AMERICAN INTERNATIONALUNIVERSITY-BANGLADESH

Faculty of Science and Technology

Course Title	: Advanced Database Management Systems [C]
Semester	: SPRING 21-22
Date of Submission : 21/04/2022	
Project Name	: Bangladesh Premier League (BPL) Management System
Course Teacher	: **REZWAN AHMED**

Group Name: Shethil404

Student Name	ID	Program
Shethil Ahammed	19-39698-1	BSc [CSE]

Content List

Admin Panel

Admin Login form:

Login As Admin

Enter Your Username

Name

Enter Your Password

Password

Submit

Diagram: Login form

After successfully login :

Welcome to Dashboard

Player	Team
Owners	Statistic
Coach	Match
Venue	View

Logout
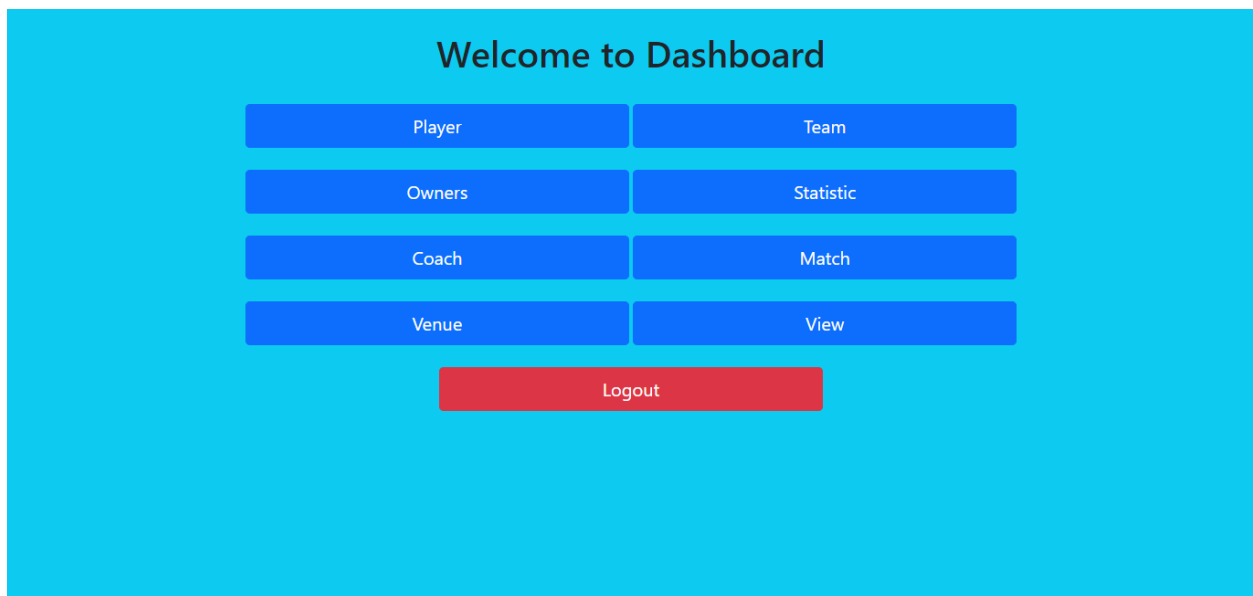
Diagram: Admin dashboard

Searching

Search Panel

Search

ID	Player Name	Role	Age	Price	Team ID	SID

Diagram: Search panel

Search Player:

Tamim | Search

ID	Player Name	Role	Age	Price	Team ID	SID
104	Tamim Iqbal	Batsman	35	500000	101	104

Diagram: Search by name

CRUD

After successfully login admin can go to Player asection. There are some features such as View Player (Read data from database), Search Player, Insert Player(Create), Update Player & Delete Player.
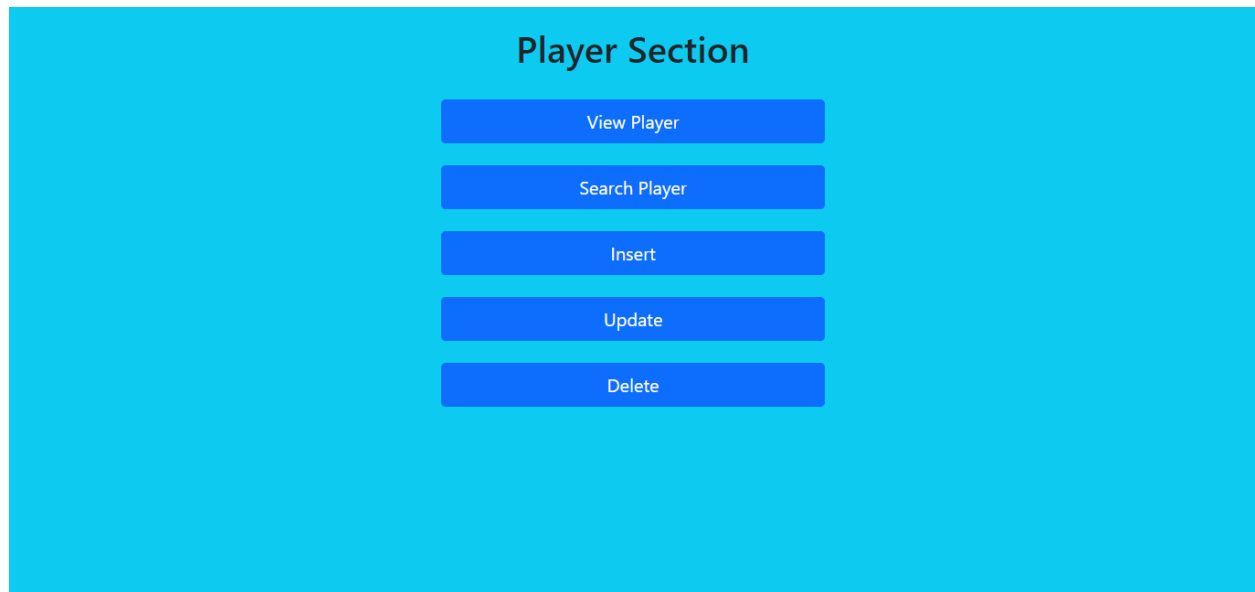

Player Section

View Player

Search Player

Insert

Update

Delete

Diagram: Player Section

ID	Name	Role	Age	Price	Team ID	Statistic ID
101	Mahmudullah	Allrounder	35	500000	101	101
103	Najibullah Zadran	Batsman	25	200000	101	103
104	Tamim Iqbal	Batsman	35	500000	101	104
105	Rubel Hossain	Bowler	30	300000	101	105
106	Mashrafe Mortaza	Bowler	35	500000	101	106
107	Shuvagata Hom	Allrounder	30	200000	101	107
108	Mohammad Shahzad	wicket keeper	31	300000	101	108
109	Fazalhaq Farooqi	Allrounder	26	200000	101	109
110	Mohammad Naim	Batsman	25	200000	101	110
111	Arafat Sunny	Bowler	28	200000	101	111
112	Shafiul Islam	Bowler	23	300000	101	112
113	Jahurul Islam	Batsman	29	200000	101	113
114	Shamsur Rahman	Batsman	27	200000	101	114
115	Ebadot Hossain	Bowler	27	300000	101	115
116	Andre Russell	Allrounder	32	400000	101	116
201	Mushfiqur Rahim	wicket keeper	33	500000	102	201

Diagram: View Player

Add player

Player ID

Enter Player id

Player Name

Enter Player name

Player Role

Allrounder

Player Age

Enter Player age

Price

Enter price

Team

Dhaka

Statistic ID

Enter Statistic id

Add

Diagram: Insert Player

Update player

Player ID

Enter Player id

Player Age

Enter Player age

Price

Enter price

Team

Dhaka

Update

Diagram: Update Player

Delete player

Player ID

450

Delete

Delete player

Player ID

450

Delete data deleted

Diagram: Delete Player

Sequence

Create Sequence:

CREATE SEQUENCE ObjectID start with 17 increment by 1;

Create Sequence by using sequence:

```
CREATE OR REPLACE TRIGGER SEQUENCE_PK
BEFORE INSERT ON Coach
FOR EACH ROW
BEGIN
   SELECT ObjectID.nextval into :new.CoachID from dual;
END;
```

Insert Value:

INSERT INTO Coach VALUES (null,'Smite Sam','Balling Coach',400000,101);

After Insertion:

COACHID	COACHNAME	TYPE	PRICE	TEAMID
11	Paul Nixon	Head Coach	500000	104
12	Ottis Gibson	Head Coach	510000	105
13	Mohammad Salahuddin	Head Coach	510000	101
14	James Foster	Head Coach	520000	102
15	Owais Shah	Head Coach	500000	103
16	Grant Flower	Head Coach	520000	106
17	Smite Sam	Balling Coach	400000	101

Create Sequence:

CREATE SEQUENCE OwnerID start with 207 increment by 1;

Create Sequence by using sequence:

CREATE OR REPLACE TRIGGER Owner_SEQUENCE_PK

BEFORE INSERT ON Owner

FOR EACH ROW

BEGIN

SELECT OwnerID.nextval into :new.OwnerID from dual;

END;

Insert Value:

INSERT INTO Owner VALUES (null,'MR. D',101);

After Insertion:

OWNERID	OWNERNAME	TEAMID
201	MR. A	101
202	MR. B	102
203	MR. C	103
204	MR. X	104
205	MR. Y	105
206	MR. Z	106
207	MR. D	101

View

1. Ckeck player details with view where player age more than 30

CREATE OR REPLACE VIEW player_details AS
SELECT * FROM player WHERE age>30

PLAYERID	PLAYERNAME	ROLE	AGE	PRICE	TEAMID	SID
101	Mahmudullah	Allrounder	35	500000	101	101
104	Tamim Iqbal	Batsman	35	500000	101	104
106	Mashrafe Mortaza	Bowler	35	500000	101	106
108	Mohammad Shahzad	wicket keeper	31	300000	101	108
116	Andre Russell	Allrounder	32	400000	101	116
209	Sohrawardi Shuvo	Allrounder	32	200000	102	209
210	Sikandar Raza	Allrounder	31	300000	102	210
211	Thisara Perera	Allrounder	35	300000	102	211
313	Lendl Simmons	Batsman	32	400000	103	313
403	Kennar Lewis	Batsman	33	400000	104	403

More than 10 rows available. Increase rows selector to view more rows.

2. View the list of batsman from Dhaka team

CREATE OR REPLACE VIEW batsman_dhaka AS
select * from player where role='Batsman' and teamID=(select teamID from team where teamName = 'Dhaka')

PLAYERID	PLAYERNAME	ROLE	AGE	PRICE	TEAMID	SID
103	Najibullah Zadran	Batsman	25	200000	101	103
104	Tamim Iqbal	Batsman	35	500000	101	104
110	Mohammad Naim	Batsman	25	200000	101	110
113	Jahurul Islam	Batsman	29	200000	101	113
114	Shamsur Rahman	Batsman	27	200000	101	114

3. View Dhaka team match schedule.

CREATE OR REPLACE VIEW dhaka_schedule AS
select * from Match where team1ID=(select teamID from team where teamname='Dhaka') or team2ID=(select teamID from team where teamname='Dhaka') order by matchID

MATCHID	TEAM1ID	TEAM2ID	MATCH_DATE	TIME	VENUEID
2	102	101	21-JAN-22	6:30 pm	101
4	104	101	22-JAN-22	6:30 pm	101
5	106	101	24-JAN-22	1:30 pm	101
7	103	101	25-JAN-22	1:30 pm	101
10	103	101	28-JAN-22	6:30 pm	102
15	105	101	01-FEB-22	1:30 pm	102
20	105	101	04-FEB-22	6:30 pm	101
23	104	101	08-FEB-22	1:30 pm	103
25	102	101	09-FEB-22	1:30 pm	103
28	106	101	11-FEB-22	6:30 pm	101

More than 10 rows available. Increase rows selector to view more rows.

4. View the head coach of every team.

CREATE OR REPLACE VIEW Head_Coach AS
select * from coach where type='Head Coach' order by CoachID

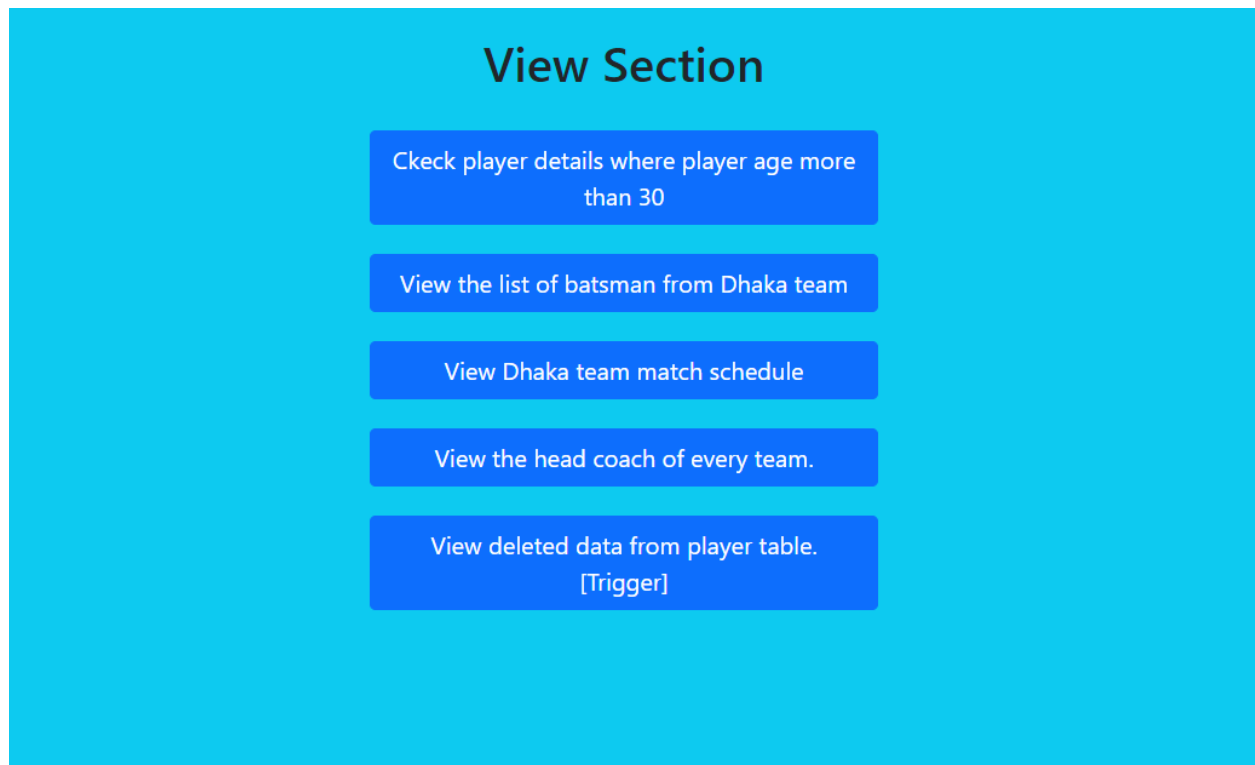| COACHID	COACHNAME	TYPE	PRICE	TEAMID
101	Paul Nixon	Head Coach	500000	104
102	Ottis Gibson	Head Coach	510000	105
103	Mohammad Salahuddin	Head Coach	510000	101
104	James Foster	Head Coach	520000	102
105	Owais Shah	Head Coach	500000	103
106	Grant Flower	Head Coach	520000	106

View ussing Admin Dashboard:

Diagram: View Section

View 01: Ckeck player details with view where player age more than 30

ID	Name	Role	Age	Price	Team ID	Statistic ID
101	Mahmudullah	Allrounder	35	500000	101	101
104	Tamim Iqbal	Batsman	35	500000	101	104
106	Mashrafe Mortaza	Bowler	35	500000	101	106
108	Mohammad Shahzad	wicket keeper	31	300000	101	108
116	Andre Russell	Allrounder	32	400000	101	116
201	Mushfiqur Rahim	wicket keeper	33	500000	102	201
209	Sohrawardi Shuvo	Allrounder	32	200000	102	209
210	Sikandar Raza	Allrounder	31	300000	102	210
211	Thisara Perera	Allrounder	35	300000	102	211
308	Ravi Bopara	Allrounder	33	400000	103	308
309	Sohag Gazi	Bowler	31	200000	103	309
310	Alok Kapali	Allrounder	31	250000	103	310
313	Lendl Simmons	Batsman	32	400000	103	313
403	Kennar Lewis	Batsman	33	400000	104	403
409	Chadwick Walton	Batsman	31	400000	104	409
444	Saf	bat	32	500001	103	444

View 02: The list of batsman from Dhaka team

ID	Name	Role	Age	Price	Team ID	Statistic ID
103	Najibullah Zadran	Batsman	25	200000	101	103
104	Tamim Iqbal	Batsman	35	500000	101	104
110	Mohammad Naim	Batsman	25	200000	101	110
113	Jahurul Islam	Batsman	29	200000	101	113
114	Shamsur Rahman	Batsman	27	200000	101	114

View 03: Dhaka team match schedule

Match ID	Team 1	Team 2	Date	Time	Venue
2	102	101	21-JAN-22	6:30 pm	101
4	104	101	22-JAN-22	6:30 pm	101
5	106	101	24-JAN-22	1:30 pm	101
7	103	101	25-JAN-22	1:30 pm	101
10	103	101	28-JAN-22	6:30 pm	102
15	105	101	01-FEB-22	1:30 pm	102
20	105	101	04-FEB-22	6:30 pm	101
23	104	101	08-FEB-22	1:30 pm	103
25	102	101	09-FEB-22	1:30 pm	103
28	106	101	11-FEB-22	6:30 pm	101
31	101	104	14-FEB-22	1:30 pm	101
33	101	103	16-FEB-22	5:30 pm	101
34	102	101	18-FEB-22	6:30 pm	101

View 04: The head coach of every team

ID	Coach Name	Type	Price	Team ID
11	Paul Nixon	Head Coach	500000	104
12	Ottis Gibson	Head Coach	510000	105
13	Mohammad Salahuddin	Head Coach	510000	101
14	James Foster	Head Coach	520000	102
15	Owais Shah	Head Coach	500000	103
16	Grant Flower	Head Coach	520000	106

Procedures and Functions

1. Create a procedure to check player details where user give prayer id to see palyer Name, Role, Age, Price, Team ID & Statistic ID

```
CREATE OR REPLACE PROCEDURE print_details(p_id Player.PlayerID%type)
IS
        P_PlayerName Player.PlayerName%type;
        P_Role Player.Role%type;
        P_Age Player.Age%type;
        P_Price Player.Price%type;
        P_TeamID Player.TeamID%type;
        P_SID Player.SID%type;
BEGIN
        SELECT PlayerName, Role, Age, Price, TeamID, SID into P_PlayerName, P_Role,
        P_Age, P_Price, P_TeamID, P_SID FROM Player where PlayerID=p_id;
        DBMS_OUTPUT.PUT_LINE('PlayerName : '|| P_PlayerName);
        DBMS_OUTPUT.PUT_LINE('Role : '||p_Role);
        DBMS_OUTPUT.PUT_LINE('Age : '||p_Age);
        DBMS_OUTPUT.PUT_LINE('Price : '||P_Price);
        DBMS_OUTPUT.PUT_LINE('TeamID : '||P_TeamID);
        DBMS_OUTPUT.PUT_LINE('SID : '||P_SID);
END;
```

Declaration:

```
DECLARE
        p_id Player.PlayerID%type:=:Player_id;
BEGIN
        print_details(p_id);
END
```

2. Create procedure which gets the name of all the players and find out every one's role.

```
CREATE OR REPLACE PROCEDURE player_role
IS
BEGIN
        DECLARE
        CURSOR c
        IS
         SELECT PlayerName, Role FROM Player;
         P_PlayerName Player.PlayerName%type;
         P_ROLE Player.Role%type;
         i number(3);
BEGIN
        FOR i in c loop
        P_PlayerName:= i.PlayerName;
        P_ROLE:= i.Role;
        DBMS_OUTPUT.PUT_LINE('Player Name: '||P_PlayerName);
        DBMS_OUTPUT.PUT_LINE('Role: '||P_ROLE);
        end loop;
  END;
END;
```

Declaration:

```
BEGIN
        player_role;
END
```

3. Create procedure which gets specific team match schedule where user give team id.

```
CREATE OR REPLACE PROCEDURE match_schedule(T_ID Match.Team1ID%type)
IS
BEGIN
        DECLARE
        CURSOR c
        IS
         SELECT MatchID, Match_date, TIME, VenueID FROM Match where
      team1ID=T_ID or team2ID=T_ID;
        M_MatchID Match.MatchID%type;
        M_Match_date Match.Match_date%type;
        M_TIME Match.TIME%type;
        M_VenueID Match.VenueID%type;
        i number(3);
BEGIN
        FOR i in c loop
        M_MatchID:= i.MatchID;
        M_Match_date:= i.Match_date;
        M_TIME:= i.TIME;
        M_VenueID:= i.VenueID;

        DBMS_OUTPUT.PUT_LINE('MatchID: '||M_MatchID);
        DBMS_OUTPUT.PUT_LINE('Match_date: '||M_Match_date);
        DBMS_OUTPUT.PUT_LINE('TIME: '||M_TIME);
        DBMS_OUTPUT.PUT_LINE('VenueID: '||M_VenueID);
        end loop;
   END;
END;
```

Declaration:

```
DECLARE
        T_ID Match.Team1ID%type:=:TEAM_ID;
BEGIN
        match_schedule(T_ID);
END
```

4. Create a function to check team owner where user give team id.

```
CREATE OR REPLACE FUNCTION owner_name(T_ID Owner.TeamID%type)
RETURN Owner.OwnerName%type
IS
        O_OwnerName Owner.OwnerName%type;
BEGIN
        SELECT OwnerName into O_OwnerName FROM Owner where TeamID = T_ID ;
        RETURN O_OwnerName;
END;
```

Declaration:

```
DECLARE
        T_ID Owner.TeamID%type:=:TEAM_ID;
        O_OwnerName Owner.OwnerName%type;
BEGIN
        O_OwnerName:=owner_name(T_ID);
        DBMS_OUTPUT.PUT_LINE('OWNER NAME: '||O_OwnerName);
END
```

5. Create a function to see many teams paly at Bangladesh Bangladesh Premier League (BPL)

```
CREATE OR REPLACE FUNCTION totalTeams
RETURN number
IS
        total number(2) := 0;
BEGIN
        SELECT count(*) into total FROM Team;
        RETURN total;
END;
```

Declaration:
```
DECLARE
c number(2);
BEGIN
  c := totalTeams();
  dbms_output.put_line('Total no. of Teamss: ' || c);
END;
```

6. Create a function to check total number of player of a team where user give team id.

```
CREATE OR REPLACE FUNCTION total_player(T_ID Player.TeamID%type)
RETURN number
IS
        total number(2) := 0;
BEGIN
        SELECT count(*) into total FROM Player where TeamID = T_ID ;
        RETURN total;
END;
```

Declaration:

```
DECLARE
        T_ID Player.TeamID%type:=:TEAM_ID;
        c number(2);
BEGIN
        c :=total_player(T_ID);
        DBMS_OUTPUT.PUT_LINE('Total player of this team is : '||c);
END
```

Triggers

1. Create a trigger that preventing to deleting row from Match table.

```
CREATE OR REPLACE  TRIGGER RENTALHIS_DEL
BEFORE DELETE ON Match
BEGIN
raise_application_error(-20001,'Records can not be deleted');
END;
```

2. Create a trigger that store delated data into delete_player table where data delete from player table.

```
CREATE OR REPLACE TRIGGER trigger_delete_player
BEFORE DELETE ON Player
FOR EACH ROW
BEGIN
INSERT INTO delete_player
(PlayerID,PlayerName,Role,Age,Price,TeamID,SID)
values(:old.PlayerID,:old.PlayerName,:old.Role,:old.Age,:old.Price,:old.TeamID,:old.SID);
END;
```

3. Create a trigger that occurs when ever an insert or update occurs in Match table and insert the old and new data in the update_Match table.

```
CREATE OR REPLACE TRIGGER update_Match
BEFORE UPDATE OR INSERT ON match
FOR EACH ROW
BEGIN
INSERT INTO update_Match
(MatchID,Team1ID,Team2ID,Match_date,TIME,VenueID)
values(:new.MatchID,:new.Team1ID,:new.Team2ID,:new.Match_date,:new
.TIME,:new.VenueID);
END;
```

4. Create a trigger that will not allow player below 16 years old.

```
CREATE OR REPLACE TRIGGER CheckAge
BEFORE
INSERT OR UPDATE ON player
FOR EACH ROW
BEGIN
      IF :new.Age<16 THEN
            raise_application_error(-20001, 'Age should be greater than
16');
      END IF;
END;
```

Exception handling

1. Create a procedure by using exception to check player details where user give prayer id to see palyer Name, Role, Age, Price, Team ID & Statistic ID

```
CREATE OR REPLACE PROCEDURE print_details(p_id Player.PlayerID%type)
IS
        P_PlayerName Player.PlayerName%type;
        P_Role Player.Role%type;
        P_Age Player.Age%type;
        P_Price Player.Price%type;
        P_TeamID Player.TeamID%type;
        P_SID Player.SID%type;
        inval_player exception;
BEGIN
        if p_id <1 then
        raise inval_player;
        ELSE
        SELECT PlayerName, Role, Age, Price, TeamID, SID into P_PlayerName, P_Role,
        P_Age, P_Price, P_TeamID, P_SID FROM Player where PlayerID=p_id;
        DBMS_OUTPUT.PUT_LINE('PlayerName : '|| P_PlayerName);
        DBMS_OUTPUT.PUT_LINE('Role : '||p_Role);
        DBMS_OUTPUT.PUT_LINE('Age : '||p_Age);
        DBMS_OUTPUT.PUT_LINE('Price : '||P_Price);
        DBMS_OUTPUT.PUT_LINE('TeamID : '||P_TeamID);
        DBMS_OUTPUT.PUT_LINE('SID : '||P_SID);
        END IF;
EXCEPTION
         WHEN inval_player THEN
           dbms_output.put_line('invalid player ID');
         WHEN no_data_found THEN
           dbms_output.put_line('No such player!');
         WHEN others THEN
           dbms_output.put_line('Error!');
END;
```

Declaration:

```
DECLARE
        p_id Player.PlayerID%type:=:Player_id;
BEGIN
        print_details(p_id);
END
```