DATABASE MANAGEMENT SYSTEMS (ITE1003) REVIEW 3

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QUESTION 6

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;
```

2. Add column named 'PLAYER_NAME' in table PLAYER. Using interactive updation.

CODE:

```
3. alter table player add player_name varchar(20);4. update player set player_name = '&player_name' where player_id = '&player_id';
```

```
0 0 11
```

```
SQL> alter table player add player_name varchar(20);

Table altered.

SQL> update player set player_name = '&player_name' where player_id = '&player_id';

Enter value for player_name: MS Dhoni

Enter value for player_id: PLR17410

old 1: update player set player_name = '&player_name' where player_id = '&player_id'

new 1: update player set player_name = 'MS Dhoni' where player_id = 'PLR17410'

1 row updated.
```

	2	1 fa	st			17 Shak	kib Al F	Hassan				
QL> QL> set QL> sel 2 ;	: lines 1 ect * fr	50 om player										
LAYER_I	:D		TEAM_ID			NO_OF_WOF	RLDCUPS	NUMBER_OF_MATCHES	BATTING_	AVERAGE	NO_OF_SIXES	NO_OF_FOURS
0_0F_T0	TALRUNS	NO_OF_T20	NO_OF_ODI	NO_OF_TEST	NO_OF_WICKETS	TYPE_OF_	_BOWLER		ECONOMY	PLAYER_	NAME	
LR17410	800	74	IND1221 120	20	1	medium	2	13	3	58 MS Dhon	7 i	24
LR74203	463	41	AUS2174 210	140	1	slow	1	6	9	67 BRETT L	EE 10	39
LR45987	985	24	SA5412 63	65	1	medium-s	3 slow	4	11	99 DAVID M	4 IILLER	47
LR20147	85	52	NZ5687 10	74	1	legspin	1	12	18	12 Kane Wi	1 lliamson	3
LR65200	21	77	BAN9852 30	2	1	fast	2	9	17	4 Shakib	0 Al Hassan	1

SQL QUERIES USING JOIN/NESTING/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';
```

- 2. (a)Display the country whose players have batting average greater than 60.
 - (b) Display the country whose players do not 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:

3. 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 where team_id in(select team_id from player where no_of_totalruns>500 );
OUTPUT:
```

```
SQL> select distinct coach_name from coach where team_id in(select team_id 2 from player where no_of_totalruns>500 );

COACH_NAME

OTTIS GIBSON
RAVI SHASTRI

SQL>
SQL> select distinct coach_name from coach inner join player on coach.team_id 2 = player.team_id where(player.no_of_totalruns>500);

COACH_NAME

OTTIS GIBSON
RAVI SHASTRI

SQL>

SQL>
SQL>
SQL>
SQL> select distinct coach_name from coach minus select distinct coach_name from coach where team_id in(select team_id 2 from player where no_of_totalruns>500 );

COACH_NAME

GARY STEAD

GARY STEAD

GARY STEAD

GARY STEAD

SQL>
SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>

SQL>
```

4. 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:

```
QL> update captain set captain_name ='MS Dhoni'where Captain_id='CAP11452';
SQL> select * from captain;
                   CAPTAIN_NAME
CAPTAIN_ID
AP11452
56
                                                                IND1221
                                                                                                  PLR44567
                               MS Dhoni
CAP21478
74
                                                                                                  PLR10235
                               DALE STEYN
                               MICHAEL CLARKE
                                                                                                  PLR74138
AP14789
20
                                                                BAN9852
                               TAMIM IQBAL
                                                                                                  PLR89562
                               ROSS TAYLOR
                                                                NZ5687
QL> select wk_name from WICKET_KEEPER where team_id in(select team_id from 2 captain where captain_name=wk_name);
```

```
SQL> select wk_name from WICKET_KEEPER natural join captain where captain_name =wk_name;

WK_NAME

MS Dhoni

SQL>
SQL> select wk_name from WICKET_KEEPER minus select wk_name from WICKET_KEEPER where team_id in(select team_id from 2 captain where captain_name=wk_name);

WK_NAME

Dinesh Kartik
Hefer Kingsly
Peter Hegward
Tim Lee

SQL>
```

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);

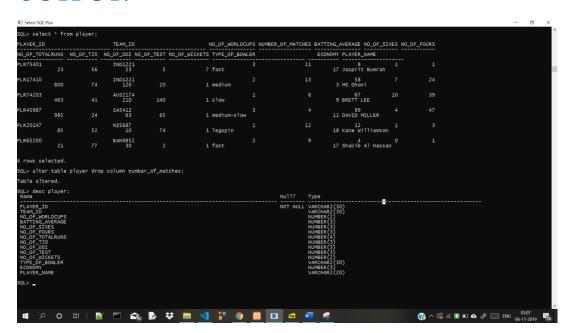
DELETE:

1. Deleting the column number_of_matches.

CODE:

```
alter table player drop column no_of_matches;

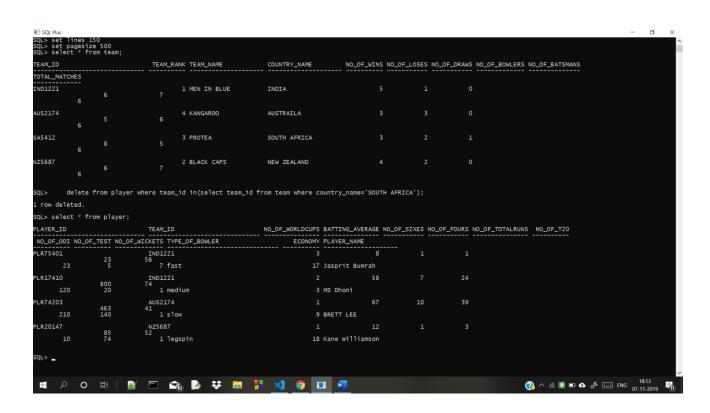
delete from coach where coach_id='CH596';
```



```
SQL>
SQL> insert into COACH values(
2 'CH596', 'IND1221', 'GARY KISTERN'
3 );
1 row created.
SQL> select * from coach;
COACH_ID
                                                          TEAM_ID
                                                                                                                    COACH_NAME
                                                         IND1221
IND1221
AUS2174
SA5412
NZ5687
BAN9852
----
СН596
СН417
СН140
                                                                                                                    GARY KISTERN
RAVI SHASTRI
JUSTIN LANGER
OTTIS GIBSON
GARY STEAD
RUSSEL DOMINGO
CH223
CH398
CH748
6 rows selected.
SQL>
SQL> delete from coach where coach_id='CH596';
1 row deleted.
SQL> select * from coach;
COACH_ID
                                                          TEAM_ID
                                                                                                                    COACH_NAME
CH417
CH140
CH223
CH398
CH748
                                                         IND1221
AUS2174
SA5412
NZ5687
                                                                                                                    RAVI SHASTRI
JUSTIN LANGER
OTTIS GIBSON
GARY STEAD
RUSSEL DOMINGO
SOL>
```

DELETION WITH EMBEDDED SELECT

delete from player where team_id in(select team_id from team where countr
y name='Australia');



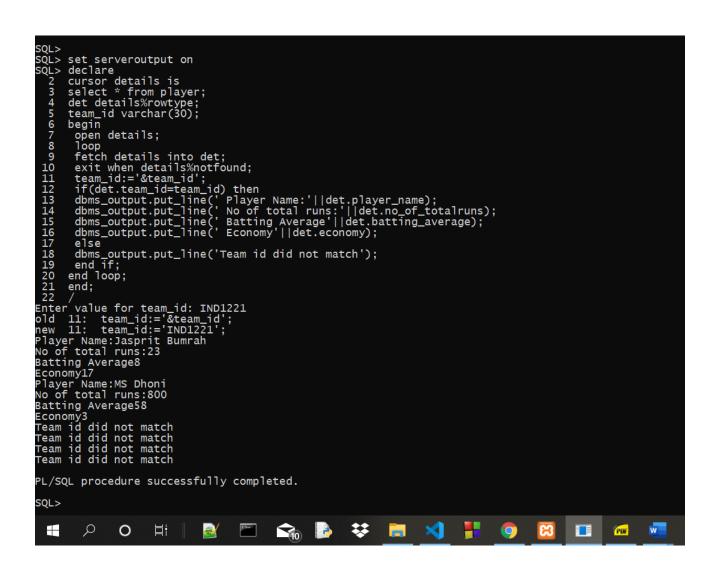
QUESTION 7

Define and implement one PL/SQL function and one PL/SQL procedure appropriate for the database under consideration.

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.

```
SQL Plus
SQL> set serveroutput on;
SQL> declare
2 p match
3 tf match
       p matches.match_id%type;
tf matches.stadium%type;
function get_stdname(matchid out matches.match_id%type, std out
matches.stadium%type) return varchar is
       begin
select stadium into std from matches where match_id='&matchid';
return std;
       end;
begin
 11
       dbms_output.put_line('Stadium:'||get_stdname(p,tf));
 12
13
Enter value for matchid: MAT401
old 7: select stadium into std from matches where match_id='&matchid';
new 7: select stadium into std from matches where match_id='MAT401';
Stadium:Sardar Patel
PL/SQL procedure successfully completed.
SQL>
SQL>
SQL> set serveroutput on;
SQL> declare
       p matches.match_id%type;
tf matches.stadium%type;
function get_stdname(matchid out matches.match_id%type, std out
matches.stadium%type) return varchar is
       begin
select stadium into std from matches where match_id='&matchid';
       return std;
 9
10
       end;
begin
 11
12
13
       dbms_output.put_line('Stadium: '||get_stdname(p,tf));
         value for matchid: MAT501
7: select stadium into std from matches where match_id='&matchid';
7: select stadium into std from matches where match_id='MAT501';
old
PL/SQL procedure successfully completed.
SQL>
```

QUESTION 8

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
insert into elimination values (:OLD.team id ,:OLD.country name
,:OLD.team_rank ,:OLD.team_name,:OLD.no_of_loses);
delete from team where team_id='BAN9852';
select *from elimination ;
```

(NEXT PAGE)

```
SQL>
SQL>
SQL> create table elimination
     teamid varchar(10) primary key, cntry_name varchar(15), rankk number(2), teamName varchar(15),
  7
8
     noLoses number(2)
     );
Table created.
SQL> set serveroutput on
SQL> create or replace trigger trig2
     after delete on team
     referencing new as new old as old
     for each row
     insert into elimination values (:OLD.team_id ,:OLD.country_name
      ,:OLD.team_rank ,:OLD.team_name,:OLD.no_of_loses);
  8
     END;
Trigger created.
```

```
SQL> delete from team where team_id='BAN9852';

1 row deleted.

SQL> select * from elimination;

TEAMID CNTRY_NAME RANKK TEAMNAME NOLOSES

BAN9852 BANGLADESH 5 TIGERS 4

SQL>
```

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;
```

```
QL> select * from player:
LAYER ID
                               TEAM_ID
                                                                NO_OF_WORLDCUPS NUMBER_OF_MATCHES BATTING_AVERAGE NO_OF_SIXES NO_OF_FOURS
O_OF_TOTALRUNS NO_OF_T20 NO_OF_ODI NO_OF_TEST NO_OF_WICKETS TYPE_OF_BOWLER
                                                                                                     ECONOMY PLAYER_NAME
LR75401
                                                                                                          8
17 Jasprit Bu<u>mra</u>h
                                                               7 fast
PLR17410
                                                                                                           58
3 MS Dhoni
           800
                                               20
                                                               1 medium
LR74203
                                                                                                          67
9 BRETT LEE
                               AUS2174
210
                                              140
                                                               1 slow
LR45987
                                                                                                          99
11 DAVID MILLER
                               SA5412
                                                               1 medium-slow
                               NZ5687
                                                                                                          12
18 Kane Williamson
                                                               1 legspin
LR65200
                               BAN9852
                                                                                                          4
17 Shakib Al Hassan
                                                               1 fast
 rows selected.
```

```
SQL>
           Create or replace trigger reference1
SQL>
  2
           after update on team
          for each row
begin
  45
          update player set team_id=:new.team_id where
  6
          team_id=:old.team_id;
  78
          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;
  9
 10
          update plays set team_id=:new.team_id where
team_id=:old.team_id;
 11
 12
 13
          update wicket_keeper set team_id=:new.team_id where
 14
           team_id=:old.team_id;
 15
           end:
 16
Trigger created.
SQL>
SQL>
                                            2
                     ≓ŧ
  \blacksquare
               0
```

	* from team;							
AM_ID		TEAM_RANK TEAM_NAME	COUNTRY_NAME	NO_OF_WINS NO_O	F_LOSES NO_	DF_DRAWS NO_OF	_BOWLERS NO_OF	_BATSMANS
TAL_MATCHES								
ID1221 6	5	1 MEN IN BLUE	INDIA		1		6	
IS7895 6	5	4 KANGAROO	AUSTRAILA	3	3			6
.5412 6	5	3 PROTEA	SOUTH AFRICA	3	2	1	8	5
:5687	5	2 BLACK CAPS	NEW ZEALAND	4	2		6	
	* from player;	TEAM_ID	NO_OF_WORLDCUPS BATT	ING_AVERAGE NO_OF	_SIXES NO_O	F_FOURS NO_OF_	TOTALRUNS NO_	OF_T20
AYER_ID		TEAM_ID 			_SIXES NO_O	F_FOURS NO_OF_	TOTALRUNS NO_	0F_T20
AYER_ID			ECONOMY PLAY		_SIXES NO_O 	F_FOURS NO_OF_ 	TOTALRUNS NO_	OF_T20 56
AYER_ID O_OF_ODI NO R75401	D_OF_TEST_NO_OF_	WICKETS TYPE_OF_BOWLER IND1221	ECONOMY PLAY	ER_NAME 				
AYER_ID 	D_OF_TEST_NO_OF_	WICKETS TYPE_OF_BOWLER IND1221 7 fast IND1221	ECONOMY PLAY 3 17 Jass	ER_NAME 	1	1	23	56
AYER_ID D_OF_ODI NO 23 R17410 120 R74203	5 20	WICKETS TYPE_OF_BOWLER IND1221 7 fast IND1221 1 medium AUS7895	ECONOMY PLAY 3 17 Jass 2 3 MS E 9 BRET	ER_NAME 	1 7	1 24	23 800	56 74