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

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DBMS TASK - 5 REPORT

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

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Writing Join Queries, equivalent, and/or recursive 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.

5.1 To retrieve all cricket boards and their teams.

5.2 To list all matches along with the teams and their captains.

5.3 To count the number of matches played by each team.

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

5.5 To retrieve all team details, including the count of winning matches for each team.

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

5.7 To retrieve the team details who won the matches.

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

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

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

5.1 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

5.2 List all matches along with the teams and their captains.

SQL> SELECT m.match_Date, m.Time1, m.matchID, t1.name AS team1_name, t1.captain AS team1_captain, t2.name AS team2_name, t2.captain AS team2_captain FROM match m JOIN team t1 ON m.teamID = t1.teamID JOIN team t2 ON m.playerID = t2.teamID;

Match_Date	Time1	MatchID	team1_name	team1_captain	team2_name	team2_captain
22-JUN-2022	1.3	M01	ABS EXPRESS	SAMPATH KUMAR	ANGRY BARD	CINIL JOHN
22-JUN-2022	8.3	M02	AVG EXPRESS	Y.JOHN	TIGER ROCK	BEN GEORGE
24-JUN-2022	8.3	M03	ROCK	K.MUTHU	ANGRY BARD	CINIL JOHN
25-JUN-2022	8.3	M04	ROCK	K.MUTHU	TIGER ROCK	BEN GEORGE
04-APR-2023	7.3	M05	EAGLE	SRI HARI	AVG EXPRESS	Y.JOHN

5.3 Count the number of matches played each team.

SQL> SELECT t.Name AS Team, COUNT(mt.TeamID) AS MatchesPlayed FROM Team t LEFT JOIN Match mt ON t.TeamID = mt.TeamID GROUP BY t.Name;

Team	MatchesPlayed

ABS EXPRESS	1
ANGRY BARD	0
AVG EXPRESS	1
EAGLE	1
KINGS	0
PANTHER	0
RAINBOW	0
ROCK	2
THUNDER	0
TIGER ROCK	0

5.4 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';

PlayerID	FName	TeamID	Coach	Captain
102	Akash	TCB02	S.KANNAN	BEN GEORGE
12	Premkumar	TCB02	S.KANNAN	BEN GEORGE

5.5 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

5.6 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

5.7To 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

5.8 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

5.9 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

5.10   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 Join Queries, equivalent, and/or recursive queries has been done successfully.

Result:

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