**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)**

Academic Year: 2025–2026

SUMMER SEMESTER - SS2526

Course Code : 10211CS207

Course Name : Database Management Systems

Slot No : S8L12

DBMS TASK - 5 REPORT

Title: **Writing Join Queries, equivalent, and/or recursive queries:**

Submitted by:

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**TASK 5**

**Writing Join Queries, equivalent, and/or recursive queries:**

(Tool: SQL/ Oracle, ALM: Flipped Classroom)

**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 cricket boards and their teams.
  2. To list all matches along with the teams and their captains.
  3. To count the number of matches played by each team.
  4. To find all the players who are part of the team named " TIGER ROCK ".
  5. To retrieve all team details, including the count of winning matches for each team.
  6. To retrieve the total number of 'Tie' matches in a team-wise manner.
  7. To retrieve the team details who won the matches.
  8. To retrieve players and match details of players who are above 25 years old.
  9. To retrieve the details of Team who have not played any matches.
  10. To retrieve the teamid, boardid, teamname, and playername for a particular playerid given.
  11. To retrieve all cricket boards and their teams.

SQL> SELECT cb.Name AS CricketBoard, t.Name AS Team FROM CricketBoard cb JOIN Team t ON cb.BoardID = t.BoardID;

|  |  |
| --- | --- |
| **CricketBoard** | **Team** |
| Chennai Cricket Board | ABS EXPRESS |
| Chennai Cricket Board | AVG EXPRESS |
| Tiruvallur Cricket Board | ANGRY BARD |
| Tiruvallur Cricket Board | TIGER ROCK |
| Trichy Cricket Board | ROCK |
| Viluppuram Cricket Board | RAINBOW |
| Madurai Cricket Board | PANTHER |
| Tuticorin Cricket Board | THUNDER |
| Selam Cricket Board | EAGLE |
| Tiruppur Cricket Board | KINGS |

* 1. List all matches along with the teams and their captains.

SQL>SELECT m.matchid, m.match\_date, m.result, t1.teamid AS team1\_id, t1.name AS team1\_name, t1.captain AS team1\_captain, t2.teamid AS team2\_id, t2.name AS team2\_name, t2.captain AS team2\_captain FROM match m JOIN team t1 ON m.teamid1 = t1.teamid JOIN team t2 ON m.teamid2 = t2.teamid ORDER BY m.matchid;

MATCHID MATCH\_DAT RESULT TEAM1\_ID TEAM1\_NAME TEAM1\_CAPTAIN TEAM2\_ID TEAM2\_NAME TEAM2\_CAPTAIN

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M01 22-JUN-22 TCB01 - WIN CCB01 ABS EXPRESS SAMPATH KUMAR TCB01 ANGRY BARD CINIL JOHN

M02 22-JUN-22 CCB01 - WIN CCB02 AVG EXPRESS Y.JOHN TCB02 TIGER ROCK BEN GEORGE

M03 24-JUN-22 TCB01 - WIN TRICB01 ROCK K.MUTHU TCB01 ANGRY BARD CINIL JOHN

M04 25-JUN-22 TRICB01 - WIN TRICB01 ROCK K.MUTHU TCB02 TIGER ROCK BEN GEORGE

M05 27-JUN-25 TRICB01 - Tie TRICB01 ROCK K.MUTHU TCB02 TIGER ROCK BEN GEORGE

* 1. Count the number of matches played each team.

SQL>SELECT t.teamid, t.name AS team\_name, COUNT(m.matchid) AS matches\_played FROM team t JOIN match m ON t.teamid = m.teamid1 OR t.teamid = m.teamid2 GROUP BY t.teamid, t.name ORDER BY matches\_played DESC

TEAMID TEAM\_NAME MATCHES\_PLAYED

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TRICB01 ROCK 3

TCB02 TIGER ROCK 3

TCB01 ANGRY BARD 2

CCB02 AVG EXPRESS 1

CCB01 ABS EXPRESS 1

SQL>

* 1. To find all the players who are part of the team named "TIGER ROCK".

SQL> SELECT p.playerID, p.fname, p.teamID, t.coach, t.captain FROM player p JOIN team t ON p.teamID = t.teamID WHERE t.name = 'TIGER ROCK';

PLAYER FNAME TEAMID COACH CAPTAIN

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102 Akash TCB02 S.KANNAN BEN GEORGE

12 Premkumar TCB02 S.KANNAN BEN GEORGE

* 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

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TRICB01 ROCK K.PAUL K.MUTHU 0

CCB02 AVG EXPRESS T.KARTHIK Y.JOHN 0

SCB01 EAGLE SOMU SRI HARI 0

MCB01 PANTHER SARAVANAN R.SUNILKUMAR 0

TUCB01 THUNDER D ALEX BARATHI 0

TCB01 ANGRY BARD TOM BABU CINIL JOHN 2

VCB01 RAINBOW S.RAJESHKUMAR MANIMARAN 0

TCB02 TIGER ROCK S.KANNAN BEN GEORGE 0

CCB01 ABS EXPRESS G.D.RAMESH SAMPATH KUMAR 1

TICB01 KINGS D ANAND MATHAN 0

10 rows selected.

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

SQL>SELECT t.teamid,t.name AS team\_name,COUNT(m.matchid) AS tie\_matchesFROM team tJOIN match mON (t.teamid = m.teamid1 OR t.teamid = m.teamid2)WHEREUPPER(m.result) LIKE '%TIE%'GROUP BY t.teamid, t.nameORDER BY tie\_matches DESC;

TEAMID TEAM\_NAME TIE\_MATCHES

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TCB02 TIGER ROCK 1

TRICB01 ROCK 1

5.7. To retrieve the team details who won the matches.

SQL>SELECT DISTINCT t.teamid, t.boardid, t.name AS team\_name, t.coach, t.captainFROM team tJOIN match mON ( (INSTR(m.result, m.teamid1) > 0 AND t.teamid = m.teamid1) OR (INSTR(m.result, m.teamid2) > 0 AND t.teamid = m.teamid2) );

TEAMID BOARDID TEAM\_NAME COACH CAPTAIN

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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, p.lname, p.age, p.playingrole,t.teamid,t.name AS team\_name,m.matchid,m.match\_date,m.resultFROM player pJOIN team t ON p.teamid = t.teamidJOIN match mON (t.teamid = m.teamid1 OR t.teamid = m.teamid2)WHERE p.age > 25

ORDER BY p.playerid, m.matchid;

PLAYER FNAME LNAME AGE PLAYINGROLE TEAMID TEAM\_NAME MATCHID MATCH\_DAT RESULT

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1 Raj N 27 Bowler CCB01 ABS EXPRESS M01 22-JUN-22 TCB01 - WIN

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

SQL>SELECT t.teamid,t.boardid,t.name AS team\_name, t.coach,t.captainFROM team tWHERE t.teamid NOT IN (SELECT teamid1 FROM matchUNIONSELECT teamid2 FROM match);

TEAMID BOARDID TEAM\_NAME COACH CAPTAIN

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VCB01 BID03 RAINBOW S.RAJESHKUMAR MANIMARAN

MCB01 BID05 PANTHER SARAVANAN R.SUNILKUMAR

TUCB01 BID06 THUNDER D ALEX BARATHI

SCB01 BID07 EAGLE SOMU SRI HARI

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

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VCB01 BID03 RAINBOW Ganesh

**Result:**

Thus the query using Join Queries, equivalent, and/or recursive queries has been done successfully.