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| Ergast Database User Guide |
| Version: 1.0 Date: 31 January 2021 Author: Chris Newell |

| List of Tables | General Notes |
|---|---|
| circuits constructorResults constructorStandings constructors driverStandings drivers lapTimes pitStops qualifying races results seasons status | Dates, times and durations are in ISO 8601 format Dates and times are UTC Strings use UTF-8 encoding Primary keys are for internal use only Fields ending with "Ref" are unique identifiers for external use A grid position of '0' is used for starting from the pitlane Labels used in the positionText fields: "D" - disqualified "E" - excluded "F" - failed to qualify "N" - not classified "R" - retired "W" - withdrew |

circuits table

| Field | Type | Null | Key | Default | Extra | Description |
|------------|--------------|------|-----|---------|----------------|---------------------------|
| circuitId | int(11) | NO | PRI | NULL | auto_increment | Primary key |
| circuitRef | varchar(255) | NO | | | | Unique circuit identifier |
| name | varchar(255) | NO | | | | Circuit name |
| location | varchar(255) | YES | | NULL | | Location name |
| country | varchar(255) | YES | | NULL | | Country name |
| lat | float | YES | | NULL | | Latitude |
| lng | float | YES | | NULL | | Longitude |
| alt | int(11) | YES | | NULL | | Altitude (metres) |
| url | varchar(255) | NO | UNI | | | Circuit Wikipedia page |

constructor_results table

| Field | Type | Null | Key | Default | Extra | Description |
|----------------------|--------------|------|-----|---------|----------------|--|
| constructorResultsId | int(11) | NO | PRI | NULL | auto_increment | Primary key |
| raceId | int(11) | NO | | 0 | | Foreign key link to races table |
| constructorId | int(11) | NO | | 0 | | Foreign key link to constructors table |
| points | float | YES | | NULL | | Constructor points for race |
| status | varchar(255) | YES | | NULL | | "D" for disqualified (or null) |

constructor_standings table

| Field | Type | Null | Key | Default | Extra | Description |
|------------------------|--------------|------|-----|---------|----------------|--|
| constructorStandingsId | int(11) | NO | PRI | NULL | auto_increment | Primary key |
| raceId | int(11) | NO | | 0 | | Foreign key link to races table |
| constructorId | int(11) | NO | | 0 | | Foreign key link to constructors table |
| points | float | NO | | 0 | | Constructor points for season |
| position | int(11) | YES | | NULL | | Constructor standings position (integer) |
| positionText | varchar(255) | YES | | NULL | | Constructor standings position (string) |
| wins | int(11) | NO | | 0 | | Season win count |

constructors table

| Field | Type | Null | Key | Default | Extra | Description |
|----------------|--------------|------|-----|---------|----------------|-------------------------------|
| constructorId | int(11) | NO | PRI | NULL | auto_increment | Primary key |
| constructorRef | varchar(255) | NO | | | | Unique constructor identifier |
| name | varchar(255) | NO | UNI | | | Constructor name |
| nationality | varchar(255) | YES | | NULL | | Constructor nationality |
| url | varchar(255) | NO | | | | Constructor Wikipedia page |

driver_standings table

| Field | Type | Null | Key | Default | Extra | Description |
|-------------------|--------------|------|-----|---------|----------------|-------------------------------------|
| driverStandingsId | int(11) | NO | PRI | NULL | auto_increment | Primary key |
| raceId | int(11) | NO | | 0 | | Foreign key link to races table |
| driverId | int(11) | NO | | 0 | | Foreign key link to drivers table |
| points | float | NO | | 0 | | Driver points for season |
| position | int(11) | YES | | NULL | | Driver standings position (integer) |
| positionText | varchar(255) | YES | | NULL | | Driver standings position (string) |
| wins | int(11) | NO | | 0 | | Season win count |

drivers table

| Field | Type | Null | Key | Default | Extra | Description |
|-------------|--------------|------|-----|---------|----------------|--------------------------|
| driverId | int(11) | NO | PRI | NULL | auto_increment | Primary key |
| driverRef | varchar(255) | NO | | | | Unique driver identifier |
| number | int(11) | YES | | NULL | | Permanent driver number |
| code | varchar(3) | YES | | NULL | | Driver code e.g. "ALO" |
| forename | varchar(255) | NO | | | | Driver forename |
| surname | varchar(255) | NO | | | | Driver surname |
| dob | date | YES | | NULL | | Driver date of birth |
| nationality | varchar(255) | YES | | NULL | | Driver nationality |
| url | varchar(255) | NO | UNI | | | Driver Wikipedia page |

lap_times table

| Field | Type | Null | Key | Default | Extra | Description |
|--------------|--------------|------|-----|---------|-------|-----------------------------------|
| raceId | int(11) | NO | PRI | NULL | | Foreign key link to races table |
| driverId | int(11) | NO | PRI | NULL | | Foreign key link to drivers table |
| lap | int(11) | NO | PRI | NULL | | Lap number |
| position | int(11) | YES | | NULL | | Driver race position |
| time | varchar(255) | YES | | NULL | | Lap time e.g. "1:43.762" |
| milliseconds | int(11) | YES | | NULL | | Lap time in milliseconds |

pit_stops table

| Field | Type | Null | Key | Default | Extra | Description |
|--------------|--------------|------|-----|---------|-------|-----------------------------------|
| raceId | int(11) | NO | PRI | NULL | | Foreign key link to races table |
| driverId | int(11) | NO | PRI | NULL | | Foreign key link to drivers table |
| stop | int(11) | NO | PRI | NULL | | Stop number |
| lap | int(11) | NO | | NULL | | Lap number |
| time | time | NO | | NULL | | Time of stop e.g. "13:52:25" |
| duration | varchar(255) | YES | | NULL | | Duration of stop e.g. "21.783" |
| milliseconds | int(11) | YES | | NULL | | Duration of stop in milliseconds |

qualifying table

| Field | Type | Null | Key | Default | Extra | Description |
|---------------|--------------|------|-----|---------|----------------|--|
| qualifyId | int(11) | NO | PRI | NULL | auto_increment | Primary key |
| raceId | int(11) | NO | | 0 | | Foreign key link to races table |
| driverId | int(11) | NO | | 0 | | Foreign key link to drivers table |
| constructorId | int(11) | NO | | 0 | | Foreign key link to constructors table |
| number | int(11) | NO | | 0 | | Driver number |
| position | int(11) | YES | | NULL | | Qualifying position |
| q1 | varchar(255) | YES | | NULL | | Q1 lap time e.g. "1:21.374" |
| q2 | varchar(255) | YES | | NULL | | Q2 lap time |
| q3 | varchar(255) | YES | | NULL | | Q3 lap time |

races table

| Field | Type | Null | Key | Default | Extra | Description |
|-------------|--------------|------|-----|------------|----------------|------------------------------------|
| raceId | int(11) | NO | PRI | NULL | auto_increment | Primary key |
| year | int(11) | NO | | 0 | | Foreign key link to seasons table |
| round | int(11) | NO | | 0 | | Round number |
| circuitId | int(11) | NO | | 0 | | Foreign key link to circuits table |
| name | varchar(255) | NO | | | | Race name |
| date | date | NO | | 0000-00-00 | | Race date e.g. "1950-05-13" |
| time | time | YES | | NULL | | Race start time e.g."13:00:00" |
| url | varchar(255) | YES | UNI | NULL | | Race Wikipedia page |
| f1_date | date | YES | | NULL | | F1 date |
| f1_time | time | YES | | NULL | | F1 start time |
| fp2_date | date | YES | | NULL | | FP2 date |
| fp2_time | time | YES | | NULL | | FP2 start time |
| fp3_date | date | YES | | NULL | | FP3 date |
| fp3_time | time | YES | | NULL | | FP3 start time |
| quali_date | date | YES | | NULL | | Qualifying date |
| quali_time | time | YES | | NULL | | Qualifying start time |
| sprint_date | date | YES | | NULL | | Sprint date |
| sprint_time | time | YES | | NULL | | Sprint start time |

results table

| Field | Type | Null | Key | Default | Extra | Description |
|-----------------|--------------|------|-----|---------|----------------|---|
| resultId | int(11) | NO | PRI | NULL | auto_increment | Primary key |
| raceId | int(11) | NO | | 0 | | Foreign key link to races table |
| driverId | int(11) | NO | | 0 | | Foreign key link to drivers table |
| constructorId | int(11) | NO | | 0 | | Foreign key link to constructors table |
| number | int(11) | YES | | NULL | | Driver number |
| grid | int(11) | NO | | 0 | | Starting grid position |
| position | int(11) | YES | | NULL | | Official classification, if applicable |
| positionText | varchar(255) | NO | | | | Driver position string e.g. "1" or "R" |
| positionOrder | int(11) | NO | | 0 | | Driver position for ordering purposes |
| points | float | NO | | 0 | | Driver points for race |
| laps | int(11) | NO | | 0 | | Number of completed laps |
| time | varchar(255) | YES | | NULL | | Finishing time or gap |
| milliseconds | int(11) | YES | | NULL | | Finishing time in milliseconds |
| fastestLap | int(11) | YES | | NULL | | Lap number of fastest lap |
| rank | int(11) | YES | | 0 | | Fastest lap rank, compared to other drivers |
| fastestLapTime | varchar(255) | YES | | NULL | | Fastest lap time e.g. "1:27.453" |
| fastestLapSpeed | varchar(255) | YES | | NULL | | Fastest lap speed (km/h) e.g. "213.874" |
| statusId | int(11) | NO | | 0 | | Foreign key link to status table |

sprint_results table

| Field | Type | Null | Key | Default | Extra | Description |
|----------------|--------------|------|-----|---------|----------------|--|
| sprintResultId | int(11) | NO | PRI | NULL | auto_increment | Primary key |
| raceId | int(11) | NO | | 0 | | Foreign key link to races table |
| driverId | int(11) | NO | | 0 | | Foreign key link to drivers table |
| constructorId | int(11) | NO | | 0 | | Foreign key link to constructors table |
| number | int(11) | YES | | NULL | | Driver number |
| grid | int(11) | NO | | 0 | | Starting grid position |
| position | int(11) | YES | | NULL | | Official classification, if applicable |
| positionText | varchar(255) | NO | | | | Driver position string e.g. "1" or "R" |
| positionOrder | int(11) | NO | | 0 | | Driver position for ordering purposes |
| points | float | NO | | 0 | | Driver points for race |
| laps | int(11) | NO | | 0 | | Number of completed laps |
| time | varchar(255) | YES | | NULL | | Finishing time or gap |
| milliseconds | int(11) | YES | | NULL | | Finishing time in milliseconds |
| fastestLap | int(11) | YES | | NULL | | Lap number of fastest lap |
| fastestLapTime | varchar(255) | YES | | NULL | | Fastest lap time e.g. "1:27.453" |
| statusId | int(11) | NO | | 0 | | Foreign key link to status table |

seasons table

| Field | Type | Null | Key | Default | Extra | Description |
|-------|--------------|------|-----|---------|-------|-----------------------|
| year | int(11) | NO | PRI | 0 | | Primary key e.g. 1950 |
| url | varchar(255) | NO | UNI | | | Season Wikipedia page |

status table

| Field | Type | Null | Key | Default | Extra | Description |
|----------|--------------|------|-----|---------|----------------|---------------------------------|
| statusId | int(11) | NO | PRI | NULL | auto_increment | Primary key |
| status | varchar(255) | NO | | | | Finishing status e.g. "Retired" |