User Registration Application

This is a full-stack **User Registration System** built with **Spring Boot** (backend), **MongoDB** (database), and **Vite + Vanilla JS / React / Vue** (frontend).
The application allows users to register with their details and stores them in MongoDB.
Registered users are displayed in a table with Edit/Delete options.

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Technologies Used

- **Backend:** Spring Boot 3.2.2, Java 17
- **Database:** MongoDB 8.2
- **Frontend:** Vite (React / Vue / Vanilla JS)
- **Build Tool:** Maven

Project Structure

```
user-registration/
├── backend/
│   ├── src/main/java/com/example/
│   │   └── UserRegistrationApplication.java
│   │   └── controller/
```

```
│   │   └── model/
│   │   └── repository/
│   │   └── service/
│   ├── pom.xml
├── frontend/
│   ├── index.html
│   ├── package.json
│   ├── vite.config.js
│   ├── src/
│   │   └── main.js / App.vue (depending on framework)
├── README.md
```

Prerequisites

Before running the project, ensure the following are installed:

1. **Java 17**
   - Check with: `java -version`
2. **Maven**
   - Check with: `mvn -version`
3. **Node.js and npm**
   - Check with: `node -v` and `npm -v`
4. **MongoDB**
   - Make a folder for database files: `C:\Users\DELL\MongoDB\data`

Installation & Setup

1. Clone the Project

```
git clone <your-repo-link>
cd user-registration
```

2. Backend Setup

1. Go to backend folder:

```
cd backend
```

2. Build the project:

```
mvn clean install
```

3. Run the backend:

```
mvn spring-boot:run
```

- Backend will run at: `http://localhost:8080/`

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3. MongoDB Setup

1. Open **PowerShell as Administrator**

2. Run MongoDB with your data folder:

```
mongod --dbpath "C:\Users\DELL\MongoDB\data"
```

- MongoDB default port: `27017`

- Keep this terminal running while using the app

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4. Frontend Setup

1. Open a terminal in frontend folder:

```
cd frontend
```

2. Install dependencies:

```
npm install
```

3. Run the frontend:

```
npm run dev
```

- Frontend URL (Vite): `http://localhost:5173/`

- Open this URL in your browser

Running the Application

1. Start MongoDB → `mongod --dbpath "C:\Users\DELL\MongoDB\data"`

2. Start Backend → `mvn spring-boot:run`

3. Start Frontend → `npm run dev`

Now open `http://localhost:5173/` in your browser. You can register users and see them listed in the table.

Functionality

- **Register a User:** Fill in Full Name, Email, Mobile, Password, and Date of Birth

- **View Users:** Users will be displayed in a table
- **Edit / Delete Users:** Update or remove existing users (if implemented)
- **Database:** User data is stored in MongoDB

Explanation of Key Files

Backend (`backend/`)

File / Folder	Description
`UserRegistrationApplication.java`	Main Spring Boot application
`controller/`	Contains REST APIs for user operations (CRUD)
`model/`	User model class (fields: name, email, mobile, dob, password)
`repository/`	Interface extending `MongoRepository` for DB operations
`service/`	Business logic for user operations
`pom.xml`	Maven dependencies & build config

Frontend (`frontend/`)

File / Folder	Description
`index.html`	Main HTML page
`package.json`	Frontend dependencies and scripts
`vite.config.js`	Vite build tool configuration
`src/`	Source code folder for JS / Vue / React
`main.js` / `App.vue`	Frontend logic and components
`components/`	UI components (Form, Table)

Notes

- Make sure **MongoDB** is running before starting the backend
- Backend listens on **port 8080**, frontend on **port 5173**
- If frontend is not connecting, check CORS settings in Spring Boot controller

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Commands Summary

Task	Command
Start MongoDB	`mongod --dbpath "C:\Users\DELL\MongoDB\data"`
Build backend	`mvn clean install`
Run backend	`mvn spring-boot:run`
Install frontend deps	`npm install`
Run frontend	`npm run dev`