TASK 3: Using Clauses, Operators and Functions in queries: **CO2, CO5, K3**

(Tool: SQL/ Oracle, ALM: Flipped classroom)

Aim: To Perform the query processing on databases for different retrieval results of queries using DML, DRL operations using aggregate, date, string, indent functions, set clauses and operators.

- To retrieve the location of a particular match conducted by its MatchID

- To retrieve the Players detail whose name start with 'A'.

- Add a column Batting and Bowling in Player table.

- To count the number of right-hand batsman in a team.

- To display the CricketBoard details for the BoardIDs 'BID01', 'BID03', and 'BID06'.

- To select the names and IDs of players who are left-hand bowlers.

- To find the UmpireID of umpires who have not umpired any match.

- To list the PlayerIDs and the total number of matches each player has played.

Sample output:

1. Select location from Match where MatchID='MAC03';

2. Select * from Player where Name ='A%';

3. Alter table Player add Batting varchar(20), Bowling varchar(6);

4. Select count(*) from Players where Batting='right-hand';

5. Select * from CricketBoard where BoardID in('BID01', BID03','BID06');

6. Select PLayerID, Name for Player where Bowling='left-hand';

Queries:

1. **Retrieve the location of a particular match by its MatchID**

   SELECT Location FROM   Match WHERE MatchID = 'MAC03'; -- **Filter for the required match**

2. **Retrieve the player details whose name starts with 'A'**

   SELECT * FROM   Player WHERE UPPER(Name) LIKE 'A%'; -- 'A%' matches names starting with A (case-insensitive)

3. **Add columns Batting and Bowling to the Player table**

   ALTER TABLE Player ADD (Batting VARCHAR2(20),   -- Stores batting style (e.g., right-hand, left-hand Bowling VARCHAR2(10));   -- Stores bowling style

4. **Count the number of right-hand batsmen in a specific team**

   SELECT COUNT(*) AS NumRightBatsmen FROM   Player WHERE LOWER(Batting) = 'right-hand'   -- Match batting style
    AND TeamID = 'TID01';   -- Restrict to one team
   (change as needed)

5. **Display CricketBoard details for specific BoardIDs**

   SELECT * FROM   CricketBoard WHERE BoardID IN ('BID01','BID03','BID06');

                            -- Matches any of the listed IDs

6.**Select the PlayerID and Name of players who are left-hand bowlers**

   SELECT PlayerID, Name FROM   Player WHERE LOWER(Bowling) = 'left-hand';

                            -- Match bowling style

7. **Find UmpireIDs of umpires who have not umpired any match**
   SELECT U.UmpireID, U.Name FROM   Umpire U LEFT JOIN Match_Umpire MU

   ON U.UmpireID = MU.UmpireID   -- Match umpires to matches
   WHERE MU.UmpireID IS NULL;   -- Keep only those with no match records

8. **List PlayerIDs and total number of matches each player has played**

   SELECT PlayerID, COUNT(DISTINCT MatchID) AS MatchesPlayed -- Count unique matches per player
   FROM   Player_Match
   GROUP BY PlayerID;   -- Group results by each player