Report

# CA1

CA1 basically has the file-based JSON storage which stores the student information. CA1 is the working as a typical file-based system and it performs 4 functions which are creating a profile, edits profile, deletes a profile, gets profiles of the student.

When the user fills the form fields and enters the create profile button it convert this data into the JSON format and then store it into the JSON file at the first time and the other time when the user clicks the create profile button, the system will convert the form data into the JSON format and then append the JSON file. And the system will traverse the JSON file to get the particular profile data and then modify the JSON file with the required form data on the edit button. And delete the profile after traversing the file to get the required profile and then delete this profile from the JSON file.

# CA2

CA2 is the updated version of our existing CA1, in which we are not using the file-based storage but the database storage of MongoDB and we do the server-side programming with the Nose JS to develop the Rest full API.

There are all the CRUD API such as create, return, update, and delete student profile information. Which will be called on the respective button clicked.

# Better Approach

The better approach is obviously the CA2 because CA2 is more efficient than CA1. In CA2, you can easily modify any module without disturbing the actual flow of the code because every API has a separate module. This approach is also faster than CA1 because in MongoDB database you have the unique identifier of every record and by this identifier, you can easily and directly get this particular record. But in the CA1 you have to traverse the JSON file which will be more hectic sometime.

That is the main reason why we update the CA1 with the MongoDB database.

# Technologies Used

Node JS and MongoDB at the backend to develop the API endpoints and at the front end, we used the jQuery to interact with the API endpoints. We use MongoDB because in CA1 we use the JSON storage and in MongoDB, data also stores in the JSON format.