

# Golang Clean Architecture

Production-Ready SaaS Starter Kit - JWT Auth, Multi-Tenancy & Subscription Management

## PROJECT OVERVIEW

**Golang Clean Architecture SaaS Template** adalah starter kit production-ready untuk membangun aplikasi SaaS dengan Go, mengikuti prinsip Clean Architecture. Template ini menghilangkan kerja boilerplate selama berminggu-minggu dengan menyediakan fitur SaaS esensial secara out-of-the-box: **JWT Authentication** (access & refresh token), **Multi-Tenancy** dengan organization-first design, **Subscription Management** dengan tiered plans, **Email Verification** async, serta **UUID Primary Keys** dan **Soft Delete** untuk database design yang aman dan scalable.

## KEY FEATURES

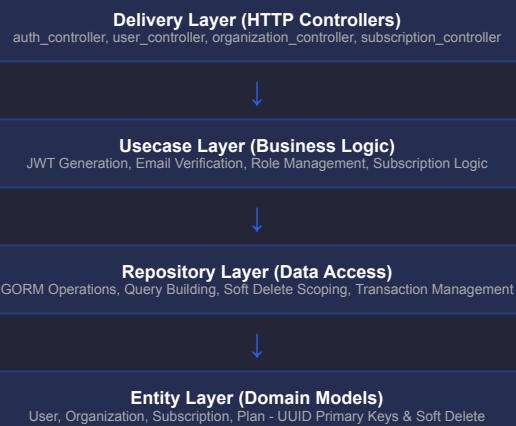
- JWT Authentication**  
Access & Refresh token, email verification
- Subscription Plans**  
Free, Pro, Enterprise tiers

- Multi-Tenancy**  
Organization-first dengan RBAC
- 59 Unit Tests**  
Comprehensive test coverage

## TECH STACK

- |                    |                    |                  |
|--------------------|--------------------|------------------|
| Go 1.23 Language   | Fiber v2 Framework | GORM ORM         |
| MySQL 8.0 Database | JWT Auth           | Docker Container |
| Logrus Logging     | Testify Testing    | Viper Config     |

## CLEAN ARCHITECTURE LAYERS



## DATABASE SCHEMA

```
// Core Tables with UUID & Soft Delete
organizations (id, name, slug, logo_url)
users (id, org_id, email, password, verified)
organization_members (id, org_id, user_id, role)
plans (id, name, price, limits, features)
subscriptions (id, org_id, plan_id, status)
audit_logs (id, action, resource, old/new_value)
```

## API ENDPOINTS

```
// Authentication
POST /api/v1/auth/register
POST /api/v1/auth/login
POST /api/v1/auth/refresh
POST /api/v1/auth/verify-email
// Protected Routes
GET /api/v1/users/me
GET /api/v1/organizations/:id
```

## PROJECT STRUCTURE

### Architecture

```

cmd/web/           - Application entry point
internal/
  config/         - Configuration and bootstrap
  entity/         - Domain entities (database models)
  model/          - Request/Response DTOs
  repository/     - Entity to DTO converters
  usecase/         - Data access layer
  delivery/       - Business logic layer
  http/           - Presentation layer
    middleware/   - HTTP handlers and routes
      middleware/ - Auth middleware
pkg/
  jwt/            - JWT service
  email/          - Email service with HTML templates
  templates/      - Email HTML templates (embedded)
  db/migrations/ - Database migration files
  docs/           - Additional documentation
  CONFIGURATION.md - Configuration guide
  EMAIL_SERVICE.md - Email service & async patterns
  TESTING.md      - Testing documentation

```

### Folder Structure

### Go Clean Architecture SaaS API

Production-ready SaaS API with JWT authentication, multi-tenancy, subscription management, and email verification

Contact API Support

Servers

Authorize

#### Health

GET /health Health check

GET /ready Readiness check

#### Authentication

POST /api/v1/auth/register Register new organization and user

POST /api/v1/auth/verify-email Verify email address

POST /api/v1/auth/resend-verification Resend verification email

POST /api/v1/auth/login Login user

POST /api/v1/auth/logout Logout current session