

Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology
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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 : S2L3

DBMS TASK - 4 REPORT

Title: Using Functions in Queries and Writing Sub Queries

Submitted by:

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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.

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, 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

4.3 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

4.4 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

4.5 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
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VCB01	BID03	RAINBOW	S.RAJESHKUMAR	MANIMARAN
MCB01	BID05	PANTHER	SARAVANAN	R.SUNILKUMAR
TUCB01	BID06	THUNDER	D ALEX	BARATHI
TICB01	BID08	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.