

## ***Overview***

Pactify is designed using a three-tier architecture with Docker and Docker Compose.

### Components:

- Node.js Application: Handles the main business logic.
- MongoDB: Serves as the database for the application.
- Docker: Containerizes the application and its dependencies.
- Docker Compose: Spins up multi-container applications.

## ***Workflow Implementation***

### Build Stage:

- Purpose:
  - To build the Docker image for the application.
- Steps:
  1. Pull the base Node.js image.
  2. Install dependencies and build the client application.
  3. Install dependencies and set up the server application.
  4. Copy the built client application to the server's public directory.
  5. Expose the server port and define the startup command.

### Deploy Stage:

- Purpose:
  - To deploy the application using Docker Compose.
- Steps:
  1. Define the MongoDB and application services.
  2. Set the necessary environment variables.

## Test Stage:

- Purpose:
  - To verify the application is running correctly.
- Steps:
  1. Use a tester service to send a request to the application.
  2. Ensure the tester service always exits successfully.