

# Restful API with Laravel 9

API Authentication

# Objective

1. Verifying `User` migration
2. Creating `UserController` class
3. Creating `Login` function
4. Configure Authentication Guard for api
5. Adding routes
6. Testing routes

# 1. Verifying **User** migration

```
public function up()
{
    Schema::create('users', function (Blueprint $table) {
        $table->id();
        $table->string('name');
        $table->string('email')->unique();
        $table->string('username')->unique();
        $table->string('password');
        $table->string('api_token')->nullable();
        $table->timestamps();
    });
}
```

## 2. Creating UsersController class

- In terminal, type:

```
php artisan make:controller UsersController
```

- The file will be created in “app/Http/Controllers” folder

```
1  <?php
2
3  namespace App\Http\Controllers;
4
5  use Illuminate\Http\Request;
6
7  class UsersController extends Controller
8  {
9      //
10 }
```

### 3. Creating Login function

```
use Illuminate\Support\Str;
class UsersController extends Controller
{
    public function login(Request $request)
    {
        $data = ['username' => $request->username, 'password' => $request->password];
        if (auth()->attempt($data)) {
            $user = auth()->user();
            $token = hash('sha256', time() . Str::random(50));
            $user->forceFill(['api_token' => $token])->save();
            $data = [ 'id' => $user->id, 'username' => $user->username,
                'fullName' => $user->name, 'token' => $token
            ];
            return BaseResponse::withData($data);
        } else {
            return BaseResponse::error(1, 'Wrong username or password');
        }
    }
}
```

## 4. Configure Authentication Guard for api

- Open file “`config/auth.php`”, add “`api`” guard right after “`web`” guard

```
'guards' => [  
    'web' => [  
        'driver' => 'session',  
        'provider' => 'users',  
    ],  
    'api' => [  
        'driver' => 'token',  
        'provider' => 'users',  
    ],  
],
```

# 5. Adding routes

```
use App\Http\Controllers\EmployeesController;
```

```
use App\Http\Controllers\UsersController;
```

```
use Illuminate\Support\Facades\Route;
```

```
Route::get('/employees/{id?}', [EmployeesController::class, 'index']);
```

```
Route::get('login', function(){  
    $response = ['errorCode' => 401, 'message' => 'Unauthenticated'];  
    return response()->json($response, 401);  
})->name('login');
```

```
Route::post('/login',[UsersController::class, 'login']);
```

```
Route::group(['middleware' => 'auth:api'], function () {  
    Route::post('/employees',[EmployeesController::class, 'create']);  
    Route::put('/employees/{id}',[EmployeesController::class, 'update']);  
    Route::delete('/employees/{id}',[EmployeesController::class, 'delete']);  
});
```

# 6. Testing login API

- **POST**: <http://localhost/laravelapi/public/api/login>

The screenshot displays a REST client interface with two panels. The left panel shows the raw JSON request, and the right panel shows the pretty-printed JSON response.

**Request (Left Panel):**

```
1 {
2   ... "username": "admin",
3   ... "password": "123456789"
4 }
```

**Response (Right Panel):**

```
1 {
2   "errorCode": 0,
3   "message": "",
4   "data": {
5     "id": 1,
6     "username": "admin",
7     "fullName": "web admin",
8     "token": "U8jc4oWr3TTdnZAtc8De1Y8il3b9ZBdV8vcDyZAz"
9   }
10 }
```



- **POST**: <http://localhost/laravelapi/public/api/login>

raw ▾

JSON ▾

Beautify

```
1  {
2    .... "username": "admin",
3    .... "password": "12345679"
4  }
5
```

Pretty

Raw

Preview

Visualize

JSON ▾



```
1  {
2    "errorCode": 1,
3    "message": "Wrong username or password.",
4    "data": null
5  }
```

# Testing protected API

- **POST:**  
`http://localhost/laravelapi/public/api/employees`

The screenshot displays a REST client interface with two panels. The left panel shows the request details for a POST method to the URL `http://localhost/laravelapi2302/public/api/employees`. The request body is a JSON object with the following fields: `lastName` (Nguyen Văn), `firstName` (B), `Email` (chant@yahoo.com), and `Phone` (3484727283). The right panel shows the response, which is a 401 Unauthorized status. The response body is a JSON object with the following fields: `errorCode` (401) and `message` (Unauthenticated).

**Request:**

Method: POST  
URL: `http://localhost/laravelapi2302/public/api/employees`

Body (JSON):

```
1 {  
2   "lastName": "Nguyen Văn",  
3   "firstName": "B",  
4   "Email": "chant@yahoo.com",  
5   "Phone": "3484727283"  
6 }
```

**Response:**

Status: 401 Unauthorized

Body (JSON):

```
1 {  
2   "errorCode": 401,  
3   "message": "Unauthenticated"  
4 }
```

POST



http://localhost/laravelapi2302/public/api/employees

Headers

9 hidden

Headers



Key

Value



Authorization

Bearer 1c53971212522e201b

Key

Value

Body



200 OK

Pretty

Raw

Preview

Visualize

JSON



1

```
{
```

2

```
  "errorCode": 0,
```

3

```
  "message": "",
```

4

```
  "data": {
```

5

```
    "LastName": "Nguyễn Văn",
```

6

```
    "FirstName": "B",
```

7

```
    "Phone": "3484727283",
```

8

```
    "Email": "chant@yahoo.com",
```

9

```
    "EMP_ID": 11
```

10

```
  }
```

11

```
}
```

