

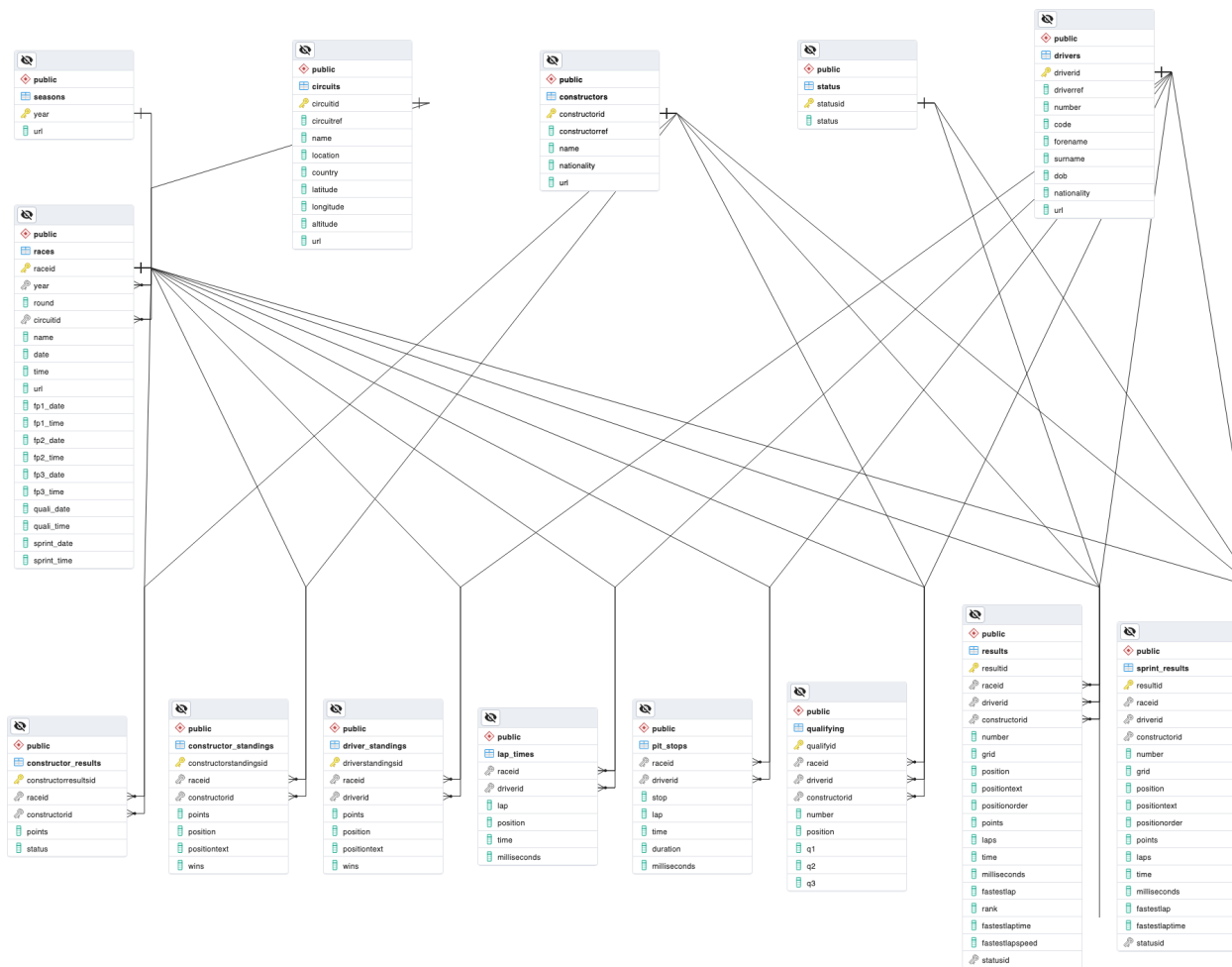


Formula 1 - Case Study using SQL

Formula One (more commonly known as **Formula 1** or **F1**) is the highest class of international racing for open-wheel single-seater formula racing cars sanctioned by the Fédération Internationale de l'Automobile (FIA).

For this case study, we have taken the dataset from kaggle. The dataset consists of all information on the Formula 1 races, drivers, constructors, qualifying, circuits, lap times, pit stops, championships from 1950 till the latest 2023 season.

Link to kaggle dataset: <https://www.kaggle.com/datasets/rohanrao/formula-1-world-championship-1950-2020?resource=download>



ER Diagram

Using the given F1 dataset, solve the following problems:

1. Identify the country which has produced the most F1 drivers.
2. Which country has produced the most no of F1 circuits
3. Which countries have produced exactly 5 constructors?
4. List down the no of races that have taken place each year
5. Who is the youngest and oldest F1 driver?
6. List down the no of races that have taken place each year and mentioned which was the first and the last race of each season.

7. Which circuit has hosted the most no of races. Display the circuit name, no of races, city and country.
8. Display the following for 2022 season:
 Year, Race_no, circuit name, driver name, driver race position, driver race points, flag to indicate if winner
 , constructor name, constructor position, constructor points, , flag to indicate if constructor is winner
 , race status of each driver, flag to indicate fastest lap for which driver, total no of pit stops by each driver
9. List down the names of all F1 champions and the no of times they have won it.
10. Who has won the most constructor championships
11. How many races has India hosted?
12. Identify the driver who won the championship or was a runner-up. Also display the team they belonged to.
13. Display the top 10 drivers with most wins.
14. Display the top 3 constructors of all time.
15. Identify the drivers who have won races with multiple teams.
16. How many drivers have never won any race.
17. Are there any constructors who never scored a point? if so mention their name and how many races they participated in?
18. Mention the drivers who have won more than 50 races.
19. Identify the podium finishers of each race in 2022 season
20. For 2022 season, mention the points structure for each position. i.e. how many points are awarded to each race finished position.
21. How many drivers participated in 2022 season?
22. How many races has the top 5 constructors won in the last 10 years.
23. Display the winners of every sprint so far in F1
24. Find the driver who has the most no of Did Not Qualify during the race.

25. During the last race of 2022 season, identify the drivers who did not finish the race and the reason for it.
26. What is the average lap time for each F1 circuit. Sort based on least lap time.
27. Who won the drivers championship when India hosted F1 for the first time?
28. Which driver has done the most lap time in F1 history?
29. Name the top 3 drivers who have got the most podium finishes in F1 (Top 3 race finishes)
30. Which driver has the most pole position (no 1 in qualifying)