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# The Formula 1 Database

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**TeamMate 1** Royston E Tauro

**TeamMate 2** Rohan M -

**TeamMate 3** Rahul Manjunath



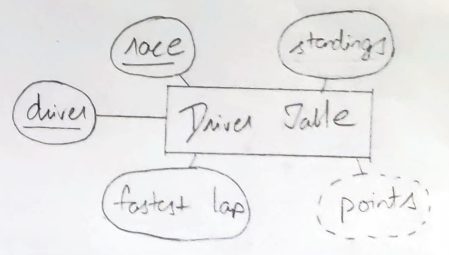
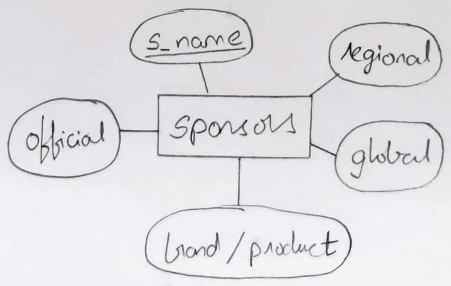
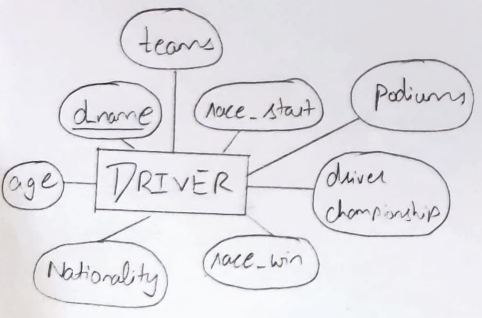
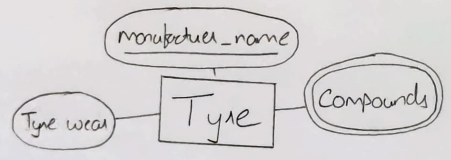
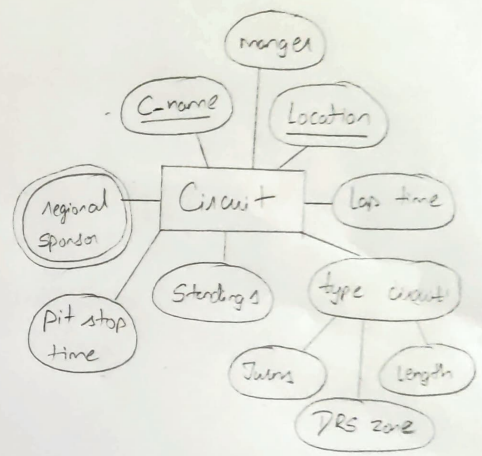
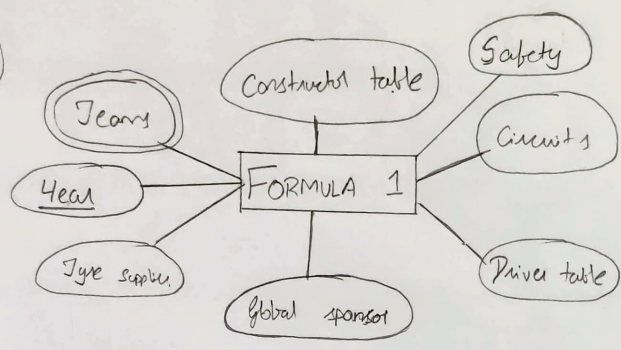
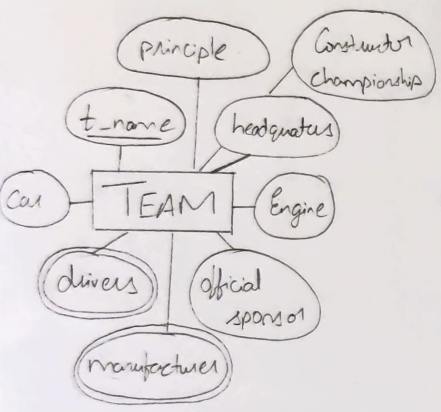
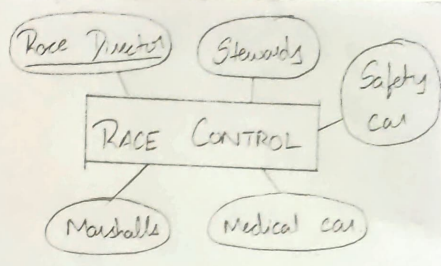
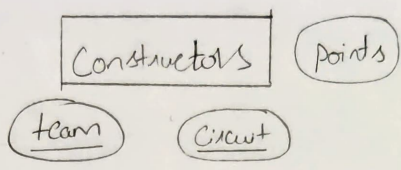
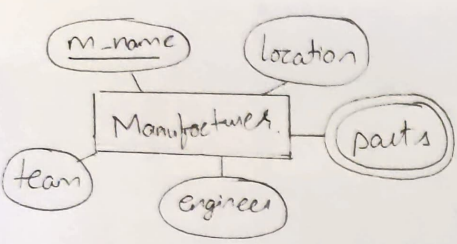
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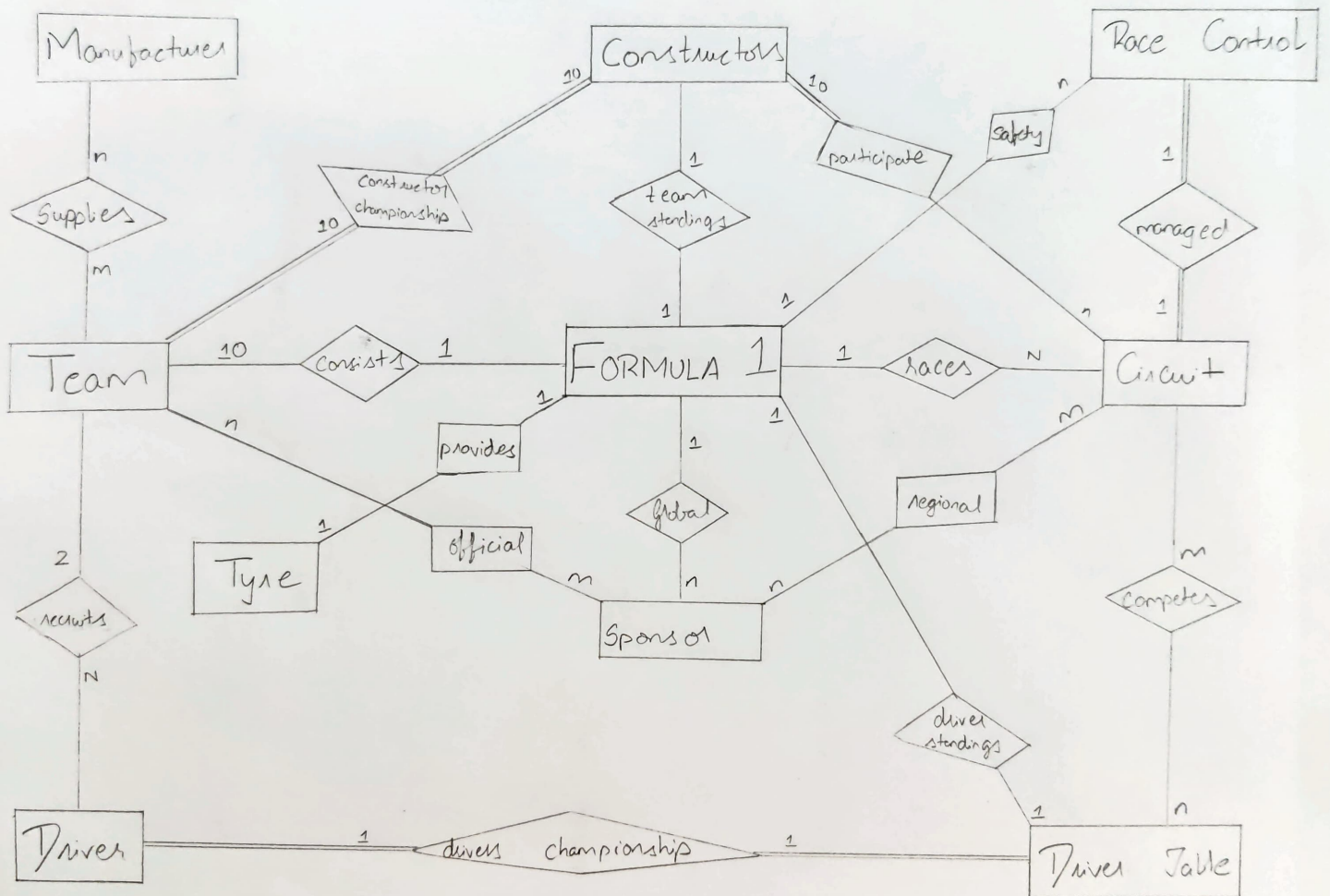
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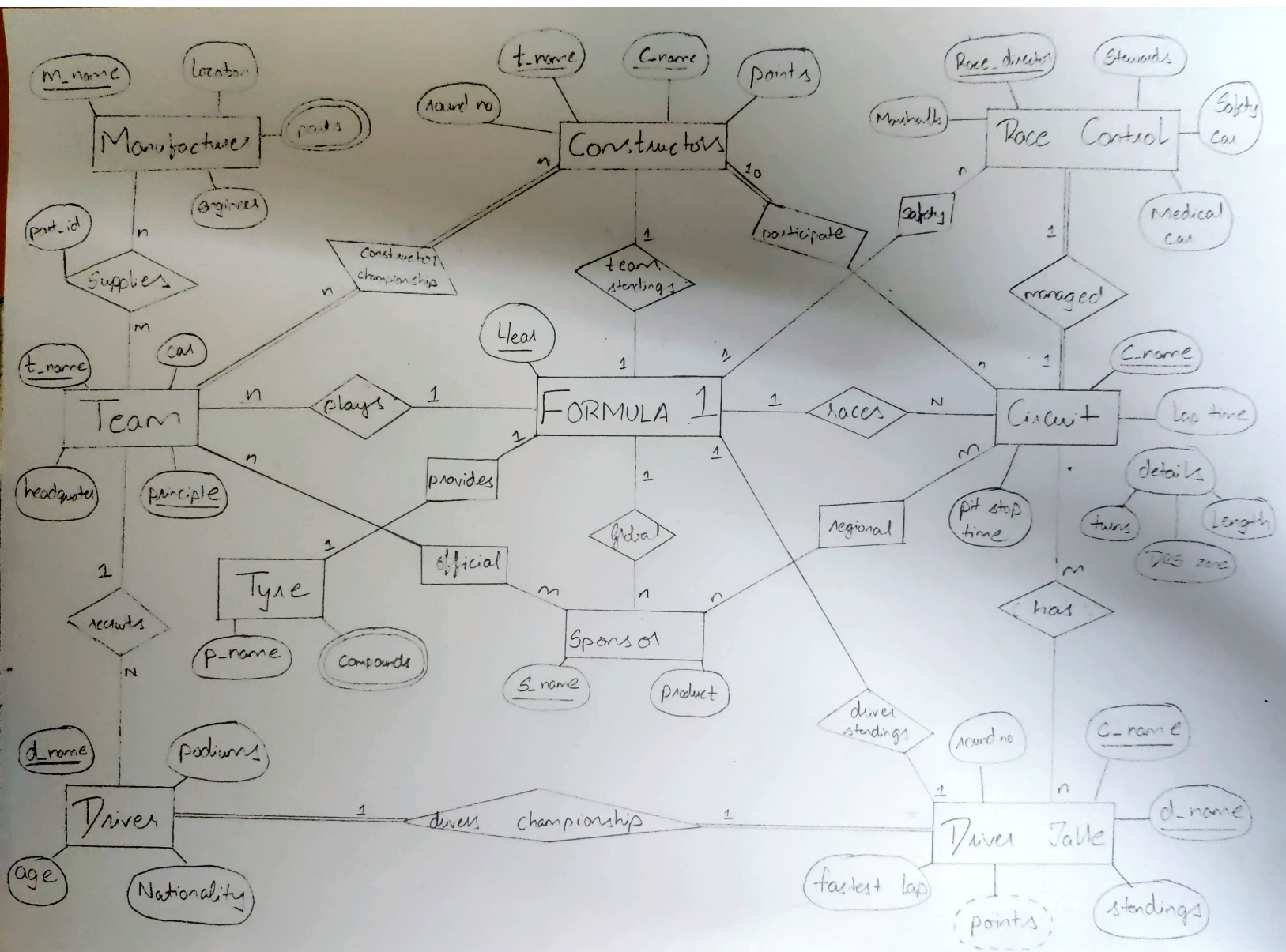
# 1. Problem Statement

**Formula 1** is held every year where 10 teams participate and race in different circuits around the world. Each team has at least 2 drivers who drive for that team in every race for the entire year. The team is managed by team principle and they manufacture a car every year in their factory headquarters. The teams can choose any driver across the world, the success of the driver is measured by the number of podiums (top 3 finishes) in his career. Every year in Formula 1 the drivers compete against each other in various races held at various circuits. They are awarded points based on the position they finish at the end of the race. Each race has a different track, with different features including (length of track, number of turns, DRS zones, pit stop length) lap times. Every race is managed by a Race control board appointed by the Formula 1 managers. The race control includes a race director, stewards and marshals who look at the fairness and safety of the sport with the help of medical and safety cars. In Formula 1 the teams also compete for constructor's title where they gain points every race. The team can have multiple manufacturers supplying different parts to them who are located in different parts of the world, the manufacturer can also supply to multiple teams in Formula 1. All the teams will race with a similar set of Tyre compounds provided by a Tyre manufacturer to Formula 1. Formula 1 has a global sponsor apart from this every team has their own official sponsors and each race has a regional sponsor

# 2. Conceptual Model of the database diagram







### **3. ER tool used - Dia**

Dia is a free and open source general-purpose diagramming software, developed originally by Alexander Larsson. The tool is easy to use and has automatic settings of attribute varieties like multi-valued , derived etc. Its a simple drag and drop tool which makes things even more easier as you wont waste time rectifying the size of the entities, relationships etc.

What makes Dia even more great is that its completely open source i.e. anybody can see and access its code base. Below are the installation steps for the same in Debian and Arch based systems:-

#### **3.1 Debian**

Install dia by entering the following commands in the terminal:

```
sudo apt update  
sudo apt install dia
```

#### **3.2 Arch**

Install dia by entering the following commands in the terminal:

```
sudo pacman -Sy dia
```

## 4. ER diagram via ER tool

