**🚀 Online Code Execution Platform**

**📌 Project Description**

A web-based platform that allows users to write, compile, and execute code in multiple programming languages. The system is built using **React.js** (Frontend), **Spring Boot** (Backend), and **MongoDB** (Database).

**🛠️ Tech Stack**

* **Frontend:** React.js, Vite, Tailwind CSS
* **Backend:** Spring Boot, Java, REST API
* **Database:** MongoDB
* **Containerization:** Docker

**📂 Folder Structure**

project-root/

│── backend/ # Spring Boot Backend

│ ├── src/main/java/ # Java Source Code

│ ├── src/main/resources # Configuration files

│ ├── pom.xml # Maven dependencies

│

│── frontend/ # React.js Frontend

│ ├── src/ # React source files

│ ├── public/ # Public assets

│ ├── package.json # Frontend dependencies

│

│── docs/ # Documentation & API details

│── .gitignore # Ignored files for Git

│── README.md # Project Overview

│── LICENSE # Project License

**🚀 Installation & Setup**

**1️⃣ Prerequisites**

Ensure you have the following installed:

* **Node.js** (For frontend)
* **Java JDK 17+** (For Spring Boot)
* **MongoDB** (Database)
* **Docker** (Optional for containerization)

**2️⃣ Clone the Repository**

git clone https://github.com/your-username/your-repo.git

cd your-repo

**3️⃣ Backend Setup (Spring Boot)**

cd backend

mvn clean install

mvn spring-boot:run

**4️⃣ Frontend Setup (React.js)**

cd frontend

npm install

npm run dev

**5️⃣ Running MongoDB (If using Docker)**

docker run -d -p 27017:27017 --name mongo-db mongo

**🖥️ Usage**

* Open http://localhost:5173/ to access the frontend.
* Backend API runs at http://localhost:8080/
* Users can write, compile, and execute code securely.

**📜 API Endpoints**

* POST /api/execute - Execute the user’s code.
* GET /api/history - Fetch past executed code.