

# INSURANCE MANAGEMENT SYSTEM SETUP GUIDE

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## 1. Prerequisites / Dependencies

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Before running the project, make sure you have the following installed:

- Git
- Docker
- Docker Compose
- Kubernetes (kubectl)
- Python 3.x
- Node.js & npm (for Angular frontend)
- Optional: Helm (if you plan to manage Kubernetes charts)

Python dependencies for backend services:

- Flask
- Flask-CORS
- SQLAlchemy
- Werkzeug
- Other dependencies listed in `requirements.txt` files for each service

Angular frontend dependencies:

- Install node modules using:  
npm install  
(run this inside the `frontend/` directory)

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## 2. Docker Commands

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To build and run all services locally using Docker Compose:

```
# Build Docker images for all services
docker-compose build
```

```
# Start containers in detached mode
docker-compose up -d
```

```
# Stop containers
docker-compose down
```

```
# Optional: clean up dangling images
docker system prune -f
```

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## 3. Kubernetes Commands

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To deploy services to a Kubernetes cluster:

```
# Check current kubectl context
kubectl config current-context
```

```
# Get cluster info
kubectl cluster-info
```

```
# Apply all Kubernetes manifests (Deployments, Services, Ingress)
kubectl apply -f k8s/
```

```
# Check all pods
kubectl get pods
```

```
# Check services
kubectl get svc
```

```
# Optional: Delete all resources
kubectl delete -f k8s/
```

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#### 4. Notes

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- Backend services: `auth-service`, `claim-service`, `policy-service`
- API Gateway routes requests to the backend services
- Frontend is served by Angular + Nginx
- Default admin user for auth-service:
  - username: admin
  - password: admin123
- Make sure ports in docker-compose and Kubernetes manifests do not conflict