

Project Report: Dockerized Node.js Application with CI/CD using GitHub Actions

Project Overview & Development Setup

Project Title:

Node.js Dockerized App with GitHub CI/CD Pipeline

Objective:

To develop a simple Node.js application, containerize it using Docker, and automate testing and deployment using GitHub Actions.

Tech Stack:

- **Backend:** Node.js, Express.js
 - **Containerization:** Docker
 - **CI/CD:** GitHub Actions
 - **Registry:** Docker Hub
 - **Version Control:** Git (GitHub)
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Code Snippets:

- `app.js`
- `Dockerfile`
- `Package.json`
- `.github/workflows/ci-cd.yml`
- `Test/sample.test.js`

CI/CD Pipeline, Testing & Docker Hub Integration

- CI/CD Workflow (ci-cd.yml)

GitHub Secrets:

<code>DOCKER_USERNAME</code>	Docker Hub username
<code>DOCKER_PASSWORD</code>	Docker Hub password

Conclusion:

The project successfully demonstrates how to:

- Build a basic Node.js server
- Containerize the app with Docker
- Run unit tests using Jest
- Push Docker images to Docker Hub using GitHub Actions

With credentials fixed, the CI/CD pipeline will automatically deploy updates from the main branch.