Data Analyst Interview (4+ yrs experience)

*Task: SQL Problem solving*

Problem Statement:

Given a list of matches in the group stage of the football World Cup, compute the number of points each team currently has.

You are given two tables, “teams” and “matches”, with the following structures:

CREATE TABLE teams

(

team\_id INT primary key,

team\_name VARCHAR(50) not null

);

CREATE TABLE matches

(

match\_id INT primary key,

host\_team INT,

guest\_team INT,

host\_goals INT,

guest\_goals INT

);

**Description:**

Each record in the “teams” table represents a single football team. Each record in the “matches” table represents a finished match between two teams.

Teams (“host\_team”, “guest\_team”) are represented by their IDs in the “teams” table (“team\_id”).

No team plays a match against itself. You know the result of each match (i.e., the number of goals scored by each team).

You would like to compute the total number of points each team has scored after all the matches described in the table. The scoring rules are as follows:

* If a team wins a match (scores strictly more goals than the other team), it receives three points.
* If a team draws a match (scores exactly the same number of goals as the opponent), it receives one point.
* If a team loses a match (scores fewer goals than the opponent), it receives no points.

Write an SQL query that returns a ranking of all teams (“team\_id”) described in the “teams” table.

For each team, you should provide its name and the number of points it received after all described matches (“num\_points”). The table should be ordered by “num\_points” (in decreasing order). In case of a tie, order the rows by “team\_id” (in increasing order).

Sample input data:

| team\_id | team\_name |

|------------|------------------|

| 10 | Give |

| 20 | Never |

| 30 | You |

| 40 | Up |

| 50 | Gonna |

| match\_id | host\_team | guest\_team | host\_goals | guest\_goals |

|--------------|----------------|-----------------|----------------|------------------|

| 1 | 30 | 20 | 1 | 0 |

| 2 | 10 | 20 | 1 | 2 |

| 3 | 20 | 50 | 2 | 2 |

| 4 | 10 | 30 | 1 | 0 |

| 5 | 30 | 50 | 0 | 1 |

Expected output:

| team\_id | team\_name | num\_points |

|------------|------------------|-----------------|

| 20 | Never | 4 |

| 50 | Gonna | 4 |

| 10 | Give | 3 |

| 30 | You | 3 |

| 40 | Up | 0 |