VIT®

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

A project report on

CRICKETER DATABASE MANAGEMENT SYSTEM

Submitted towards jth component of the course

Database Management Systems

by

SHAMIL IQBAL (18BCA0045)

&

DAMPURU SAI MATHU SANKARSHANA (18BCA0043)

PROBLEM DESCRIPTION

A CRICKETER DATABASE MANAGEMENT SYSTEM wants to implement an online Cricket Database to keep track of and display Cricketer's grades for several years. Entities can generally be differentiated by Team Name, Batsman, Bowler, Bowling Average and Batting Average. Separate Table for Knowing the Cricket Council members are being provided. For each Table, the Entities is determined by Team Name which is given as primary key which is useful while searching or manipulating data of certain Player Name.

1.1 Cricket council Team, team All-rounders, top bowlers, top batsman, Awards and ICC members are the main Entities associated with our cricketer database. These Data Entities are helpful in determining and analysing the top players in different category of teams. Each player can be easily manipulated using their unique country name.

1.2 The entity which provide information regarding team membership is called Cricket Council members (ICC). Team, Country, Govern body, Full member since, Region are the attributes associated with this table. We will know the credentials of each team and their membership related information.

1.3 CNATIOANALTEAM is one of the strong entity with Team Name as a primary key, Captain Name as Unique Key followed by the ranking in TEST, ODI and T20. Here Team Name is used to relate with all team with their corresponding team members .Entity mainly focus on the position of each team in their participated series. As an addition information we have provided Captain of each team with a unique constraint.

1.4 Information regarding Batsman and Bowlers are given in separate entities called Batsman and Bowler. In Batsman we have Player Name, Test Position, Age, Batting Style and Rating. Each player can be easily derived from table using Team Name as Foreign key from reference table as Team Ranking.

1.5 Similar to the Batsman entity Bowlers have similar Attributes regarding their field such as Test Position , Age ,Bowling Style , Rating and similar Foreign Key as Team Name to Locate the Player from their desired Country.

1.6 Statistical Information regarding Batsman and Bowlers are given in separate tables called Batsman Average and Bowler Average. In Batsman Average we have Player Name, Innings, 100's, 50's and Highest Runs. Each player can be easily derived from table using Team Name as Foreign key from reference table as Team Ranking.

1.7 Similar to the Batsman Average entity Bowlers Average have similar Attributes regarding their field such as Matches , Wickets ,Hat trick , 4 wickets and similar Foreign Key as Team Name to Locate the Player from their desired Country.

CHAPTER 1: ANALYSIS

CHAPTER 2: DESIGN

CHAPTER 3: IMPLEMENTATION

Introduction

CRICKETER DATABASE MANAGEMENT SYSTEM

These days, maintaining player stats and matches related data has very important in determining 0r predicting the future achievements of world class Cricket team. You can see many cricket organization are well managed with their data of current cricket players and team statistics they owned in different era. Concentrating with particular tables we can relate and retrieve data's very easily and accurately. One such example of those table is bowling average and batting average which helps in finding an overall idea about the player career statistics around his career. The world's largest Cricket association ICC is having similar database to store and manipulate player's statistics and team achievements. Once it comes to the coordination of such national game, there will be tons of data to store .Here, we have data of players around the world with their career statistics and their overall performance throughout their career. The tables like Team Ranking, batting and bowling Average doesn't host data directly there are connected to different other table to collect data with the help of primary key and foreign key. They depend upon the primary key of the other table. As a client you need to find relevant data easily and conveniently thus the table should contain enough Attributes to relate the information for easy accessibility. They will provide you the unique data without any duplication or repetition. There are detailed scorecards maintained by scorers for each game across the world (of any importance whatsoever). Team name and Payer name, especially when they were one unit, tracked back to gather all the first class games they could find and put them into their database. Maintaining it, after that, is relatively easier, as a task.

Tables like Cricket Council members (Full member of Cricket association) has scorecards, the date of emergence and Attributes like specification about their location are very crucial data to be preserved from their very first game.

So now, Cricket council members, team ranking, top bowlers, top batsman, average bowler and average batsman are the main tables associated with our cricketer database .Cricket council members will give elaborate idea about the emergence of national team formation of different countries around different region of the world. Which includes their Cricket board name, date of emerging to full membership in cricket council. Thus tables will provide relevant information about the world class cricket player around the globe. It includes their rank in corresponding field their native country and some basic information which include their batting style and rating .Emphasising the the rank list of cricket player in the test cricket series we categorised our table into top bats men and top bowler. So, thus it helps to provide an overall idea how different top players are spread over different top countries in the world. The most important data about a cricket player is the information about the his career achievements and his trends in scoring , batting average and bowling average are two separate tables apart from bowlers and batsman were it clearSly mention about the total runs , career record and 100's ,50's score in his test cricket series. Thus these records are very useful to compare the career achievements of player to the former Cricket legends .Overall we have basket of data under one roof, with tables consisting of relevant data holding attributes .Thus with suitable queries we can easily find and seek data. Also it makes it easy to manipulate data.

1.7.1 ADVANTAGES OF CRICKETER DATABASE MANAGEMENT SYSTEM

As we mentioned Cricketer Database will provide an overall idea of the statistics of different players distributed around different countries around the globe. These days, maintaining player stats and matches related data has very important in determine 0r predicting the future achievements of world class Cricket team. You can see many cricket organization are well managed with their data of current cricket players and team statistics they owned in different era. Generally data has vital role in predicting new thing in different field, thus this Cricket database will provide Data Scientist to predict enormous results in the field of Cricket in future. Can also be used as future reference to recruit different players to the existing field.

CHAPTER 1: ANALYSIS

1.1 ENTITIES

1. CNATIONALTEAM
2. PLAYERS
3. BATSMAN
4. BOWLER
5. ALLROUNDER
6. ICC
7. AWARDS
8. PLAYERROLE

1.2 ATTRIBUTES AND DATA TYPES.

1. **PLAYERS.**

ATTRIBUTES	**CONSTRAINTS**	**DATA TYPE (SIZE)**
JNAME	PRIMARY KEY	VARCHAR(15)
FSTNAME	NOT NULL	VARCHAR(20)
LSTNAME		VARCHAR(20)
BORN		DATE
TNAME	FOREIGN KEY REFERENCED TO CNATIOANALTEAM	VARCHAR(20)

2. **CNATIONALTEAM.**

ATTRIBUTES	**CONSTRAINTS**	**DATA TYPE (SIZE)**
TNAME	PRIMARY KEY	VARCHAR(20)
CAPTAIN	NOT NULL,UNIQUE	VARCHAR(20)
TEST_RANK		NUMBER(3)
ODI_RANK		NUMBER(3)
T20_RANK		NUMBER(3)

3. BOWLER.

ATTRIBUTES	**CONSTRAINTS**	**DATA TYPE(SIZE)**
BJNO	PRIMARY KEY	NUMBER(5)
BNAME	FOREIGN KEY REFERNCED TO PLAYER	VARCHAR(20)
RATING		INT
TNAME	FOREIGN KEY REFERNCED TO CNATIOANLTEAM	VARCAHR(20)
BOWLINGSTYLE	CHECK	VARCHAR(20)
WICKETS		INT

4. BATSMAN.

ATTRIBUTES	CONSTRAINTS	DATA TYPE(SIZE)
BAJNO	PRIMARY KEY	NUMBER(5)
BANAME	FOREIGN KEY REFERNCED TO PLAYER,NOT NULL	VARCHAR(20)
RATING		INT
TNAME	FOREIGN KEY REFERNCED TO CNATIOANLTEAM	VARCAHR(20)
BATTINGSTYLE	CHECK	VARCHAR(20)
RUNS		INT

5. ALLROUNDER.

ATTRIBUTES	CONSTRAINTS	DATA TYPE(SIZE)
ARJNO	PRIMARY KEY	NUMBER(5)
ARNAME	FOREIGN KEY REFERNCED TO PLAYER	VARCHAR(20)
RATING		INT
WICKETS		INT
BATTINGSTYLE	CHECK	VARCHAR(20)
TNAME	FOREIGN KEY REFERNCED TO CNATIOANLTEAM	VARCAHR(20)
BOWLINGSTYLE	CHECK	VARCHAR(20)
RUNS		INT

6. ICC.

ATTRIBUTES	CONSTRAINTS	DATA TYPE (SIZE)
CNAME	PRIMARY KEY	VARCHAR(20)
ICCEVENTS	NOT NULL	VARCHAR(20)
STARTDATE		DATE
TNAME	FOREIGN KEY REFERENCED TO CNATIONALTEAM	VARCHAR(20)

7. AWARDS.

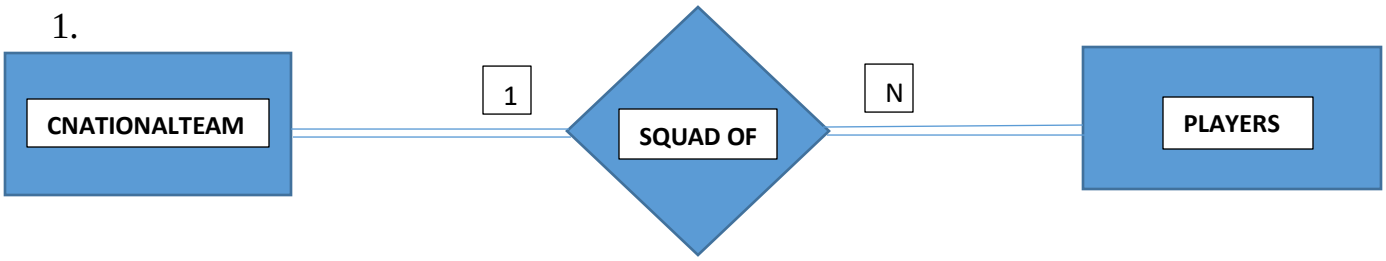
ATTRIBUTES	CONSTRAINTS	DATA TYPE (SIZE)
AWARDNAME	PRIMARY KEY	VARCHAR(20)
JNAME	FOREIGN KEY REFERENCED TO PLAYER,NOT NULL	VARCHAR(20)
YEAR		DATE
ACHIEVEMENT		VARCHAR(20)

8. PLAYERROLE.

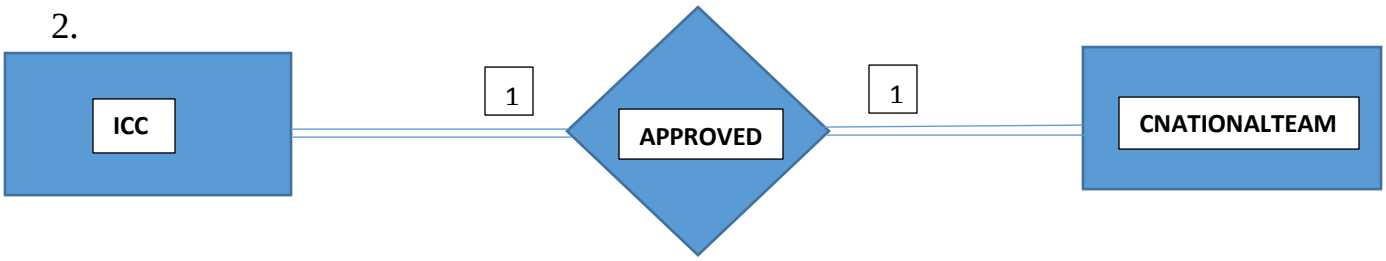
ATTRIBUTES	CONSTRAINTS	DATA TYPE (SIZE)
JNAME	PRIMARY KEY, FOREIGN KEY REFERENCED TO PLAYER	VARCHAR(20)
PLAYERROLE	NOT NULL	VARCHAR(20)

1.3 RELATIONSHIP (CARDINALITY AND PARTICIPATION).

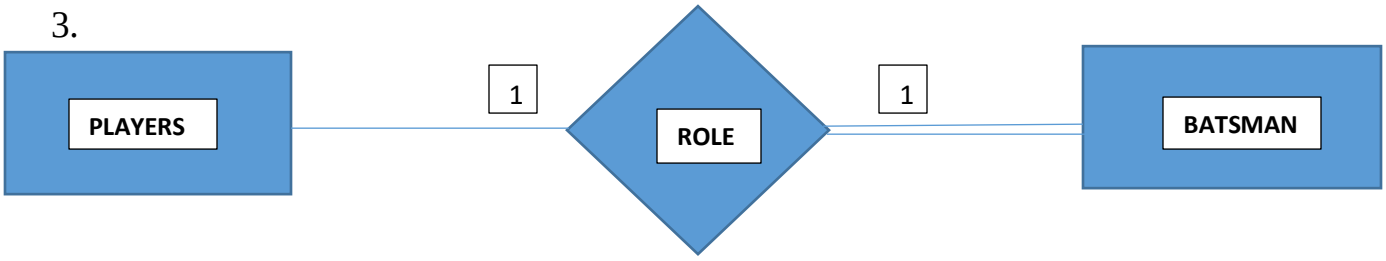
1.



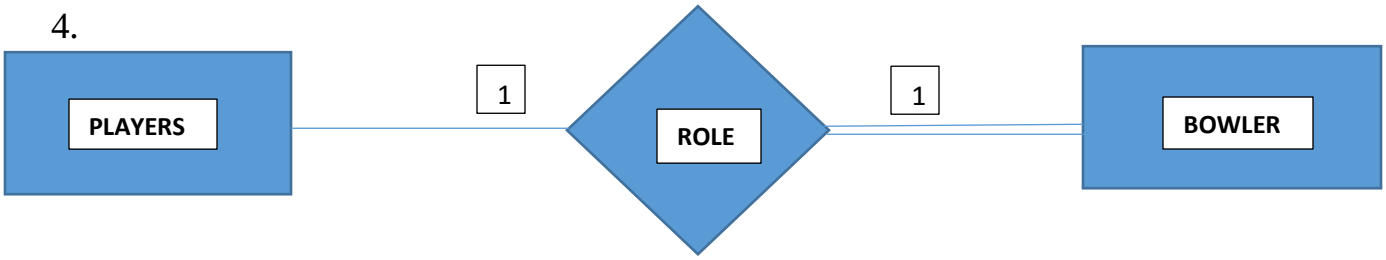
2.



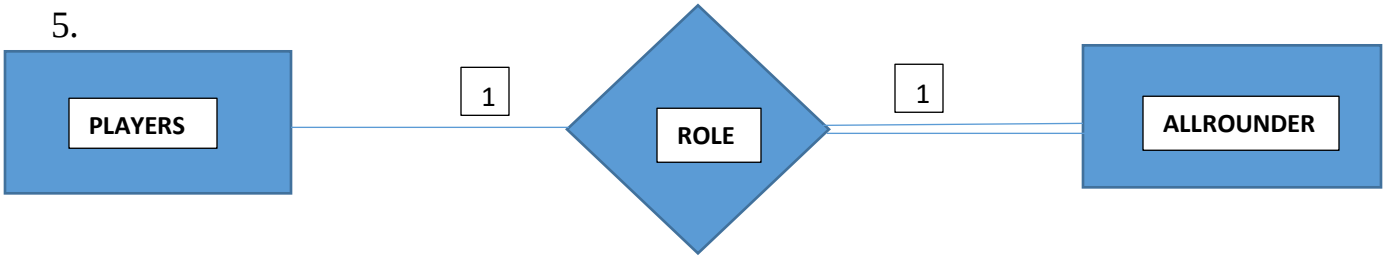
3.



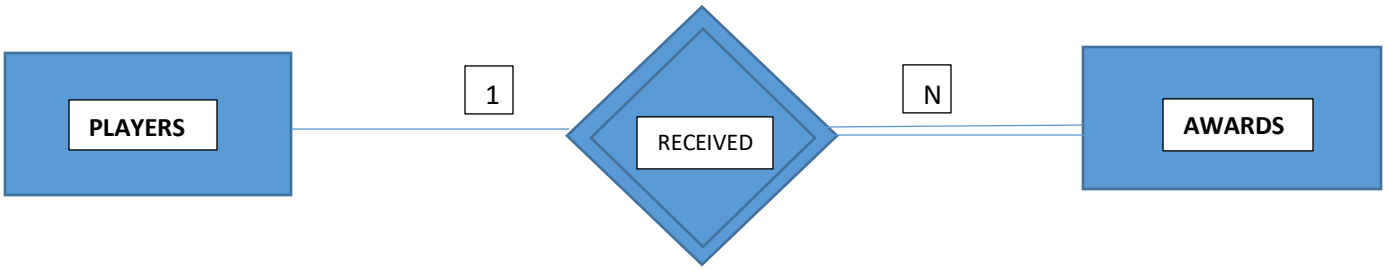
4.



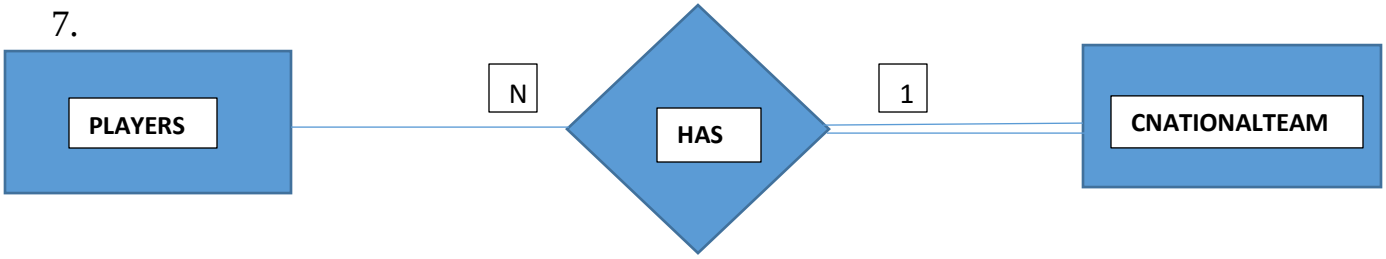
5.



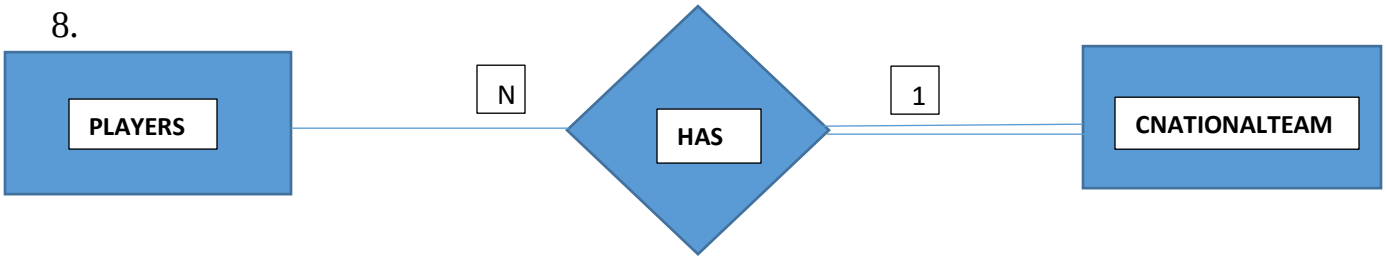
6.


PLAYERS
1
RECEIVED
N
AWARDS

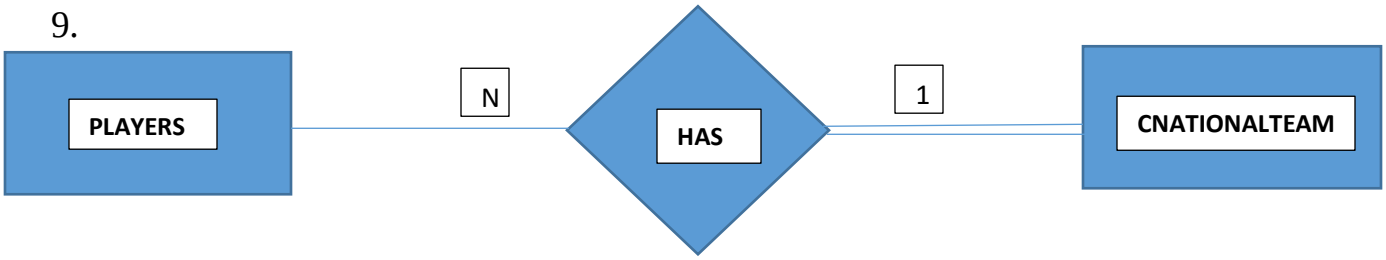
7.


PLAYERS
N
HAS
1
CNATIONALTEAM

8.

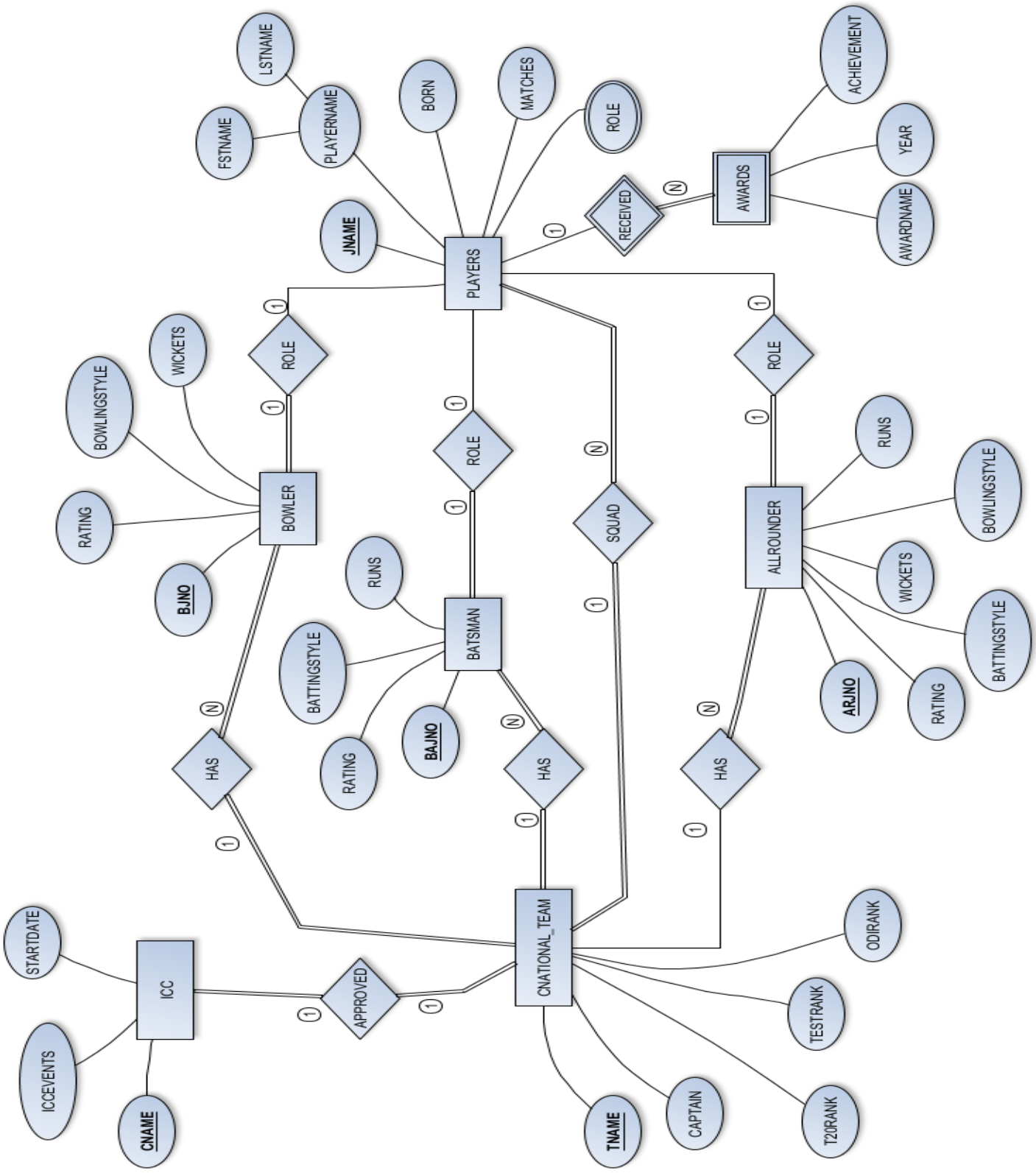

PLAYERS
N
HAS
1
CNATIONALTEAM

9.


PLAYERS
N
HAS
1
CNATIONALTEAM

CHAPTER 2: DESIGN

2.1 CRICKETER DATABASE MANAGEMENT SYSTEM ER-DIAGRAM



2.2 Relational Schema:

1. TABLE NAME: PLAYERS
ATTRIBUTES: (JNAME, FSTNAME, LSTNAME, BORN, TNAME)

2. TABLE NAME: CNATIONALTEAM
ATTRIBUTES: (TNAME, CAPTAIN, TEST_RANK, ODI_RANK, T20_RANK)

3. TABLE NAME: BOWLER
ATTRIBUTES: (BJNO, BNAME, RATING, BOWLINGSTYLE, WICKETS, TNAME)

4. TABLE NAME: BATSMAN
ATTRIBUTES: (BAJNO, BANAME, RATING, BATTINGSTYLE, RUNS, TNAME)

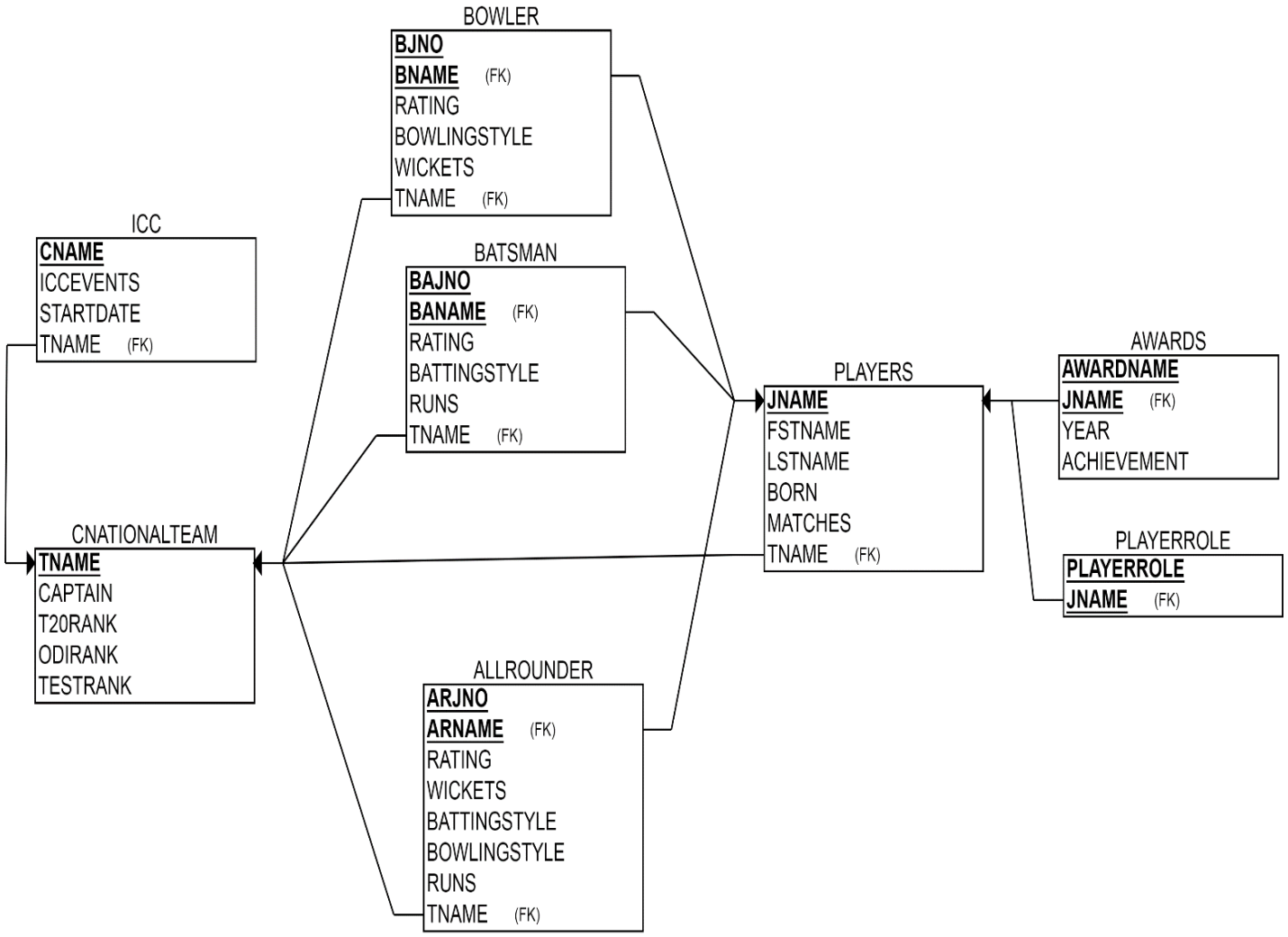
5. TABLE NAME: ALLROUNDER
ATTRIBUTES: (ARJNO, ARNAME, RATING, BOWLINGSTYLE, BATTINGSTYLE, RUNS, WICKETS, TNAME)

6. TABLE NAME: ICC
ATTRIBUTES: (CNAME, ICCEVENTS, STARTDATE, TNAME)

7. TABLE NAME: AWARDS
ATTRIBUTES: (AWARDNAME, JNAME, YEAR, ACHIEVEMENT)

8. TABLE NAME: PLAYERROLE
ATTRIBUTES: (JNAME, PLAYERROLE)

2.2 RELATIOANAL MODEL:



2.3 Graphical Tools used for ER-Diagram and Relational Model:

1. yEd Graph Editor for (ER-Diagram).
2. ERDPlus Online Editor for (Relational Model).

CHAPTER 3: IMPLEMENTATION

3.1 CREATE WITH CONSTRAINTS

1.

```
CREATE TABLE CNATIONALTEAM
(TNAME VARCHAR(20)  PRIMARY KEY,
CAPTAIN VARCHAR(20)  NOT NULL UNIQUE,
TEST_RANK NUMBER(3),
ODI_RANK  NUMBER(3),
T20_RANK NUMBER(3));
```

OUTPUT:

```
SQL> CREATE TABLE CNATIONALTEAM
  2  (TNAME VARCHAR(20)  PRIMARY KEY,
  3  CAPTAIN VARCHAR(20)  NOT NULL UNIQUE,
  4  TEST_RANK NUMBER(3),
  5  ODI_RANK  NUMBER(3),
  6  T20_RANK NUMBER(3));

Table created.
```

2.

```
CREATE TABLE PLAYERS
   (JNAME VARCHAR(15)  PRIMARY KEY,
   FSTNAME VARCHAR(20)  NOT NULL,
   LSTNAME VARCHAR(20),
   BORN DATE,
   TNAME VARCHAR(20));
```

OUTPUT:

```
SQL> CREATE TABLE PLAYERS
  2  (JNAME VARCHAR(15)  PRIMARY KEY,
  3  FSTNAME VARCHAR(20)  NOT NULL,
  4  LSTNAME VARCHAR(20),
  5  BORN DATE,
  6  TNAME VARCHAR(20));

Table created.
```

3.

```
CREATE TABLE BOWLER
(BJNO NUMBER(5)  PRIMARY KEY,
BNAME VARCHAR(20)  NOT NULL ,
RATING INT,
TNAME  VARCHAR(20),
BOWLINGSTYLE VARCHAR(20) ,
WICKETS INT);
```

OUTPUT:

```
SQL> CREATE TABLE BOWLER
  2  (BJNO NUMBER(5)  PRIMARY KEY,
  3  BNAME VARCHAR(20)  NOT NULL ,
  4  RATING INT,
  5  TNAME  VARCHAR(20),
  6  BOWLINGSTYLE VARCHAR(20) ,
  7  WICKETS INT);

Table created.
```

4.

```
CREATE TABLE BATSMAN
(BAJNO NUMBER(5)  PRIMARY KEY,
BANAME VARCHAR(20)  NOT NULL ,
RATING INT,
TNAME  VARCHAR(20),
BATTINGSTYLE VARCHAR(20) ,
RUNS INT);
```

OUTPUT:

```
SQL> CREATE TABLE BATSMAN
  2  (BAJNO NUMBER(5)  PRIMARY KEY,
  3  BANAME VARCHAR(20)  NOT NULL ,
  4  RATING INT,
  5  TNAME  VARCHAR(20),
  6  BATTINGSTYLE VARCHAR(20) ,
  7  RUNS INT);

Table created.
```

5.

```
CREATE TABLE ALLROUNDER
(ARJNO NUMBER(5)  PRIMARY KEY,
ARNAME VARCHAR(20)  NOT NULL ,
RATING INT,
TNAME  VARCHAR(20),
BATTINGSTYLE VARCHAR(20) ,
RUNS INT ,
BOWLINGSTYLE VARCHAR(20),
WICKETS INT);
```

OUTPUT:

```
SQL> CREATE TABLE ALLROUNDER
  2  (ARJNO NUMBER(5)  PRIMARY KEY,
  3  ARNAME VARCHAR(20)  NOT NULL ,
  4  RATING INT,
  5  TNAME  VARCHAR(20),
  6  BATTINGSTYLE VARCHAR(20) ,
  7  RUNS INT ,
  8  BOWLINGSTYLE VARCHAR(20),
  9  WICKETS INT);

Table created.
```

6.

```
CREATE TABLE ICC
 (CNAME VARCHAR(20)  PRIMARY KEY,
  ICCEVENTS VARCHAR(20)  NOT NULL ,
  STARTDATE  DATE,
  TNAME  VARCHAR(20));
```

OUTPUT:

```
SQL> CREATE TABLE ICC
  2    (CNAME VARCHAR(20)  PRIMARY KEY,
  3     ICCEVENTS VARCHAR(20)  NOT NULL ,
  4     STARTDATE  DATE,
  5     TNAME  VARCHAR(20));

Table created.
```

7.

```
CREATE TABLE AWARDS
 (AWARDNAME VARCHAR(20)  PRIMARY KEY,
  JNAME VARCHAR(20)  NOT NULL ,
  YEAR  DATE,
  ACHIEVEMENT  VARCHAR(20));
```

OUTPUT:

```
SQL> CREATE TABLE AWARDS
  2    (AWARDNAME VARCHAR(20)  PRIMARY KEY,
  3     JNAME VARCHAR(20)  NOT NULL ,
  4     YEAR  DATE,
  5     ACHIEVEMENT  VARCHAR(20));

Table created.

SQL>
```

8.

```
CREATE TABLE PLAYERROLE
 (JNAME VARCHAR(20)  PRIMARY KEY,
  PLAYERROLE VARCHAR(20)  NOT NULL );
```

OUTPUT:

```
SQL> CREATE TABLE PLAYERROLE
  2    (JNAME VARCHAR(20)  PRIMARY KEY,
  3     PLAYERROLE VARCHAR(20)  NOT NULL );

Table created.

SQL>
```

3.2 ALTER

1.

ALTER TABLE PLAYERS ADD CONSTRAINT FK_TN FOREIGN KEY (TNAME) REFERENCES CNATIONALTEAM (TNAME);

```
SQL> ALTER TABLE PLAYERS ADD CONSTRAINT FK_TN FOREIGN KEY (TNAME) REFERENCES CNATIONALTEAM(TNAME);

Table altered.
```

2.

ALTER TABLE BOWLER ADD CONSTRAINT FK_PL FOREIGN KEY (BNAME) REFERENCES PLAYERS(JNAME);

```
SQL> ALTER TABLE BOWLER ADD CONSTRAINT FK_PL FOREIGN KEY (BNAME) REFERENCES PLAYERS(JNAME);

Table altered.
```

3.

ALTER TABLE BOWLER ADD CONSTRAINT FK_PL2 FOREIGN KEY
(TNAME) REFERENCES CNATIONALTEAM(TNAME);

```
SQL> ALTER TABLE BOWLER ADD CONSTRAINT FK_PL2 FOREIGN KEY
  2   (TNAME) REFERENCES CNATIONALTEAM(TNAME);

Table altered.
```

4.

ALTER TABLE BOWLER ADD CONSTRAINT CK_BA CHECK (BOWLINGSTYLE = ‘RIGHT-HAND’ OR BOWLINGSTYLE = ‘LEFT-HAND’);

```
SQL> ALTER TABLE BOWLER ADD CONSTRAINT  CK_BO CHECK (BOWLINGSTYLE = 'RIGHT-HAND' O
R BOWLINGSTYLE='LEFT-HAND');

Table altered.
```

5.

ALTER TABLE ALLROUNDER ADD CONSTRAINT FK_AL FOREIGN KEY
(TNAME) REFERENCES CNATIONALTEAM(TNAME);

```
SQL> ALTER TABLE ALLROUNDER ADD CONSTRAINT FK_AL FOREIGN KEY
  2   (TNAME) REFERENCES CNATIONALTEAM(TNAME);

Table altered.
```

6.

ALTER TABLE ALLROUNDER ADD CONSTRAINT FK_AL1 FOREIGN KEY (ARNAME) REFERENCES PLAYERS(JNAME);

```
SQL> ALTER TABLE ALLROUNDER ADD CONSTRAINT FK_AL1 FOREIGN KEY (ARNAME) REFERENCES
PLAYERS(JNAME);

Table altered.
```

7.

ALTER TABLE ALLROUNDER ADD CONSTRAINT CK_AL CHECK (BATTINGSTYLE = 'RIGHT-HAND' OR BATTINGSTYLE = 'LEFT-HAND');

```
SQL> ALTER TABLE ALLROUNDER ADD CONSTRAINT  CK_AL CHECK ( BATTINGSTYLE =  'RIGHT-H
AND' OR BATTINGSTYLE = 'LEFT-HAND');

Table altered.
```

8.

ALTER TABLE ALLROUNDER ADD CONSTRAINT CK_BA CHECK (BOWLINGSTYLE = 'RIGHT-HAND' OR BOWLINGSTYLE = 'LEFT-HAND');

```
SQL> ALTER TABLE ALLROUNDER ADD CONSTRAINT  CK_BA1 CHECK ( BOWLINGSTYLE =  'RIGHT-
HAND' OR BOWLINGSTYLE = 'LEFT-HAND');

Table altered.
```

9.

ALTER TABLE BATSMAN ADD CONSTRAINT FK_BA FOREIGN KEY

(TNAME) REFERENCES CNATIONALTEAM(TNAME);

```
SQL> ALTER TABLE BATSMAN ADD CONSTRAINT FK_BA FOREIGN KEY
  2   (TNAME) REFERENCES CNATIONALTEAM(TNAME);

Table altered.
```

10.

ALTER TABLE BATSMAN ADD CONSTRAINT FK_BA2 FOREIGN KEY (BANAME) REFERENCES

PLAYERS(JNAME);

```
SQL> ALTER TABLE BATSMAN ADD CONSTRAINT FK_BA2 FOREIGN KEY (BANAME) REFERENCES PLA
YERS(JNAME);

Table altered.
```

11.

ALTER TABLE BATSMAN ADD CONSTRAINT CK_BA CHECK (BATTINGSTYLE = ‘RIGHT-HAND’ OR

BATTINGSTYLE = ‘LEFT-HAND’);

```
SQL> ALTER TABLE BATSMAN ADD CONSTRAINT  CK_BA CHECK (BATTINGSTYLE = 'RIGHT-HAND'
OR BATTINGSTYLE= 'LEFT-HAND');

Table altered.
```

12.

ALTER TABLE ICC ADD CONSTRAINT FK_ICC FOREIGN KEY

(TNAME) REFERENCES CNATIONALTEAM(TNAME);

```
SQL> ALTER TABLE ICC ADD CONSTRAINT FK_ICC FOREIGN KEY
  2   (TNAME) REFERENCES CNATIONALTEAM(TNAME);

Table altered.
```

13.

ALTER TABLE AWARDS ADD CONSTRAINT FK_AW FOREIGN KEY (JNAME) REFERENCES PLAYERS(JNAME);

```
SQL> ALTER TABLE AWARDS ADD CONSTRAINT FK_AW FOREIGN KEY (JNAME) REFERENCES PLAYER
S(JNAME);

Table altered.
```

14.

ALTER TABLE PLAYERROLE ADD CONSTRAINT FK_PR FOREIGN KEY (JNAME) REFERENCES PLAYERS(JNAME);

```
SQL> ALTER TABLE PLAYERROLE ADD CONSTRAINT FK_PR FOREIGN KEY (JNAME) REFERENCES PL
AYERS(JNAME);

Table altered.
```

3.3 INSERT COMMANDS.

1. INSERT INTO CNATIONALTEAM VALUES('&TNAME','&CAPTAIN',&TEST_RANK,&ODI_RANK,&T20_RANK);

```
SQL> /
Enter value for tname: SRILANKA
Enter value for captain: DINESH
Enter value for test_rank: 5
Enter value for odi_rank: 1
Enter value for t20_rank: 9
old   1: INSERT INTO CNATIONALTEAM VALUES('&TNAME','&CAPTAIN',&TEST_RANK,&ODI_RANK
,&T20_RANK)
new   1: INSERT INTO CNATIONALTEAM VALUES('SRILANKA','DINESH',5,1,9)

1 row created.
```

2. INSERT INTO PLAYERS VALUES('&JNAME','&FSTNAME','&LSTNAME','&BORN','&TNAME');

```
SQL> /
Enter value for jname: MALINGA
Enter value for fstname: LASSITH
Enter value for lstname: MALINGA
Enter value for born: 3/JAN/1985
Enter value for tname: SRILANKA
old   1: INSERT INTO PLAYERS VALUES('&JNAME','&FSTNAME','&LSTNAME','&BORN','&TNAME
')
new   1: INSERT INTO PLAYERS VALUES('MALINGA','LASSITH','MALINGA','3/JAN/1985','SR
ILANKA')

1 row created.
```

3. INSERT INTO PLAYERS VALUES('&JNAME','&FSTNAME','&LSTNAME','&BORN','&TNAME');

```
SQL> /
Enter value for bjno: 26
Enter value for bname: PAT
Enter value for rating: 869
Enter value for tname: AUSTRALIA
Enter value for bowlingstyle: RIGHT-HAND
Enter value for wickets: 722
old   1: INSERT INTO BOWLER VALUES(&BJNO,'&BNAME',&RATING,'&TNAME','&BOWLINGSTYLE'
,&WICKETS)
new   1: INSERT INTO BOWLER VALUES(26,'PAT',869,'AUSTRALIA','RIGHT-HAND',722)

1 row created.
```

4. INSERT INTO BATSMAN
   VALUES(&BAJNO,'&BANAME',&RATING,'&TNAME','&BATTINGSTYLE',&RUN);

```
SQL> INSERT INTO BATSMAN VALUES(&BAJNO,'&BANAME',&RATING,'&TNAME','&BATTINGSTYLE',
&RUN);
Enter value for bajno: 16
Enter value for baname: VIRAT
Enter value for rating: 922
Enter value for tname: INDIA
Enter value for battingstyle: RIGHT-HAND
Enter value for run: 11876
old   1: INSERT INTO BATSMAN VALUES(&BAJNO,'&BANAME',&RATING,'&TNAME','&BATTINGSTY
LE',&RUN)
new   1: INSERT INTO BATSMAN VALUES(16,'VIRAT',922,'INDIA','RIGHT-HAND',11876)

1 row created.
```

5. INSERT INTO ICC VALUES('&CNAME','&ICCEVENTS','&STARTDATE','&TNMAE');

```
SQL> /
Enter value for cname: ACB
Enter value for iccevents: ONE DAY TOUR
Enter value for startdate: 8/JAN/1905
Enter value for tnmae: AUSTRALIA
old   1: INSERT INTO ICC VALUES('&CNAME','&ICCEVENTS','&STARTDATE','&TNMAE')
new   1: INSERT INTO ICC VALUES('ACB','ONE DAY TOUR','8/JAN/1905','AUSTRALIA')

1 row created.
```

6. INSERT INTO AWARDS VALUES('&AWARDNAME','&JNAME','&YEAR','&ACHIEVEMENT');

```
SQL> INSERT INTO AWARDS VALUES('&AWARDNAME','&JNAME','&YEAR','&ACHIEVEMENT');
Enter value for awardname: GARFIELD SOBERS
Enter value for jname: VIRAT
Enter value for year: 3/MAR/2018
Enter value for achievement: BEST PLAYER
old   1: INSERT INTO AWARDS VALUES('&AWARDNAME','&JNAME','&YEAR','&ACHIEVEMENT')
new   1: INSERT INTO AWARDS VALUES('GARFIELD SOBERS','VIRAT','3/MAR/2018','BEST PL
AYER')

1 row created.
```

7. INSERT INTO **PLAYERROLE** VALUES('&JNAME','&PLAYERROLE');

```
SQL> INSERT INTO PLAYERROLE VALUES('&JNAME','&PLAYERROLE');
Enter value for jname: MALINGA
Enter value for playerrole: BATSMAN
old   1: INSERT INTO PLAYERROLE VALUES('&JNAME','&PLAYERROLE')
new   1: INSERT INTO PLAYERROLE VALUES('MALINGA','BATSMAN')

1 row created.
```

3.4 DELETE COMMAND

1. DELETE FROM CNATIONALTEAM WHERE TNAME ='BRAZIL';

```
SQL> DELETE FROM CNATIONALTEAM WHERE TNAME ='BRAZIL';

1 row deleted.
```

3.5 UPDATE COMMAND

1. UPDATE CNATIONALTEAM SET T20_RANK= 6 WHERE TNAME='NEWZEALAND';

```
SQL> UPDATE CNATIONALTEAM SET T20_RANK= 6 WHERE TNAME='NEWZEALAND';

1 row updated.
```

3.6 SELECT….WHERE

1. UPDATE CNATIONALTEAM SET T20_RANK= 6 WHERE TNAME='NEWZEALAND';

```
SQL> SELECT * FROM CNATIONALTEAM WHERE TEST_RANK=1;

TNAME                CAPTAIN              TEST_RANK   ODI_RANK   T20_RANK
-------------------- -------------------- ---------- ---------- ----------
INDIA                VIRAT                         1          2          4
```

3.7 ORDER BY

1. SELECT * FROM CNATIONALTEAM ORDER BY TEST_RANK;

```
SQL> SELECT * FROM CNATIONALTEAM ORDER BY TEST_RANK;

TNAME                CAPTAIN               TEST_RANK   ODI_RANK   T20_RANK
-------------------- -------------------- ---------- ---------- ----------
INDIA                VIRAT                         1          2          4
AUSTRALIA            PONTING                       2          1          2
PAKISTAN             SARFAZ                        3          1          3
BANGLADESH           HASAN                         4          7          4
SRILANKA             DINESH                        5          1          9
ENGLAND              MORGAN                        6          5          7
SOUTHAFRICA          PLESSIS                       6          5          7
NEWZEALAND           WILLIAMSON                    7          5          6
WESTINDIES           JASON                         8          9         12
IRELAND              WILLIAM                      11          9         14

10 rows selected.
```

3.8 PATTERN MATCHING

SELECT CAPTAIN FROM CNATIONALTEAM WHERE TNAME LIKE '%A';

```
SQL> SELECT CAPTAIN FROM CNATIONALTEAM WHERE TNAME LIKE '%A';

CAPTAIN
--------------------
VIRAT
PONTING
DINESH
PLESSIS
```

3.9 AGGREGATE FUNCTIONS

1. SELECT TNAME, AVG(RUNS) FROM BATSMAN GROUP BY TNAME;

TNAME	AVG(RUNS)
NEWZEALAND	10986
BANGLADESH	6686
INDIA	11986
AUSTRALIA	9986

4 rows returned in 0.00 seconds Download

2. SELECT TNAME, MIN(BORN)SENIOR_AGE FROM PLAYERS GROUP BY TNAME;

TNAME	SENIOR_AGE
SRILANKA	02/05/1990
SOUTHAFRICA	02/05/1990
NEWZEALAND	02/01/1985
INDIA	02/05/1978
BANGLADESH	02/05/1990
ENGLAND	02/05/1988
AUSTRALIA	02/05/1980

3. SELECT COUNT(*)NO_AWARDS ,JNAME FROM AWARDS GROUP BY JNAME;

NO_AWARDS	JNAME
1	VIRAT
1	BEN
1	ABBAS

3 rows returned in 0.00 seconds Download

3.10 DATE FUNCTION

1. SELECT TRUNC(MONTHS_BETWEEN (SYSDATE,STARTDATE)) FROM ICC WHERE ICCEVENTS ='ONE DAY TOUR';

```
SQL> SELECT TRUNC(MONTHS_BETWEEN (SYSDATE,STARTDATE)) FROM ICC WHERE ICCEVENTS ='O
NE DAY TOUR';

TRUNC(MONTHS_BETWEEN(SYSDATE,STARTDATE))
----------------------------------------
                                    1370
```

2.SELECT YEAR ,TO_CHAR (ADD_MONTHS(YEAR,3)) FROM AWARDS;

```
SQL> SELECT YEAR ,TO_CHAR (ADD_MONTHS(YEAR,3)) FROM AWARDS;

YEAR      TO_CHAR(ADD_MONTHS
--------- ------------------
03-MAR-18 03-JUN-18
```

3.11 NUMERIC FUNCTION

1. SELECT TNAME,SUM(WICKETS) FROM BOWLER GROUP BY TNAME;

TNAME	SUM(WICKETS)
SRILANKA	999
SOUTHAFRICA	555
NEWZEALAND	458
ENGLAND	849

4 rows returned in 0.01 seconds Download

2. SELECT TNAME, AVG(RUNS) FROM BATSMAN GROUP BY TNAME;

TNAME	AVG(RUNS)
NEWZEALAND	10986
BANGLADESH	6686
INDIA	11986
AUSTRALIA	9986

4 rows returned in 0.00 seconds Downl

3.12 STRING FUNCTION

1. SELECT CONCAT (CONCAT(JNAME,' BELONG TO'),TNAME) FROM PLAYERS WHERE TNAME='AUSTRALIA';

CONCAT(CONCAT(JNAME,'BELONGTO'),TNAME)
SMITH BELONG TOAUSTRALIA
PONTING BELONG TOAUSTRALIA

2 rows returned in 0.01 seconds Download

2. SELECT LPAD (BANAME,10,'#') FROM BATSMAN;

LPAD(BANAME,10,'#')
WILLIAMSON
#####SMITH
#####IQBAL
#####VIRAT

4 rows returned in 0.01 seconds Download

3.SELECT LOWER(ARNAME) FROM ALLROUNDER;

LOWER(ARNAME)
ben
jadeja
vernon
neil

4 rows returned in 0.01 seconds Download

3.13 GROUP BY….HAVING

1.SELECT COUNT(JNAME), TNAME FROM PLAYERS GROUP BY TNAME HAVING COUNT(JNAME)>2;

COUNT(JNAME)	TNAME
3	INDIA

1 rows returned in 0.00 seconds Download

3.14 JOIN

1.SELECT BATSMAN.BANAME, BATSMAN.TNAME, BATSMAN.RUNS FROM ((BATSMAN JOIN CNATIONALTEAM ON BATSMAN.TNAME=CNATIONALTEAM.TNAME)INNER JOIN PLAYERS ON PLAYERS.JNAME=BATSMAN.BANAME);

BANAME	TNAME	RUNS
WILLIAMSON	NEWZEALAND	10986
SMITH	AUSTRALIA	9986
IQBAL	BANGLADESH	6686
VIRAT	INDIA	11986

4 rows returned in 0.01 seconds Download

2.SELECT BOWLER.BNAME, BOWLER.TNAME, BOWLER.WICKETS FROM BOWLER LEFT JOIN CNATIONALTEAM ON BOWLER.TNAME=CNATIONALTEAM.TNAME;

BNAME	TNAME	WICKETS
MALINGA	SRILANKA	999
JAMES	ENGLAND	849
VERNON	SOUTHAFRICA	555
NEIL	NEWZEALAND	458

4 rows returned in 0.00 seconds Download

3.15 SUBQUERY

1. SELECT JNAME,AWARDNAME FROM AWARDS WHERE JNAME=(SELECT JNAME FROM PLAYERS WHERE JNAME='VIRAT');

JNAME	AWARDNAME
VIRAT	GARFIELD

1 rows returned in 0.00 seconds Download

2. SELECT BNAME ,TNAME FROM BOWLER WHERE WICKETS> ANY (SELECT WICKETS FROM BOWLER WHERE BNAME='NEIL');

BNAME	TNAME
MALINGA	SRILANKA
JAMES	ENGLAND
VERNON	SOUTHAFRICA

3 rows returned in 0.00 seconds Download

CHAPTER 4: CONCLUSION

This is Cricket Database Management System. At first the software saves all the team and team members name and their history. Each and every matches data can be updated easily using this software. Point table of all the software will be shown. ODI and test ranking table can also be viewed in this main Entity .Statistics of each player and team can be viewed tabular wise within each entity.

As soon as someone checks the database, details of a particular player can be viewed by a single click on his name. Any data other than cricket score will also be updated.