F1 TEAM PERFORMANCE TRACKER

MILESTONE: CONCEPTUAL MODEL (EER AND UML)

GROUP 14

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Percentage of effort contributed by student 1: 50%

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Submission Date: 10-13-2024

F1 Team Performance Data Management System - EER and UML Diagram

Entities and Attributes

1. **Team**
   a. TeamID(PK)
   b. TeamName
   c. EngineSupplier
   d. Team Principal
   e. HeadQuarters
   f. Budget

   A team can be constructor team (same engine and same car manufacturer) or a non-constructor team.

2. **Drivers**
   a. TeamID(FK)
   b. DriverID(PK)
   c. Driver name
   d. Nationality
   e. Date of Birth
   f. Career Wins

   A Driver can be either reserve driver or the main driver. Each team has two main drivers.

3. **Driver Standings**
   a. DriverID(FK)
   b. SeasonID(FK)
   c. Points
   d. Wins
   e. Rank
   f. Podiums

   A unique record can be identified by the driver ID and season ID.

4. **Constructor Standing**
   a. TeamID(FK)
   b. SeasonID(FK)
   c. Points
   d. Wins
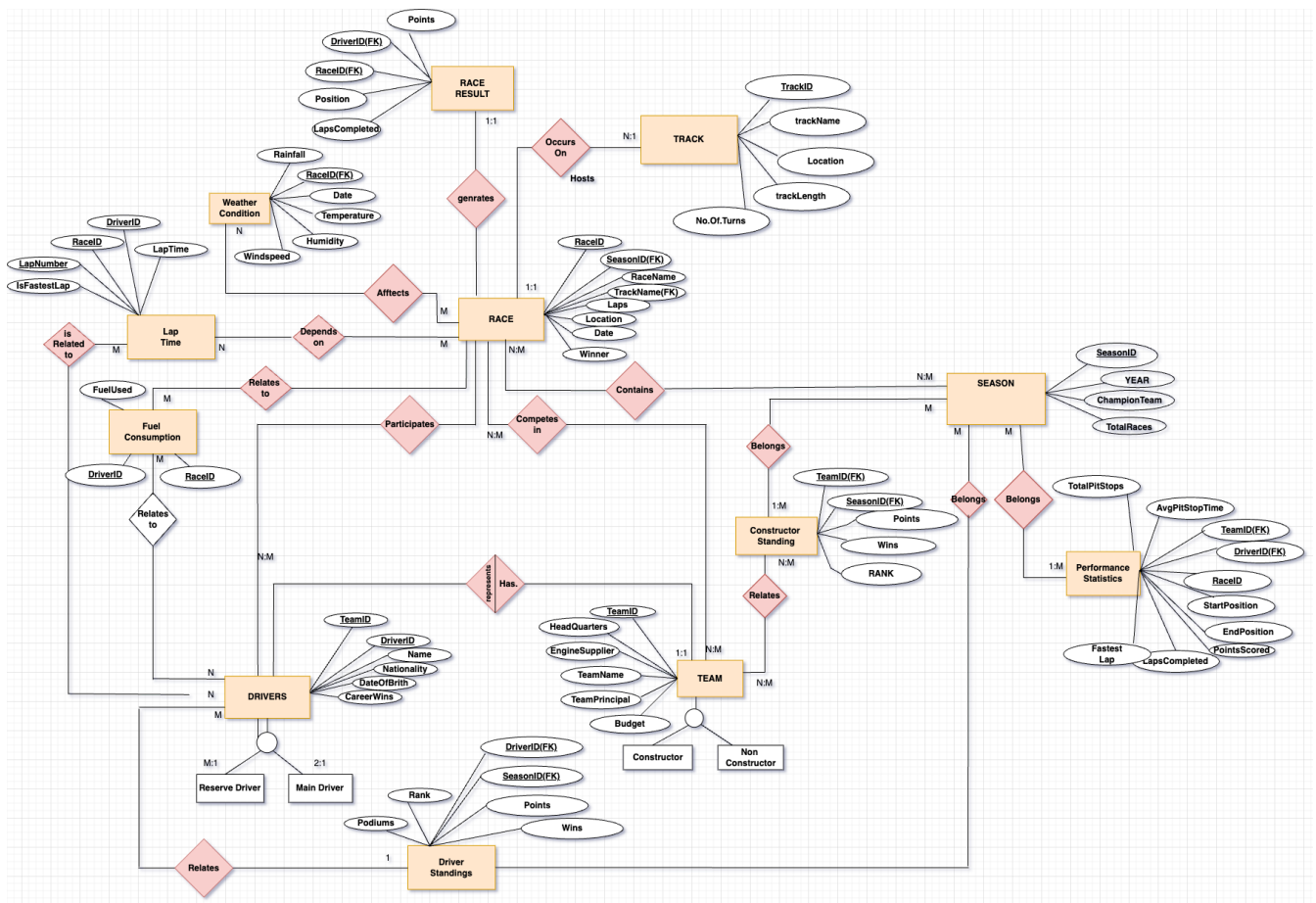   e. Rank

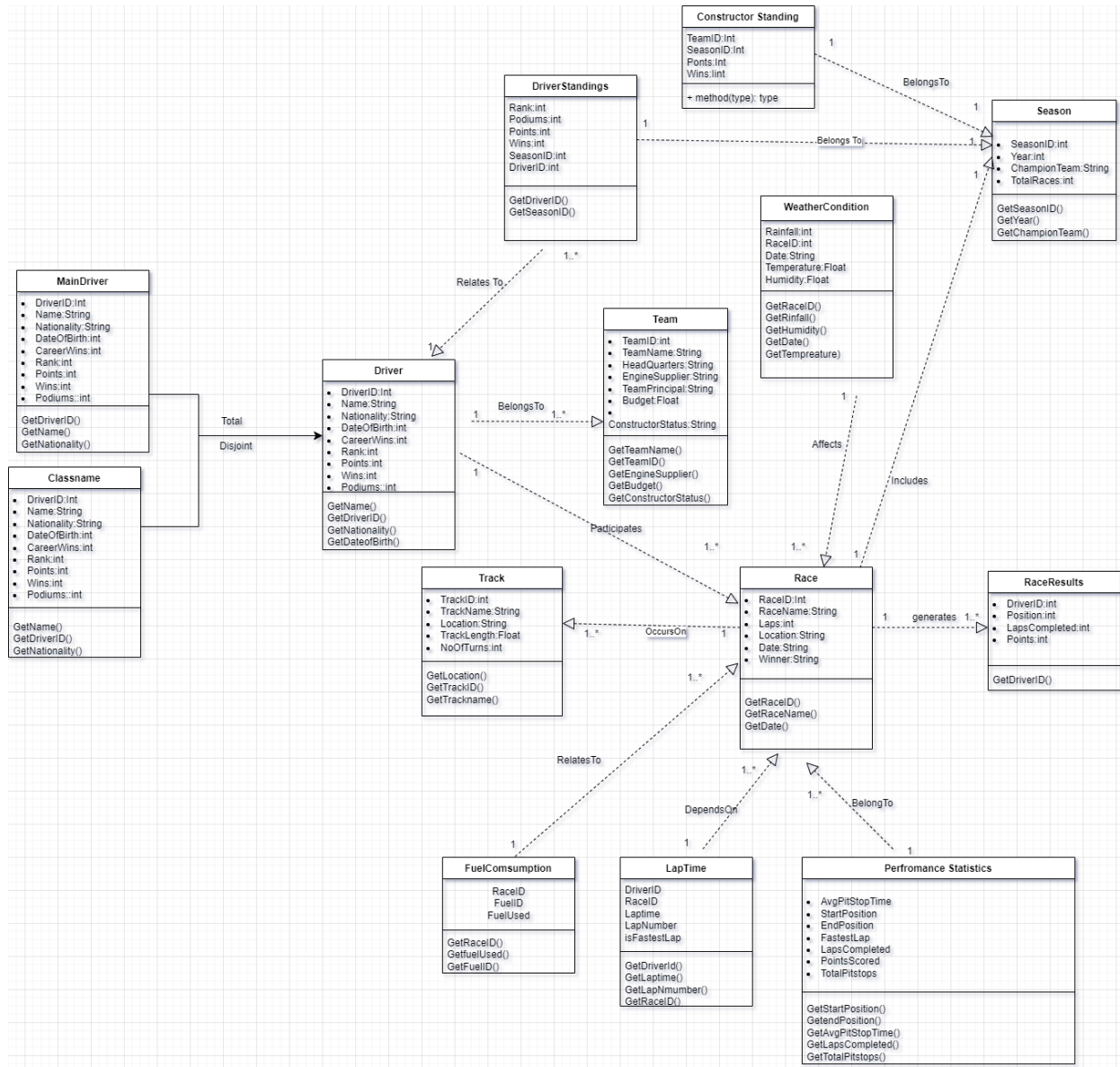   A unique record can be identified by teamID and seasonID

5. **Race**
   a. RaceID(PK)
   b. SeasonID(FK)
   c. Race Name
   d. TrackName(FK)
   e. Laps

      f.   Location

      g.   Date

      h.   Winner

6. **Season**
   a. SeasonID(PK)
   b. Year
   c. Champion Team
   d. Total Number of Races

7. **Track**
   a. TrackID(FK)
   b. TrackName
   c. Location
   d. Track length
   e. No. Of turns

8. **Race result**
   a. Points
   b. DriverID(FK)
   c. RaceID(FK)
   d. Position
   e. LapsCompleted

9. **Weather Condition**
   a. Rainfall
   b. RaceID(FK)
   c. Date
   d. Temperature
   e. Humidity
   f. Windspeed

10. **LapTime**
    a. DriverID(FK)
    b. RaceID(FK)
    c. Laptime
    d. LapNumber
    e. IsFastestLap

11. **Fuel Consumption**
    a. RaceID(FK)
    b. DriverID(FK)
    c. FuelUsed

12. **Performance Statistics**
    a. RaceID(FK)
    b. TeamID(FK)
    c. DriverID(FK)

      d.   Startposition

      e.   Endposition

      f.   Points Scored

      g.   Laps completed

      h.   Fastest lap

      i.   Average pit stop time

      j.   Total pit stops

EER Diagram of F1 Team Performance Tracker based on the entities and attributes listed above

UML Diagram of F1 Team Performance Tracker