CS 350 – DATABASE SYSTEMS

TERM PROJECT

PART 1: Data Requirements

1. Data Requirements

- Each circuit has an ID, reference, name, location, country, latitude, longitude, altitude and URL.
- Each circuit hosts **at least one** race.
- Each constructor has an ID, reference, name, nationality and URL.
- Each constructor has **0 or more** constructor standings, **0 or more** qualifying's and **0 or more** results.
- Each constructor standing has an ID, points, position and number of wins.
- Each constructor standing has **exactly one** constructor and **exactly one** race.
- Each driver has an ID, reference, number, code, forename, surname, date of birth, nationality and URL.
- Each driver has **0 or more** pit stops, **0 or more** lap times, **0 or more** driver standings, **0 or more** qualifying's and **0 or more** results.
- Each lap time has a lap number, position, time in h:mm:ss and millisecond format.
- Each lap time has **exactly one** race and **exactly one** driver.
- Each pit stop has a stop number, lap number, time, duration and time in milliseconds.
- Each pit stop has **exactly one** race and **exactly one** driver.
- Each qualifying has an ID, number, position and times for Q1, Q2 and Q3.
- Each qualifying has **exactly one** race, **exactly one** driver and **exactly one** constructor.
- Each race has an ID, round (x'th race), name, date, time, URL.
- Each race has **exactly one** season, **exactly one** constructor standing, **exactly one** circuit, **0 or more** pit stops, **0 or more** driver standings, **0 or more** results, **0 or more** qualifying's and **0 or more** lap times.
- Each result has an ID, number, grid, position, points, laps count, time in hours, time in milliseconds, fastest lap, rank, fastest lap time, fastest lap speed and a status.
- Each result has **exactly one** race, **exactly one** constructor and **exactly one** driver.
- Each season has a year and URL.
- Each season has **0 or more** races.
- Each status has an ID and a status kind (This is a lookup table).