# Technical Assignment - Software Engineering Intern

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Prerequisites - Go 1.24+ - Docker Desktop - Minikube - kubectl
Project Structure
- Dockerfile : Builds the Docker image
- deployment.yaml : Kubernetes Deployment
- service.yaml: Kubernetes Service
- go.mod, `main.go: Go application files
- book.go: Book model
- storage.go: File storage logic
- handlers.go: API handlers.

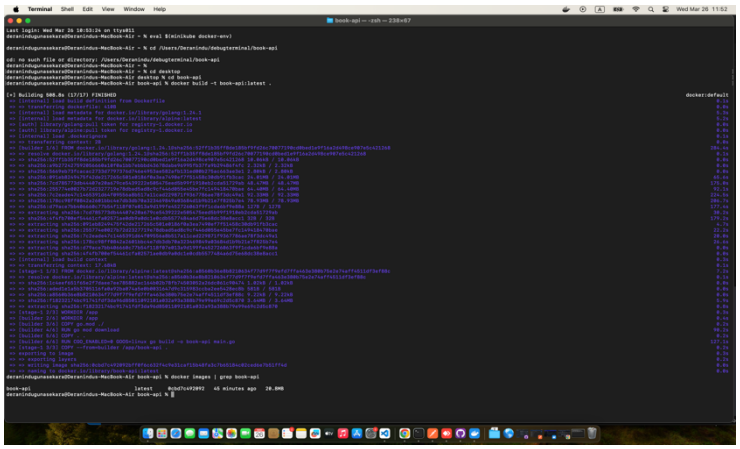
## Run Locally
1. Install: `go mod tidy`
2. Run: `go run main.go` - Access: `http://localhost:8080`(or Defined Port)

## Build & Run with Docker
1. Build: `docker build -t book-api:latest .`
2. Run: `docker run -p 8080:8080 book-api:latest`

## Deploy to Minikube
1. Start Minikube: `minikube start`
2. Set Docker: `eval $(minikube docker-env)`
3. Build: `docker build -t book-api:latest .`
4. Deploy: - `kubectl apply -f deployment.yaml` - `kubectl apply -f service.yaml`
5. Access: `minikube service book-api-service --url` - Test at the returned URL

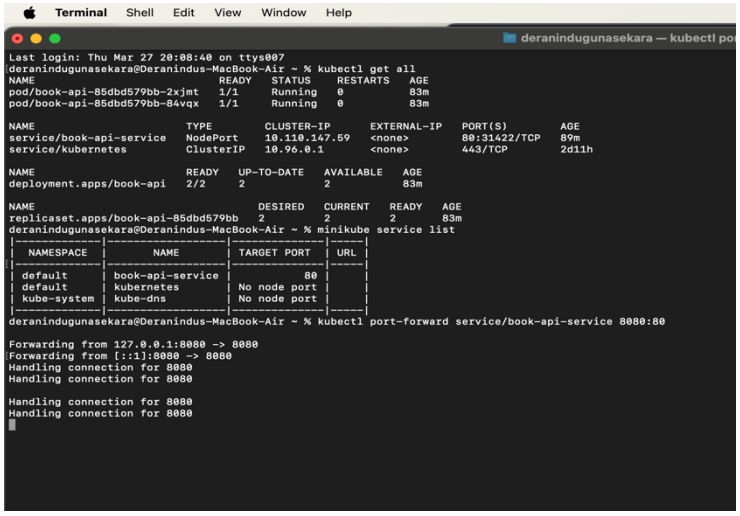
## Frameworks & Libraries
**Framework**
Gin -Web framework for routing and HTTP handling.

**Libraries**:
- google/uuid: Generates unique book IDs.
- Go Standard Library: File I/O, JSON, and concurrency (goroutines, channels).



-Docker Image built

-Kubernetes Deployment




-Output