

4660 Final Project Database Design
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Driver Table: *stores information about the drivers and overall career performance.*

```
CREATE TABLE DriverTable (  
    driver_id int PRIMARY KEY,  
    first_name VARCHAR(100) NOT NULL,  
    last_name VARCHAR(100) NOT NULL,  
    dob DATE NOT NULL,  
    nationality VARCHAR(100),  
    team_id INT,  
    total_points INT DEFAULT 0,  
    total_wins INT DEFAULT 0,  
    total_podiums INT DEFAULT 0,  
    total_races INT DEFAULT 0,  
    FOREIGN KEY (team_id) REFERENCES TeamTable(team_id)  
);  
GO  
  
INSERT INTO DriverTable (driver_id, first_name, last_name, dob, nationality, team_id, total_points, total_wins, total_podiums, total_races)  
VALUES (674, 'Max', 'Verstappen', '1997-09-30', 'Netherlands', NULL, 297, 62, 111, 206);  
GO  
  
INSERT INTO DriverTable (driver_id, first_name, last_name, dob, nationality, team_id, total_points, total_wins, total_podiums, total_races)  
VALUES (75, 'Lando', 'Norris', '1999-11-13', 'United Kingdom', NULL, 964, 3, 25, 125);  
GO  
  
INSERT INTO DriverTable (driver_id, first_name, last_name, dob, nationality, team_id, total_points, total_wins, total_podiums, total_races)  
VALUES (502, 'Charles', 'Leclerc', '1997-10-16', 'Monaco', NULL, 1381, 8, 41, 144);  
GO  
  
INSERT INTO DriverTable (driver_id, first_name, last_name, dob, nationality, team_id, total_points, total_wins, total_podiums, total_races)  
VALUES (729, 'Oscar', 'Piastri', '2001-04-06', 'Astrailia', NULL, 359, 2, 9, 43);  
GO  
  
INSERT INTO DriverTable (driver_id, first_name, last_name, dob, nationality, team_id, total_points, total_wins, total_podiums, total_races)  
VALUES (6, 'Carlos', 'Sainz', '1994-09-01', 'Spain', NULL, 1226, 4, 25, 203);  
GO  
  
INSERT INTO DriverTable (driver_id, first_name, last_name, dob, nationality, team_id, total_points, total_wins, total_podiums, total_races)  
VALUES (412, 'George', 'Russel', '1998-02-15', 'United Kingdom', NULL, 661, 2, 14, 125);  
GO  
  
INSERT INTO DriverTable (driver_id, first_name, last_name, dob, nationality, team_id, total_points, total_wins, total_podiums, total_races)  
VALUES (804, 'Lewis', 'Hamilton', '1985-01-07', 'United Kingdom', NULL, 4829, 105, 201, 353);  
GO  
  
INSERT INTO DriverTable (driver_id, first_name, last_name, dob, nationality, team_id, total_points, total_wins, total_podiums, total_races)  
VALUES (170, 'Sergio', 'Perez', '1990-01-26', 'Mexico', NULL, 1637, 6, 39, 278);  
GO  
  
INSERT INTO DriverTable (driver_id, first_name, last_name, dob, nationality, team_id, total_points, total_wins, total_podiums, total_races)  
VALUES (393, 'Fernanda', 'Alonso', '1981-07-29', 'Spain', NULL, 2329, 32, 106, 398);  
GO  
  
INSERT INTO DriverTable (driver_id, first_name, last_name, dob, nationality, team_id, total_points, total_wins, total_podiums, total_races)  
VALUES (931, 'Nico', 'Hulkenberg', '1987-08-19', 'Germany', NULL, 561, 0, 0, 224);  
GO
```

	driver_id	first_name	last_name	dob	nationality	team_id	total_points	total_wins	total_podiums	total_races
1	75	Lando	Norris	1999-11-13	United Kingdom	1353	964	3	25	125
2	170	Sergio	Perez	1990-01-26	Mexico	1843	1637	6	39	278
3	393	Fernanda	Alonso	1981-07-29	Spain	1531	2329	32	106	398
4	502	Charles	Leclerc	1997-10-16	Monaco	1470	1381	8	41	144
5	674	Max	Verstappen	1997-09-30	Netherlands	1843	297	62	111	206
6	729	Oscar	Piastri	2001-04-06	Astrailia	1353	359	2	9	43
7	804	Lewis	Hamilton	1985-01-07	United Kingdom	1173	4829	105	201	353
8	931	Nico	Hulkenberg	1987-08-19	Germany	1963	561	0	0	224

Teams Table: *stores information about F1 teams and overall performance.*

```
CREATE TABLE TeamTable (  
    team_id INT PRIMARY KEY,  
    team_name VARCHAR(100) NOT NULL,  
    team_nationality VARCHAR(100),  
    engineer_id INT,  
    total_points INT DEFAULT 0,  
    total_wins INT DEFAULT 0,  
    total_podiums INT DEFAULT 0,  
    FOREIGN KEY (engineer_id) REFERENCES EngineerTable(engineer_id)  
);  
GO  
  
INSERT INTO TeamTable (team_id, team_name, team_nationality, engineer_id, total_points, total_wins, total_podiums)  
VALUES (1353, 'McLaren', 'United Kingdom', 2748, 593, 5, 10);  
GO  
  
INSERT INTO TeamTable (team_id, team_name, team_nationality, engineer_id, total_points, total_wins, total_podiums)  
VALUES (1470, 'Ferrari', 'Italy', 2383, 557, 5, 18);  
GO  
  
INSERT INTO TeamTable (team_id, team_name, team_nationality, engineer_id, total_points, total_wins, total_podiums)  
VALUES (1843, 'RedBull Racing', 'Austria', 2768, 544, 8, 17);  
GO  
  
INSERT INTO TeamTable (team_id, team_name, team_nationality, engineer_id, total_points, total_wins, total_podiums)  
VALUES (1173, 'Mercedes', 'Germany', 2241, 382, 3, 7);  
GO  
  
INSERT INTO TeamTable (team_id, team_name, team_nationality, engineer_id, total_points, total_wins, total_podiums)  
VALUES (1531, 'Aston Martin', 'United Kingdom', 2988, 86, 0, 9);  
GO  
  
INSERT INTO TeamTable (team_id, team_name, team_nationality, engineer_id, total_points, total_wins, total_podiums)  
VALUES (1963, 'Haas', 'USA', 2501, 46, 0, 0);  
GO  
  
INSERT INTO TeamTable (team_id, team_name, team_nationality, engineer_id, total_points, total_wins, total_podiums)  
VALUES (1480, 'Williams', 'United Kingdom', 2372, 17, 0, 0);  
GO
```

	team_id	team_name	team_nationality	engineer_id	total_points	total_wins	total_podiums
1	1173	Mercedes	Germany	2241	382	3	7
2	1353	McLaren	United Kingdom	2748	593	5	10
3	1470	Ferrari	Italy	2383	557	5	18
4	1480	Williams	United Kingdom	2372	17	0	0
5	1531	Aston Martin	United Kingdom	2988	86	0	9
6	1843	RedBull Racing	Austria	2768	544	8	17
7	1963	HaaS	USA	2501	46	0	0

Engineer Table: *stores information about F1 engineer/constructors.*

```
CREATE TABLE EngineerTable (  
    engineer_id INT PRIMARY KEY,  
    engineer_name VARCHAR(100) NOT NULL,  
    nationality VARCHAR(100),  
    total_points INT DEFAULT 0,  
    total_wins INT DEFAULT 0  
);  
GO
```

```
INSERT INTO EngineerTable (engineer_id, engineer_name, nationality, total_points, total_wins)  
VALUES (2241, 'Mercedes Benz', 'Germany', 14713.50, 220);  
GO
```

```
INSERT INTO EngineerTable (engineer_id, engineer_name, nationality, total_points, total_wins)  
VALUES (2383, 'Ferrari', 'Italy', 10299, 248);  
GO
```

```
INSERT INTO EngineerTable (engineer_id, engineer_name, nationality, total_points, total_wins)  
VALUES (2768, 'Red Bull', 'United Kingdom, Austria', 7792, 121);  
GO
```

```
INSERT INTO EngineerTable (engineer_id, engineer_name, nationality, total_points, total_wins)  
VALUES (2988, 'Aston Martin', 'United Kingdom', 498, 0);  
GO
```

```
INSERT INTO EngineerTable (engineer_id, engineer_name, nationality, total_points, total_wins)  
VALUES (2501, 'HaaS', 'USA', 295, 0);  
GO
```

```
INSERT INTO EngineerTable (engineer_id, engineer_name, nationality, total_points, total_wins)  
VALUES (2372, 'Williams', 'United Kingdom', 3637, 114);  
GO
```

	engineer_id	engineer_name	nationality	total_points	total_wins
1	2241	Mercedes Benz	Germany	14713	220
2	2372	Williams	United ...	3637	114
3	2383	Ferrari	Italy	10299	248
4	2501	HaaS	USA	295	0
5	2748	McLaren	United ...	6884	188
6	2768	Red Bull	United ...	7792	121
7	2988	Aston Martin	United ...	498	0

Race Table: *stores information about races in the 2024 season.*

```
CREATE TABLE RaceTable (  
    race_id INT PRIMARY KEY,  
    race_name VARCHAR(100) NOT NULL,  
    season_year INT NOT NULL,  
    race_date DATE NOT NULL,  
    race_location VARCHAR(100),  
    race_type VARCHAR(100)  
);  
GO
```

```
INSERT INTO RaceTable (race_id, race_name, season_year, race_date, race_location, race_type)  
VALUES (3086, 'GP Australia', 2024, '2024-03-24', 'Melbourn', 'Grand Prix');  
GO
```

```
INSERT INTO RaceTable (race_id, race_name, season_year, race_date, race_location, race_type)  
VALUES (3390, 'GP Japan', 2024, '2024-04-07', 'Suzuka', 'Grand Prix');  
GO
```

```
INSERT INTO RaceTable (race_id, race_name, season_year, race_date, race_location, race_type)  
VALUES (3775, 'Miami GP', 2024, '2024-05-05', 'Florida', 'Grand Prix');  
GO
```

```
INSERT INTO RaceTable (race_id, race_name, season_year, race_date, race_location, race_type)  
VALUES (3449, 'GP Romagna', 2024, '2024-05-19', 'Imola', 'Grand Prix');  
GO
```

```
INSERT INTO RaceTable (race_id, race_name, season_year, race_date, race_location, race_type)  
VALUES (3522, 'GP Monaco', 2024, '2024-05-26', 'Monaco', 'Grand Prix');  
GO
```

```
INSERT INTO RaceTable (race_id, race_name, season_year, race_date, race_location, race_type)  
VALUES (3249, 'GP Great Britain', 2024, '2024-07-07', 'Northhamptonshire', 'Grand Prix');  
GO
```

	race_id	race_name	season_year	race_date	race_location	race_type
1	3086	GP Australia	2024	2024-03-24	Melbourn	Grand Prix
2	3249	GP Great Britain	2024	2024-07-07	Northhamptonshire	Grand Prix
3	3390	GP Japan	2024	2024-04-07	Suzuka	Grand Prix
4	3522	GP Monaco	2024	2024-05-26	Monaco	Grand Prix

Race Result Table: *stores information about the 2024 race results for each driver.*

```
CREATE TABLE RaceResultTable (
    result_id INT PRIMARY KEY,
    race_id INT,
    driver_id INT,
    team_id INT,
    position INT,
    points_scored INT,
    lap_time TIME,
    race_status VARCHAR(100),
    FOREIGN KEY(race_id) REFERENCES RaceTable (race_id),
    FOREIGN KEY(driver_id) REFERENCES DriverTable(driver_id),
    FOREIGN KEY(team_id) REFERENCES TeamTable (team_id)
);
GO

INSERT INTO RaceResultTable (result_id, race_id, driver_id, team_id, position, points_scored, lap_time, race_status)
VALUES
(41, 3086, 75, 1353, 3, 25, '01:20:32.747', 'Finished'),
(42, 3086, 170, 1843, 5, 10, '01:20:53.152', 'Finished'),
(43, 3086, 393, 1531, 8, 4, '01:22:07.800', 'Finished'),
(44, 3086, 502, 1470, 2, 19, '01:20:29.209', 'Finished'),
(45, 3086, 674, 1843, NULL, NULL, NULL, 'DNF'),
(46, 3086, 729, 1353, 4, 12, '01:20:52.613', 'Finished'),
(47, 3086, 804, 1173, NULL, NULL, NULL, 'DNF'),
(48, 3086, 931, 1963, NULL, NULL, NULL, 'DNF'),

(49, 3249, 75, 1353, 3, 15, '01:22:34.606', 'Finished'),
(50, 3249, 170, 1843, 17, 0, NULL, 'Finished'),
(51, 3249, 393, 1531, 8, 4, '01:23:30.600', 'Finished'),
(52, 3249, 502, 1470, 14, 0, NULL, 'Finished'),
(53, 3249, 674, 1843, 2, 18, '01:22:28.524', 'Finished'),
(54, 3249, 729, 1353, 4, 12, '01:22:39.488', 'Finished'),
(55, 3249, 804, 1173, 1, 25, '01:22:27.059', 'Finished'),
(56, 3249, 931, 1963, 5, 8, '01:22:42.781', 'Finished'),

(57, 3390, 75, 1353, 5, 10, '01:54:53.300', 'Finished'),
(58, 3390, 170, 1843, 2, 18, '01:54:36.100', 'Finished'),
(59, 3390, 393, 1531, 6, 8, '01:55:07.800', 'Finished'),
(60, 3390, 502, 1470, 4, 12, '01:54:50.100', 'Finished'),
(61, 3390, 674, 1843, 1, 26, '01:54:23.566', 'Finished'),
(62, 3390, 729, 1353, 8, 4, '01:55:11.100', 'Finished'),
(63, 3390, 804, 1173, 9, 2, '01:55:12.200', 'Finished'),
(64, 3390, 931, 1963, 11, 0, NULL, 'Finished'),

(65, 3522, 75, 1353, 4, 12, '02:23:29.407', 'Finished'),
(66, 3522, 170, 1843, NULL, NULL, NULL, 'DNF'),
(67, 3522, 393, 1531, 11, 0, NULL, 'Finished'),
(68, 3522, 502, 1470, 1, 25, '02:23:15.554', 'Finished'),
(69, 3522, 674, 1843, 6, 8, '02:23:23.566', 'Finished'),
(70, 3522, 729, 1353, 2, 18, '02:23:22.709', 'Finished'),
(71, 3522, 804, 1173, 7, 7, '02:23:30.462', 'Finished'),
(72, 3522, 931, 1963, NULL, NULL, NULL, 'DNF');
GO
```

	result_id	race_id	driver_id	team_id	position	points_scored	lap_time	race_status
1	41	3086	75	1353	3	25	01:20:32.7470000	Finished
2	42	3086	170	1843	5	10	01:20:53.1520000	Finished
3	43	3086	393	1531	8	4	01:22:07.8000000	Finished
4	44	3086	502	1470	2	19	01:20:29.2090000	Finished
5	45	3086	674	1843	NULL	NULL	NULL	DNF
6	46	3086	729	1353	4	12	01:20:52.6130000	Finished
7	47	3086	804	1173	NULL	NULL	NULL	DNF
8	48	3086	931	1963	NULL	NULL	NULL	DNF
9	49	3249	75	1353	3	15	01:22:34.6060000	Finished
10	50	3249	170	1843	17	0	NULL	Finished
11	51	3249	393	1531	8	4	01:23:30.6000000	Finished
12	52	3249	502	1470	14	0	NULL	Finished
13	53	3249	674	1843	2	18	01:22:28.5240000	Finished
14	54	3249	729	1353	4	12	01:22:39.4880000	Finished
15	55	3249	804	1173	1	25	01:22:27.0590000	Finished
16	56	3249	931	1963	5	8	01:22:42.7810000	Finished
17	57	3390	75	1353	5	10	01:54:53.3000000	Finished
18	58	3390	170	1843	2	18	01:54:36.1000000	Finished
19	59	3390	393	1531	6	8	01:55:07.8000000	Finished
20	60	3390	502	1470	4	12	01:54:50.1000000	Finished
21	61	3390	674	1843	1	26	01:54:23.5660000	Finished
22	62	3390	729	1353	8	4	01:55:11.1000000	Finished
23	63	3390	804	1173	9	2	01:55:12.2000000	Finished
24	64	3390	931	1963	11	0	NULL	Finished
25	65	3522	75	1353	4	12	02:23:29.4070000	Finished
26	66	3522	170	1843	NULL	NULL	NULL	DNF
27	67	3522	393	1531	11	0	NULL	Finished
28	68	3522	502	1470	1	25	02:23:15.5540000	Finished
29	69	3522	674	1843	6	8	02:23:23.5660000	Finished
30	70	3522	729	1353	2	18	02:23:22.7090000	Finished
31	71	3522	804	1173	7	7	02:23:30.4620000	Finished
32	72	3522	931	1963	NULL	NULL	NULL	DNF

Seasons Table: *tracks yearly champion drivers from 2023 – 2019.*

```
CREATE TABLE SeasonsTable (  
    season_year INT PRIMARY KEY,  
    champion_driver_id INT,  
    champion_team_id INT,  
    total_races INT,  
    season_start_date DATE,  
    season_end_date DATE,  
    FOREIGN KEY (champion_driver_id) REFERENCES DriverTable(driver_id),  
    FOREIGN KEY (champion_team_id) REFERENCES TeamTable(team_id)  
);  
GO  
  
INSERT INTO SeasonsTable (season_year, champion_driver_id, champion_team_id, total_races, season_start_date, season_end_date)  
VALUES  
    (2023, 674, 1843, 22, '2023-03-05', '2023-11-26'),  
    (2022, 674, 1843, 22, '2022-03-20', '2022-11-20'),  
    (2021, 804, 1173, 22, '2021-03-18', '2021-12-05'),  
    (2020, 804, 1173, 22, '2020-07-05', '2020-12-13'),  
    (2019, 804, 1173, 22, '2019-03-17', '2019-12-01');  
GO
```

	season_year	champion_driver_id	champion_team_id	total_races	season_start_date	season_end_date
1	2019	804	1173	22	2019-03-17	2019-12-01
2	2020	804	1173	22	2020-07-05	2020-12-13
3	2021	804	1173	22	2021-03-18	2021-12-05
4	2022	674	1843	22	2022-03-20	2022-11-20
5	2023	674	1843	22	2023-03-05	2023-11-26