Report

CA1 and CA2 both are the Apartment Registration System but CA1 is the JSON file-based system developed in JavaScript. And CA2 is the API based system that stores the data into the MongoDB database (NoSQL database). And we are using Node JS which is the JavaScript framework, used to developed the interactive APIs to stable the connection between the client and the backend.

There are following buttons on the front-end:

**Create**: Which is used to make the record into the MongoDB database.

**Edit**: Which is used to edit the selected record. (You can select any record by clicking the row of the table provided on the frontend)

**Delete**: You can delete any selected record by clicking this button.

# CA1

CA1 is the JSON file-based Apartment Registration System in which users can perform the CRUD operations on the JSON file by clicking the create, edit, delete and get record buttons and behind each button, there is a module written in JavaScript which interacts with the JSON file and performs its respective function.

# CA2

As explained above, CA2 is working the same as CA1 but the way of doing things is change. We are using the Node JS and MongoDB at the backend. In CA2, the data stores in the database and user can create the record in the MongoDB collection and you can also edit any record on click on the edit button provided on the form at front-end. You can also delete any record from the collection by clicking on the button.

Better Approach

The better approach is the CA2 because we are using the latest technologies which are Node JS and MongoDB and in CA1 we using the file-based approach which is not so well.

In MongoDB, each record has its identifier (Typically known as Object ID) and you can fetch any record by its object directly and easily perform any operation on that particular record such as deletion and modification.

But in CA1 (file-based approach) is not so good. Because you have to traverse the whole file to get any particular record which is sometimes hectic. And it takes time according to the file size. But you can perform every operation on this file also but things become difficult than the CA2, and more complexity and this approach are not so much efficient than the CA2.

So that’s why we use Node JS and MongoDB to do things easier, modifiable, and efficient.

# Technologies Used

As discussed above, we are using Node JS and MongoDB at the server-side and jQuery which is JavaScript library for the DOM manipulations and to interact with the Node JS Application Programming Interface (API).