**Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology**

 **(Deemed to be University Estd. u/s 3 of UGC Act, 1956)**

**School of Computing**

**B.Tech. – Computer Science and Engineering**

**VTR UGE2021- (CBCS)**

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Course Name : Database Management Systems

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DBMS TASK - 4 REPORT

Title: Using Functions in Queries and Writing Sub Queries

Submitted by:

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| **VTUNO** | **REGISTER NUMBER** | **STUDENT NAME** |
| VTU27916 | 24UECS1462 | J.SAI VINEETH KUMAR |

**Using Functions in Queries and Writing Sub Queries**

Aim:

To perform the advanced query processing and test its heuristics using designing of optimal correlated and nested sub queries such as finding summary statistics.

1. To retrieve all team details, including the count of winning matches for each team
2. To retrieve the total number of 'Tie' matches in a team-wise manner.
3. To retrieve the team details who won the matches.
4. To retrieve players and match details of players who are above 25 years old.
5. To retrieve the details of Team who have not played any matches.
6. To retrieve the teamid, boardid, teamname, and playername for a particular playerid given.
   1. To retrieve all team details, including the count of winning matches for each team.

SQL> SELECT t.TeamID, t.Name AS TeamName, t.Coach, t.Captain, COUNT(m.MatchID) AS WinningMatchCount FROM Team t LEFT JOIN Match m ON t.TeamID = substr(m.result,1,5) GROUP BY t.TeamID, t.Name, t.Coach, t.Captain;

**Output:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TeamID** | **TeamName** | **Coach** | **Captain** | **WinningMatchCount** |
| CCB01 | ABS EXPRESS | G.D.RAMESH | SAMPATH KUMAR | 1 |
| CCB02 | AVG EXPRESS | T.KARTHIK | Y.JOHN | 0 |
| MCB01 | PANTHER | SARAVANAN | R.SUNILKUMAR | 0 |
| SCB01 | EAGLE | SOMU | SRI HARI | 0 |
| TCB01 | ANGRY BARD | TOM BABU | CINIL JOHN | 2 |
| TCB02 | TIGER ROCK | S.KANNAN | BEN GEORGE | 0 |
| TICB01 | KINGS | D ANAND | MATHAN | 0 |
| TRICB01 | ROCK | K.PAUL | K.MUTHU | 0 |
| TUCB01 | THUNDER | D ALEX | BARATHI | 0 |
| VCB01 | RAINBOW | S.RAJESHKUMAR | MANIMARAN | 0 |

4.2 To retrieve the total number of 'Tie' matches in a team-wise manner.

SQL> SELECT t.Name AS TeamName, COUNT(\*) AS TotalTieMatches FROM Team t JOIN Match\_result mt ON t.TeamID = mt.TeamID JOIN Match\_result m ON mt.MatchID = m.MatchID WHERE m.Result = 'Tie' GROUP BY t.Name;

|  |  |
| --- | --- |
| **TeamName** | **TotalTieMatches** |
| ROCK | 1 |

* 1. To retrieve the team details who won the matches.

SQL> select \* from team where teamID in (select mr.teamID from match\_result mr left join team t on mr.teamId=t.teamID where mr.result='Win');

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TeamID** | **BoardID** | **Name** | **Coach** | **Captain** |
| CCB01 | BID01 | ABS EXPRESS | G.D.RAMESH | SAMPATH KUMAR |
| TCB01 | BID02 | ANGRY BARD | TOM BABU | CINIL JOHN |
| TRICB01 | BID04 | ROCK | K.PAUL | K.MUTHU |

* 1. To retrieve players and match details of players who are above 25 years old.

SQL> SELECT p.PlayerID, p.FName AS PlayerName, p.Age, m.MatchID, m.match\_Date, m.Time1, m.Result FROM Player p, match m where p.playerID in(select playerID from player where age>25);

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **PlayerID** | **PlayerName** | **Age** | **MatchID** | **Match\_Date** | **Time1** | **Result** |
| 1 | Raj | 27 | M01 | 22-JUN-2022 | 1.3 | TCB01 - WIN |
| 1 | Raj | 27 | M02 | 22-JUN-2022 | 8.3 | CCB01 - WIN |
| 1 | Raj | 27 | M03 | 24-JUN-2022 | 8.3 | TCB01 - WIN |
| 1 | Raj | 27 | M04 | 25-JUN-2022 | 8.3 | TRICB01 - WIN |
| 1 | Raj | 27 | M05 | 04-APR-2023 | 7.3 | Tie |

* 1. To retrieve the details of Team who have not played any matches.

SQL> select \* from team where teamID not in(select teamid from match Union select playerId from match);

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TeamID** | **BoardID** | **Name** | **Coach** | **Captain** |
| VCB01 | BID03 | RAINBOW | S.RAJESHKUMAR | MANIMARAN |
| MCB01 | BID05 | PANTHER | SARAVANAN | R.SUNILKUMAR |
| TUCB01 | BID06 | THUNDER | D ALEX | BARATHI |
| TICB01 | BID08 | KINGS | D ANAND | MATHAN |

* 1. To retrieve the teamid, boardid, teamname, and playername for a particular playerid given.

SQL> SELECT t.teamid, t.boardid, t.name, p.fname FROM team t JOIN player p ON t.teamid = p.teamid WHERE p.playerid = '66';

|  |  |  |  |
| --- | --- | --- | --- |
| **TeamID** | **BoardID** | **Name** | **FName** |
| VCB01 | BID03 | RAINBOW | Ganesh |

Result:

Thus the query using joins and writing subqueries has been done successfully.