PROJECT REPORT ON CRICKER MANAGEMENT SYSTEM

LOVELY PROFESSIONAL UNIVERSITY

SUBMITTED BY:-

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TOPIC:

CRICKET WORLD CUP

REVIEW : 1

Project Name : Cricket World Cup

Introduction :

Our DBMS project is based on Cricket World Cup management. It provides various information about the various teams participating in the World Cup, 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 World Cup 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 World Cup 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.

Relationships:

Cricket player plays in team (N-1)

A cricket player can play in only one team but a team can have many players in it but a team must have players in it. So, the relationship becomes (N-1).

Coach manages team(1-N)

Coach can manage a single team, but each team can have many coaches (like batting coach, fielding coach, bowling coach). But it is compulsory for a team to have a coach. So, the relationship is 1-N

Team plays match(M-N)

Team can play many matches and a match can be played by two teams. So, the relationship is M-N.

Matches are umpired by Umpire(M-N)

An umpire can umpire in many matches and a match can have two umpires. So, the relationship is M-N.

Team headed by a Captain (1-1)

A team has 1 captain and a captain is from single team only. So the relationship is 1-1.

Functional Requirements:

1) VIEWER

System must allow users to login if they enter the correct login id and password. The users must be able to see the player details of each player in the database. Scores of each match must be visible. Match date and venue should be displayed on the login if the users seek for it.

System should display the complete roster of a team including the captain and the players playing in the top 11 and the current rank of the team. The details of the coach must also be available to the users. Referees and their details are also important as the players and the viewers want to see the best referees managing their team's match. Each player's statistics should also be available like total runs , number of matches played etc.

System should display data on each match which has been scored in the duration of the entire tournament. System should allow fixtures to be searched and the date should also be available.

BASIC ANALOGY:

- View the website with a browser.
- Login to the website.
- View all teams.
- View all players of a team.
- View all batsmen in the tournament.
- View all bowlers in the tournament.
- View all match reports in a season.
- View statistics of a player (all time).
- View coach details.
- View umpire details.
- View Match details.
- View ranking of each team

View Player information per match:

a) Number of matches
b) Total runs
c) Total wickets

View all match details:

i. Team 1
ii. Team 2
iii. Umpire
iv. Winner
v. Date
vi. Time
vii. Stadium
viii. Rank of teams after match

2) ADMINISTRATOR

Administrator is in charge of creating the website which is used to access the database. Administrator has all the privileges of the user but has the authority to add and remove data from the database which the user cannot do.

Administrator is responsible for creating different user accounts and assigning the id and password. Administrators are the one who generate the fixtures and update them in the database. They should be allowed to enter the team name of home and away teams. He should have the authority to enter and modify the match details like time and venue in case the need to be changed.

If any player has been punished for bad behaviour or other reasons and cannot play in the World Cup anymore the administrator should be able to delete the data from the database. The rank of every team must keep being modified after each match. After a team is eliminated or disqualified the administrator should be able to delete the entire team's record.

BASIC ANALOGY:

- Create website.
- Generate login ID for viewer.
- Design website.
- Display different menus.
- Create World Cup.
- Display Team Name.
- Display Team Captain.
- Display Team Squad.

View Player information per match:

a) Number of matches
b) Total runs
c) Total wickets

REMOVAL OF OLD DATA:

i. If any team gets disqualified, then their data needs to be removed from the database.
ii. If a player gets injured during the World Cup and is unable to play further, then their data needs to be removed from the database.
iii. If any match gets cancelled due to unforeseen circumstances, then the particular match details should be removed.

MODIFICATION OF DATA:

i. After every match the existing ranks of every team should be modified.
ii. After every match, the statistics of every player should be updated.
iii. Due to unfavourable weather conditions, a match might get delayed. Hence, the match timings need to be changed.

RETRIEVAL OF DATA:

i) View information of every Team:

Before the start of a new match, we have to retrieve the Team record like:

a) Team Name
b) Number of Batsman
c) Number of Bowlers
d) Wicketkeeper
e) Number of Wins
f) Number of Losses
g) Names of Players

ii) View information of every Match:

After every match, we have to retrieve the Match details like:

a) First Team Name
b) Second Team Name
c) Umpire
d) Winner
e) Loser

iii) View Score Board:

After every match, we have to retrieve the ranking order of teams :

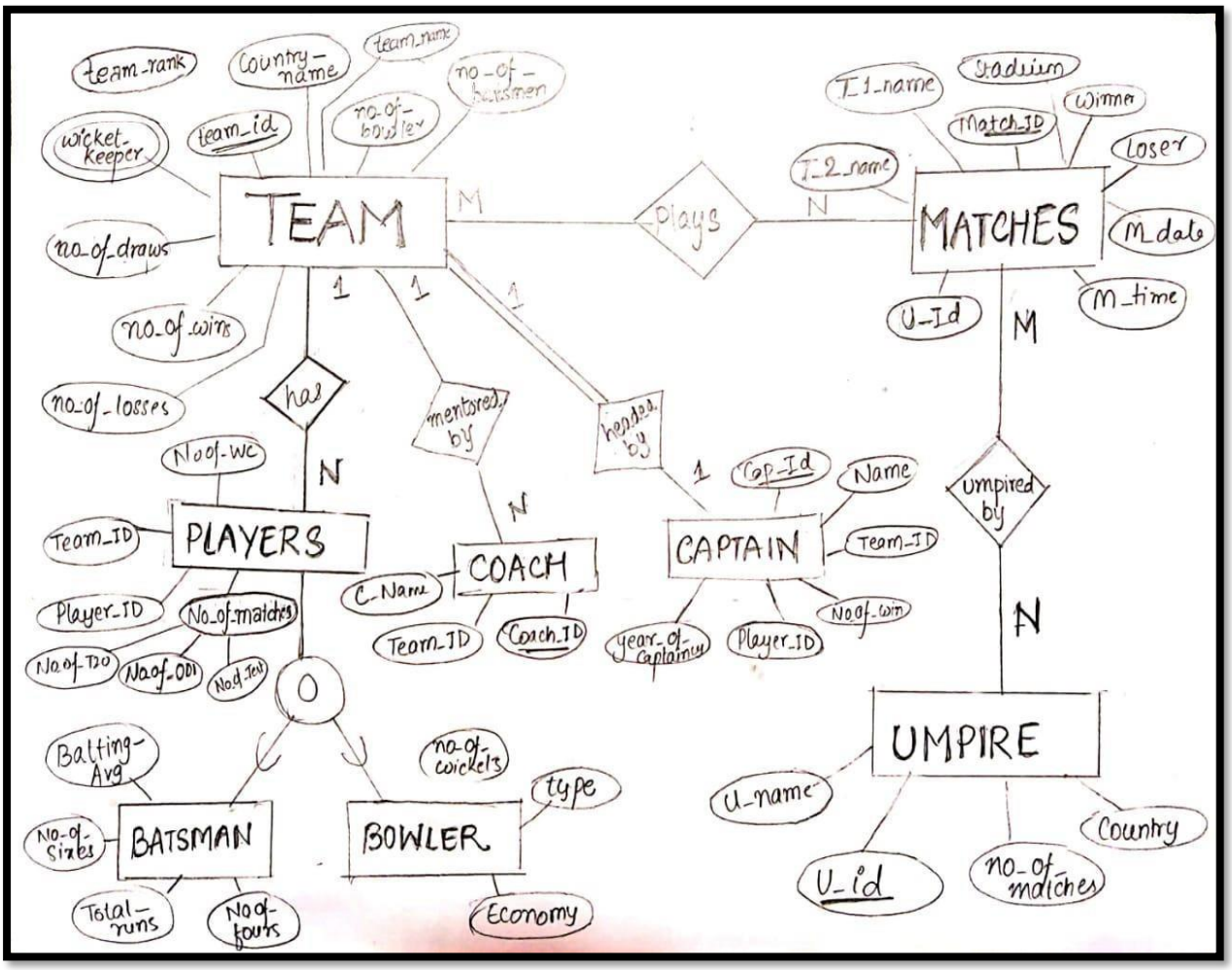
a) Rank of each team
b) Team name

iv) View the captain of each team:

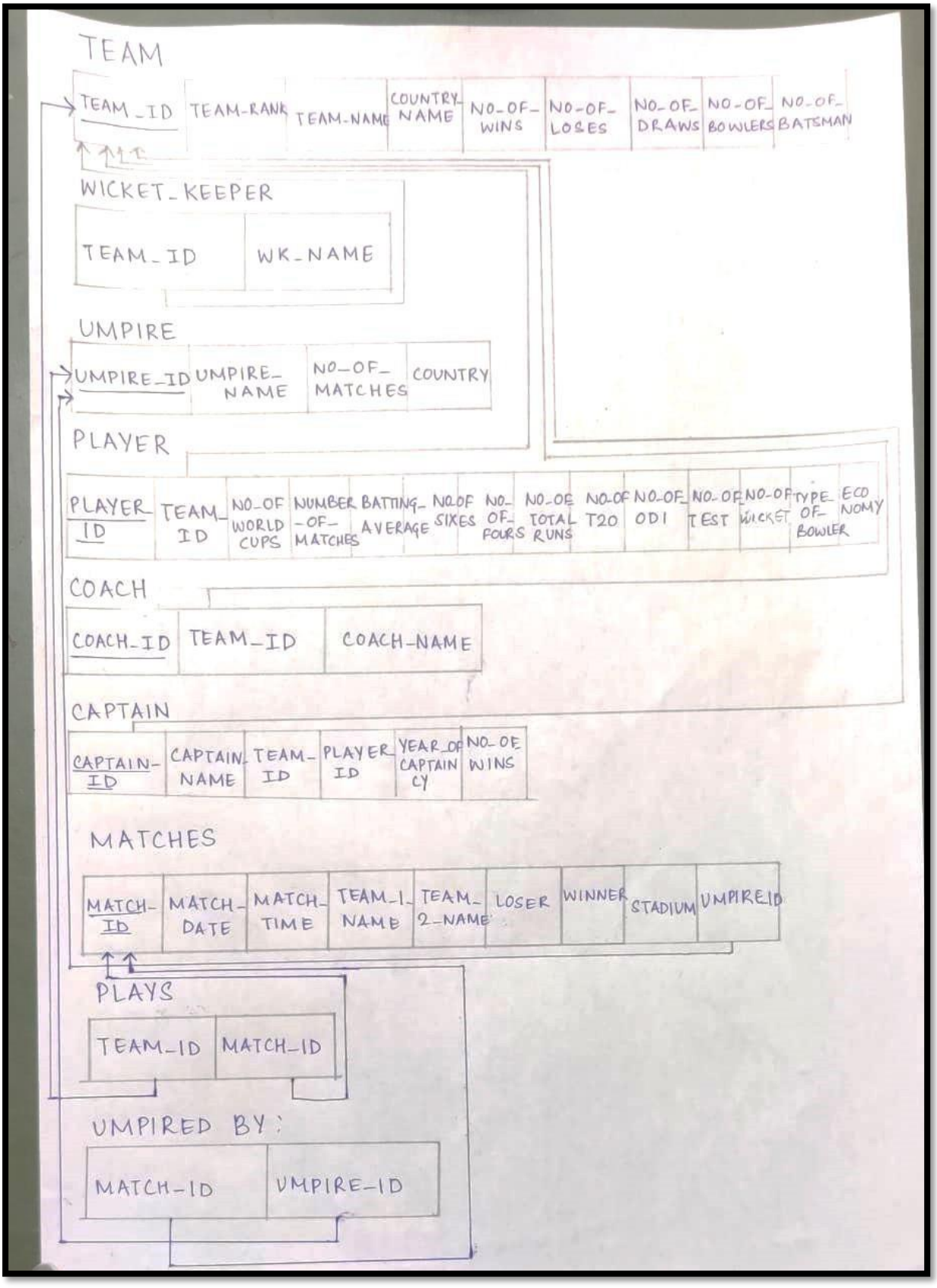
During the toss, we need to retrieve the data of the captain

a) Name of captain
b) Number of wins under his captaincy
c) Years of captaincy

ER MODEL along with key constraints, participation constraints and cardinality constraints:



QUESTION 4 :


TEAM
TEAM_ID
TEAM-RANK
TEAM-NAME
COUNTRY_NAME
NO-OF-WINS
NO-OF-LOSES
NO-OF-DRAWS
NO-OF-BOWLERS
NO-OF-BATSMAN
WICKET_KEEPER
TEAM_ID
WK_NAME
UMPIRE
UMPIRE_ID
UMPIRE_NAME
NO_OF_MATCHES
COUNTRY
PLAYER
PLAYER_ID
TEAM_ID
NO-OF WORLD CUPS
NUMBER-OF-MATCHES
BATTING_AVERAGE
NO.OF SIXES
NO-OF-FOURS
NO-OF TOTAL RUNS
NO-OF T20
NO-OF-ODI
NO-OF-TEST
NO-OF-WICKET
TYPE-OF-BOWLER
ECONOMY
COACH
COACH_ID
TEAM_ID
COACH-NAME
CAPTAIN
CAPTAIN-ID
CAPTAIN-NAME
TEAM-ID
PLAYER ID
YEAR_OF CAPTAINCY
NO_OF WINS
MATCHES
MATCH-ID
MATCH-DATE
MATCH-TIME
TEAM_1-NAME
TEAM-2-NAME
LOSER
WINNER
STADIUM
UMPIRE ID
PLAYS
TEAM_ID
MATCH_ID
UMPIRED BY:
MATCH-ID
UMPIRE-ID

QUESTION 5:

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:

```
SQL> create table TEAM(
  2       team_id varchar(30) primary key,
  3       team_rank number(3),
  4       team_name varchar(20) not null,
  5       country_name varchar(20),
  6       no_of_wins number(3),
  7       no_of_loses number(3),
  8       no_of_draws number(3),
  9       no_of_bowlers number(2),
 10       no_of_batsmans number(2)
 11  );

Table created.
```

```
SQL> desc TEAM;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------
 TEAM_ID                                   NOT NULL VARCHAR2(30)
 TEAM_RANK                                          NUMBER(3)
 TEAM_NAME                                 NOT NULL VARCHAR2(20)
 COUNTRY_NAME                                       VARCHAR2(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)
```

TABLE WICKET_KEEPER:

```
SQL> create table WICKET_KEEPER(
  2      team_id references TEAM,
  3      wk_name varchar(30)
  4  );

Table created.
```

```
SQL> desc WICKET_KEEPER;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 TEAM_ID                                            VARCHAR2(30)
 WK_NAME                                            VARCHAR2(30)
```

TABLE UMPIRE:

```
SQL> create table UMPIRE(
  2      umpire_id varchar(30) primary key,
  3      umpire_name varchar(30),
  4      no_of_matches number(4),
  5      country varchar(20)
  6  );

Table created.
```

```
SQL> desc UMPIRE;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 UMPIRE_ID                                 NOT NULL VARCHAR2(30)
 UMPIRE_NAME                                        VARCHAR2(30)
 NO_OF_MATCHES                                      NUMBER(4)
 COUNTRY                                            VARCHAR2(20)
```

TABLE PLAYER:

```
SQL> create table PLAYER(
  2       player_id varchar(30) primary key,
  3       team_id references TEAM,
  4       no_of_worldcups number(2),
  5       number_of_matches number(3),
  6       batting_average number(3),
  7       no_of_sixes number(3),
  8       no_of_fours number(3),
  9       no_of_totalruns number(4),
 10       no_of_t20 number(3),
 11       no_of_odi number(3),
 12       no_of_test number(3),
 13       no_of_wickets number(2),
 14       type_of_bowler varchar(30),
 15       economy number(3)
 16  );

Table created.
```

```
SQL> desc PLAYER;
 Name                                                                                  Null?    Type
 ------------------------------------------------------------------------------------- -------- ------------------------------------
 PLAYER_ID                                                                             NOT NULL VARCHAR2(30)
 TEAM_ID                                                                                        VARCHAR2(30)
 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                                                                                 VARCHAR2(30)
 ECONOMY                                                                                        NUMBER(3)
```

TABLE COACH:

```
SQL> create table COACH(
  2       coach_id varchar(30) primary key,
  3       team_id references TEAM,
  4       coach_name varchar(30)
  5  );

Table created.
```

```
SQL> desc COACH;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 COACH_ID                                  NOT NULL VARCHAR2(30)
 TEAM_ID                                            VARCHAR2(30)
 COACH_NAME                                         VARCHAR2(30)
```

TABLE CAPTAIN:

```
SQL> create table CAPTAIN(
  2       captain_id varchar(30) primary key,
  3       captain_name varchar(30),
  4       team_id references TEAM,
  5       player_id varchar(30),
  6       year_of_captaincy number(2),
  7       no_of_wins number(4)
  8  );

Table created.
```

```
SQL> desc CAPTAIN;
 Name                                                                    Null?    Type
 ----------------------------------------------------------------------- -------- ----------------------------
 CAPTAIN_ID                                                              NOT NULL VARCHAR2(30)
 CAPTAIN_NAME                                                                     VARCHAR2(30)
 TEAM_ID                                                                          VARCHAR2(30)
 PLAYER_ID                                                                        VARCHAR2(30)
 YEAR_OF_CAPTAINCY                                                                NUMBER(2)
 NO_OF_WINS                                                                       NUMBER(4)
```

TABLE MATCHES:

```
SQL> create table MATCHES(
  2      match_id varchar(20) primary key,
  3      match_date date,
  4      match_time timestamp(0),
  5      team_1_name varchar(30),
  6      team_2_name varchar(30),
  7      loser varchar(30),
  8      winner varchar(30),
  9      stadium varchar(30),
 10      umpire_id references umpire
 11  );

Table created.
```

```
SQL> desc MATCHES;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 MATCH_ID                                  NOT NULL VARCHAR2(20)
 MATCH_DATE                                         DATE
 MATCH_TIME                                         TIMESTAMP(0)
 TEAM_1_NAME                                        VARCHAR2(30)
 TEAM_2_NAME                                        VARCHAR2(30)
 LOSER                                              VARCHAR2(30)
 WINNER                                             VARCHAR2(30)
 STADIUM                                            VARCHAR2(30)
 UMPIRE_ID                                          VARCHAR2(30)
```

TABLE PLAYS:

```
SQL> create table PLAYS(
  2      team_id references TEAM,
  3      match_id references MATCHES
  4  );

Table created.
```

```
SQL> desc PLAYS;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 TEAM_ID                                            VARCHAR2(30)
 MATCH_ID                                           VARCHAR2(20)
```

TABLE UMPIRED_BY:

```
SQL> create table UMPIRED_BY(
  2       match_id references MATCHES,
  3       umpire_id references UMPIRE
  4  );

Table created.
```

```
SQL> desc UMPIRED_BY;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 MATCH_ID                                           VARCHAR2(20)
 UMPIRE_ID                                          VARCHAR2(30)
```

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
);
```

```
SQL> select * from  team;

TEAM_ID                        TEAM_RANK TEAM_NAME          COUNTRY_NAME        NO_OF_WINS NO_OF_LOSES NO_OF_DRAWS NO_OF_BOWLERS NO_OF_BATSMANS
------------------------------ ---------- ------------------- -------------------- ---------- ----------- ----------- ------------- --------------
IND1221                                 1 MEN IN BLUE         INDIA                         5           1           0             6              7
AUS2174                                 4 KANGAROO            AUSTRAILA                     3           3           0             5              6
SA5412                                  3 PROTEA              SOUTH AFRICA                  3           2           1             8              5
NZ5687                                  2 BLACK CAPS          NEW ZEALAND                   4           2           0             6              7
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'
);
```

```
SQL> select * from UMPIRE;

UMPIRE_ID                 UMPIRE_NAME                NO_OF_MATCHES COUNTRY
------------------------- -------------------------- ------------- --------------------
UMP41002                  Kumar Dharmasena                     103 Sri Lanka
UMP74101                  Aleem Dar                            207 Pakistan
Ump52410                  Anil Chaudhary                        19 India
UMP85201                  Ian Gould                            140 England
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'
);
```

```
SQL> select * from COACH;

COACH_ID                       TEAM_ID                        COACH_NAME
------------------------------ ------------------------------ ------------------------------
CH417                          IND1221                        RAVI SHASTRI
CH140                          AUS2174                        JUSTIN LANGER
CH223                          SA5412                         OTTIS GIBSON
CH398                          NZ5687                         GARY STEAD
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
);
```

```
SQL> select * from captain;

CAPTAIN_ID                     CAPTAIN_NAME                   TEAM_ID                        PLAYER_ID                      YEAR_OF_CAPTAINCY
============================== ============================== ============================== ============================== =================
NO_OF_WINS
==========
CAP11452                       MS DHONI                       IND1221                        PLR44567                                       4
        56

CAP21478                       DALE STEYN                     SA5412                         PLR10235                                       7
        74

CAP30214                       MICHAEL CLARKE                 AUS2174                        PLR74138                                       9
       100

CAP14789                       TAMIM IQBAL                    BAN9852                        PLR89562                                       2
        20

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'

);
```

```
SQL> select * from MATCHES;

MATCH_ID            MATCH_DAT MATCH_TIME                                                                TEAM_1_NAME
=================== ========= ========================================================================= ============================
TEAM_2_NAME                   LOSER                     WINNER                    STADIUM                   UMPIRE_ID
============================= ========================= ========================= ========================= ==========
MAT101              12-MAR-11 01-OCT-19 03.30.00 PM                                                     India
Bangladesh                    Bangladesh                India                     Feroz Shah Kotla          UMP55200

MAT301              21-MAR-11 01-OCT-19 11.30.00 AM                                                     Sri Lanka
Bangladesh                    Bangladesh                Sri Lanka                 M.A. Chidambaram          UMP74101

MAT401              23-MAR-11 01-OCT-19 03.30.00 PM                                                     New Zealand
South Africa                  South Africa              New Zealand               Sardar Patel              UMP85201

MAT501              26-MAR-11 01-OCT-19 08.30.00 AM                                                     England
India                         England                   India                     Wankhede                  Ump52410

MAT201              15-MAR-11 01-OCT-19 09.30.00 AM                                                     England
Australia                     England                   Australia                 Eden Gardens              UMP41002
```

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
);
```

```
SQL> select * from PLAYER;

PLAYER_ID                    TEAM_ID                     NO_OF_WORLDCUPS NUMBER_OF_MATCHES BATTING_AVERAGE NO_OF_SIXES NO_OF_FOURS
============================ ========================== =============== ================= ================ =========== ===========
NO_OF_TOTALRUNS  NO_OF_T20  NO_OF_ODI NO_OF_TEST NO_OF_WICKETS TYPE_OF_BOWLER                 ECONOMY
=============== ========== ========== ========== ============= ============================== ==========
PLR17410                     IND1221                                    2                13              58           7          24
          800         74         120         20             1 medium                                    3

PLR74203                     AUS2174                                    1                 6              67          10          39
          463         41         210        140             1 slow                                      9

PLR45987                     SA5412                                     3                 4              99           4          47
          985         24          63         65             1 medium-slow                              11

PLR20147                     NZ5687                                     1                12              12           1           3
           85         52          10         74             1 legspin                                  18

PLR65200                     BAN9852                                    2                 9               4           0           1
           21         77          30          2             1 fast                                     17
```

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'
);
```

```
SQL> select * from Umpired_by;

MATCH_ID             UMPIRE_ID
==================== ===============
MAT501               UMP55200
MAT301               Ump52410
MAT101               UMP41002
MAT401               UMP74101
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'
);
```

```
SQL> select * from Plays;

TEAM_ID                        MATCH_ID
============================== ====================
IND1221                        MAT101
AUS2174                        MAT201
BAN9852                        MAT301
NZ5687                         MAT401
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'
);
```

```
SQL> select * from WICKET_KEEPER;

TEAM_ID                        WK_NAME
============================== ==============================
IND1221                        MS Dhoni
IND1221                        Dinesh Kartik
AUS2174                        Tim Lee
AUS2174                        Peter Hegward
AUS2174                        Hefer Kingsly
```

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;
```

```
SQL> alter table team add  total_matches  number(5);

Table altered.

SQL> update team set total_matches=no_of_draws + no_of_wins + no_of_loses;

5 rows updated.

SQL> set lines 180
SQL> set pagesize 500
SQL>
SQL> desc team;
 Name                                                                                                  Null?    Type
 ----------------------------------------------------------------------------------------------------- -------- ------------------------------------------------------------------------------------
--------
 TEAM_ID                                                                                               NOT NULL VARCHAR2(30)
 TEAM_RANK                                                                                                      NUMBER(3)
 TEAM_NAME                                                                                             NOT NULL VARCHAR2(20)
 COUNTRY_NAME                                                                                                   VARCHAR2(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)
 TOTAL_MATCHES                                                                                                  NUMBER(5)

SQL> select * from team;

TEAM_ID                        TEAM_RANK TEAM_NAME            COUNTRY_NAME         NO_OF_WINS NO_OF_LOSES NO_OF_DRAWS NO_OF_BOWLERS NO_OF_BATSMANS TOTAL_MATCHES
------------------------------ ---------- -------------------- -------------------- ---------- ---------- ---------- -------------- -------------- -------------
IND1221                                 1 MEN IN BLUE          INDIA                         5          1          0              6              7             6
AUS2174                                 4 KANGAROO             AUSTRAILA                     3          3          0              5              6             6
SA5412                                  3 PROTEA               SOUTH AFRICA                  3          2          1              8              5             6
NZ5687                                  2 BLACK CAPS           NEW ZEALAND                   4          2          0              6              7             6
BAN9852                                 5 TIGERS               BANGLADESH                    2          4          0              7              7             6

SQL>
```

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';
```

OUTPUT:

SQL Plus

```
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.
```

SQL Plus

```
0
         2            1 fast                                17 Shakib Al Hassan


SQL>
SQL> set lines 150
SQL> select * from player
  2  ;

PLAYER_ID                      TEAM_ID                       NO_OF_WORLDCUPS NUMBER_OF_MATCHES BATTING_AVERAGE NO_OF_SIXES NO_OF_FOURS
------------------------------ ------------------------------ --------------- ----------------- --------------- ------------ ------------
NO_OF_TOTALRUNS  NO_OF_T20  NO_OF_ODI NO_OF_TEST NO_OF_WICKETS TYPE_OF_BOWLER                   ECONOMY PLAYER_NAME
--------------- ----------- ---------- ---------- ------------- ------------------------------ ---------- --------------------
PLR17410                       IND1221                                       2                13             58            7           24
            800          74         120         20             1 medium                                3 MS Dhoni

PLR74203                       AUS2174                                       1                 6             67           10           39
            463          41         210        140             1 slow                                  9 BRETT LEE

PLR45987                       SA5412                                        3                 4             99            4           47
            985          24          63         65             1 medium-slow                          11 DAVID MILLER

PLR20147                       NZ5687                                        1                12             12            1            3
             85          52          10         74             1 legspin                              18 Kane Williamson

PLR65200                       BAN9852                                       2                 9              4            0            1
             21          77          30          2             1 fast                                 17 Shakib Al Hassan
```

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';
```

OUTPUT:

```
SQL> select umpire_name from umpire minus select umpire_name from umpire
  2  where umpire_id in(select umpire_id from matches where stadium='Eden
  3  Gardens');

UMPIRE_NAME
------------------------------
Aleem Dar
Anil Chaudhary
Ian Gould
Tony Hill

SQL> select umpire_name from umpire minus select umpire_name from umpire
  2  where umpire_id in(select umpire_id from matches where stadium='Wankhede');

UMPIRE_NAME
------------------------------
Aleem Dar
Ian Gould
Kumar Dharmasena
Tony Hill

SQL>
```

```
SQL>
SQL> select umpire_name from umpire natural join matches where stadium='Wankhede';

UMPIRE_NAME
------------------------------
Anil Chaudhary

SQL>
SQL> select umpire_name from umpire minus select umpire_name from umpire natural join matches where stadium='Wankhede';

UMPIRE_NAME
------------------------------
Aleem Dar
Ian Gould
Kumar Dharmasena
Tony Hill

SQL>
```

2. (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:

```
SQL>
SQL>
SQL> select country_name from team where team_id in(select team_id from player
  2   where batting_average >60);

COUNTRY_NAME
--------------------
AUSTRAILA
SOUTH AFRICA

SQL>
SQL> select country_name from team natural join player where batting_average>60;

COUNTRY_NAME
--------------------
AUSTRAILA
SOUTH AFRICA

SQL>
SQL> select country_name from team minus select country_name from team where team_id in(select team_id from player
  2   where batting_average >60);

COUNTRY_NAME
--------------------
BANGLADESH
INDIA
NEW ZEALAND

SQL>
```

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 wh
ere 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> 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
JUSTIN LANGER
RUSSEL DOMINGO

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:

```
SQL> update captain set captain_name ='MS Dhoni'where Captain_id='CAP11452';

1 row updated.

SQL> select * from captain;

CAPTAIN_ID                     CAPTAIN_NAME                   TEAM_ID                        PLAYER_ID                      YEAR_OF_CAPTAINCY
------------------------------ ------------------------------ ------------------------------ ------------------------------ -----------------
NO_OF_WINS
----------
CAP11452                       MS Dhoni                       IND1221                        PLR44567                                       4
        56

CAP21478                       DALE STEYN                     SA5412                         PLR10235                                       7
        74

CAP30214                       MICHAEL CLARKE                 AUS2174                        PLR74138                                       9
       100

CAP14789                       TAMIM IQBAL                    BAN9852                        PLR89562                                       2
        20

CAP36957                       ROSS TAYLOR                    NZ5687                         PLR957417                                      5
        85


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

WK_NAME
------------------------------
MS Dhoni

SQL>
```

```
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);
```

OUTPUT:

```
SQL>  select player_id,player_name from player where type_of_bowler in(select type_of_bowler from player group by type_of_bowler having count(*)>1);

PLAYER_ID                      PLAYER_NAME
------------------------------ --------------------
PLR75401                       Jasprit Bumrah
PLR65200                       Shakib Al Hassan

SQL>  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);

PLAYER_ID                      UPPER(PLAYER_NAME)
------------------------------ --------------------
PLR75401                       JASPRIT BUMRAH
PLR65200                       SHAKIB AL HASSAN

SQL>
```

DELETE:

1. Deleting the column number_of_matches.

CODE:

```sql
alter table player drop column no_of_matches;

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

OUTPUT:

```
Select SQL Plus
SQL> select * from player;

PLAYER_ID                      TEAM_ID                        NO_OF_WORLDCUPS NUMBER_OF_MATCHES BATTING_AVERAGE NO_OF_SIXES NO_OF_FOURS
------------------------------ ------------------------------ --------------- ----------------- ---------------- ------------ ------------
NO_OF_TOTALRUNS  NO_OF_T20  NO_OF_ODI NO_OF_TEST NO_OF_WICKETS TYPE_OF_BOWLER                ECONOMY PLAYER_NAME
--------------- ---------- --------- ----------- ------------- ------------------------------ ---------- --------------------
PLR75401                       IND1221                        3                11               8            1            1
            23         56        23           5             7 fast                          17 Jasprit Bumrah

PLR17410                       IND1221                        2                13              58            7           24
           800         74       120          20             1 medium                         3 MS Dhoni

PLR74203                       AUS2174                        1                 6              67           10           39
           463         41       210         140             1 slow                           9 BRETT LEE

PLR45987                       SA5412                         3                 4              99            4           47
           985         24        63          65             1 medium-slow                   11 DAVID MILLER

PLR20147                       NZ5687                         1                12              12            1            3
            85         52        10          74             1 legspin                       18 Kane Williamson

PLR65200                       BAN9852                        2                 9               4            0            1
            21         77        30           2             1 fast                          17 Shakib Al Hassan

6 rows selected.

SQL> alter table player drop column number_of_matches;

Table altered.

SQL> desc player;
 Name                                                                                  Null?    Type
 ------------------------------------------------------------------------------------ -------- ----------------------------
 PLAYER_ID                                                                             NOT NULL VARCHAR2(30)
 TEAM_ID                                                                                        VARCHAR2(30)
 NO_OF_WORLDCUPS                                                                                NUMBER(2)
 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                                                                                 VARCHAR2(30)
 ECONOMY                                                                                        NUMBER(3)
 PLAYER_NAME                                                                                    VARCHAR2(20)

SQL>
```

```
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
------------------------------ ------------------------------ ------------------------------
CH596                          IND1221                        GARY KISTERN
CH417                          IND1221                        RAVI SHASTRI
CH140                          AUS2174                        JUSTIN LANGER
CH223                          SA5412                         OTTIS GIBSON
CH398                          NZ5687                         GARY STEAD
CH748                          BAN9852                        RUSSEL DOMINGO

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                          IND1221                        RAVI SHASTRI
CH140                          AUS2174                        JUSTIN LANGER
CH223                          SA5412                         OTTIS GIBSON
CH398                          NZ5687                         GARY STEAD
CH748                          BAN9852                        RUSSEL DOMINGO

SQL>
```

DELETION WITH EMBEDDED SELECT

```
delete from player where team_id in(select team_id from team where countr
y_name='Australia');
```

```
SQL Plus
SQL> set lines 150
SQL> set pagesize 500
SQL> select * from team;

TEAM_ID                        TEAM_RANK TEAM_NAME           COUNTRY_NAME         NO_OF_WINS NO_OF_LOSES NO_OF_DRAWS NO_OF_BOWLERS NO_OF_BATSMANS
------------------------------ --------- ------------------- -------------------- ---------- ---------- ----------- -------------- --------------
TOTAL_MATCHES
-------------
IND1221                                1 MEN IN BLUE         INDIA                         5          1           0
             6             6             7
             6

AUS2174                                4 KANGAROO            AUSTRAILA                     3          3           0
             5             6
             6

SA5412                                 3 PROTEA              SOUTH AFRICA                  3          2           1
             8             5
             6

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


SQL>     delete from player where team_id in(select team_id from team where country_name='SOUTH AFRICA');

1 row deleted.

SQL> select * from player;

PLAYER_ID                      TEAM_ID                      NO_OF_WORLDCUPS BATTING_AVERAGE NO_OF_SIXES NO_OF_FOURS NO_OF_TOTALRUNS  NO_OF_T20
------------------------------ ---------------------------- --------------- ------------- ----------- ---------- --------------- ----------
 NO_OF_ODI NO_OF_TEST NO_OF_WICKETS TYPE_OF_BOWLER                  ECONOMY PLAYER_NAME
---------- ---------- ------------- ------------------------------ ---------- --------------------
PLR75401                       IND1221                                      3             8          1          1
             23            56
        23          5             7 fast                                  17 Jasprit Bumrah

PLR17410                       IND1221                                      2            58          7         24
            800            74
       120         20             1 medium                                 3 MS Dhoni

PLR74203                       AUS2174                                      1            67         10         39
            463            41
       210        140             1 slow                                   9 BRETT LEE

PLR20147                       NZ5687                                       1            12          1          3
             85            52
        10         74             1 legspin                               18 Kane Williamson

SQL>
```

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.

```
SQL>
SQL> set serveroutput on
SQL> declare
  2  cursor details is
  3  select * from player;
  4  det details%rowtype;
  5  team_id varchar(30);
  6  begin
  7   open details;
  8   loop
  9   fetch details into det;
 10   exit when details%notfound;
 11   team_id:='&team_id';
 12   if(det.team_id=team_id) then
 13   dbms_output.put_line(' Player Name:'||det.player_name);
 14   dbms_output.put_line(' No of total runs:'||det.no_of_totalruns);
 15   dbms_output.put_line(' Batting Average'||det.batting_average);
 16   dbms_output.put_line(' Economy'||det.economy);
 17   else
 18   dbms_output.put_line('Team id did not match');
 19   end if;
 20  end loop;
 21  end;
 22  /
Enter value for team_id: IND1221
old  11:  team_id:='&team_id';
new  11:  team_id:='IND1221';
Player Name:Jasprit Bumrah
No of total runs:23
Batting Average8
Economy17
Player Name:MS Dhoni
No of total runs:800
Batting Average58
Economy3
Team id did not match
Team id did not match
Team id did not match
Team id did not match

PL/SQL procedure successfully completed.

SQL>
```

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>
SQL> set serveroutput on;
SQL> declare
  2  p matches.match_id%type;
  3  tf matches.stadium%type;
  4  function get_stdname(matchid out matches.match_id%type, std out
  5  matches.stadium%type) return varchar is
  6  begin
  7  select stadium into std from matches where match_id='&matchid';
  8  return std;
  9  end;
 10  begin
 11  dbms_output.put_line('Stadium:'||get_stdname(p,tf));
 12  end;
 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
  2  p matches.match_id%type;
  3  tf matches.stadium%type;
  4  function get_stdname(matchid out matches.match_id%type, std out
  5  matches.stadium%type) return varchar is
  6  begin
  7  select stadium into std from matches where match_id='&matchid';
  8  return std;
  9  end;
 10  begin
 11  dbms_output.put_line('Stadium: '||get_stdname(p,tf));
 12  end;
 13  /
Enter value for matchid: MAT501
old   7: select stadium into std from matches where match_id='&matchid';
new   7: select stadium into std from matches where match_id='MAT501';
Stadium: Wankhede

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
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

(NEXT PAGE)

```
SQL>
SQL>
SQL> create table elimination
  2  (
  3  teamid  varchar(10) primary key,
  4  cntry_name varchar(15),
  5  rankk number(2),
  6  teamName varchar(15),
  7  noLoses number(2)
  8  );

Table created.

SQL> set serveroutput on
SQL> create or replace trigger trig2
  2  after delete on team
  3  referencing new as new old as old
  4  for each row
  5  begin
  6  insert into elimination values (:OLD.team_id ,:OLD.country_name
  7  ,:OLD.team_rank ,:OLD.team_name,:OLD.no_of_loses);
  8  END;
  9  /

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

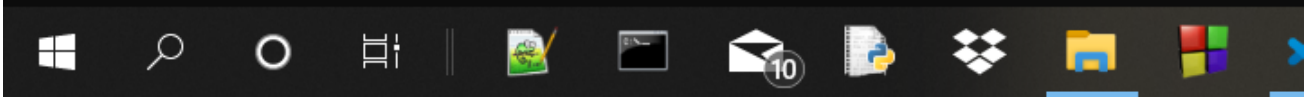
CODE:

```
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;
```

OUTPUT

```
SQL> select * from player;

PLAYER_ID                      TEAM_ID                        NO_OF_WORLDCUPS NUMBER_OF_MATCHES BATTING_AVERAGE NO_OF_SIXES NO_OF_FOURS
------------------------------ ------------------------------ --------------- ----------------- --------------- ------------ -----------
NO_OF_TOTALRUNS  NO_OF_T20  NO_OF_ODI NO_OF_TEST NO_OF_WICKETS TYPE_OF_BOWLER                   ECONOMY PLAYER_NAME
--------------- ---------- --------- ---------- ------------- ------------------------------ ---------- --------------------
PLR75401                       IND1221                                        3                11                8            1           1
           23         56        23          5             7 fast                                       17 Jasprit Bumrah

PLR17410                       IND1221                                        2                13               58            7          24
          800         74       120         20             1 medium                                      3 MS Dhoni

PLR74203                       AUS2174                                        1                 6               67           10          39
          463         41       210        140             1 slow                                        9 BRETT LEE

PLR45987                       SA5412                                         3                 4               99            4          47
          985         24        63         65             1 medium-slow                                11 DAVID MILLER

PLR20147                       NZ5687                                         1                12               12            1           3
           85         52        10         74             1 legspin                                    18 Kane Williamson

PLR65200                       BAN9852                                        2                 9                4            0           1
           21         77        30          2             1 fast                                       17 Shakib Al Hassan

6 rows selected.
```

```
SQL>
SQL>      Create or replace trigger reference1
  2       after update on team
  3       for each row
  4       begin
  5       update player set team_id=:new.team_id where
  6       team_id=:old.team_id;
  7       update coach set team_id=:new.team_id
  8       where team_id=:old.team_id;
  9       update captain set team_id=:new.team_id where
 10       team_id=:old.team_id;
 11       update plays set team_id=:new.team_id where
 12       team_id=:old.team_id;
 13       update wicket_keeper set team_id=:new.team_id where
 14       team_id=:old.team_id;
 15       end;
 16       /

Trigger created.

SQL>
SQL>
```



```
SQL>
SQL>     update team set team_id= 'AUS7895' where team_id='AUS2174';

1 row updated.

SQL> select * from team;

TEAM_ID                        TEAM_RANK TEAM_NAME           COUNTRY_NAME         NO_OF_WINS NO_OF_LOSES NO_OF_DRAWS NO_OF_BOWLERS NO_OF_BATSMANS
------------------------------ ---------- -------------------- -------------------- ---------- ---------- ---------- -------------- --------------
TOTAL_MATCHES
-------------
IND1221                                 1 MEN IN BLUE          INDIA                         5          1          0              6              7
            6

AUS7895                                 4 KANGAROO             AUSTRAILA                     3          3          0              5              6
            6

SA5412                                  3 PROTEA               SOUTH AFRICA                  3          2          1              8              5
            6

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


SQL> select * from player;

PLAYER_ID                      TEAM_ID                        NO_OF_WORLDCUPS BATTING_AVERAGE NO_OF_SIXES NO_OF_FOURS NO_OF_TOTALRUNS  NO_OF_T20
------------------------------ ------------------------------ --------------- --------------- ------------ ------------ --------------- ----------
 NO_OF_ODI NO_OF_TEST NO_OF_WICKETS TYPE_OF_BOWLER                    ECONOMY PLAYER_NAME
---------- ---------- ------------- ------------------------------ ---------- --------------------
PLR75401                       IND1221                                 3               8            1            1              23         56
        23          5             7 fast                                   17 Jasprit Bumrah

PLR17410                       IND1221                                 2              58            7           24             800         74
       120         20             1 medium                                  3 MS Dhoni

PLR74203                       AUS7895                                 1              67           10           39             463         41
       210        140             1 slow                                    9 BRETT LEE

PLR45987                       SA5412                                  3              99            4           47             985         24
        63         65             1 medium-slow                            11 DAVID MILLER

PLR20147                       NZ5687                                  1              12            1            3              85         52
        10         74             1 legspin                                18 Kane Williamson


SQL>
```