

251826 TASK 5:- Writing Join Queries, equivalent, and for recursive queries:

(Tool: SQL/Oracle, AIM+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.

- 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 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 team id, boardid, teamname, and playername for a particular player id given.
- 5.11 To retrieve all cricket boards and their items:

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

Cricket Board	Team
Chennai Cricket Board	ABS EXPRESS
Chennai Cricket Board	AVG EXPRESS
Tiruvallur Cricket Board	ANGRY BARD
Tiruvallur Cricket Board	TIGER Rock
Tiruchy Cricket Board	ROCK
Madurai Cricket Board	RAIN BOW
Tuticorin Cricket Board	PANTHER
Salem Cricket Board	THUNDER
Tiruppur 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.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
22-Jun-2022	1.3	M01	ABS EXPRESS	SAMPATH K. JIN KUMAR	ANGRY BARD TIGER ROCK
22-Jun-2022	8.3	M02	AVG EXPRESS	V. JOHN	TIGER ROCK
24-Jun-2022	8.3	M03	ROCK	K. MUTHU	ANGRY BARD
25-Jun-2022	8.3	M04	ROCK	K. MUTHU	TIGER ROCK
06-Apr-2023	7.3	M05	EAGLE	SRI HARI	AVG EXPRESS

5.3 Count the number of matches played each item.

SQL > SELECT t.name AS team, COUNT(m.matchID) AS matches_played FROM team LEFT JOIN match m ON t.teamID = m.teamID GROUP BY t.team;

Team	matches played
ABS EXPRESS	1
ANGRY BARD	0
AVG EXPRESS	1
EAGLE	1
KINGIS	0
PANTHER	0
RAIN BOW	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.Name, 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	Prem Kumar	TCB02	S.KANNAN	BEN GEORGE

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

SQL> SELECT t.TeamID, t.Name AS Team Name, t.Coach, t.Captain, COUNT(m.MatchID) AS winning match count 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:

Team ID	Team Name	Coach	Captain	winning match Count
CCB01	ABS EXPRESS	G.D RAMESH	SAMARTH KUMAR	1
CCB02	AUGEXPRESS	T. KARTHIK	V. JOHN	0
MCB01	PANTHER	SARAVANAN	R.SUNIL KUMAR	0
SCB01	EAGLE	SOMU	SRI HARI	0
TCB01	ANGRY BARD	TOM BABU	CINIL JOHN	2
TCB02	TIGER ROCK	S.KANNAN	BEN GEORGE	0
TICB01	KING'S	D ANAND	MATHAN	0
TRICB01	ROCK	K. PAUL	K. MUTHU	0
TUCB01	THUNDER	O ALEX	BARATHI	0
VCB01	RAINBOW	S. RAJESH KUMAR	MANIMARAN	0

56 To retrieve the total number of 'tie' matches in a team manner.

SQL > SELECT t.Name AS Team name, COUNT(1) AS Total Tie matches
team t JOIN match_result mr ON t.teamID = mr.TeamID
match_result m ON mr.matchID = m.matchID 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 * FROM team WHERE teamID IN (SELECT
from match_result mr LEFT JOIN team t ON mr.teamID = t.
where mr.Result = 'Win');

Team ID	Board ID	Name	Coach	Captain
CCBOI	BID01	ABS EXPRESS	G.D RAMESH	SAMPATH KUMAR
TCBOI	BID02	ANGRY BARD	TOM BABU	CINIL JOHN
TRICBOI	BID04	ROCK	K.PAUL	K.MUTHU

58 To retrieve players and match details of players who above 25 years old

SQL > SELECT P.PlayerID, P.IFName AS Player Name, P.
m.matchID, m.matchDate, m.time, m.Result FROM Player
Match m WHERE P.PlayerID IN (SELECT PlayerID FROM Player
age > 25);

PlayerID	Player Name	Age	MatchID	MatchDate	Time	Result
1	Raj	27	M01	22-JUN-22	1.3	TCB01-WIN
1	Raj	27	M02	22-JUN-22	8.3	TCB01-WIN
1	Raj	27	M03	24-JUN-22	8.3	TICB01-WIN
1	Raj	27	M04	25-JUN-22	8.3	TICB01-WIN
1	Raj	27	M05	04-APR-23	7.3	Tie

5.9 TO retrieve the details of team who have not played any matches.

SQL > SELECT * from team where ID not in (select teamid from match union select playerid from match);

TeamID	BoardID	Name	Coach	Captain
VCB01	BID03	RAIN BOW	SRAJESH KUMAR	MANIMARAN
MCB01	BID05	PANTHER SARAVANAN	SARAVANAN	R.SUNIL KUMAR
TUCB01	BID06	THUNDER D-ALEX	DALEX	BARATHI
TICB01	BID08	D ANAND KING'S	D. ANAND	MATHEAN

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.played = '60';

TeamID	BoardID	NAME	FNAME
VCB01	BID03	RAINBOW	Ganesh

VEL TECH - CSE	
EX NO.	5
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	7
ECORD (5)	5
TOTAL (20)	18
GRAND TOTAL	8

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