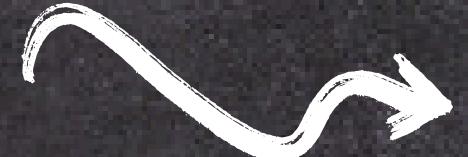


DATA BASE FINAL PROJECT

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MAIN IDEA



The application is designed to analyze Formula 1 race performance and provide a user-friendly interface for F1 enthusiasts. It delivers comprehensive data on races, drivers, and circuits while offering interactive features for analysis and user engagement.



DATASET

Users Table:

```
+-----+-----+
| id | username | password |
+-----+-----+
| 1 | admin    | 03ac674216f3e15c761ee1a5e255f067953623c8b388b4459e13f978d7c846f4 |
+-----+-----+
```

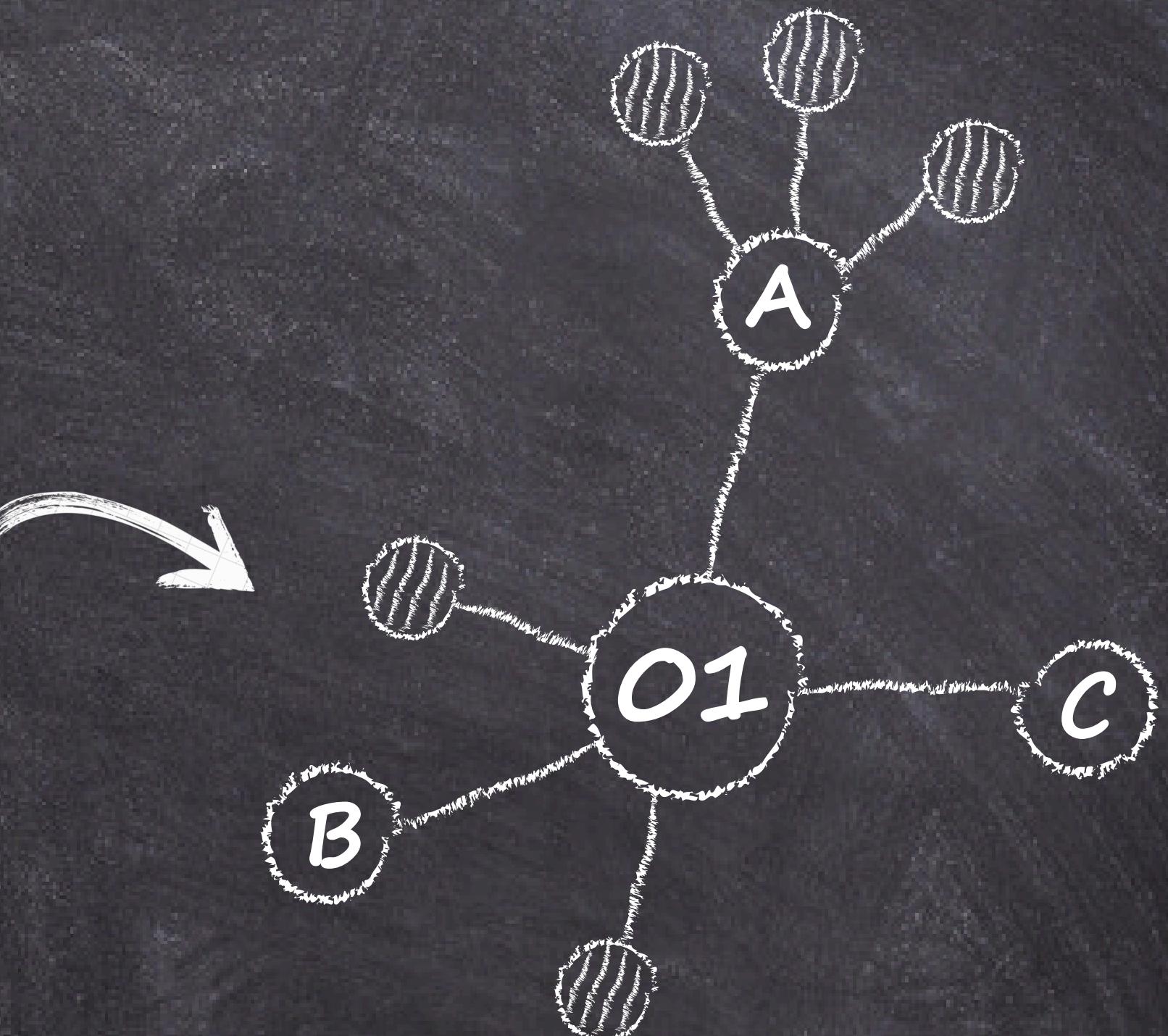
Drivers Table:

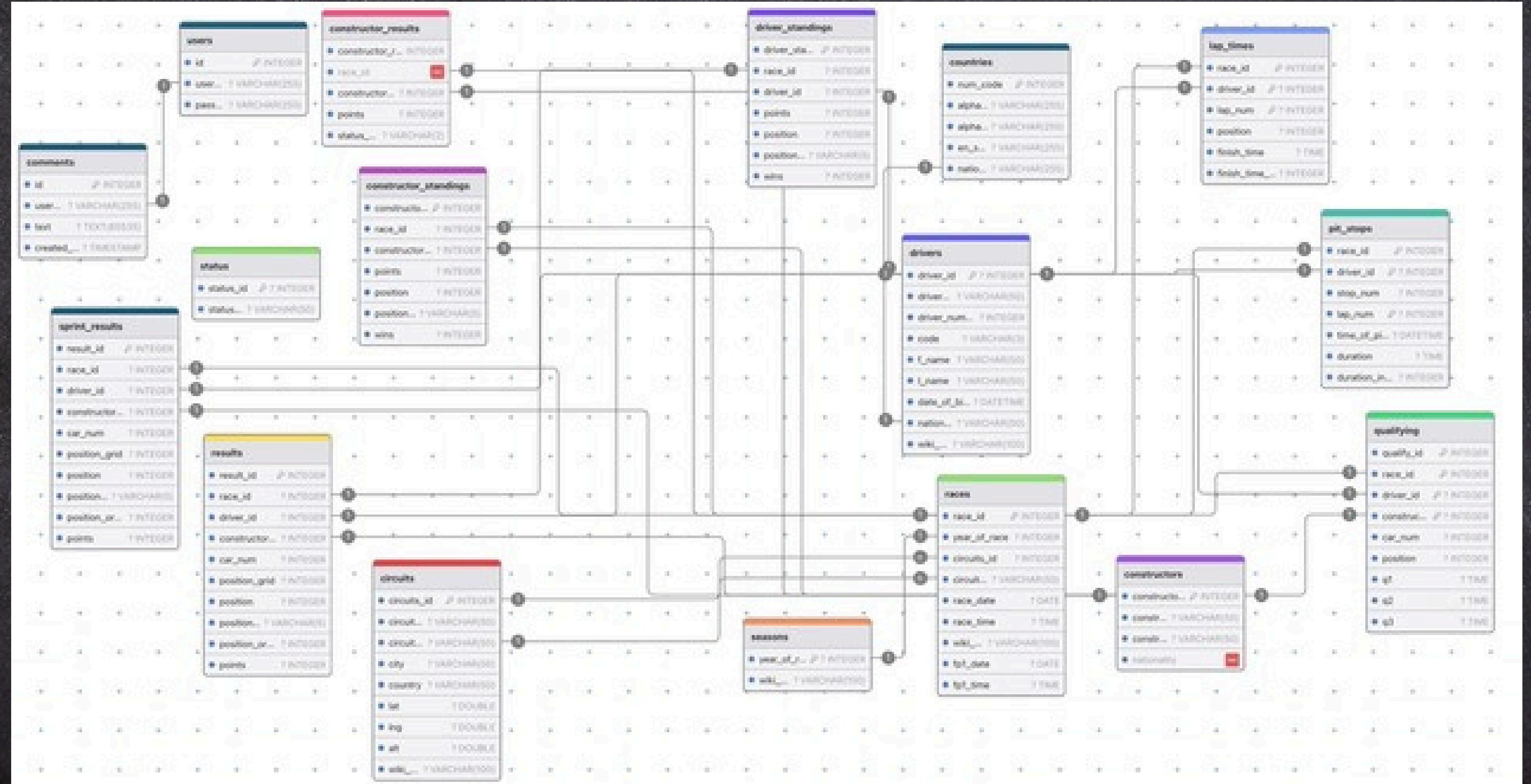
```
+-----+-----+-----+-----+-----+-----+-----+-----+
| drtver_id | drtver_ref | drtver_number | code | f_name | l_name | date_of_birth | nationality | wikit_url
+-----+-----+-----+-----+-----+-----+-----+-----+
|      1 | hamilton |          44 | HAM | Lewis | Hamilton | 1985-01-07 00:00:00 | British | http://en.wikipedia.org/wikil Lewis_Hamilton |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

The dataset includes extensive Formula 1 data spanning from 1950 to 2024, structured into 17 tables. These tables encapsulate information about circuits, drivers, constructors, races, standings, and more.

ER MODEL:

The data is modeled using
an Entity-Relationship
(ER) diagram where:
(following page)



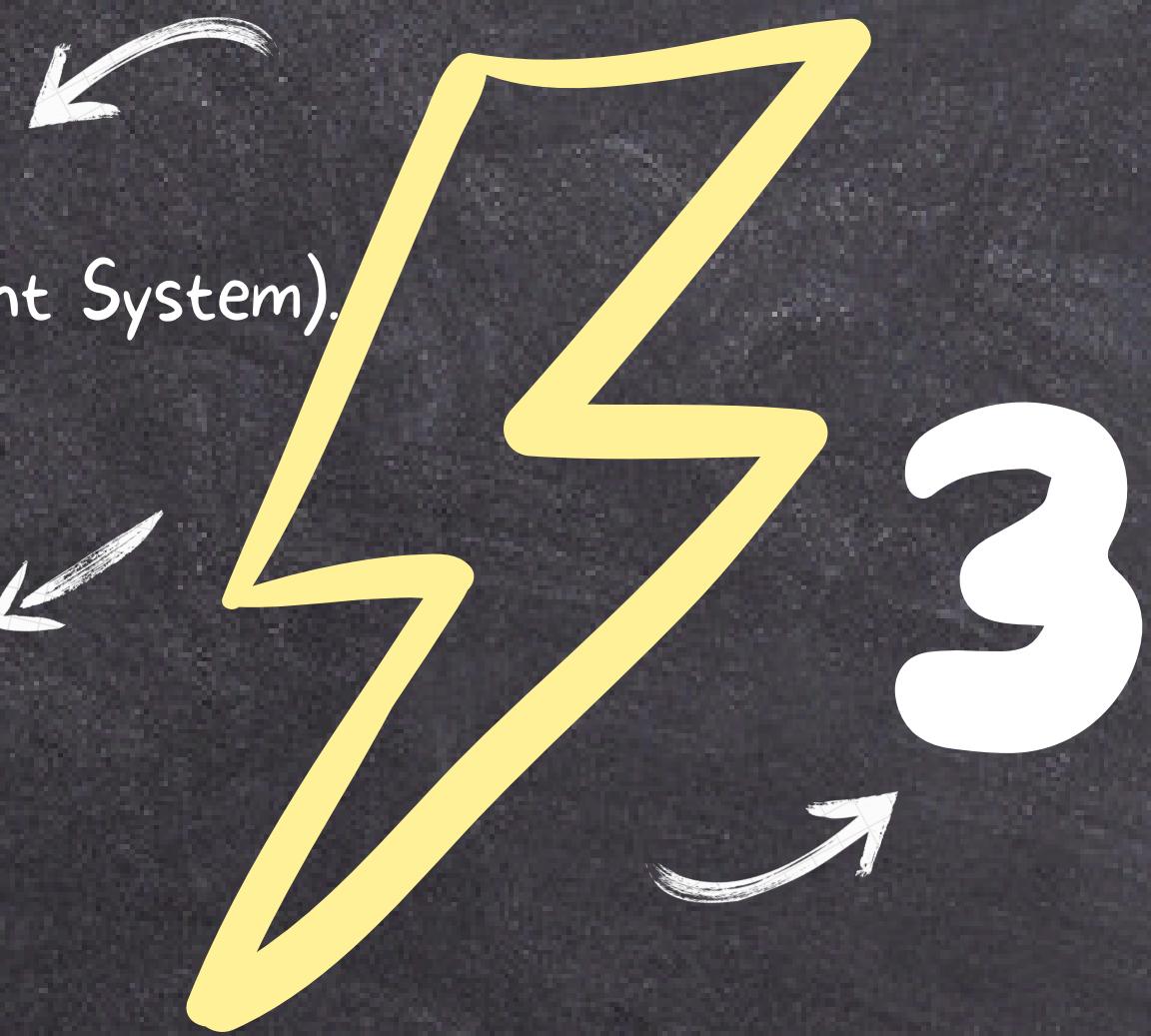


Type: MySQL
(Relational Database Management System).

2

Features: ACID
compliance ensures
reliable transactions
and data integrity.

DATABASE



The database supports CRUD operations. It also allows for schema adjustments to adapt to evolving requirements, ensuring flexibility and reliability in data management.

INTERFACE

SEARCH BAR PAGE

Allows users to search drivers or races dynamically.

Homepage:

Displays recent updates and a list of countries.

LOGIN/ REGISTER

Secure user authentication with a user-friendly interface.

FUNCTIONS OF THE APPLICATION

1

Constructor / driver Ranking

- Ranks F1 constructors based on points and wins.
- Resolves ties with total wins as a secondary criterion.

2

Login Authentication

- Validates user credentials with hashed passwords.
- Maintains session states for authenticated users.

3

CRUD Operations

- Users can add, modify, or delete records related to drivers, races, and results.

FUNCTIONS OF THE APPLICATION

4

Comment System

- Allows users to add comments linked to accounts.
- Handles invalid input and ensures session validation.

5

Race Details by Year

- Fetches detailed race data for a specific year.
- Returns results in JSON for frontend integration.

6

Driver Search

- Searches drivers dynamically using flexible filters.
- Supports case-insensitive, error-tolerant queries.

CONTRIBUTION

- 江宸安：查看賽車手跟賽事的頁面還有網頁的架構和登入註冊、create table 和 選取特定車隊的車手、特定年份的賽事的sql
- 林紹安：新增賽車手、新增賽事結果、國籍選單、一部份修改賽車手資料的功能
- 林瀚璿：網頁架構、顯示資料、條件篩選功能、留言欄
- 朱自中：選手的查詢、刪除、部分的修改資料、稍微整理一下ui
- 賴雋樞：新增賽車手的sql、確認最後功能debug、做report和slide