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

SDG 4: Quality Education
Course Code   : 10211CS207

Course Name   : Database Management Systems

Slot No : S1L4

DBMS TASK- 4 REPORT

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

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TASK 4

Using Functions in Queries and Writing Sub Queries

Aim:

To perform the advanced query processing and test its heuristics using designing of optimalcorrelated 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.

4.1 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,(SELECT COUNT(m.MatchID)FROM Match m WHERE t.TeamID = SUBSTR(m.result, 1, 5)) AS WinningMatchCount FROM Team t;

Output:

TEAMID	TEAMNAME	COACH	CAPTAIN	WINNINGMATCHCOUNT
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.

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

SQL> SELECT t.TeamID, t.Name AS TeamName,(SELECT COUNT(m.MatchID) FROM Match m WHERE(t.TeamID = m.TeamID1 OR t.TeamID = m.TeamID2) AND INSTR(m.Result, 'Tie') > 0) AS TieCount FROM Team t group by t.teamid, t.name;

TEAMID	TEAMNAME	TIECOUNT
TUCB01	THUNDER	0
TRICB01	ROCK	1
VCB01	RAINBOW	0
CCB02	AVG EXPRESS	0
MCB01	PANTHER	0
CCB01	ABS EXPRESS	0
TCB01	ANGRY BARD	0
TCB02	TIGER ROCK	1
SCB01	EAGLE	0
TICB01	KINGS	0

10 rows selected.

4.3 To retrieve the team details who won the matches.

SQL> SELECT * FROM team t WHERE t.teamid IN (SELECT teamid1 FROM match WHERE INSTR(result, teamid1) > 0 UNION SELECT teamid2 FROM match WHERE INSTR(result, teamid2) >)

TEAMID	BOARDID	NAME	COACH	CAPTAIN
TCB01	BID02	ANGRY BARD	TOM BABU	CINIL JOHN
TRICB01	BID04	ROCK	K.PAUL	K.MUTHU

2 rows selected.

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

SQL> SELECT p.playerID,p.FName,p.LName,p.age,m.matchid,m.match_Date, m.Time1,m.result FROM player p, match m WHERE p.age > 25 AND (p.teamid = m.teamid1 OR p.teamid = m.teamid2);

PLAYER	PLAYERNAME	AGE	MATCHID	MATCH_DAT	TIME1	RESULT
1	Raj	27	M01	22-JUN-22	1.3	TCB01 - WIN

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

SQL> SELECT t.TeamID, t.Name AS TeamName, t.Coach, t.Captain FROM Team t WHERE t.TeamID NOT IN (SELECT TeamID1 FROM Match UNION SELECT TeamID2 FROM Match);

TEAMID	TEAMNAME	COACH	CAPTAIN
VCB01	RAINBOW	S.RAJESHKUMAR	MANIMARAN
MCB01	PANTHER	SARAVANAN	R.SUNILKUMAR
TUCB01	THUNDER	D ALEX	BARATHI
SCB01	EAGLE	SOMU	SRI HARI
TICB01	KINGS	D ANAND	MATHAN

4.6 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.