

TECHNICAL INSTALLATION MANUAL

STOCKFELLOW

DEVOPPS

BRIGHTBYTE ENTERPRISES

DEMO 3

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1 Introduction

StockFellow is a React Native (Expo) mobile application that connects to a Java Spring Boot backend microservices architecture. This document provides step-by-step installation instructions for setting up the development environment on Windows, macOS, and Linux.

2 System Overview

- **Frontend:** React Native (Expo) mobile app
- **Backend:** Java Spring Boot microservices (Dockerized)
- **Database:** PostgreSQL, MongoDB and Alfresco (Dockerized)
- **Authentication:** JWT-based with MFA support
- **Storage:** AsyncStorage for local data caching

3 Prerequisites

3.1 For All Operating Systems

Requirement	Version	Installation Guide
Node.js	$\geq 18.x$	Node.js Official
npm / Yarn	Latest	Comes with Node.js
Java JDK	17+	OpenJDK
Maven	$\geq 3.8.x$	Maven Guide
Docker, Docker Compose & Docker Desktop	Latest	Docker Docs
Expo CLI	Latest	npm install -g expo-cli
Git	Latest	Git Installation

Table 1: Prerequisites for All Operating Systems

3.2 Additional for Mobile Development

Requirement	OS	Installation Guide
Android Studio (for emulator)	Windows/macOS/Linux	Android Studio
Xcode (iOS Simulator, macOS only)	macOS	Xcode (App Store)

Table 2: Additional Requirements for Mobile Development

4 Installation and Running

4.1 Step 1: Clone & Setup Monorepo

```
git clone https://github.com/COS301-SE-2025/StockFellowstockfellow.git
cd stockfellow
npm install # Install root dependencies
```

4.2 Step 2: Backend Services Setup

From the root folder, while Docker Desktop running
docker-compose up --build

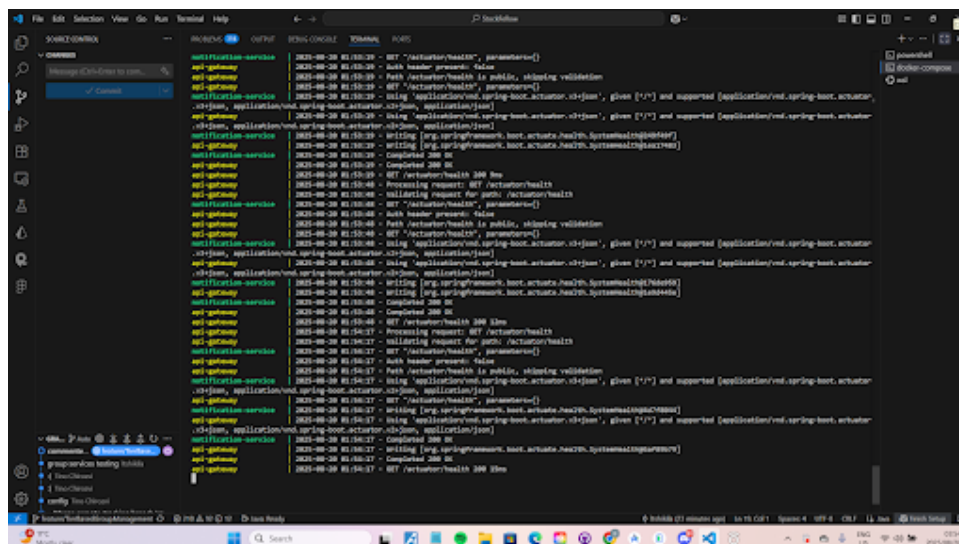


Figure 1: Docker backend running

4.3 Step 3: Mobile App Setup

```
cd apps/mobile-app
```

1. Install dependencies

npm install

2. Start development

npm run start

--OR--

npx expo start --clear # clears bundler cache

3. Open app in emulator(e.g. Press a for Android emulator)



Figure 2: React Native emulator running on Android emulator

5 Troubleshooting

Issue	Solution
Docker fails to start	Ensure Docker Desktop is running
Expo app not connecting	Check .env API_BASE_URL
Android Emulator issues	Run adb devices to check connection
iOS Simulator issues (macOS)	Ensure Xcode Command Line Tools are installed

Table 3: Common Issues and Solutions

6 User Manual

For detailed usage instructions, refer to: StockFellow User Manual