

### **Solutions with marks**

1- SQL Statement :

```
SELECT COLUMN_NAME, DATA_TYPE FROM USER_TAB_COLUMNS  
WHERE TABLE_NAME= ' Team_Staff '; 0.5 point
```

2- GRANT CREATE TABLE to USERNAME; 0.5 point

3- REVOKE privilege ON [table/view] FROM username; 0.5 point

4- This is a PL/SQL code with the structure of error handling using the EXCEPTION block. 0.5 point

5-

```
SELECT COUNT(*) AS MatchCount      0.25 point  
FROM Match 0.25 point  
WHERE Team1_ID = 2 OR Team2_ID = 2; 0.25 point  
  
Result = 4 0.25 point
```

----- if they use the match\_organization table

```
SELECT COUNT(DISTINCT TEAM_ID) AS Matches_Played 0.25 point  
FROM Match_Organization 0.25 point  
WHERE Team_ID = 2; 0.25 point  
  
Result = 4 0.25 point
```

```

6- CREATE OR REPLACE FUNCTION GetAthleteRole (AName IN VARCHAR)
RETURN VARCHAR2 IS
CURSOR crsr IS SELECT Athlete_ID FROM Athlete
                WHERE Athlete_Name = AName;

crsr_rec crsr%ROWTYPE;

Role_Name VARCHAR2(100);

BEGIN
    FOR crsr_rec IN crsr LOOP
        select Role INTO Role_Name
        FROM Team_Staff WHERE Athlete_ID = crsr_rec. Athlete_ID;
    END LOOP;

RETURN Role_Name ;

END;

/

BEGIN --displaying
    dbms_output.put_line ('The role of athlete John Doe is:' || GetAthleteRole ('John Doe'));
END;

/

```

1.5 points == (General correct syntax 0.25; variables 0.5 == (cursor ; crsr\_rec crsr and roleName); loop and return value 0.5, displaying :0.25 )

-----Solution without the cursor

```
CREATE OR REPLACE FUNCTION GetAthleteRole (AName IN VARCHAR2)
```

```
RETURN VARCHAR2 IS
```

```
    Role_Name VARCHAR2(100);
```

```
BEGIN
```

```
    SELECT ts.Role INTO Role_Name
```

```
    FROM Athlete a
```

```
    JOIN Team_Staff ts ON a.Athlete_ID = ts.Athlete_ID
```

```
    WHERE a.Athlete_Name = AName
```

```
END;
```

```
/
```

```
BEGIN
```

```
    dbms_output.put_line ('The role of athlete John Doe is:' || GetAthleteRole ('John Doe'));
```

```
END;
```

```
/
```

1.5 points == (General correct syntax 0.5 (It suppose to be correct); variables 0.25; JOIN 0.5, displaying :0.25 )

7- SET SERVEROUTPUT ON; 0.5 point

8-

```
CREATE OR REPLACE TRIGGER check_membership_update
```

```
BEFORE UPDATE OF membership_level ON Athlete
```

```
FOR EACH ROW
```

```
BEGIN
```

```
    IF :OLD.membership_level = 'Gold' AND :NEW.membership_level = 'Silver' THEN
```

```
        RAISE_APPLICATION_ERROR(-20001, 'Cannot downgrade from Gold to Silver membership.');
```

```
    END IF;
```

END;

/

2 point == (General correct syntax 0. 5; BEFORE UPDATE 0. 5; The condition 0. 5; Raising Error 0. 5 )

9- SELECT Athlete.Athlete\_Name, Team.Team\_Name, Team\_Staff.Role,  
Team\_Staff.Join\_Date

FROM Team\_Staff

JOIN Athlete ON Team\_Staff.Athlete\_ID = Athlete.Athlete\_ID

JOIN Team ON Team\_Staff.Team\_ID = Team.Team\_ID;

2 point == (General correct syntax 0.5; All the needed attributes 0.75; The Join 0.5 ;Result 0.25 )

10- One of the two users should select the table for update **1 point**