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Roll No : PB_01   **Panel :** B
Sub : FSD   **Batch :** B1

Lab Assignment 7

Aim: Develop a full stack web application using MERN stack to perform CRUD operations.

Objectives:

1. To develop full-stack web projects using the MERN stack.
2. To learn database connectivity using fetch api.
3. To perform insert, update, delete and search operations on database.

Theory:

1. What is MERN stack?
M stands for MongoDB: a NoSQL database that stores data in JSON-like documents, making it flexible and scalable.
E stands for Express.js: a web application framework for Node.js used to build APIs and handle HTTP requests.
R stands for React: a JavaScript library for building user interfaces, particularly for single-page applications (SPAs).
N stands for Node.js: a runtime environment that executes JavaScript code outside a web browser, commonly used for building scalable network applications.
The MERN stack leverages these technologies to enable full-stack development using JavaScript across the board, from front-end to back-end.

2. Use of Fetch api.

The Fetch API provides a modern way to fetch resources asynchronously across the network. It's a web standard that simplifies making HTTP requests in the browser, replacing older methods like XMLHttpRequest.

With Fetch, developers can make network requests (such as fetching data from a server or sending data to a server) using promises, allowing for cleaner, more concise asynchronous code.

FAQ:

1. What makes MERN stack the fastest growing tech stack?

The MERN stack's popularity stems from a few key factors:

JavaScript Everywhere: Using a single language (JavaScript) throughout the stack streamlines development and reduces context-switching for developers.
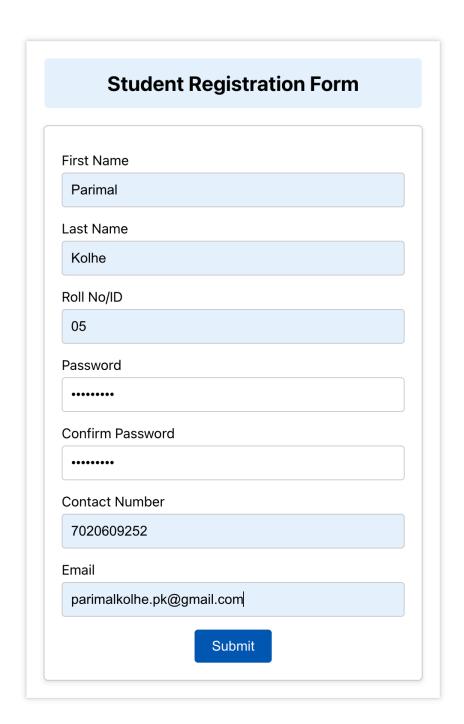
Component-Based Architecture: React's component-based structure allows for reusable and maintainable code, enhancing developer productivity.

Scalability and Flexibility: MongoDB's NoSQL nature makes it easier to handle unstructured data and scale as needed, catering to the demands of modern applications.

Large Community and Resources: The robust communities and extensive resources available for each component of the stack make it easier for developers to find support, learn, and grow within the ecosystem.

The MERN stack's agility, flexibility, and the ease of building scalable applications have contributed significantly to its rapid adoption in the development world.
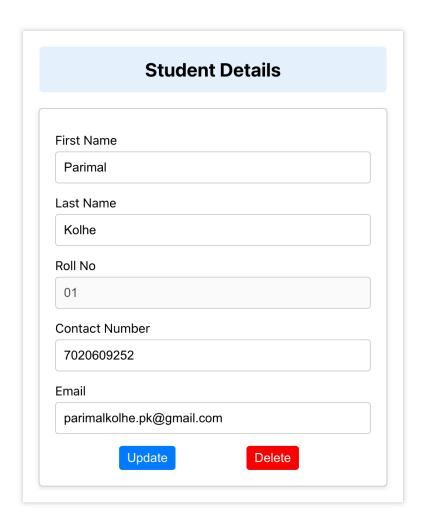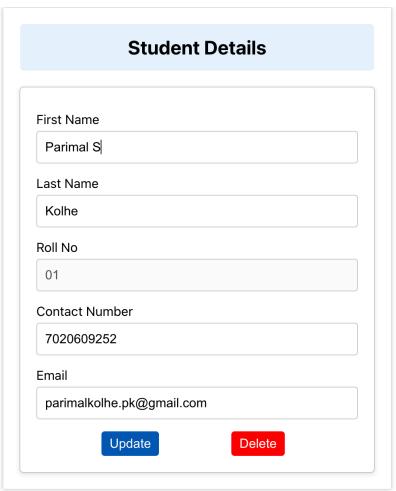
Output :

Student Registration Form

First Name

Parimal

Last Name

Kolhe

Roll No/ID

05

Password

•••••••••

Confirm Password

•••••••••

Contact Number

7020609252

Email

parimalkolhe.pk@gmail.com

Submit

Student Records

Insert New Student   Enter Roll No   Find

First Name	Last Name	Roll No/ID	Contact Number	Email
Parimal	Kolhe	03	7020609252	parimalkolhe@rediffmail.com
Parimal	Kolhe	01	7020609252	parimalkolhe.pk@gmail.com
Parimal	Kolhe	10	7020609252	parimalkolhe07@gmail.com

Student Details

First Name

Parimal

Last Name

Kolhe

Roll No

01

Contact Number

7020609252

Email

parimalkolhe.pk@gmail.com

Update   Delete

Student Details

First Name

Parimal S

Last Name

Kolhe

Roll No

01

Contact Number

7020609252

Email

parimalkolhe.pk@gmail.com

Update   Delete

Student Records

Insert New Student | Enter Roll No | Find

First Name	Last Name	Roll No/ID	Contact Number	Email
Parimal	Kolhe	03	7020609252	parimalkolhe@rediffmail.com
Parimal S	Kolhe	01	7020609252	parimalkolhe.pk@gmail.com
Parimal	Kolhe	10	7020609252	parimalkolhe07@gmail.com

Student Details

First Name

Parimal S

Last Name

Kolhe

Roll No

01

Contact Number

7020609252

Email

parimalkolhe.pk@gmail.com

Update | Delete

Student Records

Insert New Student | Enter Roll No | Find

First Name	Last Name	Roll No/ID	Contact Number	Email
Parimal	Kolhe	03	7020609252	parimalkolhe@rediffmail.com
Parimal	Kolhe	10	7020609252	parimalkolhe07@gmail.com