

User's Guide for Sports League Stored Procedures

Procedure Q1: spPlayersInsert

- **Purpose:** Inserts a new player into the PLAYERS table, generating a new ID if not provided.
- **Input Parameters:**
 - `p_player_id` (INTEGER, optional): Player ID. If NULL, a new ID is generated.
 - `p_reg_number` (VARCHAR2): Unique registration number of the player.
 - `p_last_name` (VARCHAR2): Last name of the player.
 - `p_first_name` (VARCHAR2): First name of the player.
 - `p_is_active` (INTEGER): Indicates active (1) or inactive (0) status of the player.
 - `p_error_code` (OUT, INTEGER): Output parameter for potential error codes.
- **Expected Output:** None directly. Errors indicated through `p_error_code`.
- **Error Codes:**
 - `-2`: Duplicate player ID or registration number.
 - `-3`: Data type/format mismatch.
 - `-4`: Generic/unexpected error.
- **Example:**

```
DECLARE
    v_error_code INTEGER;
BEGIN
    spPlayersInsert(NULL, '12345', 'Doe', 'John', 1, v_error_code);
    IF v_error_code <> 0 THEN
        -- Handle error
    END IF;
END;
```

Procedure Q2: spPlayersSelectAll, spRostersSelectAll, spTeamsSelectAll

- **Purpose:** Outputs all records from the respective tables (PLAYERS, ROSTERS, TEAMS) using `DBMS_OUTPUT`.
- **Input Parameters:** None.
- **Expected Output:** All records from the respective table displayed in the script window.
- **Potential Errors:**
 - 'Unable to retrieve player data.'
 - 'Unable to retrieve roster data.'
 - 'Unable to retrieve team data.'
- **Example:**

```
BEGIN
    spPlayersSelectAll; -- Replace with respective procedure for ROSTERS
                        or TEAMS
END;
```

Procedure Q3: spPlayersSelectAll, spRostersSelectAll, spTeamsSelectAll (Cursor Version)

- **Purpose:** Returns a cursor with all records from the respective tables.
- **Input Parameters:** None.
- **Expected Output:** Cursor with all records.
- **Potential Errors:**
 - 'Unable to retrieve player data.'
 - 'Unable to retrieve roster data.'
 - 'Unable to retrieve team data.'
- **Example:**

```
DECLARE
    v_cursor SYS_REFCURSOR;
BEGIN
    spPlayersSelectAll(v_cursor);
    -- Process cursor data
    CLOSE v_cursor;
END;
```

Procedure Q4: vwPlayerRosters (View Creation)

- **Purpose:** Creates a view combining players, rosters, and teams data.
- **Input Parameters:** None (View creation).
- **Expected Output:** A new view **vwPlayerRosters** is created.

Procedure Q5: spTeamRosterById

- **Purpose:** Displays the team roster for a specified team ID.
- **Input Parameters:** **v_teamid** (NUMBER): Team ID to query.
- **Expected Output:** Roster information of the specified team.
- **Error Codes:** None.
- **Example:**

```
BEGIN
    spteamrosterbyid(123); -- Replace with the desired team ID
END;
```

Procedure Q6: spTeamRosterByName

- **Purpose:** Searches and displays team roster by a partial/full team name.
- **Input Parameters:** **p_team_name** (VARCHAR2): Partial or full team name.
- **Expected Output:** Roster information of teams matching the name.
- **Error Codes:**
 - **1**: No data found.
 - **-3**: Data type/format mismatch.

- -4: Generic/unexpected error.
- **Example:**

```
BEGIN
  spTeamRosterByName('Noobs'); -- Replace with the team name to search
END;
```

Procedure Q7: vwTeamsNumPlayers (View Creation)

- **Purpose:** Creates a view that lists teams along with the number of active players.
- **Input Parameters:** None (View creation).
- **Expected Output:** A new view **vwTeamsNumPlayers** is created.

Function Q8: fncNumPlayersByTeamID

- **Purpose:** Retrieves the number of active players in a team based on team ID.
- **Input Parameters:** **p_team_id** (NUMBER): Team ID.
- **Expected Output:** Number representing count of active players.
- **Error Codes:**
 - -1: No team found with given ID.
 - -4: Generic/unexpected error.
- **Example:**

```
DECLARE
  v_num_players NUMBER;
BEGIN
  v_num_players := fncNumPlayersByTeamID(123); -- Replace with the
desired team ID
-- Display or use v_num_players
END;
```

Procedure Q9: vwSchedule (View Creation)

- **Purpose:** Creates a view for game schedules.
- **Input Parameters:** None (View creation).
- **Expected Output:** A new view **vwSchedule** is created.

Procedure Q10: spSchedUpcomingGames

- **Purpose:** Retrieves and displays upcoming games within 'n' days.
- **Input Parameters:** **n** (INTEGER): Number of days ahead to retrieve games.
- **Expected Output:** Information about upcoming games.
- **Potential Errors:**
 - 'Error: Invalid number of days.'
 - Solution: Must pass a valid integer.

- 'Error: Unable to retrieve upcoming games.'
 - Generic error; double-check command.
- **Example:**

```
BEGIN
  spSchedUpcomingGames(7); -- Replace with the number of days ahead
END;
```

Procedure Q11: spSchedPastGames

- **Purpose:** Displays games played in the past 'n' days.
- **Input Parameters:** n (NUMBER): Number of past days to query.
- **Expected Output:** Game records from the past 'n' days.
- **Potential Errors:**
 - 'Error: Invalid number of days.'
 - Solution: Must pass a valid integer.
 - 'Error: Unable to retrieve upcoming games.'
 - Generic error; double-check command.
- **Example:**

```
BEGIN
  spSchedPastGames(30); -- Replace with the number of past days
END;
```

Procedure Q12: spRunStandings

- **Purpose:** Updates the tempStandings table with current standings data.
- **Input Parameters:** None.
- **Expected Output:** Updated tempStandings table.
- **Error Codes:** None.
- **Example:**

```
BEGIN
  spRunStandings;
END;
```

Trigger Q13: trRunStandings

- **Purpose:** Automates the execution of spRunStandings on updates in the games table.
- **Input Parameters:** Triggered by update on games table.
- **Expected Output:** Automatic update of standings upon any change in the games table.
- **Error Codes:** None.

- **Example:** User can take advantage of this trigger to run the following query at any time for up-to-date league standings:

```
SELECT * FROM tempStandings
```

Procedure Q14: spGetAllStars

- **Purpose:** Identifies and displays the all-star lineup of players with the most goals for their team in the current season.
- **Input Parameters:** None.
- **Expected Output:** A list of all-star players, with each player's team name, player name, and total goals scored in the season.
- **Potential Errors:**
 - 'Error: Unable to retrieve all star players.'
 - Generic error messages; double-check command.
- **Example:**

```
BEGIN  
    spGetAllStars;  
END;
```