LAPORAN TUGAS

MATA KULIAH APPLICATION PROGRAMMING INTERFACE (API)

DOSEN PENGAMPU

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PROGRAM STUDI 'TEKNIK INFORMATIKA'

STMIK AMIK BANDUNG

Buatlah API menggunakan framework Laravel dan database MySQL

dengan topik bebas, asalkan bukan seperti yang dicontohkan di kelas (mahasiswa, produk, pendaftaran, dsb)

Membuat endpoint di bawah ini :

- 1. Endpoint / (berisi swagger documentation)
- 2. Endpoint register
- 3. Endpoint login (mendapatkan token)
- 4. Endpoint <sesuaitopik>
 - 1. GET all data
 - 2. GET data by id
 - 3. POST data (mengharuskan pakai token)
 - 4. PUT data by id (mengharuskan pakai token)
 - 5. DELETE data by id (mengharuskan pakai token)

Dalam project laravel, harus memiliki:

- 1. Controller Auth
- 2. Controller < sesuai topik>
- 3. Resources < sesuai topik>
- 4. Model User
- 5. Model <sesuai topik>
- 6. Migration <sesuai topik>
- 7. Route API auth
- 8. Route API < sesuai topik>

Yang harus dikumpulkan:

- 1. Screenshot seluruh code (controller, model, migration, route)
- 2. Screenshot swagger documentation
- 3. Screenshot seluruh hasil api (boleh dari swagger / dari postman)
- 4. Rename nama file pdf dengan format "UAS API <NIM> <NAMA>"

Dikumpulkan paling lambat tanggal 5 Juni 2023 jam 23:59

Topik sama dengan mahasiswa lain tidak apa apa, asalkan kolom-kolom databasenya beda

Tapi kalua codingan sama dengan mahasiswa lain, nilai = 0

Screenshot Code:

.env

```
# .env
      APP_NAME=Laravel
  1
      APP ENV=local
     APP_KEY=base64:ozzGemyrysGvwXcMLq2y3lwF0KJtN4cs202we/7Xk2Y=
      APP DEBUG=true
      APP URL=http://uas api laravel.test
      LOG_CHANNEL=stack
      LOG DEPRECATIONS CHANNEL=null
      LOG_LEVEL=debug
     DB_CONNECTION=mysql
     DB HOST=127.0.0.1
     DB_PORT=3306
     DB_DATABASE=uas_api_laravel
     DB USERNAME=root
     DB_PASSWORD=
     BROADCAST_DRIVER=log
```

AppServiceProvider.php

```
app > Providers > 	 AppServiceProvider.php > 	 AppServiceProvider > 	 boot
      <?php
      namespace App\Providers;
      use Illuminate\Support\Facades\Schema;
      use Illuminate\Support\ServiceProvider;
      class AppServiceProvider extends ServiceProvider
           public function register(): void
           // jumlah string 255
 21
           public function boot(): void
               Schema::defaultStringLength( Length: 255);
```

2023_06_29_034851_create_obats_table.php (Database Migration)

```
database > migrations > 👁 2023_06_29_034851_create_obats_table.php > ધ class > 😚 up > 😯 Closure
       <?php
      use Illuminate\Database\Migrations\Migration;
      use Illuminate\Database\Schema\Blueprint;
      use Illuminate\Support\Facades\Schema;
      return new class extends Migration
           public function up(): void
               Schema::create( table: 'obats', callback: function (Blueprint $table) {
                   $table->id();
                   $table->string( column: 'nama');
 17
                   $table->string( column: 'gambar');
                   $table->string( column: 'tipe');
                   $table->text( column: 'deskripsi');
                   $table->string( column: 'produksi');
                   $table->double( column: 'harga');
                   $table->date( column: 'kadaluarsa');
                   $table->timestamps();
               });
           public function down(): void
               Schema::dropIfExists( table: 'obats');
```

Obat.php (Model)

```
app > Models > 🐡 Obat.php > ધ Obat > 🔑 $fillable
      <?php
       namespace App\Models;
       use Illuminate\Database\Eloquent\Factories\HasFactory;
      use Illuminate\Database\Eloquent\Model;
       class Obat extends Model
           use HasFactory;
           protected $guarded = ['id'];
           protected $fillable = [
               'nama',
                'tipe',
                gambar',
                deskripsi',
 18
                produksi',
                'harga',
                'kadaluarsa',
```

ObatResource.php (Resources)

```
app > Http > Resources > 🐡 ObatResource.php > 😭 ObatResource > 😚 toArray
      <?php
      namespace App\Http\Resources;
      use Illuminate\Http\Resources\Json\JsonResource;
      class ObatResource extends JsonResource
          public $status;
          public $message;
          public $pagination;
          public function __construct($status, $message, $resource, $pagination)
              parent:: construct( resource: $resource);
              $this->status = $status;
              $this->message = $message;
              $this->pagination = $pagination;
           public function toArray($request): array
               return [
                   'success' => $this->status,
 32
                   'message' => $this->message,
                   'data' => $this->resource,
                   'pagination' => $this->pagination
```

ObatController.php (Controller)

index

```
app > Http > Controllers > Api > 	 ObatController.php > 	❸ ObatController > 	❺ index
      class ObatController extends Controller
          public function __construct()
               $this->middleware( middleware: 'auth:api', options: ['except' => ['index', 'show']]);
           public function index(Request $request)
 88
               $where = $request->has( key: 'where') ? $request->get( key: 'where') : '{}';
               $sort = $request->has( key: 'sort') ? $request->get( key: 'sort') : 'id:asc';
               $per_page = $request->has( key: 'per_page') ? $request->get( key: 'per_page') : 2;
               $page = $request->has( key: 'page') ? $request->get( key: 'page') : 1;
               $count = $request->has( key: 'count') ? $request->get( key: 'count') : false;
               $search = $request->has( key: 'search') ? $request->get( key: 'search') : '';
               $sort = explode( separator: ':', string: $sort);
               $where = str_replace( search: "'", replace: "\"", subject: $where);
               $where = json_decode( json: $where, associative: true);
               $query = Obat::where([['id', '>', '0']]);
               if($where) {
                   foreach($where as $key => $value) {
                       $query = $query->where([[$key, "=", $value]]);
```

```
app > Http > Controllers > Api > ♥ ObatController.php > ♣ ObatController > ♦ index
                  if($search) {
                      $query = $query->where([['nama', 'like', '%' . $search . '%']]);
$query = $query->orWhere([['deskripsi', 'like', '%' . $search . '%']]);
$query = $query->orWhere([['harga', 'like', '%' . $search . '%']]);
                 $datas = [];
                 $pagination = [];
                 $pagination['page'] = (int)$page;
                 $pagination['per_page'] = (int)$per_page;
                 $pagination['total_data'] = $query->count( mixed: 'id');
$pagination['total_page'] = ceil( num: $pagination['total_data'] / $pagination['per_page']);
                  if($count == true) {
                      $query = $query->count( mixed: 'id');
$datas['count'] = $query;
                      $query = $query
                           ->orderBy($sort[0], $sort[1])
                            ->limit($per_page)
                           ->offset(($page - 1) * $per_page)
                       foreach($query as $qry) {
                           $temp = $qry;
                            $created_at_indo = Carbon::parse( time: $temp['created_at']);
                            $created_at_indo->locale( locale: 'id')->settings( settings: ['formatFunction' => 'translatedFormat'])
                  foreach($query as $qry) {
                       $temp = $qry;
                       $created_at_indo = Carbon::parse( time: $temp['created_at']);
                       $created_at_indo->locale( locale: 'id')->settings( settings: ['formatFunction' => 'translatedFormat']);
                       $temp['created_date_indo'] = $created_at_indo->format( format: 'l, d F Y H:i:s');
                       array_push( &array: $datas, values[0]: $temp);
```

return new ObatResource(status: true, message: 'Get Data Successfull', resource: \$datas, pagination: \$pagination)

Show data by id

Insert Data

Update Data by Id

Destroy by id

Api.php (Route)

Composer.json (Import library I5-swagger & jwt-auth)

```
⟨→⟩ composer.json > {} require
           "name": "laravel/laravel",
           "type": "project",
           "description": "The skeleton application for the Laravel framework.",
           "keywords": ["laravel", "framework"],
           "license": "MIT",
           "require": {
               "php": "^8.1",
               "darkaonline/15-swagger": "^8.5",
                'guzzlehttp/guzzle": "^7.2",
               "laravel/framework": "^10.10",
               "laravel/sanctum": "^3.2",
               "laravel/tinker": "^2.8",
 13
               "php-open-source-saver/jwt-auth": "^2.1"
           'require-dev": {
```

jwt.php

.env

auth.php (config)

```
## .env
{-} composer.json
                  jwt.php
                                                 auth.php X
           'defaults' => [
                guard => api ,
                passwords => users,
           'guards' => [
               'web' => [
                    'driver' => 'session',
                    'provider' => 'users',
               'api' => [
                    'driver' => 'jwt',
                    'provider' => 'users',
```

User.php (Model)

```
app > Models > 🐡 User.php > 😭 User
      class User extends Authenticatable implements JWTSubject
           use HasApiTokens, HasFactory, Notifiable;
          protected $fillable = [
               'name',
               'email',
               'password',
          protected $hidden = [
               'password',
               'remember_token',
          protected $casts = [
               'email_verified_at' => 'datetime',
           public function getJWTIdentifier()
               return $this->getKey();
          public function getJWTCustomClaims()
               return [];
```

AuthController.php

Login

```
app > Http > Controllers > Api > 👄 AuthController.php > 😭 AuthController > 😚 login
       class AuthController extends Controller
           public function __construct()
               $this->middleware( middleware: 'auth:api', options: ['except' => ['login', 'register']]);
           public function login(Request $request)
               $request->validate( rules: [
                    'email' => 'required|string|email',
                    'password' => 'required|string',
               $credentials = $request->only( keys: 'email', 'password');
               $token = Auth::attempt( credentials: $credentials);
               if(!$token) {
                    return response()->json( data: [
                        'status' => 'error',
'message' => 'Unauthorized',
               $user = Auth::user();
               return response()->json( data: [
                    'status' => "success",
                    'data' => $user,
                    'auth' => [
                        'token' => $token,
                        'type' => 'bearer',
```

Register

```
app > Http > Controllers > Api > 🐡 AuthController.php > 😭 AuthController > 😚 register
125
           public function register(Request $request)
               $request->validate( rules: [
                    'name' => 'required|string|max:255',
                    'email' => 'required|string|email|max:255|unique:users',
                    'password' => 'required|string|min:8',
               ]);
               $user = User::create([
                    'name' => $request->name,
                    'email' => $request->email,
                    'password' => Hash::make( value: $request->password),
               ]);
               $token = Auth::login( user: $user);
               return response()->json( data: [
                    'status' => 'success',
                    'message' => 'User Created Successfull',
                    'data' => $user,
                    'auth' => [
                        'token' => $token,
                        'type' => 'bearer',
               ]);
```

logout

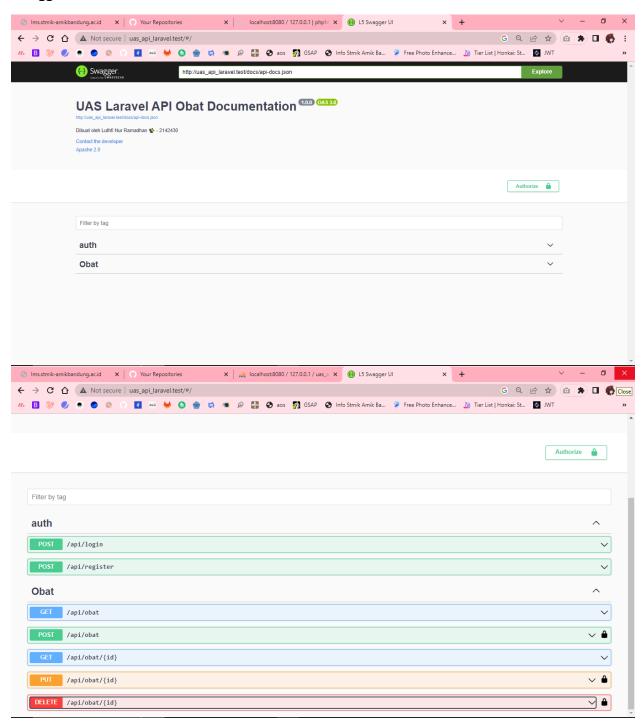
Refresh token

Authenticate.php

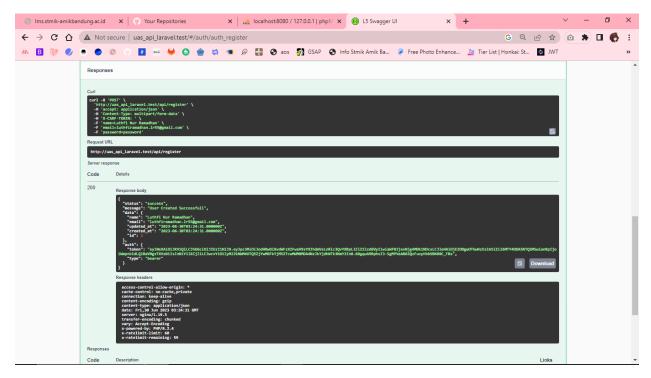
Handler.php

Web.php

Swagger:



/api/register





/api/login

Login Ketika Salah



Login Ketika Benar (*akan mendapatkan token)



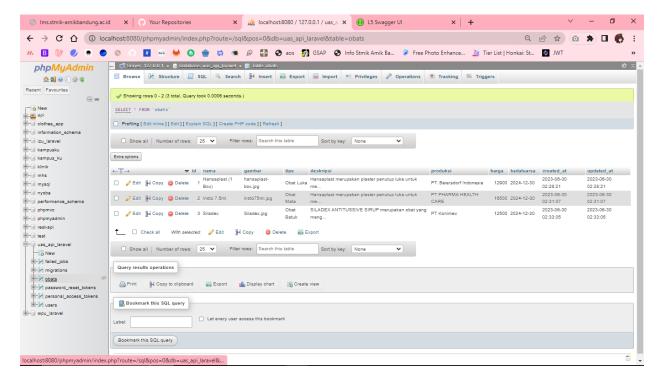
Copy & paste token login disini



Jika mencoba melakukan Post tanpa memasukkan token login



Data di Database



Jika mencoba melakukan Put tanpa memasukkan token login



Jika mencoba melakukan Delete tanpa memasukkan token login



Jika Tanpa memasukkan token login kita hanya bisa melakukan Get All Data & Get Data by Id

Get All Data

Get Data by Id

Jika User Memasukkan Token Login Maka User Akan bisa melakukan Post, Put, Delete



Post - Insert Data Baru



Put – Update Data Baru {id}

Sekarang Delete Data Yang telah Dibuat

Begitu pula dengan di Postman

