

Laporan Praktikum

JWT-Auth dengan Lumen (CRUD + JWT)

Nama: Kurniawan

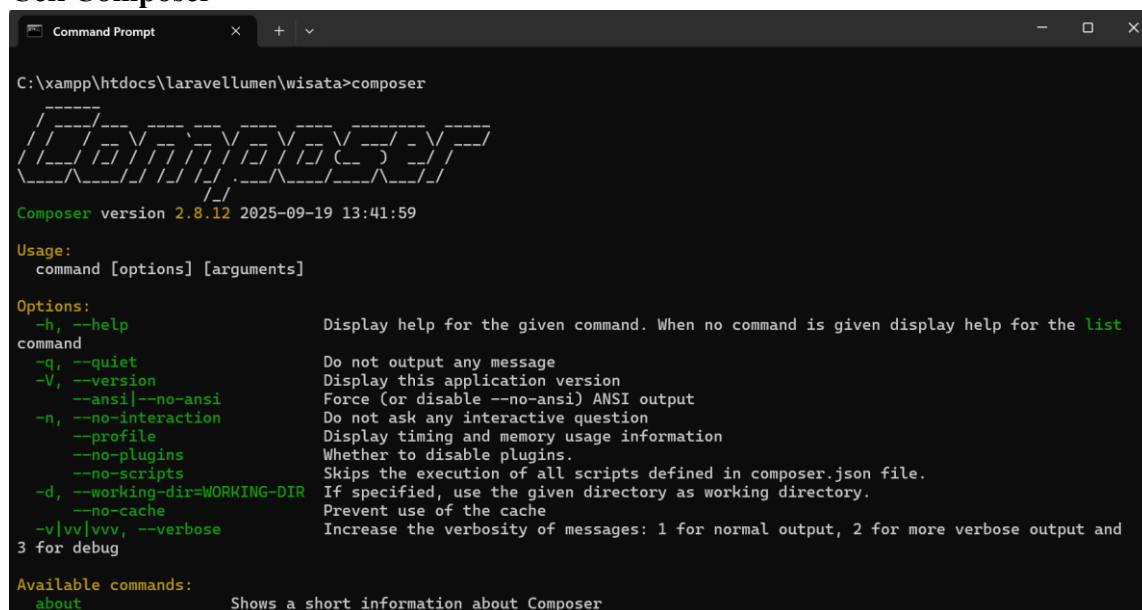
NIM: G.211.23.0065

Matkul: Rekayasa Web

Link Github:

https://github.com/WAWAN25JAJAJA/Tugas_Praktikum_Rekayasa_Web/blob/main/wisata.zip

➤ Cek Composer



```
C:\xampp\htdocs\laravellumen\wisata>composer

Composer version 2.8.12 2025-09-19 13:41:59

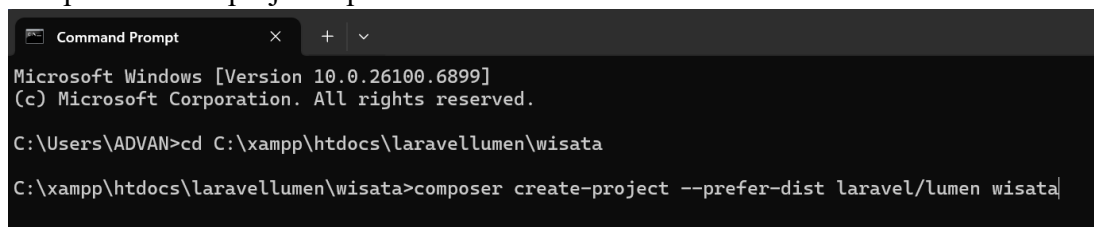
Usage:
  command [options] [arguments]

Options:
  -h, --help                Display help for the given command. When no command is given display help for the list
  -q, --quiet               Do not output any message
  -V, --version             Display this application version
  --ansi|--no-ansi          Force (or disable --no-ansi) ANSI output
  -n, --no-interaction      Do not ask any interactive question
  --profile                 Display timing and memory usage information
  --no-plugins              Whether to disable plugins.
  --no-scripts              Skips the execution of all scripts defined in composer.json file.
  -d, --working-dir=WORKING-DIR If specified, use the given directory as working directory.
  --no-cache                Prevent use of the cache
  -v|vv|vvv, --verbose     Increase the verbosity of messages: 1 for normal output, 2 for more verbose output and
  3 for debug

Available commands:
  about                     Shows a short information about Composer
```

➤ Install Lumen

- Masuk ke direktori kerja, lalu buat proyek baru:
- `composer create-project --prefer-dist laravel/lumen wisata`



```
Microsoft Windows [Version 10.0.26100.6899]
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C:\Users\ADVAN>cd C:\xampp\htdocs\laravellumen\wisata

C:\xampp\htdocs\laravellumen\wisata>composer create-project --prefer-dist laravel/lumen wisata|
```

➤ Proses Install Lumen

```

Command Prompt

Creating a "laravel/lumen" project at "./wisata"
Installing laravel/lumen (v10.0.0)
- Installing laravel/lumen (v10.0.0): Extracting archive
Created project in D:\\wisata
> @php -r "file_exists('.env') || copy('.env.example', '.env');"
Loading composer repositories with package information
Updating dependencies
Lock file operations: 104 installs, 0 updates, 0 removals
- Locking brick/math (0.12.3)
- Locking carbonphp/carbon-doctrine-types (2.1.0)
- Locking doctrine/inflector (2.1.0)
- Locking doctrine/lexer (3.0.1)
- Locking dragonmantank/cron-expression (v3.6.0)
- Locking egulias/email-validator (4.0.4)
- Locking fakerphp/faker (v1.24.1)
- Locking fruitcake/php-cors (v1.3.0)
- Locking graham-campbell/result-type (v1.1.3)
- Locking guzzlehttp/uri-template (v1.0.5)
- Locking hamcrest/hamcrest-php (v2.1.1)
- Locking illuminate/auth (v10.49.0)
- Locking illuminate/broadcasting (v10.49.0)
- Locking illuminate/bus (v10.49.0)
- Locking illuminate/cache (v10.49.0)
- Locking illuminate/collections (v10.49.0)
- Locking illuminate/conditionable (v10.49.0)
- Locking illuminate/config (v10.49.0)
- Locking illuminate/console (v10.49.0)
- Locking illuminate/container (v10.49.0)
- Locking illuminate/contracts (v10.49.0)
- Locking illuminate/database (v10.49.0)

```

➤ Masuk direktori wisata

```

Command Prompt

Microsoft Windows [Version 10.0.26100.6899]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ADVAN>cd C:\xampp\htdocs\laravellumen\wisata

C:\xampp\htdocs\laravellumen\wisata>

```

➤ Database & Tabel

Column	Type	Collation	Operator	Value
id_wisata	int(2)		=	
kota	varchar(10)	utf8mb4_general_ci	LIKE	
landmark	varchar(100)	utf8mb4_general_ci	LIKE	
tarif	varchar(10)	utf8mb4_general_ci	LIKE	

Id_wisata = primary_key & auto increment

➤ Isi table

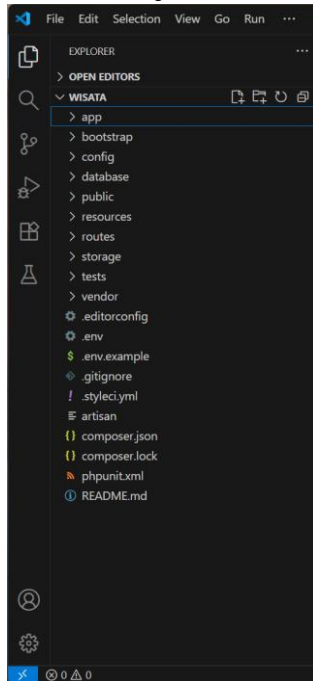
KOTA	LANDMARK	TARIF
SEMARANG	LAWANG SEWU	20000
YOGYAKARTA	PRAMBANAN	35000
MAGELANG	BOROBUDUR	45000
SURAKARTA	PGS	GRATIS

➤ Server Requirements

- PHP >= 7.3
- OpenSSL PHP Extension

- PDO PHP Extension
- Mbstring PHP Extension
- Composer– Download composer-- atau --- Install composer

➤ Folder Project hasil instalasi



➤ Konfigurasi Database

Buka file `.env`, ubah pengaturan koneksi sesuai database lokal:

```

.env
1 APP_NAME=Lumen
2 APP_ENV=local
3 APP_KEY=
4 APP_DEBUG=true
5 APP_URL=http://localhost:8000
6 APP_TIMEZONE=UTC
7
8 LOG_CHANNEL=stack
9 LOG_SLACK_WEBHOOK_URL=
11 DB_CONNECTION=mysql
12 DB_HOST=127.0.0.1
13 DB_PORT=3306
14 DB_DATABASE=json
15 DB_USERNAME=root
16 DB_PASSWORD=
17
18 CACHE_DRIVER=file
19 QUEUE_CONNECTION=sync
20
  
```

➤ Membuat Migration Tabel User

Buat migration:

```

Command Prompt
Microsoft Windows [Version 10.0.26100.6899]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ADVAN>cd C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata
C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata>php artisan make:migration create_users_table
  
```

➤ Edit file di database/migrations/xxxx_xx_xx_create_users_table.php:

```

0 references | 0 overrides
14 public function up(): void
15 {
16     Schema::create(table: 'users', callback: function (Blueprint $table): void {
17         $table->id();
18         $table->string(column: 'name');
19         $table->string(column: 'email')->unique();
20         $table->timestamp(column: 'email_verified_at')->nullable();
21         $table->string(column: 'password');
22         $table->rememberToken();
23         $table->timestamps();
24     });
25 }
26

```

➤ **Lalu jalankan migrasi:**

```

Command Prompt
Microsoft Windows [Version 10.0.26100.6899]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ADVAN>cd C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata

C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata>php artisan migrate

```

➤ **Menambahkan Seeder User**

Buat seeder:

```

Command Prompt
Microsoft Windows [Version 10.0.26100.6899]
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C:\Users\ADVAN>cd C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata

C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata>php artisan make:seeder UsersTableSeeder

```

➤ **Edit file database/seeder/UsersTableSeeder.php:**

```

5 use App\Models\User;
6 use Illuminate\Database\Seeder;
7 use Illuminate\Support\Facades\Hash;
8
16 public function run(): void
17 {
18     $users = User::create(attributes: [
19         'name' => 'admin',
20         'email' => 'admin@gmail.com',
21         'password' => Hash::make(value: 'admin')
22     ]);
23 }

```

➤ **Jalankan:**

```
Command Prompt
Microsoft Windows [Version 10.0.26100.6899]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ADVAN>cd C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata

C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata>php artisan db:seed --class=UsersTableSeeder
```

➤ Install JWT-Auth

Pasang package:

```
Command Prompt
Microsoft Windows [Version 10.0.26100.6899]
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C:\Users\ADVAN>cd C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata

C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata>composer require tymon/jwt-auth
```

➤ Buat File Konfigurasi Auth

Buat folder config lalu tambahkan file **wisata/config/auth.php**:

```
config > auth.php
1  <?php
2
3  return [
4      'defaults' => [
5          'guard' => 'api',
6          'passwords' => 'users',
7      ],
8
9      'guards' => [
10         'api' => [
11             'driver' => 'jwt',
12             'provider' => 'users',
13         ],
14     ],
15
16     'providers' => [
17         'users' => [
18             'driver' => 'eloquent',
19             'model' => \App\Models\User::class,
20         ],
21     ],
22 ];
```

➤ Tambahkan konfigurasi di bootstrap/app.php:

```
96 $app->register(provider: App\Providers\AuthServiceProvider::class);
97 $app->register(provider: Tymon\JWTAuth\Providers\LumenServiceProvider::class);
98
```

➤ Modifikasi Model User

Edit **app/Models/User.php**:

```

8 use Illuminate\Contracts\Auth\Authenticatable as AuthenticatableContract;
9 use Illuminate\Contracts\Auth\Access\Authorizable as AuthorizableContract;
10
11 //this is new
12 use Tymon\JWTAuth\Contracts\JWTSubject;
13
14 8 references | 0 implementations
15 class User extends Model implements AuthenticatableContract, AuthorizableContract, JWTSubject
16 {
17     use Authenticatable, Authorizable;
18
19     /**
20      * Get the identifier that will be stored in the subject claim of the JWT.
21      *
22      * @return mixed
23      */
24     0 references | 0 overrides
25     public function getJWTIdentifier(): mixed
26     {
27         return $this->getKey();
28     }
29
30     /**
31      * Return a key value array, containing any custom claims to be added to the JWT.
32      *
33      * @return array
34      */
35     0 references | 0 overrides
36     public function getJWTCustomClaims(): array
37     {
38         return [];
39     }
40 }

```

➤ Buat Controller Auth

Buat file `app/Http/Controllers/AuthController.php`:

```

1 <?php
2
3 namespace App\Http\Controllers;
4
5 use Illuminate\Http\Request;
6 use Illuminate\Support\Facades\Auth;
7 use App\Models\User;
8
9 0 references | 0 implementations
10 class AuthController extends Controller
11 {
12     0 references | 0 overrides
13     function AuthController::__construct()
14     {
15         $this->middleware(middleware: 'auth:api', options: ['except' => ['login', 'refresh', 'logout']
16     }
17
18     /**
19      * Get a JWT via given credentials.
20      *
21      * @param Request $request
22      * @return Response
23      */
24     0 references | 0 overrides
25     public function login(Request $request): JsonResponse
26     {
27         $this->validate(request: $request, rules: [
28             'email' => 'required|string',
29             'password' => 'required|string',
30         ]);
31
32         $credentials = $request->only(keys: ['email', 'password']);
33
34         return $this->respondWithToken(token: $token);
35     }
36
37     /**
38      * Get the authenticated User.
39      *
40      * @return \Illuminate\Http\JsonResponse
41      */
42     0 references | 0 overrides
43     public function me(): JsonResponse
44     {
45         return response()->json(data: auth()->user());
46     }
47
48     /**
49      * Log the user out (Invalidate the token).
50      *
51      * @return \Illuminate\Http\JsonResponse
52      */
53     0 references | 0 overrides
54     public function logout(): JsonResponse
55     {
56         auth()->logout();
57
58         return response()->json(data: ['message' => 'Successfully logged out']);
59     }
60 }

```

```

57      /**
58       * Refresh a token.
59       *
60       * @return \Illuminate\Http\JsonResponse
61       */
62      0 references | 0 overrides
63      public function refresh(): JsonResponse
64      {
65          return $this->respondWithToken(token: auth()->refresh());
66      }
67
68      /**
69       * Get the token array structure.
70       *
71       * @param string $token
72       *
73       * @return \Illuminate\Http\JsonResponse
74       */
75      2 references | 0 overrides
76      protected function respondWithToken($token): JsonResponse
77      {
78          return response()->json(data: [
79              'access_token' => $token,
80              'token_type' => 'bearer',
81              'user' => auth()->user(),
82              'expires_in' => auth()->factory()->getTTL() * 60 * 24
83          ]);
84      }

```

➤ Jalankan:

```

Microsoft Windows [Version 10.0.26100.6899]
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C:\Users\ADVAN>cd C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata

C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata>php artisan migrate

```

➤ Buat Controller CRUD

Buat file `app/Http/Controllers/DestinasController.php`:

```

1  <?php
2
3  namespace App\Http\Controllers;
4
5  use Illuminate\Http\Request;
6  use App\Models\Wisata;
7
8  0 references | 0 implementations
9  class WisataController extends Controller
10  {
11      0 references | 0 overrides
12      public function __construct()
13      {
14          $this->middleware(middleware: 'auth:api');
15      }
16
17      0 references | 0 overrides
18      public function showAll(): JsonResponse
19      {
20          return response()->json(data: Wisata::all());
21      }
22
23      0 references | 0 overrides
24      public function showOne($id): JsonResponse
25      {
26          return response()->json(data: Wisata::find(id: $id));
27      }
28
29      0 references | 0 overrides
30      public function create(Request $request): JsonResponse
31      {
32          $wisata = Wisata::create(attributes: $request->all());
33
34          return response()->json(data: $wisata, status: 201);
35      }
36  }

```

```

30     }
31
32     0 references | 0 overrides
33     public function update($id, Request $request): JsonResponse
34     {
35         $wisata = Wisata::findOrFail(id: $id);
36         $wisata->update(attributes: $request->all());
37
38         return response()->json(data: $wisata, status: 200);
39     }
40
41     0 references | 0 overrides
42     public function delete($id): Response|ResponseFactory
43     {
44         $wisata->findOrFail(id: $id)->delete();
45         return response(content: 'Deleted Successfully', status: 200);
46     }
47 }

```

➤ Routing

Edit routes/web.php:

```
20 $router->group([attributes: ['prefix' => 'api'], callback: function () use ($router): void {
21     $router->get(uri: 'wisata', action: ['uses' => 'WisataController@showAll']);
22     $router->get(uri: 'wisata/{id}', action: ['uses' => 'WisataController@showOne']);
23     $router->post(uri: 'wisata', action: ['uses' => 'WisataController@create']);
24     $router->delete(uri: 'wisata/{id}', action: ['uses' => 'WisataController@delete']);
25     $router->put(uri: 'wisata/{id}', action: ['uses' => 'WisataController@update']);
26
27     // jwt-auth
28     $router->post(uri: 'login', action: ['uses' => 'AuthController@login']);
29     $router->post(uri: 'logout', action: ['uses' => 'AuthController@logout']);
30     $router->post(uri: 'refresh', action: ['uses' => 'AuthController@refresh']);
31     $router->post(uri: 'user-profile', action: ['uses' => 'AuthController@me']);
32 });
```

➤ **Uji Endpoint**

Jalankan server:

```
Command Prompt - php -S lk × + ∨
Microsoft Windows [Version 10.0.26100.6899]
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
C:\Users\ADVAN>cd C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata

C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata>php -S localhost:8000 -t public
[Wed Nov 12 07:49:51 2025] PHP 8.2.12 Development Server (http://localhost:8000) started
```

➤ **Login (POST)**

localhost:8000/api/login

Body:

 **http://localhost:8000/api/login**

POST

http://localhost:8000/api/login

Send

Params

Authorization

Headers (9)

Body

Scripts

Tests

Settings

☐ none

☒ form-data

☐ x-www-form-urlencoded

☐ raw

☐ binary

☐ GraphQL

	Key		Value	Description	*** Bulk Edit
<input checked="" type="checkbox"/>	email	Text	admin@gmail.com		
<input checked="" type="checkbox"/>	password	Text	admin		
	Key	Text	Value	Description	

Body

Cookies

Headers (6)

Test Results

200 OK · 781 ms · 830 B

{ } JSON Preview Visualize

```
1 {  
2   "access_token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiIsInR5cCI6IkpXZWx0eXBpL2xzZ2luIiwiaWF0IjoxNzYwOTA0ODQzLCJleHAiOiE3NjE1NTI  
    ONDM5ImSi51ZiI6MTc2MjkwODg0MywiYWianRpIjoiaWmFtKUZ3QzQzRHVjByMLnJyISInN1YiI6IjEiLCJwcnVpdDlzM2JkNmNM4OT  
    Q5ZjYwMGFKYjM5ZTcuMWM0MDA4NzJkYjdhdGkiLnR5cCI6IjEiLCJwcnVpdDlzM2JkNmNM4OTQ5ZjYwMGFKYjM5ZTcuMWM0MDA4NzJkYjdhdGkiLnR5cCI6IjEiLCJwcnVpdDlzM2JkNmNM4OT  
3   "token_type": "bearer",  
4   "user": {  
5     "id": 1,  
6     "name": "admin",  
7     "email": "admin@gmail.com",  
8     "password": "admin@123"
```


➤ **CRUD wisata (gunakan Bearer Token)**

- **GET /api/wisata**
- **POST /api/wisata**
- **PUT /api/wisata/{id}**
- **DELETE /api/wisata/{id}**

Semua endpoint di atas wajib menyertakan header Authorization:

Authorization: Bearer <token_login>

➤ **Hasil Uji Coba**

- Login berhasil menghasilkan token JWT.
- Token digunakan untuk mengakses data **wisata**.
- Operasi CRUD berjalan aman karena hanya pengguna login yang dapat mengakses.

➤ **Kesimpulan**

Dengan menggunakan **JWT-Auth pada Lumen**, proses otentikasi API menjadi aman dan terstandarisasi. Token JWT digunakan sebagai kunci akses yang divalidasi di setiap request, memastikan hanya pengguna terautentikasi yang dapat melakukan operasi CRUD pada data.