

F1 Web ERD

Domain: F1 Stats Website

Entities:

1. Teams
2. Person
3. Driver (Subclass of Person)
4. Team Principals (Subclass of Person)
5. Tracks
6. Races
7. Lap Timings
8. Pit Stops
9. Current Race Data
10. Views / Visitors

Attributes and Data Types:

The Data Types are given along with PostgreSQL Data Type.

1. Teams:
 - 1.1. Team_ID (Integer: smallint): [Primary Key]: Unique identifier for the Team.
 - 1.2. Team_Name (String: varchar(35)): [Not NULL] [Unique]: Name of the Teams.
 - 1.3. Color (Integer: integer): Hexcode of the team.
 - 1.4. Participating (Boolean: boolean): [Not NULL] [Default False]: Participation Details (True if team participates; else False).
 - 1.5. Licensed (String: varchar(6)): [Not NULL]: Country Code of 3 (6 if there are 2).
 - 1.6. Based (String: varchar(6)): Country Code of 3 (6 if there are 2).
 - 1.7. Engine (String: varchar(10)): Company of the engine being used.
 - 1.8. Races_Entered (Integer: smallint): [Not NULL] [Default 0]: Number of Races entered.
 - 1.9. Races_Started (Integer: smallint): [Not NULL] [Default 0]: Number of races started.
 - 1.10. Drivers (Integer: smallint): [Not NULL] [Default 0] : Number of Drivers (past and current).
 - 1.11. Wins (Integer: smallint): [Not NULL] [Default 0]: Shows total number of wins.
 - 1.12. All_Time_Points (Integer: smallint): [Not NULL] [Default 0]: All time points since the formation of the team.

- 1.13. Season_Points (Integer: smallint): Number of current season points.
 - 1.14. Poles (Integer: smallint): [Not NULL] [Default 0]: Number of pole positions secured by the team.
 - 1.15. Fastest_Laps (Integer: smallint): [Not NULL] [Default 0]: Number of Fastest laps secured by the team.
 - 1.16. Podiums (Integer: smallint): [Not NULL] [Default 0]: Number of Podium winnings secured by the team.
2. Person:
 - 2.1. Person_ID (Integer: smallint): [Primary Key]: Unique identifier for the Person.
 - 2.2. Full_Name (String: varchar(100)): [Not NULL]: Full Name of the Person.
 - 2.3. First_Name (String: varchar(25)): First Name of the Person.
 - 2.4. Last_Name (String: varchar(25)): Last Name of the Person.
 - 2.5. Headshot_URL (String: varchar(200)): Url of the person's image.
 - 2.6. DOB (Date: date): Date of Birth of the Person.
 - 2.7. Team_ID (Integer: smallint): [Foreign Key]: Key referring to entity Team.
3. Driver (Inherits from Person):
 - 3.1. Broadcast_Name (String: varchar(27)): [Not NULL] [Unique]: Broadcast name of the Driver.
 - 3.2. Name_Acronym (String: char(3)): [Not NULL] [Unique]: 3 letter acronym of the Driver.
 - 3.3. Driver_Number (Integer: smallint): [Not NULL] [Unique]: Driver's number on livery.
 - 3.4. Country_Code (String: char(3)): [Not NULL]: Driver's Country of origin.
4. Team Principal (Inherits from Person):
 - 4.1. Brief (String: varchar(500)): Brief and highlights of the Team Principal since they joined.
 - 4.2. Year_Joined (Integer: smallint): [Not NULL]: Year of joining the current team.
5. Tracks:
 - 5.1. Track_ID (Integer: smallint): [Primary Key]: Unique ID of the Track.
 - 5.2. Name (String: char(50)): [Not NULL]: Name of the Track.
 - 5.3. Map_URL (String: char(250)): [Not NULL]: Map Design/layout.
 - 5.4. Type (Boolean: boolean): [Not NULL]: 0-Race Circuit, 1-Street Circuit.
 - 5.5. Direction (Boolean: boolean): [Not NULL] : 0-Clockwise, 1-Anticlockwise.
 - 5.6. Location (String: char(50)): [Not NULL]: City where the track is located.
 - 5.7. Country_Code (String: char(3)): [Not NULL]: Country Code where the track is located.

- 5.8. Length (Integer: smallint): [Not NULL]: Length of the track in meters.
 - 5.9. Turns (Integer: smallint): [Not NULL]: Number of turns on the circuit.
 - 5.10. Grand_Prix_Held (Integer: smallint): [Not NULL]: Number of races held at the circuit.
6. Races:
 - 6.1. Race_ID (Integer: smallint): [Primary Key]: Unique ID of the Race.
 - 6.2. Year (Integer: smallint): The Year the race was held or will be held
 - 6.3. Round (Integer: smallint): Round Number of the f1 calendar for that year
 - 6.4. Circuit_ID (Integer: smallint): [Foreign Key]: Unique ID of the track
 - 6.5. Date (Date: date): Date when race was or will be held
 - 6.6. Time (Time: time): Time when race was or will be held
7. Lap Timings:
 - 7.1. Lap_Timings_ID (Integer: integer): [Primary Key]: Unique identifier of the table.
 - 7.2. Race_ID (Integer: integer): [Foreign Key]: Race_ID from Race table.
 - 7.3. Person_ID (Integer: smallint): [Foreign Key]: Person_ID from Person table.
 - 7.4. Lap_Number (Integer: smallint): [Not NULL]: Current Lap of the driver.
 - 7.5. Position (Integer: smallint): [Not NULL]: Current position on the grid.
 - 7.6. Time (Time: time): Time taken to finish the lap.
 - 7.7. Millisecond (Integer: integer): Time to finish the lap in milliseconds.
8. Pit Stop:
 - 8.1. Pit_Stop_ID (Integer: smallint): [Primary Key]: Unique ID of the team pitstop for the driver.
 - 8.2. Race_ID (Integer: smallint): [Foreign Key]: Race ID from Race Table.
 - 8.3. Person_ID (Integer: smallint): [Foreign Key]: Person ID from the Person table.
 - 8.4. Stop (Integer: smallint): Number of Pit Stops.
 - 8.5. Lap (Integer: smallint): Lap number when the stop occurred.
 - 8.6. Time (Time: time): Time at which the Pit stop took place during the race.
 - 8.7. Duration (Float: real): Duration of the Pitstop.
 - 8.8. Millisecond (Integer: integer): Duration of the Pitstop in Milliseconds.
9. Current Race Data
 - 9.1. CRD_ID (Integer: integer): [Primary Key]: Unique ID of the Current Race.
 - 9.2. Race_ID (Integer: smallint): [Foreign Key]: Race ID from the race table.
 - 9.3. Track_ID (Integer: smallint): [Foreign Key]: Track ID from the Track Table.

- 9.4. Driver_ID (Integer: smallint): [Foreign Key]: Driver ID from the Driver Table.
 - 9.5. Speed (Integer: smallint): speed of the car.
 - 9.6. RPM (Integer: smallint): rpm of the car.
 - 9.7. DRS (Integer: smallint): drs of the car.
 - 9.8. Throttle (Integer: smallint): throttle pressure out of 100.
 - 9.9. Time (Time: time): Current Time.
 - 9.10. X (Integer: smallint): The 'x' value in a 3D Cartesian coordinate system representing the current approximate location of the car on the track.
 - 9.11. Y (Integer: smallint): The 'y' value in a 3D Cartesian coordinate system representing the current approximate location of the car on the track.
 - 9.12. Z (Integer: smallint): The 'z' value in a 3D Cartesian coordinate system representing the current approximate location of the car on the track.
 - 9.13. Position (Integer: smallint): Current Position of the driver.
 - 9.14. Lap Number (Integer: smallint): Current Lap number.
 - 9.15. Gap (Float: real): Gap to Leader in seconds.
 - 9.16. Interval (Float: real): Gap to the car ahead.
10. Views / Visitors:
- 10.1. View_ID (Integer: bigint): [Primary Key]: Unique ID the visitors viewing the page.
 - 10.2. Page (String: varchar(100)): Name of the page visited.
 - 10.3. URL (String: varchar(100)): URL of the page visited.
 - 10.4. IP (String: varchar(15)): IP of the user visiting.
 - 10.5. Time (Time: time): Time when the user visited.
 - 10.6. Visit (Boolean: boolean): 1 when the user is first visiting, 0 for every minute after. This is used to track how long a user is on a page.

ER Diagram:

