

EX.NO:3 INTEGRITY CONSTRAINT ENFORCEMENT FOR THE TABLES USING DDL COMMANDS

Date : 13.02.2023

Aim:

To enforce integrity constraints on cricket league management system using the schema

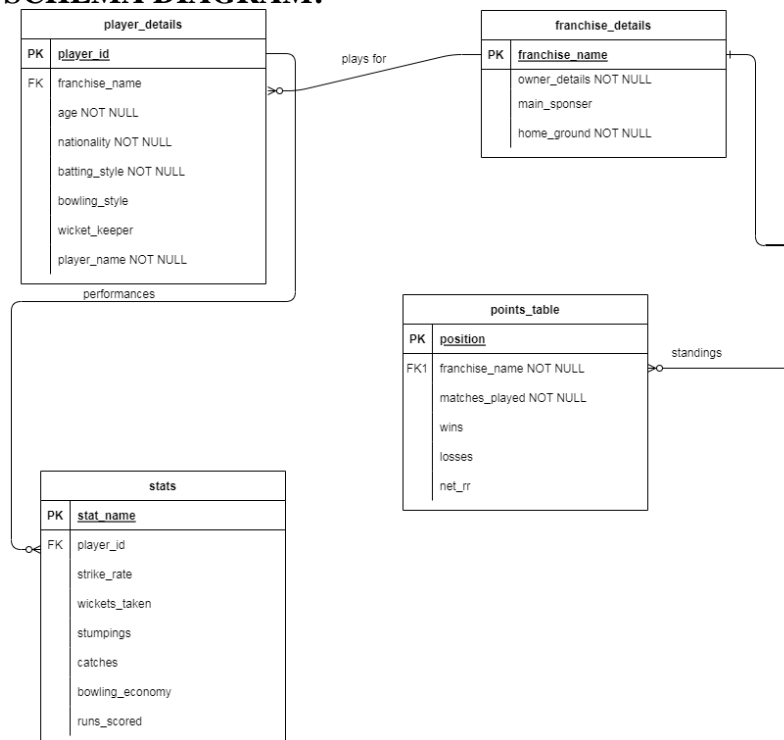
Player_details(player_id,franchise_ref,age,nationality,batting_style,bowling_style,wicket_keeper,player_name);

Franchise_details(Franchise_name,owner_details,main_sponsor,home_ground);

Stats(stat_name,player_ref,matches_played,strike_rate,wicket_taken,stumpings,catches,bowling_economy,runs_scored);

using DDL commands in ORACLE.

SCHEMA DIAGRAM:



DATA DICTIONARY:

Describe the relations with required data types of each field and with necessary constraint for creating the tables.

Franchise_details relation

Attribute	Data type	Constrain	Remarks
Franchise_name	Varchar(100)	Primary key	Unique name of franchise
Owner_details	Varchar(50)	-	
Home_ground	Varchar(50)	-	

Main_sponsor	Varchar(50)	-	
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Points_table relation

Attribute	Datatype	Constrain	Remarks
Position	int	Primary key	Denotes the position at the points table
Team_ref	Varchar(20)	Foreign key	Reference to team name
Matches_played	Varchar(20)	NOT NULL	
wins	Int	-	
losses	Int	-	
Net_rr	Int	-	

Procedure:

```
CREATE TABLE FRANCHISE_DETAILS([FRANCHISE_NAME VARCHAR(100) PRIMARY KEY,MAIN_SPONSOR VARCHAR(50),
OWNER_DETAILS VARCHAR(50),HOME_GROUND VARCHAR(50)]);
```

Column Name	Data Type	Nullable	Default	Primary Key
FRANCHISE_NAME	VARCHAR2(100)	No	-	1
MAIN_SPONSOR	VARCHAR2(50)	Yes	-	-
OWNER_DETAILS	VARCHAR2(50)	Yes	-	-
HOME_GROUND	VARCHAR2(50)	Yes	-	-

```
CREATE TABLE POINTS_TABLE([POSITIONS INT PRIMARY KEY,TEAM_REF VARCHAR(50),MATCHES_PLAYED INT NOT NULL,
WINS INT NOT NULL,LOSSES INT NOT NULL,NET_RR DECIMAL NOT NULL]);
```

Column Name	Data Type	Nullable	Default	Primary Key
POSITIONS	NUMBER	No	-	1
MATCHES_PLAYED	NUMBER	No	-	-
WINS	NUMBER	No	-	-
LOSSES	NUMBER	No	-	-
NET_RR	NUMBER	No	-	-
TEAM_REF	VARCHAR2(100)	Yes	-	-

```
CREATE TABLE PLAYER_DETAILS([PLAYER_ID INT PRIMARY KEY,PLAYER_NAME VARCHAR(50) NOT NULL,AGE INT NOT NULL,NATIONALITY VARCHAR(50) NOT NULL,
BATTING_STYLE VARCHAR(20),BOWLING_STYLE VARCHAR(50),WICKET_KEEPER VARCHAR(3),FRANCHISE_REF VARCHAR(50)]);
```

Column Name	Data Type	Nullable	Default	Primary Key
PLAYER_ID	NUMBER	No	-	1
PLAYER_NAME	VARCHAR2(50)	No	-	-
AGE	NUMBER	No	-	-
NATIONALITY	VARCHAR2(50)	No	-	-
BATTING_STYLE	VARCHAR2(20)	Yes	-	-
BOWLING_STYLE	VARCHAR2(50)	Yes	-	-
WICKET_KEEPER	VARCHAR2(3)	Yes	-	-
FRANCHISE_REF	VARCHAR2(100)	Yes	-	-

```
CREATE TABLE STATS([STAT_NAME VARCHAR(50) PRIMARY KEY,PLAYER_REF INT,RUNS_SCORED INT,WICKETS_TAKEN INT,
STRIKE_RATE DECIMAL,BOWLING_ECONOMY DECIMAL,CATCHES_TAKEN INT NOT NULL,STUMPINGS INT]);
```

Column Name	Data Type	Nullable	Default	Primary Key
STAT_NAME	VARCHAR2(50)	No	-	1
RUNS_SCORED	NUMBER	Yes	-	-
WICKETS_TAKEN	NUMBER	Yes	-	-
STRIKE_RATE	NUMBER	Yes	-	-
BOWLING_ECONOMY	NUMBER	Yes	-	-
CATCHES_TAKEN	NUMBER	No	-	-
STUMPINGS	NUMBER	Yes	-	-
PLAYER_REF	NUMBER	Yes	-	-

```

ALTER TABLE PLAYER_DETAILS
ADD FOREIGN KEY (FRANCHISE_REF) REFERENCES FRANCHISE_DETAILS(FRANCHISE_NAME);

ALTER TABLE STATS
ADD FOREIGN KEY (PLAYER_REF) REFERENCES PLAYER_DETAILS(PLAYER_ID);

ALTER TABLE POINTS_TABLE
ADD FOREIGN KEY (TEAM_REF) REFERENCES FRANCHISE_DETAILS(FRANCHISE_NAME);

```

```

SELECT CONSTRAINT_NAME, CONSTRAINT_TYPE, SEARCH_CONDITION FROM
USER_CONSTRAINTS WHERE TABLE_NAME = 'PLAYER_DETAILS';

```

CONSTRAINT_NAME	CONSTRAINT_TYPE	SEARCH_CONDITION
SYS_C00152152742	R	-
SYS_C00152128561	C	"PLAYER_NAME" IS NOT NULL
SYS_C00152128562	C	"AGE" IS NOT NULL
SYS_C00152128563	C	"NATIONALITY" IS NOT NULL
SYS_C00152128564	P	-

```

SELECT CONSTRAINT_NAME, CONSTRAINT_TYPE, SEARCH_CONDITION FROM
USER_CONSTRAINTS WHERE TABLE_NAME = 'FRANCHISE_DETAILS';

```

CONSTRAINT_NAME	CONSTRAINT_TYPE	SEARCH_CONDITION
SYS_C00152129686	P	-

```

SELECT CONSTRAINT_NAME, CONSTRAINT_TYPE, SEARCH_CONDITION FROM
USER_CONSTRAINTS WHERE TABLE_NAME = 'POINTS_TABLE';

```

CONSTRAINT_NAME	CONSTRAINT_TYPE	SEARCH_CONDITION
SYS_C00152152878	R	-
SYS_C00152128920	C	"MATCHES_PLAYED" IS NOT NULL
SYS_C00152128921	C	"WINS" IS NOT NULL
SYS_C00152128922	C	"LOSSES" IS NOT NULL
SYS_C00152128923	C	"NET_RR" IS NOT NULL
SYS_C00152128924	P	-

```
SELECT CONSTRAINT_NAME, CONSTRAINT_TYPE, SEARCH_CONDITION FROM
USER_CONSTRAINTS WHERE TABLE_NAME = 'STATS';
```

CONSTRAINT_NAME	CONSTRAINT_TYPE	SEARCH_CONDITION
SYS_C00132133141	R	-
SYS_C00132129299	C	"CATCHES_TAKEN" IS NOT NULL
SYS_C00132129300	P	-

Parameter	Marks
Perfection in Table Design(10)	
Completion(05)	
Neatness(05)	
Prompt Timing(05)	
Total(25)	

Result

The enforcement of the integrity constraints in the cricket league management system is done and the output is verified .