

Birla Institute of Technology & Science, Pilani, K. K. BIRLA Goa campus
Database Systems (CS F212) Second Semester 2019-2020
Lab-5 Exercise: To study JOINS and SET Operations in SQL

1. (A) Write a SQL query to list ALL Player IDs (*Information Table*) and their respective teams using keyword LEFT JOIN.
(B) Perform the same task as in part A by using keyword RIGHT JOIN.

| PLAYER_ID | TEAM |
|-----------|------|
| 11206 | CSK |
| 12816 | CSK |
| 13715 | CSK |
| 27611 | CSK |
| 89618 | CSK |
| 22302 | MI |
| 23816 | MI |
| 38398 | MI |
| 39984 | MI |
| 40550 | MI |
| 44908 | MI |
| 59965 | MI |
| 73944 | MI |
| 74987 | MI |
| 84606 | MI |
| 87483 | MI |
| 50350 | SRH |
| 82935 | SRH |
| 99978 | SRH |
| 22535 | DC |
| 26549 | K11P |
| 18271 | KKR |
| 37519 | KKR |
| 64549 | RR |
| 25264 | RCB |
| 82464 | RCB |

(Expected Output)

2. Write a SQL Query to display those Team Names which have the least number of players in the Information table along with the number of players in these teams.

| TEAM | COUNT |
|------|-------|
| DC | 1 |
| K11P | 1 |
| RR | 1 |

(Expected Output)

3. Write a SQL query to list ALL Player Names (*from PLAYERS Table*) and their respective ROLE_IDs using keyword NATURAL JOIN. ?

| PLAYER_NAME | ROLE_ID |
|----------------|---------|
| S Smith | 101 |
| BA Stokes | 102 |
| CA Lynn | 103 |
| Q de Kock | 104 |
| SA Yadav | 103 |
| DA Warner | 103 |
| AB de Villiers | 104 |
| KD Karthik | 101 |
| PA Patel | 102 |
| N Pooran | 101 |
| SK Raina | 102 |
| AT Rayudu | 102 |
| Mohammad Nabi | 102 |
| MS Dhoni | 104 |
| KH Pandya | 101 |
| L Malinga | 101 |
| C Gayle | 103 |
| KL Rahul | 103 |
| PP Shaw | 102 |
| SR Watson | 102 |
| KA Pollard | 101 |

(Expected Output)

4. Write a SQL Query to display top 5 run scorer and the number for players who scored less than them.(Use Cross Join)

| PLAYER_NAME | cnt |
|----------------|-----|
| DA Warner | 20 |
| KL Rahul | 19 |
| Q de Kock | 18 |
| AB de Villiers | 17 |
| SA Yadav | 16 |

(Expected Output)

5. Write a SQL Query to display maximum runs scored by a batsman and maximum wickets taken by a bowler **without using OR predicate**. (Hint: Union)

| ROLE | ROLE_ID | MAX |
|---------|---------|-----|
| BOWLER | 101 | 10 |
| BATSMAN | 103 | 692 |

(Expected Output)

6. Write a SQL Query to display the names of Teams which do not have any players in the Information table using LEFT JOIN. (Concept: MINUS)

| T_ID | TEAM |
|------|--------|
| 09 | PW |
| 10 | BITS11 |

(Expected Output)

7. Write a SQL Query to display Player ID's of Bowlers with an active contract using INNER JOIN. (Concept: INTERSECT)

| PLAYER_ID |
|-----------|
| 23816 |
| 40550 |

(Expected Output)

8. Write a SQL Query to Display the Player Name, Role and maximum runs scored by player for each Playing Role.

| PLAYER_NAME | ROLE | RUNS |
|-------------|---------------|------|
| S Smith | BOWLER | 282 |
| Q de Kock | WICKET-KEEPER | 529 |
| DA Warner | BATSMAN | 692 |
| SR Watson | ALL-ROUNDER | 398 |

(Expected Output)

9. Write a SQL Query to display the names, roles of those players who have been contracted by more than one team in their career along with the number of contracts using keyword join.

| CNT | PLAYER_NAME | ROLE |
|-----|-------------|---------------|
| 2 | SA Yadav | BATSMAN |
| 3 | MS Dhoni | WICKET-KEEPER |
| 2 | L Malinga | BOWLER |
| 2 | C Gayle | BATSMAN |

(Expected Output)

Note:

A player is considered game changer if he meets both the following 2 conditions:

- 1.a. Grade = "01" and AWARDS > 1
- 1.b. Grade = "02" and AWARDS > 4
- 1.c. Grade = "03" and AWARDS > 7
- 1.d. Grade = "04" and AWARDS > 10

2. Role should be Batsman or Bowler .

For a Batsman you will consider runs scored by him to know the grade .

For a Bowler you will consider the wickets taken by him to know the grade .

Information regarding grades is given in Table PLAYER_GRADE. For example if a Batsman has scored 231 runs then he will fall into grade 02 since $231 \geq 200$ and $231 < 300$.

10. Write a SQL Query to display the number of game changer player in each team if there is any.

| TEAM | Number_of_GameChangers |
|------|------------------------|
| CSK | 1 |
| MI | 1 |
| SRH | 1 |

(Expected Output)