

Task-5: Writing join queries, equivalent and/or recursive queries

Aim: To Perform the advanced query processing and test its heuristics using designing of optimised related 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 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 details of team who have not played any matches.
- 5.9: To retrieve players and match details of players who are above 25 years old.
- 5.10: To retrieve the team id, board id, teamname and player name for a particular player id given.

5.1: To retrieve all cricket boards and their teams.
 SQL > select cb.name AS cricket Board, t.name AS Team
 from cricket board join Team t on cb.Board ID = t.Board ID;

cricket board	Team	cricket Board	Team
chennai cricket board	ABS EXP	villupuram cricket	Rainbow
chennai cricket board	AVG EXP	madurai Board	Panther
Tiruvallur cricket board	Angry Bird	selam cricket	eagle
Trichy cricket Board	Rock	Tiruppur cricket	Kings

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

SQL > select m.match_Date, m.time, m.match ID, t1.name,
 AS team1_name, t1.captain AS team1_captain, t2.name
 AS team2_name, t2.captain AS team2_captain
 from team t1 join team t2 on m.Player ID =
 team ID;

match Date	Time	match ID	Team1 Name	Team1 captain	Team2 name	Team2 captain
22-6-22	1.3	MO1	ABS EXP	sampath	Angry	John
22-6-22	8.3	MO2	AVG EXP	John	Tiger	Ben
24-6-22	8.3	MO3	Rock	muthu	Angry	John
25-6-22	8.3	MO4	Rock	muthu	Tiger	Ben
4-4-23	7.3	MO5	Eagle	srihari	AVG EXP	John

5.3 Count the number of matches played each team.
 SQL > select t.name as Team, count as matches played from team
 t LEFT JOIN match mt ON t.Team ID = mt.TeamID Group
 BY t-Name;

Team	matches Played	Team	matches Played
ABS Express	1	Panther	0
Angry Bird	0	Rainbow	0
AVG Express	1	Rock	2
Eagle	1	Thunder	0
Kings	0	Tiger Rock	0

5.4: To Find all the Players who are part of the team named 'Tiger Rock'.

SQL > select p.player ID, p.fname, p.teamID, t.coach, t.captain
 from player p join team t ON p.team ID = t.team where
 t.name = 'Tiger Rock';

Player ID	FName	TeamID	coach	captain
102	Akash	TC BOL	S. Kannan	Ben George
12	Prem	TC BOL	S. Kannan	Ben George

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

SQL > select t.Team ID, t.name as Team Name, t.coach,
 t.captain, count (m.match ID) as winning match count
 from t left join match m on t.team ID = subst
 (m.result, 4, 5) Group BY t.team ID, t.name t.coach t.captain;

Team ID	Team Name	coach	captain	winning count
CCBC1	ABS Express	Ramesh	Sampath	1
CCBC2	AVG Express	T. Karthik	John	0
MCB01	Panther	Sasavana	R. Sonil	0
SCB01	Eagle	Somv	sri hari	0
TCB01	Angry Bird	Tom	John	2
TCB02	Tiger	S. Kanan	Ben	0
TICB01	Kings	D. Anand	Mathan	0

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

SQL > select t.name as TeamName, count(*) as Total Tie matches from Team t join match result mt on t.Team ID = mt.Team ID join match result m on mt.Match ID = m.Match ID where m.result = 'Tie' Group By t.Name;

Team Name	Total Tie matches.
Rock	1

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

SQL > select t from team where Team ID in (select mr.Team ID from match_result mr left join team t on mr.Team ID = team ID where mr.result = 'win');

Team ID	Board ID	Name	coach	captain.
CCB01	BID01	ABS EXP	G.D. Ramesh	Sampath
TCB01	BID02	Angry BIRD	Tom BABU	Civil 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.player ID, p.FName as player Name, p.Age, m.match ID, m.match Date, m.Time t, m.result from Player p match in where p.Player ID in (select ID from player where age > 25);

Player ID	Player Name	Age	Match ID	Match Date	Time	Result
1	Raj	27	M01	22-Jun-22	1-3	TICB01-w
1	Raj	27	M02	23-Jun-22	8-3	CCB01-w
1	Raj	27	M03	24-Jun-22	8-3	TICB01-w
1	Raj	27	M04	25-Jun-22	8-3	TRICB01-w
1	Raj	27	M05	4-APR-23	7-3	Tie.

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

SQL > select * from team where team ID not in (select team ID from match union select played from match);

Team ID	Board ID	Name	Coach	Captain
VCB01	BID03	Rainbow	S. Rajesh	nanimaran
MCB01	BID05	Panther	Saravanan	sonil kumar
TLICB01	BID06	Thunder	Alex	Barathi
TICB01	BID08	King	Anand	mathan.

5.10: SQL > select t.teamid, t.boardid, t.name, p.fname from team t join player p on t.teamid = p.teamid where p played = 'cc';

Team ID	Board ID	Name	F Name
VCB01	BID03	Rainbow	Ganesh

VIVA TECH	
EX NO.	3
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	20
TOTAL (20)	
SIGN WITH DATE	

Result: Thus the query using join queries equivalent and/or recursive queries has been done successfully.