# Courier Management User Guide

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The user guide explains how to run the project as a user, from installation, configuration and actual running.

## 1. Prerequisites

**Node.js and npm**: To run the React frontend, make sure you have Node.js and npm installed.

**Go**: To run the backend server, make sure you have Go installed.

**Firebase**:

- You will need a Firebase project with Authentication (Email/Password and Google sign in enabled) and Firestore database. You can create one on https://console.firebase.google.com/. This project's Firebase config keys will be used in the frontend (see more in step 3).
- You'll also need to generate a Firebase Service Account JSON file for server authentication. You can do this by going to:
  Project settings → Service accounts → Select go → Generate new private key and saving the JSON file.
  Place this JSON file somewhere accessible and secret but do NOT commit it to git (see more in step 3, used for FIREBASE_SA ).

**Google Maps API Key**: Enable "Maps JavaScript API" and "Places API" in Google Cloud (https://console.cloud.google.com/) and obtain an API key.
You can do this by going to: APIs & Services → Credentials → Create credentials → API key.
This is required for address autocomplete and map display (see more in step 3).

## 2. Cloning the Repository

Begin by cloning the project repository from GitHub:
git clone https://github.com/Evap1/courier-system.git

Then, navigate into the project directory:
cd courier-system

The repository contains both frontend and backend code.

## 3. Configuration

Before running the app, you need to configure environment variables for the frontend and backend:

**Frontend**:
In the project root, you can find a file named “.env”. This file holds the Firebase and Google Maps keys. Open it and ensure it contains the following keys (replace the placeholder values with your actual credentials):

REACT_APP_FIREBASE_API_KEY=<Your Firebase Web API Key>

REACT_APP_FIREBASE_AUTH_DOMAIN=<your-project-id>.firebaseapp.com

REACT_APP_FIREBASE_PROJECT_ID=<your-project-id>

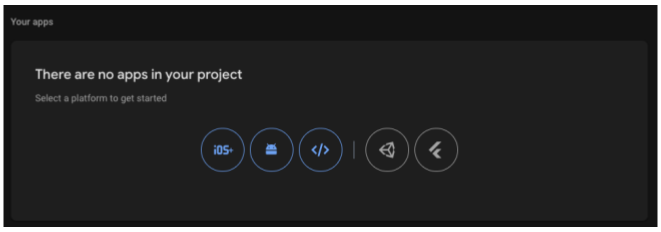
REACT_APP_FIREBASE_STORAGE_BUCKET=<your-project-id>.appspot.com

REACT_APP_FIREBASE_MESSAGING_SENDER_ID=<Firebase Sender ID>

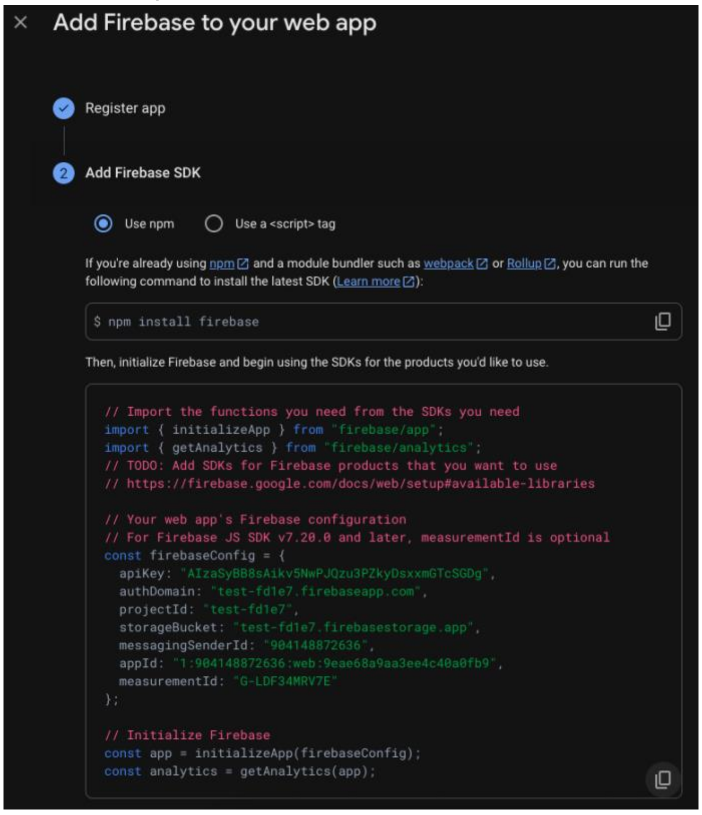
REACT_APP_FIREBASE_APP_ID=<Firebase App ID>

REACT_APP_GOOGLE_MAPS_API_KEY=<Your Google Maps API Key>

The Firebase values can be found in your Firebase project settings under:
Project Settings → General → SDK setup and configuration :


Your apps
There are no apps in your project
Select a platform to get started
iOS+
</>

Choose the web and follow the instructions.
All of the required fields will be filled out in this screen:



Add Firebase to your web app

Register app

Add Firebase SDK

Use npm    Use a <script> tag

If you're already using npm and a module bundler such as webpack or Rollup, you can run the following command to install the latest SDK (Learn more):

```
$ npm install firebase
```

Then, initialize Firebase and begin using the SDKs for the products you'd like to use.

```
// Import the functions you need from the SDKs you need
import { initializeApp } from "firebase/app";
import { getAnalytics } from "firebase/analytics";
// TODO: Add SDKs for Firebase products that you want to use
// https://firebase.google.com/docs/web/setup#available-libraries

// Your web app's Firebase configuration
// For Firebase JS SDK v7.20.0 and later, measurementId is optional
const firebaseConfig = {
  apiKey: "AIzaSyBB8sAikv5NwPJQzu3PZkyDsxxmGTcSGDg",
  authDomain: "test-fd1e7.firebaseapp.com",
  projectId: "test-fd1e7",
  storageBucket: "test-fd1e7.firebasestorage.app",
  messagingSenderId: "904148872636",
  appId: "1:904148872636:web:9eae68a9aa3ee4c40a0fb9",
  measurementId: "G-LDF34MRV7E"
};

// Initialize Firebase
const app = initializeApp(firebaseConfig);
const analytics = getAnalytics(app);
```

The Google Maps API key can be found in your Google Cloud account settings under:
APIs & Services → Credentials → Show key.

**Backend**:
The backend expects two environment variables at runtime:

- GCP_PROJECT_ID - Your Google Cloud project ID (the same as Firebase project ID).
- FIREBASE_SA - The file path to your Firebase Service Account JSON credentials, that is kept in a secret and a local location

You can create a backend specific .env file or include it in the same root .env file. Alternatively, you can export these variables in your shell before running the server.

**IMPORTANT:** Never expose your service account JSON or API keys in a public repo. Keep the .env out of version control.

## 4. Installation

Install dependencies for the **frontend**:
npm install

This will download all required packages listed in package.json.

For the **backend**:
go mod download

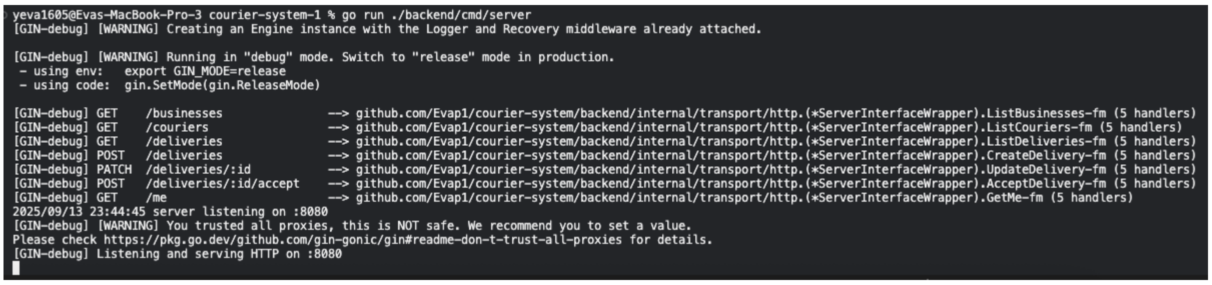
This will fetch Go dependencies (Gin, Firebase Admin SDK, etc.).

## 5. Running the Backend Server

Start the backend API server first, from the project root:

Source .env
go run .\backend\cmd\server

This will compile and run the Go server. If your env vars are set, you should see a log like "server listening on :8080" in the console. The server will connect to Firestore and be ready to accept requests, leave this running.

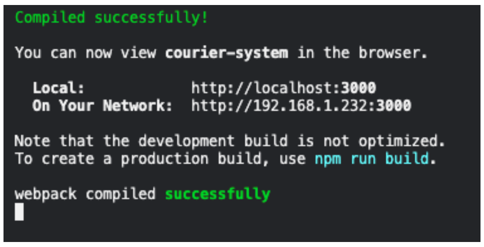


```
yeva1605@Evas-MacBook-Pro-3 courier-system-1 % go run ./backend/cmd/server
[GIN-debug] [WARNING] Creating an Engine instance with the Logger and Recovery middleware already attached.

[GIN-debug] [WARNING] Running in "debug" mode. Switch to "release" mode in production.
 - using env:   export GIN_MODE=release
 - using code:  gin.SetMode(gin.ReleaseMode)

[GIN-debug] GET    /businesses               --> github.com/Evap1/courier-system/backend/internal/transport/http.(*ServerInterfaceWrapper).ListBusinesses-fm (5 handlers)
[GIN-debug] GET    /couriers                 --> github.com/Evap1/courier-system/backend/internal/transport/http.(*ServerInterfaceWrapper).ListCouriers-fm (5 handlers)
[GIN-debug] GET    /deliveries               --> github.com/Evap1/courier-system/backend/internal/transport/http.(*ServerInterfaceWrapper).ListDeliveries-fm (5 handlers)
[GIN-debug] POST   /deliveries               --> github.com/Evap1/courier-system/backend/internal/transport/http.(*ServerInterfaceWrapper).CreateDelivery-fm (5 handlers)
[GIN-debug] PATCH  /deliveries/:id           --> github.com/Evap1/courier-system/backend/internal/transport/http.(*ServerInterfaceWrapper).UpdateDelivery-fm (5 handlers)
[GIN-debug] POST   /deliveries/:id/accept    --> github.com/Evap1/courier-system/backend/internal/transport/http.(*ServerInterfaceWrapper).AcceptDelivery-fm (5 handlers)
[GIN-debug] GET    /me                       --> github.com/Evap1/courier-system/backend/internal/transport/http.(*ServerInterfaceWrapper).GetMe-fm (5 handlers)
2025/09/13 23:44:45 server listening on :8080
[GIN-debug] [WARNING] You trusted all proxies, this is NOT safe. We recommend you to set a value.
Please check https://pkg.go.dev/github.com/gin-gonic/gin#readme-don-t-trust-all-proxies for details.
[GIN-debug] Listening and serving HTTP on :8080
```

## 6. Running the Frontend App

In another terminal, from the project root, start the React development server:
npm start

This will start the app on **http://localhost:3000** (the default server address) and usually will open your default browser with that URL.



```
Compiled successfully!

You can now view courier-system in the browser.

  Local:            http://localhost:3000
  On Your Network:  http://192.168.1.232:3000

Note that the development build is not optimized.
To create a production build, use npm run build.

webpack compiled successfully
```

## 7. Using the Application

With both servers running, you can now use the app:
Open http://localhost:3000 in your browser, you should see the Login page.

Sign In as a new user and choose your role.

**For Business account:**
Create a new account, then on the first screen choose "Business" and enter a business name and address. Now you will see the business dashboard. Try adding a new delivery, it should appear in your list with status "posted" and "Unassigned". When the courier picks it up, the status will be changed to "picked_up". At that point, an "Open Map" button should appear in the Courier Info column. Click on it to watch the courier moving on the map in real time. When delivered, the status will be changed to "delivered" and the "Open Map" dissappears.

**For courier account:**
Create a new account, then on the first screen choose "Courier" and enter a name. Allow location access (in browser prompt) to enable live tracking. You should see a map and posted deliveries as markers on it. Click on one to accept it, update the status to "Picked Up" by clicking on it again when picked. Then, navigate to the destination and update the status to "Delivered" when the drop off was successful.

**IMPORTANT:** TEST_OVERRIDE is a variable used for testing. If it's true, the location service is override by fixed coordinates, set in courier_routes.json. if you'd like to override the location, notice to fill the courier document id in courierMap (both variables can be found in courier.jsx). If TEST_OVERRIDE is false, the courier will stream it's real location.

**For admin account:**
There's no UI to register as admin.
In the root folder, there is a folder called "scripts" and a file called initAdmin.js in it.
This file initializes an admin user or updates an existing one.
When admin is initialized, you may sign in with email and password or with google sign in as well.
When data is seeded, using seed.js, you may see all dashboards functionality.

To run initAdmin.js:

0. If it's the first time running the script: run npm i firebase-admin @faker-js/faker uuid
1. make sure you're in the root
2. Modify ADMIN_EMAIL and ADMIN_PASSWORD in initAdmin.js as desired.
3. Run the following, can be found in env file:
export FIREBASE_SA=<>
export GCP_PROJECT_ID=<>
4. Run the file: node /scripts/initAdmin.js

To fill dummy data:
If you desire to test API:
You may manually create deliveries and users using the app or use postman to execute API functions.

If you desire to only fill the data:
You may manually add users and deliveries in firebase console database in the collection created, or you may run **scripts/seed.js** file that will do the previous, automatically.
Important to emphasize, it will create users and deliveries directly in firebase DB, thus it's not testing the API functionality (for delivery creation perhaps).

To run seed.js:

0. If it's the first time running the script, run npm i firebase-admin @faker-js/faker uuid
1. make sure you're in the root
2. Modify SEED_PASSWORD in seed.js as desired.
3. Run the following, can be found in env file:
export FIREBASE_SA=<>
export GCP_PROJECT_ID=<>
4. Run the file: node /scripts/seed.js