SnapCart Developer Setup Guide

? Project Structure Overview

```
snapcart/
|-- Dockerfile                  # Spring Boot app Docker build
|-- docker-compose.yml          # Runs app + Postgres
|-- deploy.sh                   # Deployment script for server
|-- .env                        # Environment variables
|-- pom.xml                     # Spring Boot backend
|-- snapcart_ui/                # Angular frontend
|    |-- package.json
|    `-- ...
`-- src/                        # Spring Boot source code
```

? 1. Prerequisites

```
On Windows:
- Java 17+
- Node.js (v18.19+)
- Angular CLI (v19+) via: npm install -g @angular/cli
- PostgreSQL (optional, for local DB)
- Docker Desktop with WSL2 backend
- Maven 3.8+
- Git

On Linux:
sudo apt install openjdk-17-jdk maven nodejs npm docker.io docker-compose git
sudo npm install -g @angular/cli
```

? 2. Backend Setup (Spring Boot)

```
cd snapcart
mvn clean install
```

? 3. Frontend Setup (Angular)

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```
cd snapcart/snapcart_ui
npm install
ng serve


UI at: http://localhost:4200
```

? 4. Docker-Based Setup (App + Postgres)

```
Build and run:
docker compose up --build

App: http://localhost:8080
Postgres: db:5432

.env file:
POSTGRES_DB=snapcart
POSTGRES_USER=snapuser
POSTGRES_PASSWORD=snappass


SPRING_DATASOURCE_URL=jdbc:postgresql://db:5432/snapcart
SPRING_DATASOURCE_USERNAME=snapuser
SPRING_DATASOURCE_PASSWORD=snappass
```

? 5. Deploying to AWS/Remote Machine

```
scp -r snapcart/ ubuntu@<EC2-IP>:/home/ubuntu/
cd snapcart
chmod +x deploy.sh
./deploy.sh
```

? 6. Testing

```
Backend:
mvn test

Frontend:
```

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```
ng test
```

? Helpful Links

- Spring Boot: https://docs.spring.io/spring-boot/docs/current/reference/html/
- Angular: https://angular.io/docs
- Docker Compose: https://docs.docker.com/compose/
- PostgreSQL: https://www.postgresql.org/docs/