

# Project Description

1. The hardware operation system UI is primarily designed for desktop screen sizes, providing CRUD functionality for mySQL database.
2. The project is released in a central control version and a site version. The central control version includes features for login, account management, role permission management, and enable tracing different sites databases. The site version includes login and role permission functionalities.
3. The project has been developed using a scalable architecture with Vite and TypeScript, providing flexibility in various scenarios.

# Page Feature

## Parking Space Status Overview



1. Add Parking Space
2. View Parking Space
3. Edit Parking Space
4. Reset Parking Space
5. Add Car Plate Information
6. Edit Car Plate Information
7. Up and down Parking Lot Barrier

8. Edit Character Generator Information
9. View List of Car Plate History
10. Search List of Car Plate

## Car Plate Records

The screenshot displays a web interface for managing car plate records. On the left is a navigation menu with options like '車牌紀錄 / 查詢', '單位管理', '車牌紀錄', and '車牌管理'. The main area is titled '車牌紀錄' and contains a search bar with filters for '常用車牌號碼', '單位名稱', and '查詢日期'. Below the search bar, a table lists car plate records with columns for '車牌號碼', '相關車牌', '單位名稱', '機場時間', '出欄時間', and '攝影機名稱'. A modal window on the right, titled '車牌詳細資料', provides detailed information for a selected record, including '車牌號碼', '相關車牌', '單位名稱', '出欄時間', '出欄日期', '攝影機名稱', '車牌類別', '入口', '停車位號', '車牌號碼', '機道', '英文名稱', '公司', '部門', '員工號碼', '身分證字號', '電話', '地址', and '停車位號'.

車牌號碼	相關車牌	單位名稱	機場時間	出欄時間	攝影機名稱
ENJ-0001 E	ENJ-0001 (舊版)	1 號車位	2022-12-19 10:39:36	2022-12-19 12:39:36	1 號攝影機
1 ENJ-6789	ENJ-6789	2 號車位	2022-12-19 18:47:23	2022-12-19 18:47:23	1 號攝影機
ENJ-9999 E	ENJ-9999	3 號車位	2022-12-19 18:47:23	2022-12-19 18:47:23	1 號攝影機
9 ENJ-8888	ENJ-8888	4 號車位	2022-12-19 18:47:23	2022-12-19 18:47:23	4 號攝影機
ENJ-0001 E	ENJ-1000	4 號車位	2022-12-19 18:47:23	2022-12-19 18:47:23	4 號攝影機
ENJ-0001 E	ENJ-1000	4 號車位	2022-12-19 18:47:23	2022-12-19 18:47:23	4 號攝影機

1. View Car Plate Record
2. Search List of Car Plate History

## Hardware Management

The screenshot shows a web interface for hardware management. The main title is '查看硬體-API 01'. The interface is divided into a left sidebar and a main content area. The sidebar contains navigation options: '系統管理', '帳號管理', '硬體管理', '系統管理', '帳號管理', and '退出'. The main content area is titled '硬體管理' and has sub-tabs for 'I/O Box 設定' and '硬體串接'. Below the tabs are search filters for '增加硬體名稱/IP' and '硬體類別', and a '新增硬體' button. The main area displays a table of hardware items with the following data:

硬體名稱	硬體類別	IP	Port	密碼	動作
硬盤機10014	硬盤機	192.168.1.100	5000	123456	[編輯] [刪除]
LED字號機01	LED字號機	192.168.1.101	5000	123456	[編輯] [刪除]
LED字號機02	LED字號機	192.168.1.102	5000	123456	[編輯] [刪除]
LED字號機03	LED字號機	192.168.1.103	5000	123456	[編輯] [刪除]
LED字號機04	LED字號機	192.168.1.104	5000	123456	[編輯] [刪除]
LED字號機05	LED字號機	192.168.1.105	5000	123456	[編輯] [刪除]

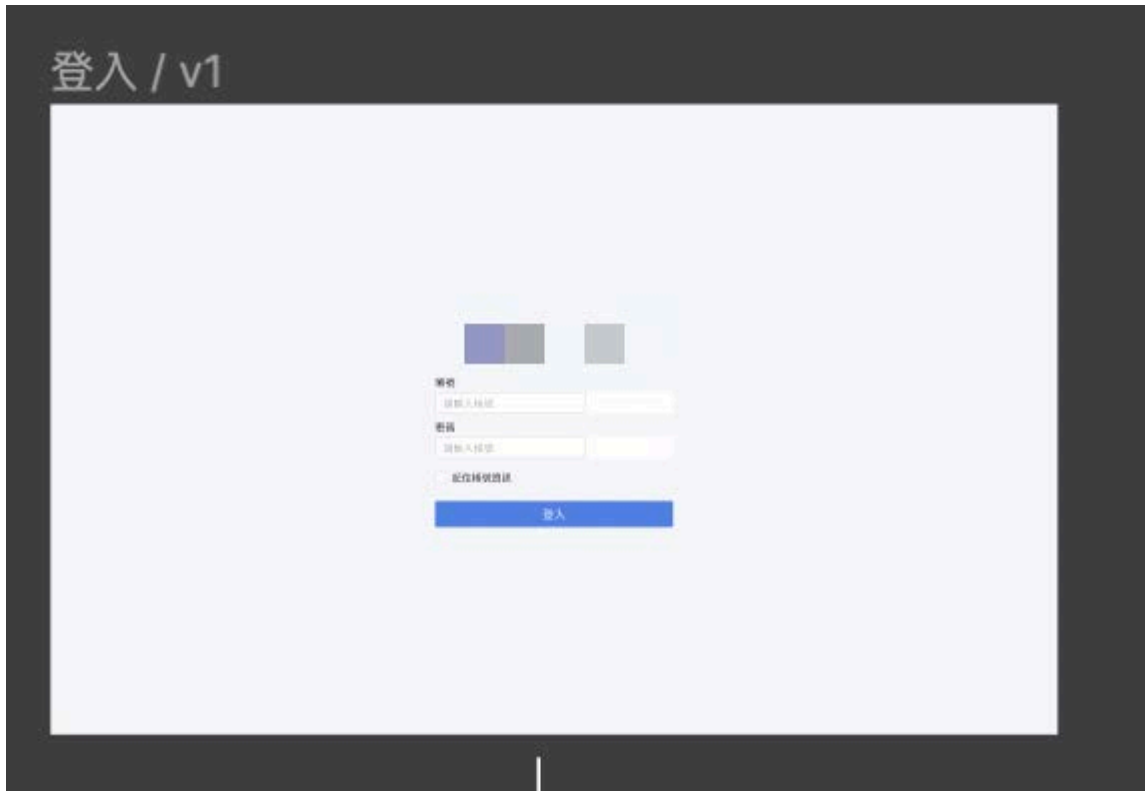
A blue arrow points to the 'Edit' button in the '動作' column of the first row.

1. Add IoBox information
2. View and Search IoBox information
3. Edit IoBox information
4. Delete IoBox
5. Add Hardware
6. View and Search Hardware
7. Edit Hardware
8. Delete Hardware



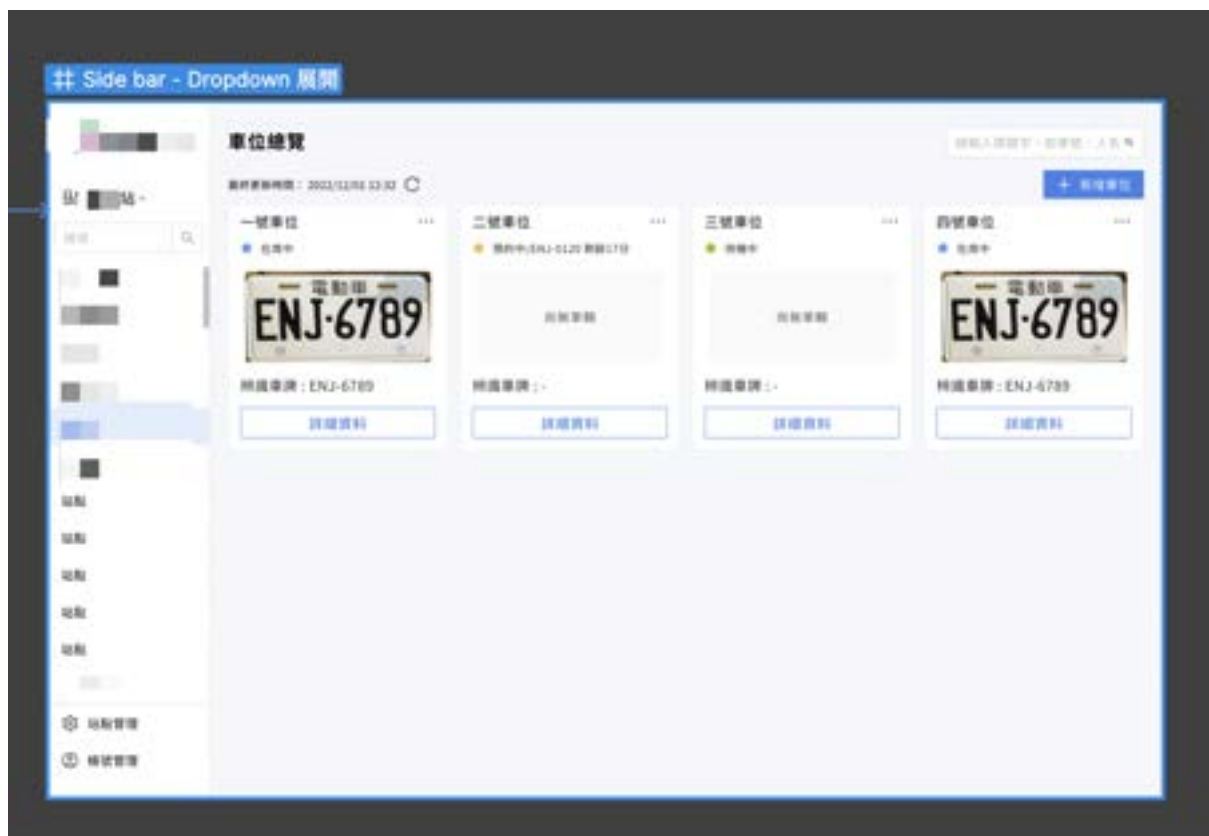
4. Delete Account
5. Add Permission
6. View and Search Permission
7. Edit Permission
8. Delete Permission

## Login



The screenshot shows a login interface with the title "登入 / v1" in the top left corner. The main content area is light gray and contains a centered login form. The form includes a header with three colored squares (blue, gray, and light blue). Below this, there are two input fields: "帳號" (Account) and "密碼" (Password). The "帳號" field is labeled "請輸入帳號" and the "密碼" field is labeled "請輸入密碼". There is a checkbox labeled "記住帳號密碼" (Remember account and password) and a blue "登入" (Login) button at the bottom.

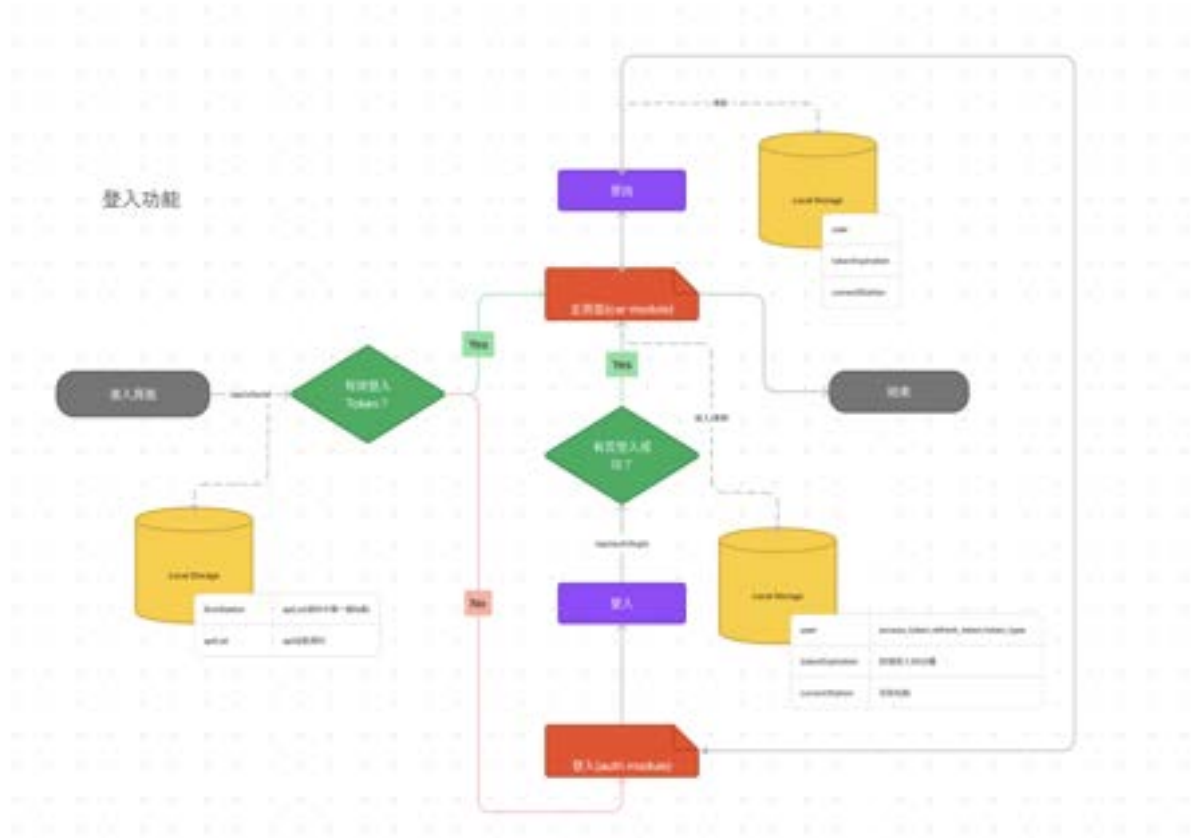
## Sites List Menu



1. Search Site
2. Switch the IP of the site's api endpoint

# Data Structure

## Login Function



## API Endpoint Switch



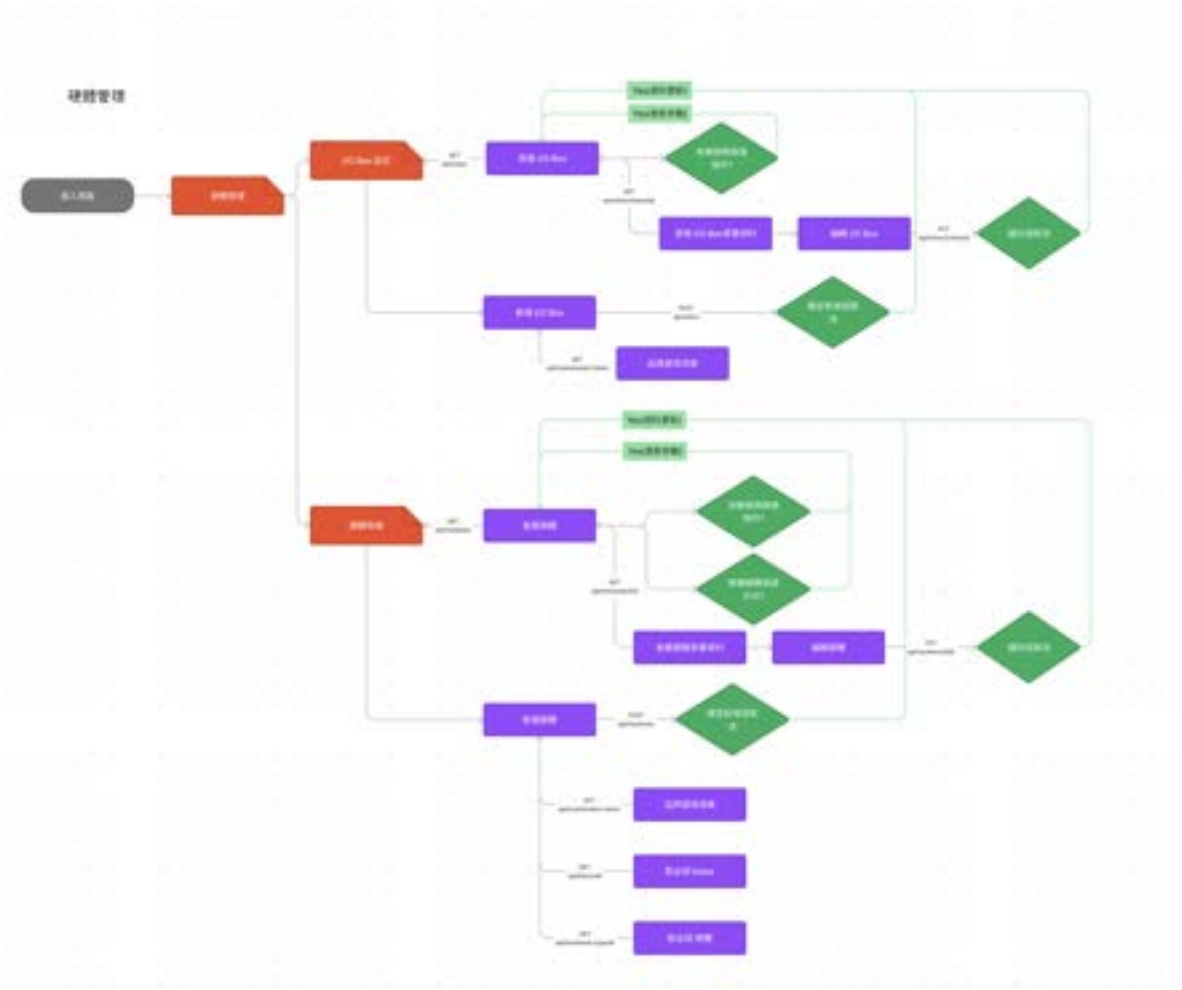




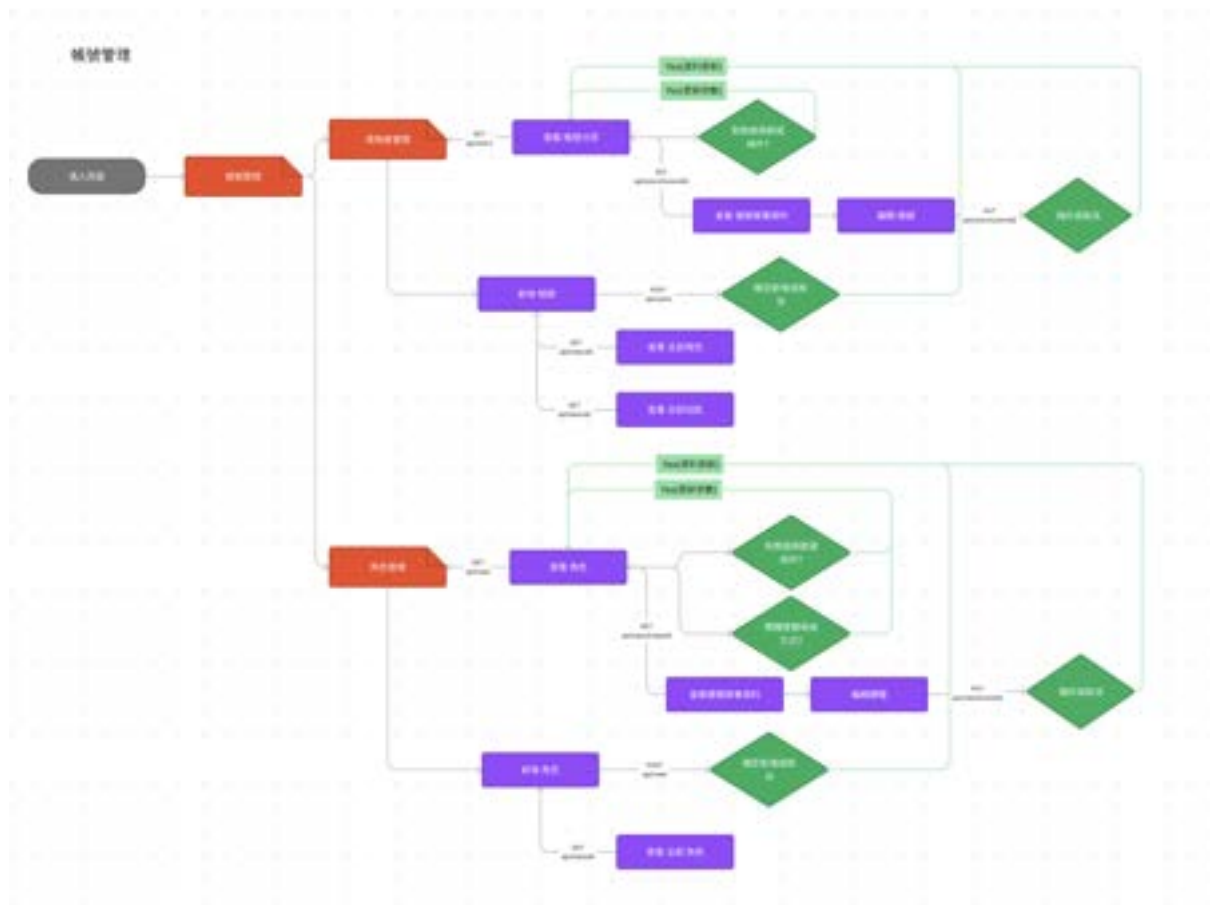
# Hardware Records



# Hardware Management



## Account & Permission Management



## Tech-stack Description

- React (^18.2.0): JavaScript UI library, optimizing user interface.
- Redux Toolkit (^1.9.2): Optimizing client-side state management in React environment.
- Ant Design(^5.1.4): UI component library.
- Axios(^1.3.2): Optimizing https request.
- SWR(^2.0.0): Optimizing server side state management.
- React Router Dom(^6.5.0): Optimizing page router in React environment.
- Styled Components(^5.3.6): Optimizing css styling.
- Scss(^1.57.1): Optimizing custom css styling for Ant Design components.
- Match Sorter(^6.3.1): Optimizing data search and sorting.

# Folder Structure

## Folder Structure Description

- assets: static resource
- components: mainly executing client side components and custom UI components.
- features: module folders
- router: router setup
- store: redux state files
- hooks: mainly executing custom hook in the project
- utils: mainly executing functions in the project
- interface(types):type collection



## Modular Folder Structure

- Parking Space Management System Module



- Auth Module

