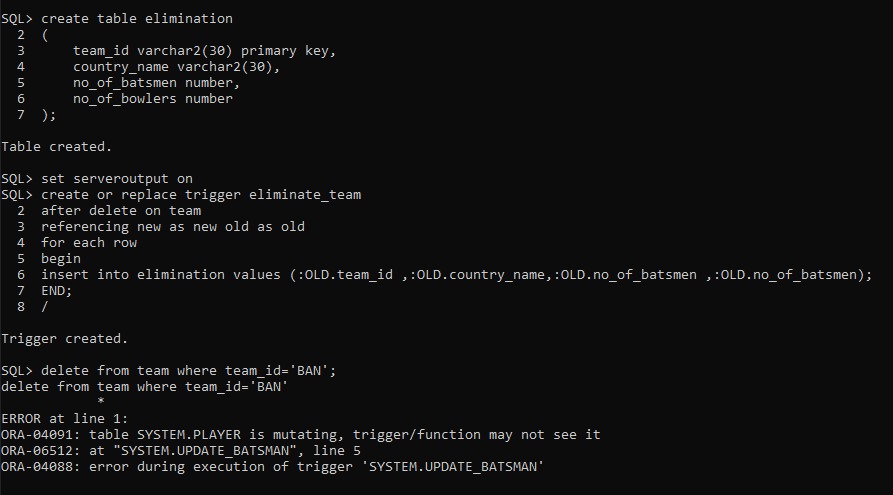
delete from team where team\_id='BAN';

select \*from elimination ;

\*/

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OUTPUT:-



2 : Prevent a user from adding a BOWLER to the BATSMAN table.

/\*

CREATE OR REPLACE TRIGGER update\_batsman

BEFORE INSERT OR UPDATE ON batsman

FOR EACH ROW

DECLARE

player\_type varchar2(50);

not\_a\_batsman EXCEPTION;

BEGIN

SELECT type\_of\_player INTO player\_type FROM player

WHERE player\_id = :new.player\_id;

IF (player\_type like 'Bowler') THEN

RAISE not\_a\_batsman;

END IF;

EXCEPTION

WHEN not\_a\_batsman THEN

Raise\_application\_error (-20300,'Entered player is not a Batsman');

WHEN NO\_DATA\_FOUND THEN

Raise\_application\_error(-20322,'Player does not exists');

END;

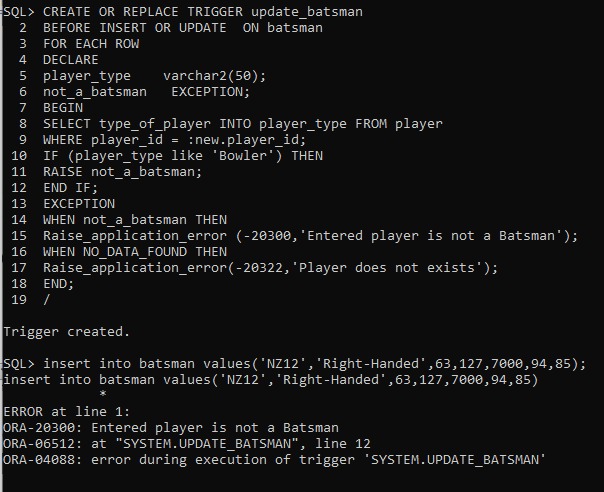
/

insert into batsman values('NZ12','Right-Handed',63,127,7000,94,85);

delete from batsman where player\_id='NZ12';

\*/

OUTPUT:-



* Cursors

1 : Write down a cursor to obtain ID Of Team and Player along with the player name.

#include <stdio.h>

main(int argc, char \*argv[])

{

if (vfork() == 0)

execvp(argv[1], &argv[1]);

printf("Parent Process\n");

}

declare

cursor c1 is select team\_id,player\_id,name from captain;

t\_id captain.team\_id%type;

p\_id captain.player\_id%type;

name captain.team\_id%type;

begin

open c1;

dbms\_output.put\_line('TEAM\_ID PLAYER\_ID NAME'||chr(13)||chr(10));

loop

fetch c1 into t\_id,p\_id,name;

exit when c1%notfound;

dbms\_output.put\_line(t\_id||' '||p\_id||' '||name);

end loop;

close c1;

end;

/

OUTPUT:-



2 : Write down to a cursor to implement and obtain ID of both Coach and Team along with to which country the coach belongs and his respective name.

declare

cursor c1 is select coach\_id,team\_id,coach\_name,coach\_country from coach;

id coach.coach\_id%type;

team coach.team\_id%type;

name coach.coach\_name%type;

t coach.coach\_country%type;

begin

open c1;

dbms\_output.put\_line('C\_ID T\_ID COUNTRY NAME'||chr(13)||chr(10));

loop

fetch c1 into id,team,name,t;

exit when c1%notfound;

dbms\_output.put\_line(id||' '||team||' '||t||' '||name);

end loop;

close c1;

end;

/

OUTPUT:-



* Procedures

1 : Any player name given , Write a procedure to display whether he is a batsman or bowler and to which country he belongs.

create or replace PROCEDURE Displayplayer(pname VARCHAR2)

IS

tp player.type\_of\_player%TYPE;

tn team.country\_name%TYPE;

BEGIN

SELECT p.type\_of\_player,t.country\_name INTO tp, tn

FROM player p join team t on t.team\_id=p.team\_id

WHERE player\_name=pname;

DBMS\_OUTPUT.PUT\_LINE('Type : '||tp);

DBMS\_OUTPUT.PUT\_LINE('Team NAme : '||tn);

END Displayplayer;

EXEC Displayplayer('Virat Kholi');

EXEC Displayplayer('MS Dhoni');

EXEC Displayplayer('Marcus Stoinis');

EXEC Displayplayer('David Warner');

EXEC Displayplayer('Rashid Khan');

EXEC Displayplayer('Colin Munro');

OUTPUT:-



2 : Any match date given , Write a procedure to display the teams names between matches being held.

create or replace PROCEDURE matchdetails(matchdatetime timestamp)

IS

tp matches.team1\_id%TYPE;

tq matches.team2\_id%TYPE;

BEGIN

SELECT m.team1\_id,m.team2\_id INTO tp, tq

FROM matches m

WHERE match\_date\_time=matchdatetime;

DBMS\_OUTPUT.PUT\_LINE('Team1 is : '||tp);

DBMS\_OUTPUT.PUT\_LINE('Team2 is : '||tq);

END matchdetails;

EXEC Displayplayer('01-JUN-2019 03-00-00 pm');

EXEC Displayplayer('04-JUN-2019 03-00-00 pm');

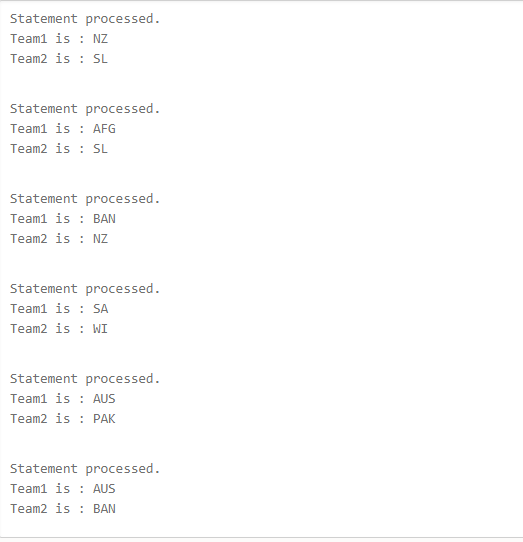
EXEC Displayplayer('05-JUN-2019 06-00-00 pm');

EXEC Displayplayer('10-JUN-2019 03-00-00 pm');

EXEC Displayplayer('12-JUN-2019 03-00-00 pm');

EXEC Displayplayer('20-JUN-2019 03-00-00 pm');

OUTPUT:-



* Functions

1 : RETRIVE THE RUN RATE OF GIVEN TEAM ID

create or replace function r(teamid in string)

return number

as

r\_r number;

begin

select run\_rate into r\_r from points\_table

where points\_table.team\_id=teamid;

return r\_r;

end;

/

declare

teamid varchar2(30);

runrate number;

begin

teamid:=&teamid;

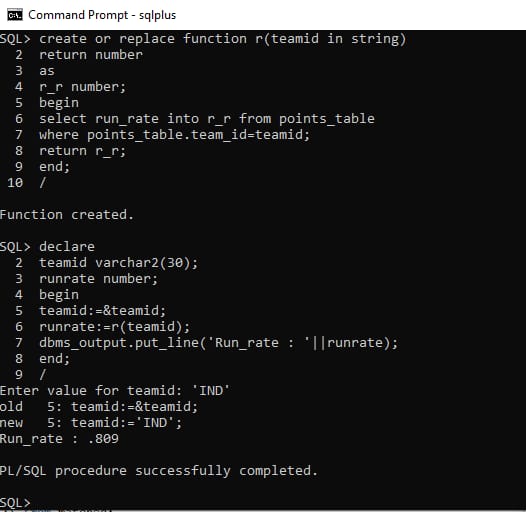
runrate:=r(teamid);

dbms\_output.put\_line('Run\_rate : '||runrate);

end;

/

OUTPUT:-



2 : RETRIVE THE NUMBERS MATCHES WON BY GIVEN TEAM IN WORLD CUP 2019.

create or replace function no\_of\_wins(teamid in string)

return number

as

wins number;

begin

select count(\*) into wins from results

where winner\_team=teamid;

return wins;

end;

/

declare

teamid varchar2(30);

wins number;

begin

teamid:=&teamid;

wins:=no\_of\_wins(teamid);

dbms\_output.put\_line('No of Matches Won by '||teamid||' are '||wins);

end;

/

OUTPUT:-

