

CS 451 Final Project

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1 Cover Page

- **Author:** Zane Globus-O'Harra
- **Project Title:** Formula 1 Database
- **Connection Information**
 - **Port Number:** 3372
 - **Host Name:** ix
 - **Guest Account Login & Password:**
login: guest
password: guest
 - **Database Name:** f1db
- **Project URL:** TODO
- **Highlights:** TODO

2 Summary

2.1 High Level Overview

The world that will be modeled will be a simplified version of a Formula 1 (F1) car-racing season. This will include the drivers, the teams the drivers are in, the races, and the results of those races.

2.2 Kinds of Data

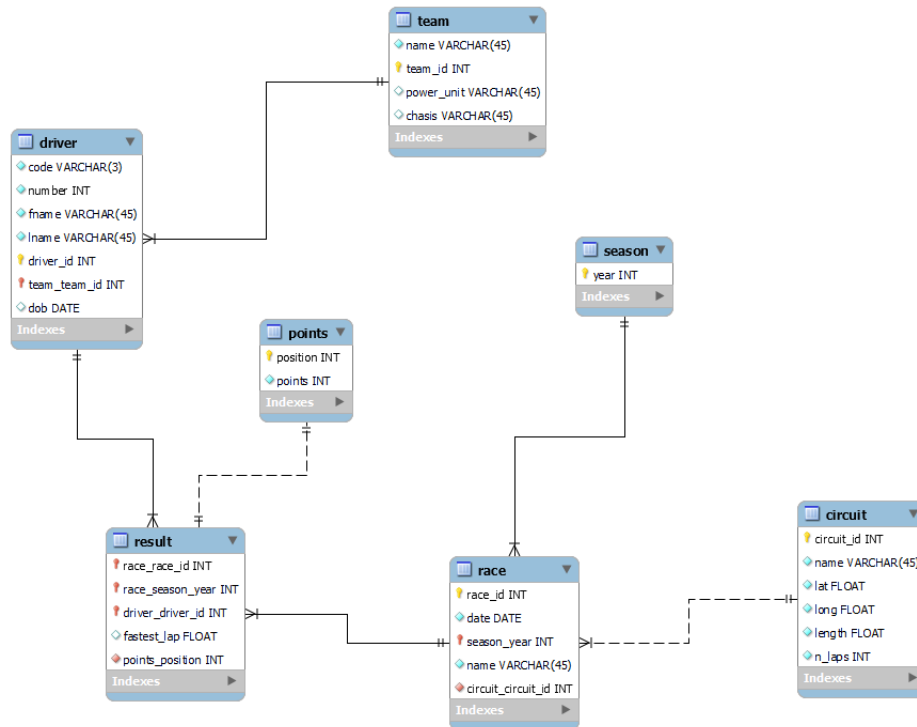
The kinds of data that will be stored will be about the drivers, the teams, and the results that those drivers receive in the races that they participate in. I'm not sure how in-depth you want me to go when discussing kinds of data, but I think that the high level overview and the ER diagram in the Logical Design section make it fairly clear the kinds of data that I will be keeping track of.

2.3 Application Programs

The application programs that are desired are a way to summarize the results in a season, and determine who was the champion for that season. I also want to look at the average results of each driver, and give a summary of their best and worst races in a season (if I add data for multiple seasons, then I will also be able to look at their results across their career).

Each team will have two drivers, and I will have a way to compare the drivers of one team. I will also have a way to look at the results of a team over a season (the team's results is the sum of the results of its drivers), and the results of that team over its tenure in F1.

3 Logical Design



4 Physical Design

Table names are in **bold and CAPITALIZED**, primary keys are underlined, and foreign keys are *italicized*. If an attribute is a primary key and a foreign key, then

it is *underlined and italicized*. Not null requirements are indicated. Primary keys and foreign keys are always not null.

- **TEAM:** team_id, name, power_unit, chassis
 - not null: power_unit, chassis
- **DRIVER:** driver_id, *team_team_id*, code, number, fname, lname, dob
 - not null: code, number, fname, lname
- **RESULT:** race_race_id, race_season_year, driver_driver_id, *points_position*, fastest_lap
- **POINTS:** position, points
 - not null: points
- **RACE:** race_id, season_year, circuit_circuit_id, date, name
 - not null: date, name
- **SEASON:** year
- **CIRCUIT:** circuit_id, name, lat, long, length, n_laps
 - not null: name, lat, long, length, n_laps

5 List of Applications

- (1) input: driver, season
output: A single driver's race results across that season
- (2) input: team, season
output: A single team's race results across that season
- (3) input: season
output: summary of the all driver's results across that season
- (4) input: season
output: summary of the team (constructor) results of that season
- (5) input: driver, season
output: best and worst results of that driver
- (6) input: driver, season
output: average results of that driver across that season

- (7) input: team, season
output: average results of that team across that season
- (8) input: team, season
output: for each race in that season, compare the results of the drivers in that team
- (9) input: race, season
output: summary of the driver's results from that one race in that season
- (10) input: race, season
output: summary of the team's results from that race in that season

6 User's Guide

TODO

7 Contents of Tables

TODO

8 Implementation Code

TODO

9 Conclusion

TODO