

Laporan Praktikum

JWT-Auth dengan Lumen (CRUD + JWT)

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Matkul: Rekayasa Web

Link Github:

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

➤ Cek Composer

➤ Install Lumen

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

```
Command Prompt + ▾

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/doctrine-inflator (2.1.0)
  - Locking doctrine/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
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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

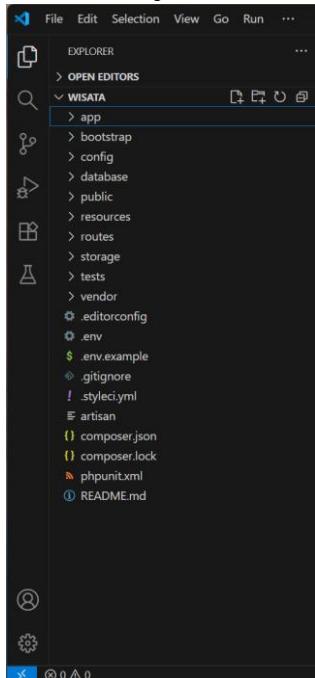
KOTA	LANDMARK	TARIF
SEMARANG	LAWANG SEWU	20000
YOGYAKARTA	PRAMBANAN	35000
MAGELANG	BOROBUDUR	45000
SURAKARTA	PGS	GRATIS

➤ 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:

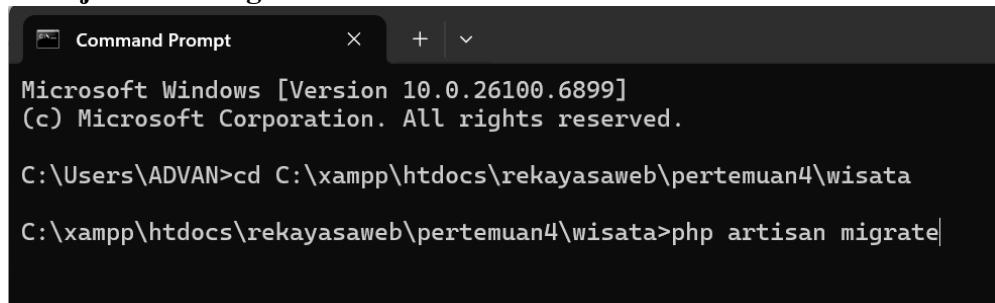
```
	Command Prompt
Microsoft Windows [Version 10.0.26100.6899]
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C:\Users\ADVAN>cd C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata
C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata>php artisan make:migration create_users_table
```

➤ **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('users', callback: function (Blueprint $table): void {
17             $table->id();
18             $table->string('name');
19             $table->string('email')->unique();
20             $table->timestamp('email_verified_at')->nullable();
21             $table->string('password');
22             $table->rememberToken();
23             $table->timestamps();
24         });
25     }
26 }
```

➤ Lalu jalankan migrasi:

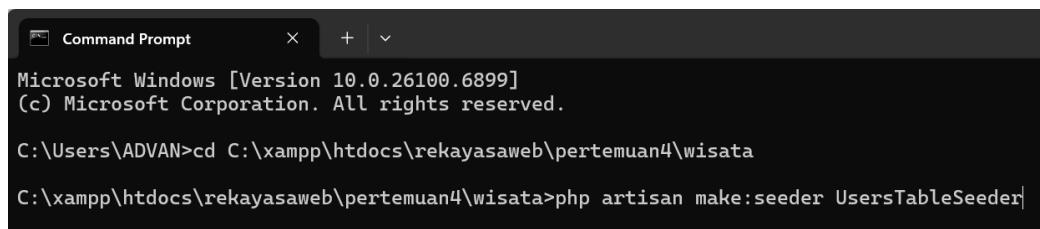


```
Command Prompt      + | ▾
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C:\Users\ADVAN>cd C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata
C:\xampp\htdocs\rekayasaweb\pertemuan4\wisata>php artisan migrate
```

➤ Menambahkan Seeder User

Buat seeder:



```
Command Prompt      + | ▾
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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/seeders/UsersTableSeeder.php:

```
5     use App\Models\User;
6     use Illuminate\Database\Seeder;
7     use Illuminate\Support\Facades\Hash;
8
0 references | 0 overrides
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 + ▾

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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 + ▾

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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);|
```

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

```

➤ 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
10 class AuthController extends Controller
11 {
12     /**
13      * Get a JWT via given credentials.
14      *
15      * @param Request $request
16      * @return Response
17      */
18     0 references | 0 overrides
19     public function login(Request $request): JsonResponse
20     {
21
22         $this->validate($request, [
23             'email' => 'required|string',
24             'password' => 'required|string',
25         ]);
26
27         $credentials = $request->only(['email', 'password']);
28
29         return $this->respondWithToken($token);
30     }
31
32     /**
33      * Get the authenticated User.
34      *
35      * @return \Illuminate\Http\JsonResponse
36      */
37     0 references | 0 overrides
38     public function me(): JsonResponse
39     {
40         return response()->json(['data' => auth()->user()]);
41     }
42
43     /**
44      * Log the user out (Invalidate the token).
45      *
46      * @return \Illuminate\Http\JsonResponse
47      */
48     0 references | 0 overrides
49     public function logout(): JsonResponse
50     {
51         auth()->logout();
52
53         return response()->json(['message' => 'Successfully logged out']);
54     }
55 }

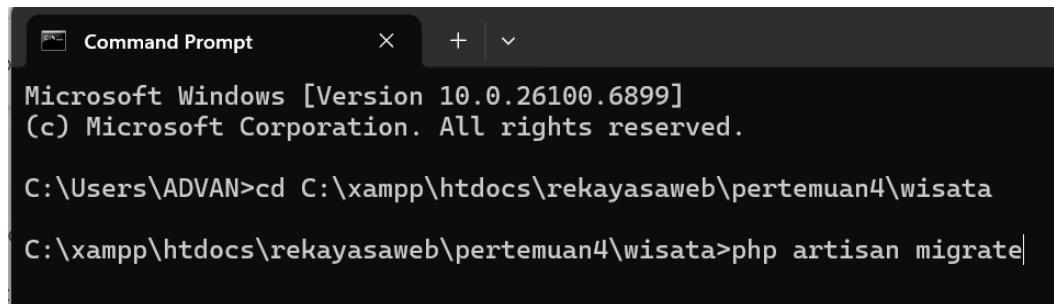
```

```

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     }
85 }

```

➤ Jalankan:



```

Command Prompt      X + ▾
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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/DestinasiController.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
37 }

```

```

30     }
31
32     0 references | 0 overrides
33     public function update($id, Request $request): JsonResponse
34     {
35         $Wisata = Wisata::findOrFail($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)->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 -Sk  X  +  ^
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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 <http://localhost:8000/api/login> Save ↴

POST <http://localhost:8000/api/login> Send ↴

Params	Authorization	Headers (9)	Body	Scripts	Tests	Settings	Cookies																
<input type="radio"/> none	<input checked="" type="radio"/> form-data	<input type="radio"/> x-www-form-urlencoded	<input type="radio"/> raw	<input type="radio"/> binary	<input type="radio"/> GraphQL																		
<table border="1"> <thead> <tr> <th>Key</th> <th>Value</th> <th>Description</th> <th>Bulk Edit</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> email</td> <td>Text <input type="button" value="▼"/></td> <td>admin@gmail.com</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> password</td> <td>Text <input type="button" value="▼"/></td> <td>admin</td> <td></td> </tr> <tr> <td>Key</td> <td>Text <input type="button" value="▼"/></td> <td>Value</td> <td>Description</td> </tr> </tbody> </table>								Key	Value	Description	Bulk Edit	<input checked="" type="checkbox"/> email	Text <input type="button" value="▼"/>	admin@gmail.com		<input checked="" type="checkbox"/> password	Text <input type="button" value="▼"/>	admin		Key	Text <input type="button" value="▼"/>	Value	Description
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Key	Text <input type="button" value="▼"/>	Value	Description																				

Body Cookies Headers (6) Test Results ⚙

200 OK 781 ms 830 B ⓘ

{ } JSON Preview Visualize ↴

```

1 {
2     "access_token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.
3         eyJpc3MiOiJodHRwOi8vbg9jYWxob3N0OjgwMDAvYXBpL2xvZ2luTiwiawF0IjoxNzYy0TA40DQzLCJ1eHAi0jE3NjI5MTI
4         ONDMSim5iZii6MTCzMjkwoDg0MywianRpIjoiRmFKU3ZQZ0RHwjbYm1NjRyIsInN1YiI6IjEiLCJwcnYi0iIyM2JkNWM40T
5         Q5ZjYwMGFkYjM52TcwMwM0MDA4NzJkYjhNTk3NmY3In0.EJf4dK6usXR6y8uHv0CVxa5iDHq0C8PFYbokIQL4MoI",
6     "token_type": "bearer",
7     "user": {
8         "id": 1,
9         "name": "admin",
10        "email": "admin@gmail.com",
11        "password": "$2y$10$...",
12        "created_at": null,
13        "updated_at": null
14    }
15 }

```

➤ **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.