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PEMROGRAMAN WEB LANJUT

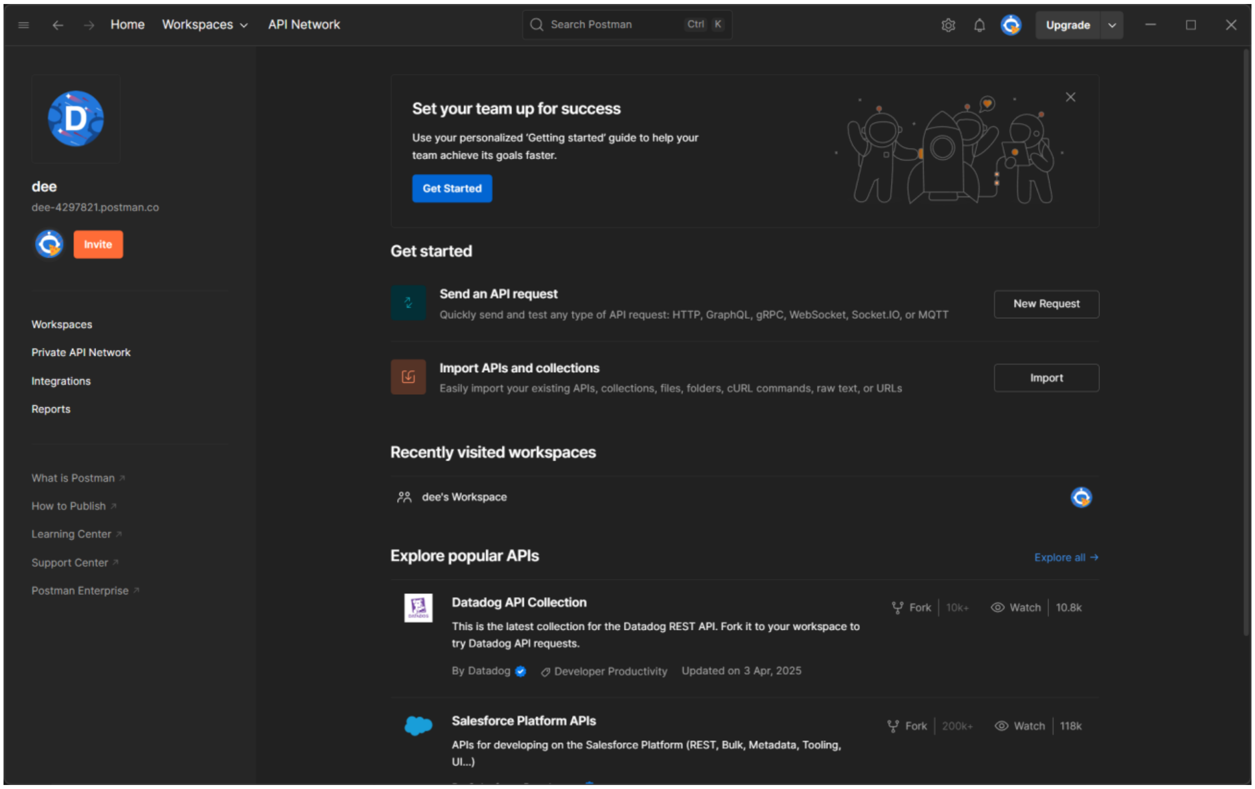
JOBSHEET

RESTFUL API 2

Praktikum 1 – Implementasi Eloquent Accessor

1. Sebelum memulai pastikan REST API, terlebih dahulu pastikan sudah ter instal aplikasi Postman.

⇨ Postman



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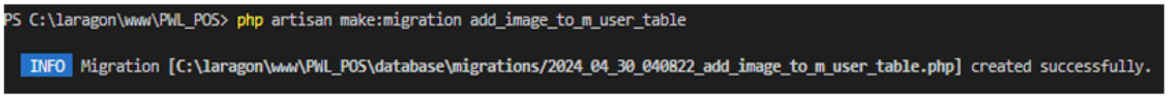
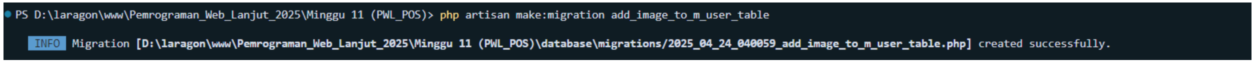
2. Kita akan memodifikasi Table m_user dengan menambahkan column : image, buka terminal lalu ketikkan

php artisan make:migration add_image_to_m_user_table



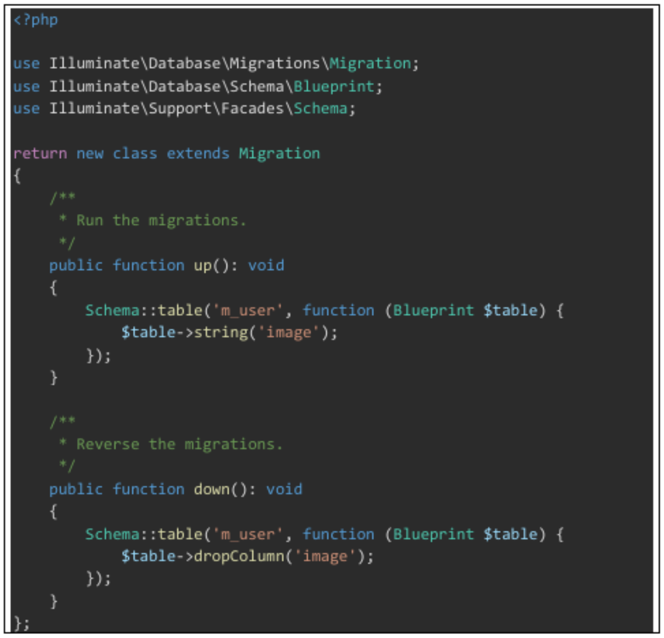
```
PS C:\laragon\www\PWL_POS> php artisan make:migration add_image_to_m_user_table

  INFO  Migration [C:\laragon\www\PWL_POS\database\migrations/2024_04_30_040822_add_image_to_m_user_table.php] created successfully.
```

⇨ Add migration



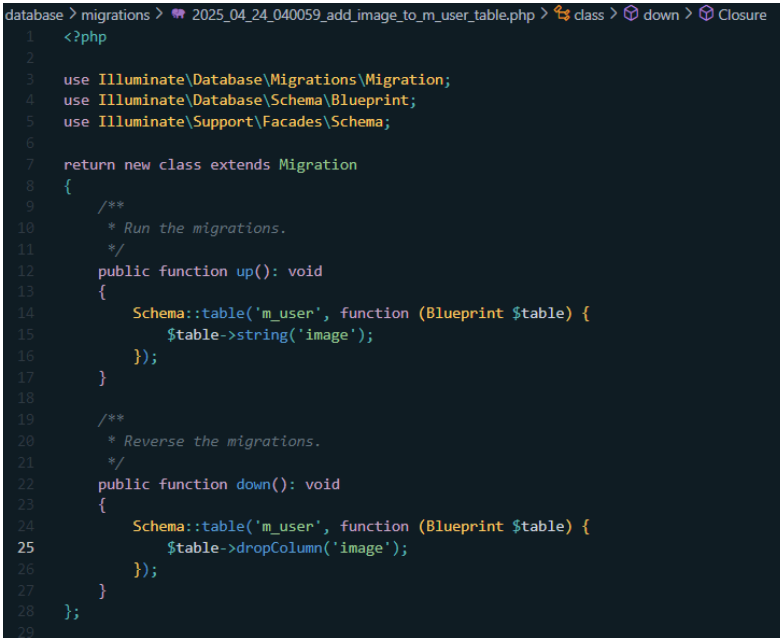
```
PS D:\laragon\www\Pemrograman_Web_Lanjut_2025\Minggu 11 (PWL_POS)> php artisan make:migration add_image_to_m_user_table

  INFO  Migration [D:\laragon\www\Pemrograman_Web_Lanjut_2025\Minggu 11 (PWL_POS)\database\migrations/2025_04_24_040059_add_image_to_m_user_table.php] created successfully.
```

3. Buka file migrasi tersebut lalu modifikasi seperti ini lalu simpan:



```php
<?php

use Illuminate\Database\Migrations\Migration;
use Illuminate\Database\Schema\Blueprint;
use Illuminate\Support\Facades\Schema;

return new class extends Migration
{
    /**
     * Run the migrations.
     */
    public function up(): void
    {
        Schema::table('m_user', function (Blueprint $table) {
            $table->string('image');
        });
    }

    /**
     * Reverse the migrations.
     */
    public function down(): void
    {
        Schema::table('m_user', function (Blueprint $table) {
            $table->dropColumn('image');
        });
    }
};
```

⇨ Migration



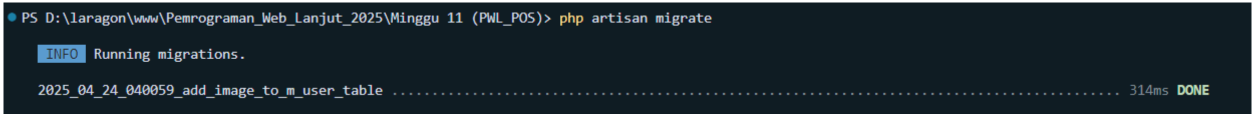
database > migrations > 2025_04_24_040059_add_image_to_m_user_table.php > class > down > Closure

```php
<?php

use Illuminate\Database\Migrations\Migration;
use Illuminate\Database\Schema\Blueprint;
use Illuminate\Support\Facades\Schema;

return new class extends Migration
{
    /**
     * Run the migrations.
     */
    public function up(): void
    {
        Schema::table('m_user', function (Blueprint $table) {
            $table->string('image');
        });
    }

    /**
     * Reverse the migrations.
     */
    public function down(): void
    {
        Schema::table('m_user', function (Blueprint $table) {
            $table->dropColumn('image');
        });
    }
};
```

4. Lakukan jalankan update migrasi dengan cara:

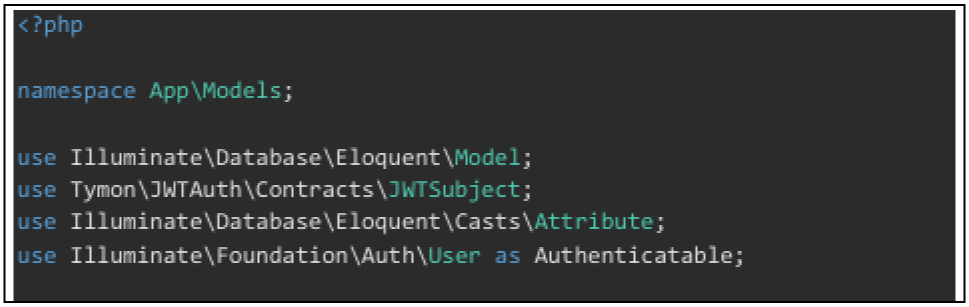
```
php artisan migrate
```

⇨ Migrate



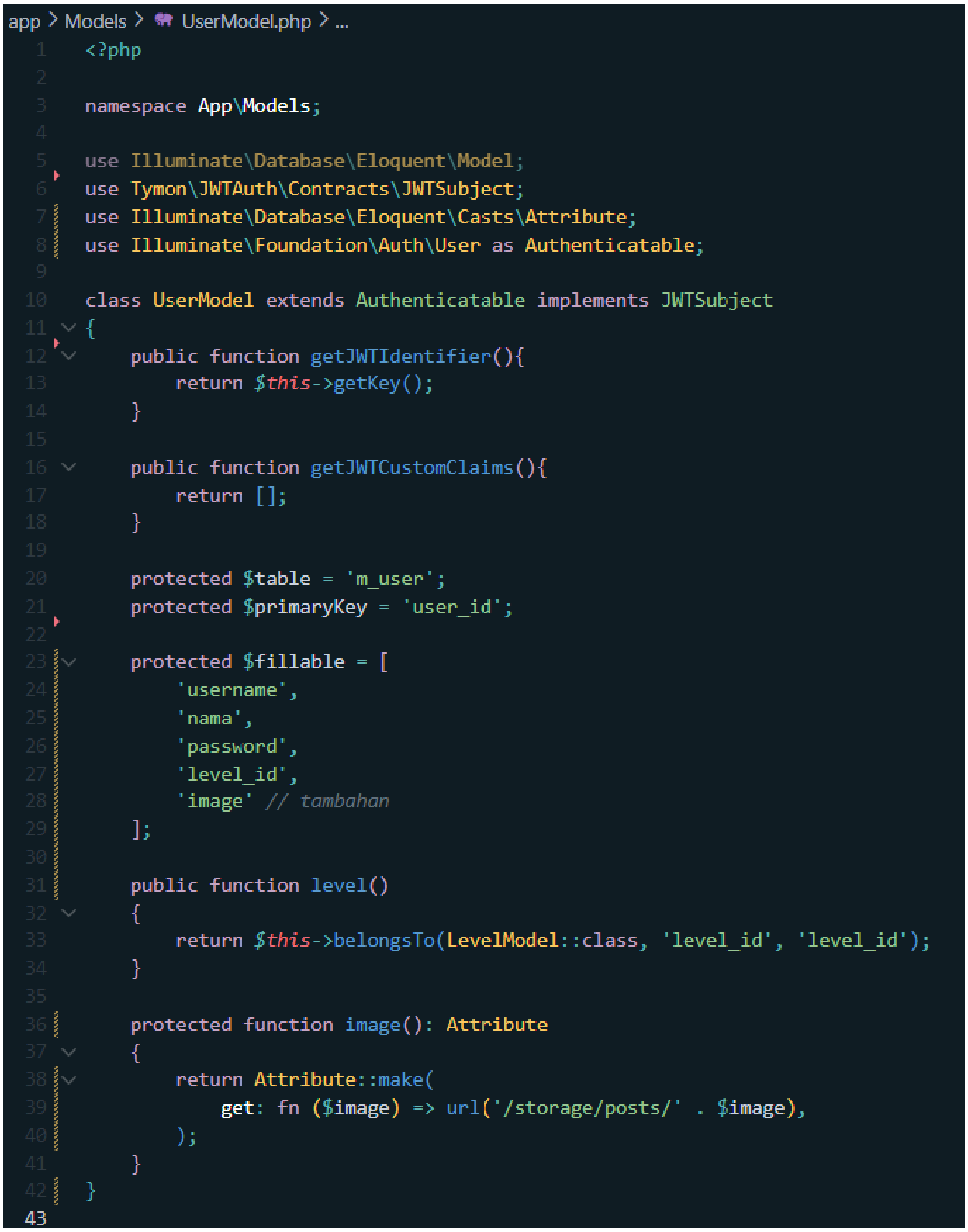
```
PS D:\laragon\www\Pemrograman_Web_Lanjut_2025\Minggu 11 (PWL_POS)> php artisan migrate

   INFO  Running migrations.

   2025_04_24_040059_add_image_to_m_user_table ........................................................................................ 314ms DONE
```

5. Lalu lakukan modifikasi models pada App/Models/UserModel.php



```php
<?php

namespace App\Models;

use Illuminate\Database\Eloquent\Model;
use Tymon\JWTAuth\Contracts\JWTSubject;
use Illuminate\Database\Eloquent\Casts\Attribute;
use Illuminate\Foundation\Auth\User as Authenticatable;
```

⇨ UserModel

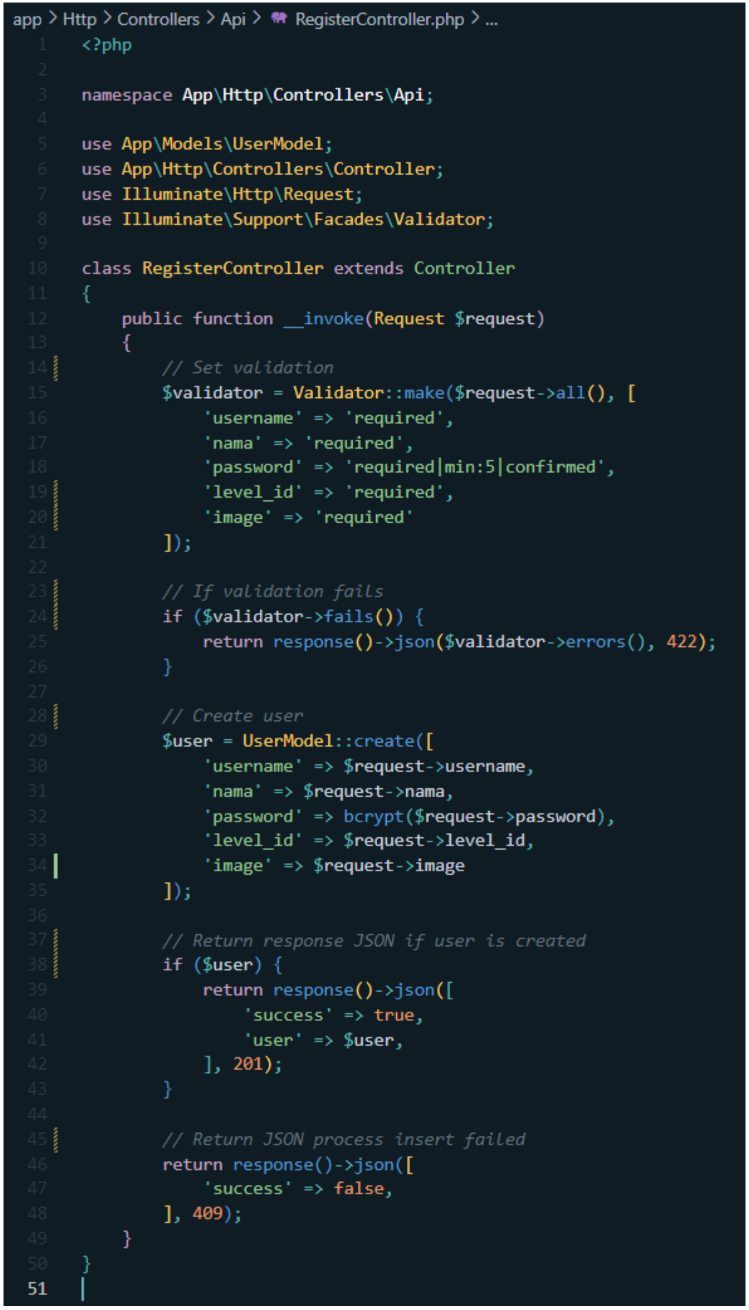


```php
<?php

namespace App\Models;

use Illuminate\Database\Eloquent\Model;
use Tymon\JWTAuth\Contracts\JWTSubject;
use Illuminate\Database\Eloquent\Casts\Attribute;
use Illuminate\Foundation\Auth\User as Authenticatable;

class UserModel extends Authenticatable implements JWTSubject
{
    public function getJWTIdentifier(){
        return $this->getKey();
    }

    public function getJWTCustomClaims(){
        return [];
    }

    protected $table = 'm_user';
    protected $primaryKey = 'user_id';

    protected $fillable = [
        'username',
        'nama',
        'password',
        'level_id',
        'image' // tambahan
    ];

    public function level()
    {
        return $this->belongsTo(LevelModel::class, 'level_id', 'level_id');
    }

    protected function image(): Attribute
    {
        return Attribute::make(
            get: fn ($image) => url('/storage/posts/' . $image),
        );
    }
}
```

6. Lakukan modifikasi pada Controllers/Api/RegisterController

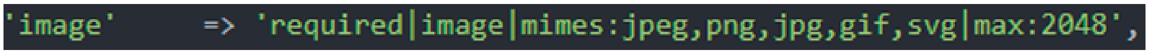
```php
<?php

namespace App\Http\Controllers\Api;

use App\Models\UserModel;
use App\Http\Controllers\Controller;
use Illuminate\Http\Request;
```

⇨ RegisterController


app > Http > Controllers > Api > RegisterController.php > ...

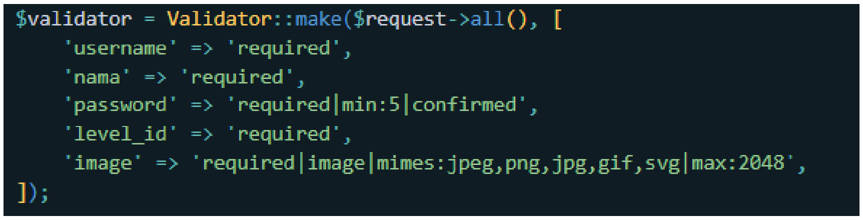
```php
<?php

namespace App\Http\Controllers\Api;

use App\Models\UserModel;
use App\Http\Controllers\Controller;
use Illuminate\Http\Request;
use Illuminate\Support\Facades\Validator;

class RegisterController extends Controller
{
    public function __invoke(Request $request)
    {
        // Set validation
        $validator = Validator::make($request->all(), [
            'username' => 'required',
            'nama' => 'required',
            'password' => 'required|min:5|confirmed',
            'level_id' => 'required',
            'image' => 'required'
        ]);

        // If validation fails
        if ($validator->fails()) {
            return response()->json($validator->errors(), 422);
        }

        // Create user
        $user = UserModel::create([
            'username' => $request->username,
            'nama' => $request->nama,
            'password' => bcrypt($request->password),
            'level_id' => $request->level_id,
            'image' => $request->image
        ]);

        // Return response JSON if user is created
        if ($user) {
            return response()->json([
                'success' => true,
                'user' => $user,
            ], 201);
        }

        // Return JSON process insert failed
        return response()->json([
            'success' => false,
        ], 409);
    }
}

```

7. Anda dapat menambahkan detail untuk spesifikasi image pada validator



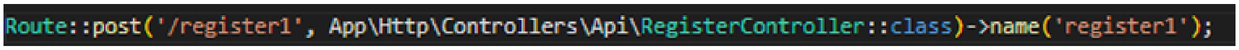
```
'image'      =>  'required|image|mimes:jpeg,png,jpg,gif,svg|max:2048',
```

⇨ Validator



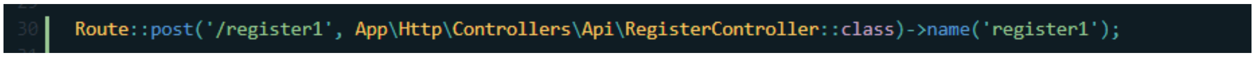
```
$validator = Validator::make($request->all(), [
    'username' => 'required',
    'nama' => 'required',
    'password' => 'required|min:5|confirmed',
    'level_id' => 'required',
    'image' => 'required|image|mimes:jpeg,png,jpg,gif,svg|max:2048',
]);
```

8. Ubah atau tambahkan register1 pada routes/api.php



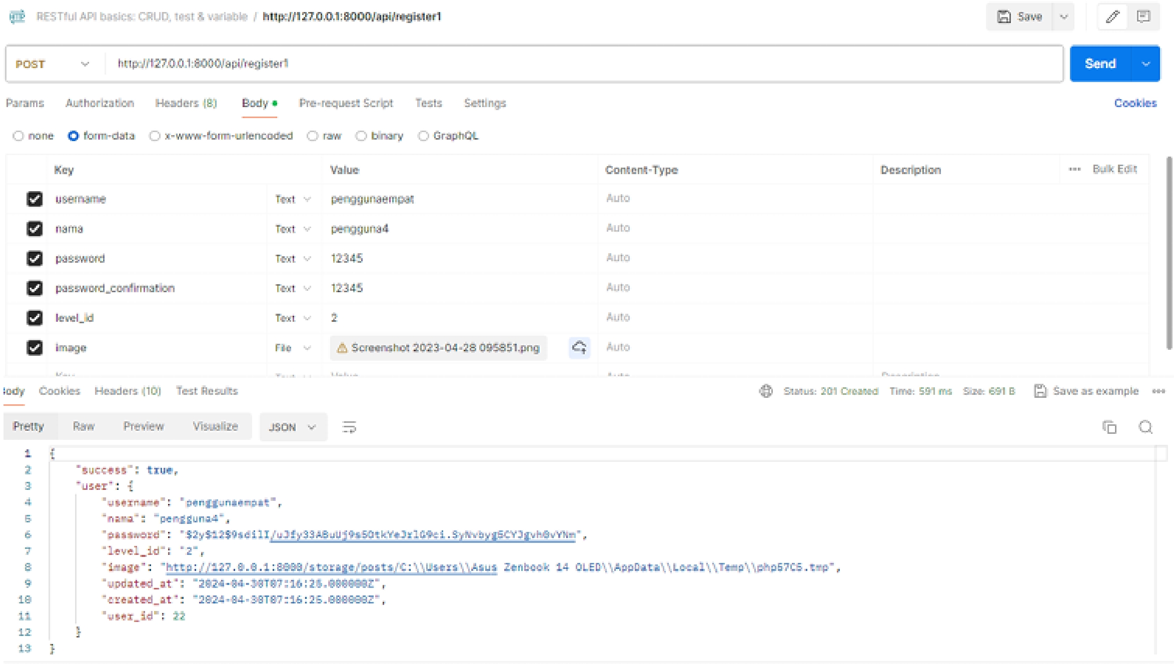
```
Route::post('/register1', App\Http\Controllers\Api\RegisterController::class)->name('register1');
```

⇨ Routes



```
    Route::post('/register1', App\Http\Controllers\Api\RegisterController::class)->name('register1');
```

8. Simpan dan akses pada aplikasi Postman, atur pada Body isi manual Key dan Valuenya pada Key image tambahkan value File dan upload gambar http://127.0.0.1:8000/api/register1 dengan method POST dan klik send

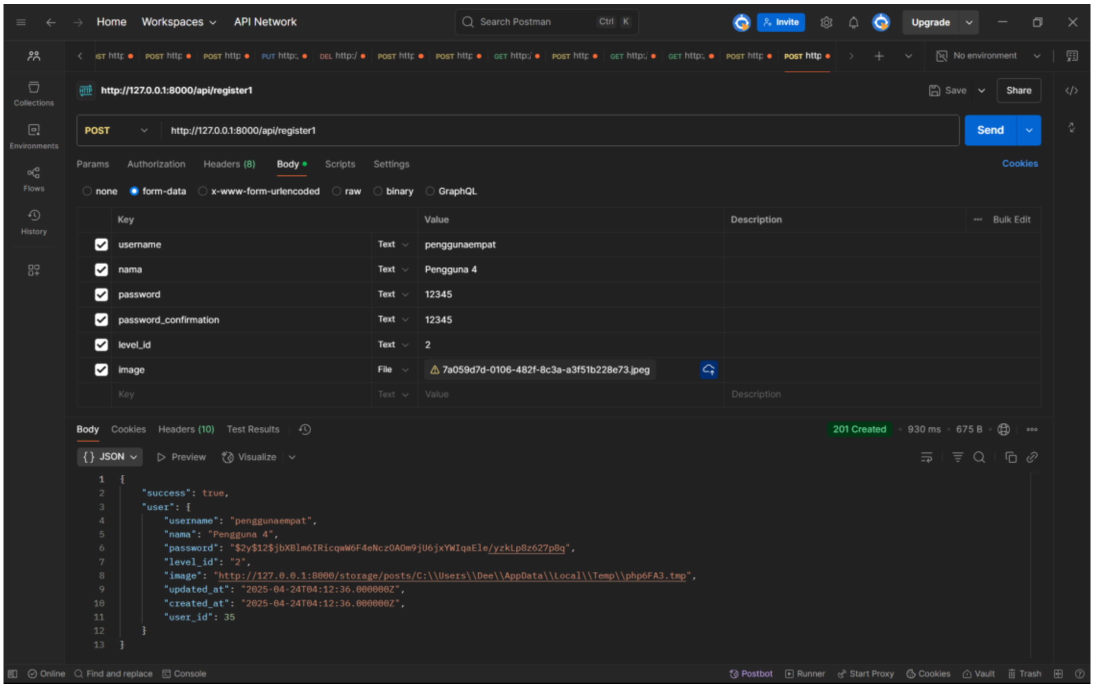


RESTful API basics: CRUD, test & variable / http://127.0.0.1:8000/api/register1
Save
POST
http://127.0.0.1:8000/api/register1
Send
Params
Authorization
Headers (8)
Body
Pre-request Script
Tests
Settings
Cookies
○ none ● form-data ○ x-www-form-urlencoded ○ raw ○ binary ○ GraphQL

	Key		Value	Content-Type	Description
☑	username	Text	penggunaempat	Auto	
☑	nama	Text	pengguna4	Auto	
☑	password	Text	12345	Auto	
☑	password_confirmation	Text	12345	Auto	
☑	level_id	Text	2	Auto	
☑	image	File	Screenshot 2023-04-28 095851.png	Auto	

```
{
    "success": true,
    "user": {
        "username": "penggunaempat",
        "nama": "pengguna4",
        "password": "$2y$12$9sdilI/uJfy33ABuUj9s5OtkYeJrlG9ci.SyNvbygSCYJgvh0vYNm",
        "level_id": "2",
        "image": "http://127.0.0.1:8000/storage/posts/C:\\Users\\Asus Zenbook 14 OLED\\AppData\\Local\\Temp\\php57C5.tmp",
        "updated_at": "2024-04-30T07:16:25.000000Z",
        "created_at": "2024-04-30T07:16:25.000000Z",
        "user_id": 22
    }
}
```

⇨ Postman



POST http://127.0.0.1:8000/api/register1

Body: ○ none ● form-data ○ x-www-form-urlencoded ○ raw ○ binary ○ GraphQL

	Key		Value	Description
☑	username	Text	penggunaempat	
☑	nama	Text	Pengguna 4	
☑	password	Text	12345	
☑	password_confirmation	Text	12345	
☑	level_id	Text	2	
☑	image	File	7a059d7d-0106-482f-8c3a-a3f51b228e73.jpeg	

201 Created · 930 ms · 675 B

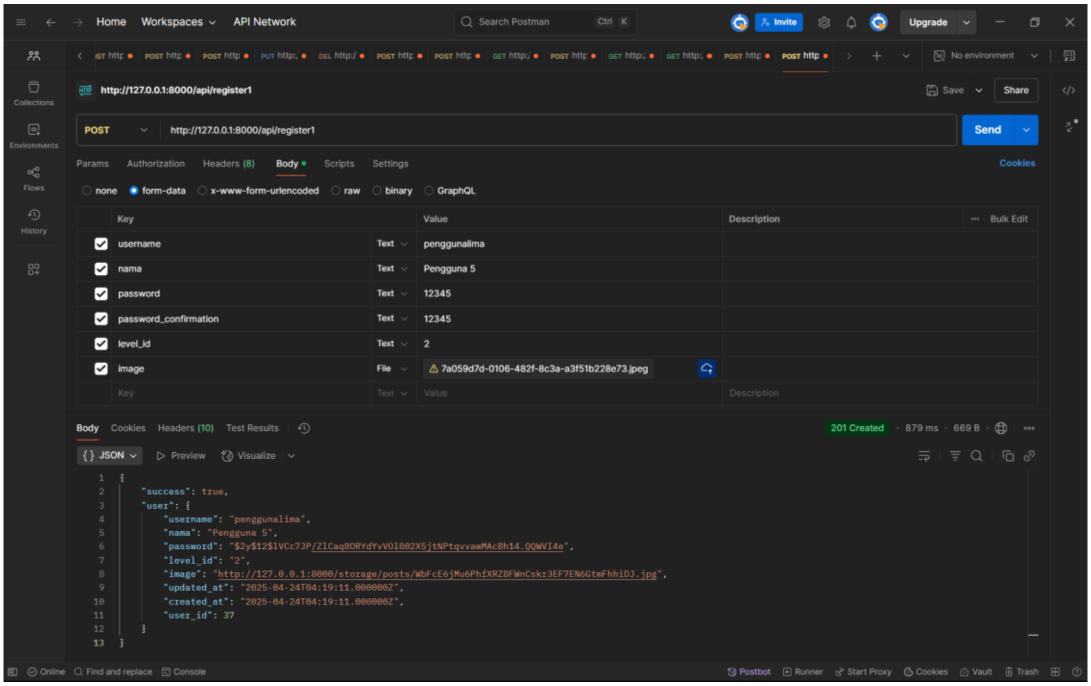
```
{
    "success": true,
    "user": {
        "username": "penggunaempat",
        "nama": "Pengguna 4",
        "password": "$2y$12$jbXBlm6IRicqwW6F4eNcz0A0m9jU6jxYWIqaEle/yzkLp8z627p8q",
        "level_id": "2",
        "image": "http://127.0.0.1:8000/storage/posts/C:\\Users\\Dee\\AppData\\Local\\Temp\\php6FA3.tmp",
        "updated_at": "2025-04-24T04:12:36.000000Z",
        "created_at": "2025-04-24T04:12:36.000000Z",
        "user_id": 35
    }
}
```

9. Pada Controllers/Api/RegisterController bagian create user ganti dengan

```
'image'       => $image->hashName(),
```

10. Uji coba dan screenshot hasilnya apa perbedaan dari yang sebelumnya

⇨ Create user



POST http://127.0.0.1:8000/api/register1

Body: ○ none ● form-data ○ x-www-form-urlencoded ○ raw ○ binary ○ GraphQL

	Key		Value	Description
☑	username	Text	penggunalima	
☑	nama	Text	Pengguna 5	
☑	password	Text	12345	
☑	password_confirmation	Text	12345	
☑	level_id	Text	2	
☑	image	File	7a059d7d-0106-482f-8c3a-a3f51b228e73.jpeg	

201 Created · 879 ms · 669 B

```
{
    "success": true,
    "user": {
        "username": "penggunalima",
        "nama": "Pengguna 5",
        "password": "$2y$12$lVCc7JP/ZlCaq8ORYdYvVOl802X5jtNPtqvvawMAcBh14.QQWVI4e",
        "level_id": "2",
        "image": "http://127.0.0.1:8000/storage/posts/WbFcE6jMu6PhfXRZ8FWnCskr3EF7EN6GtmFhhiDJ.jpg",
        "updated_at": "2025-04-24T04:19:11.000000Z",
        "created_at": "2025-04-24T04:19:11.000000Z",
        "user_id": 37
    }
}
```

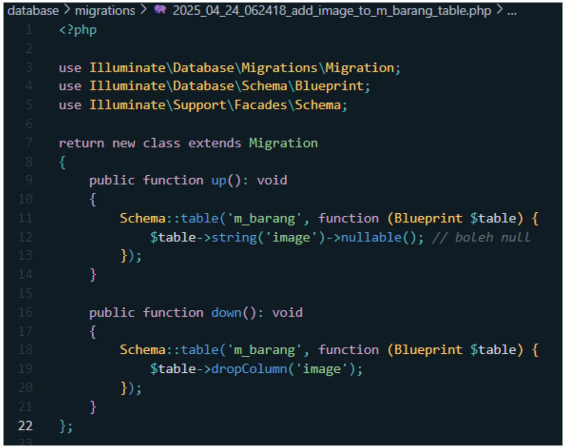
Perbedaannya terletak pada path gambar. Pada percobaan sebelumnya, path image terlihat secara jelas sesuai dengan nama file aslinya. Sedangkan pada percobaan yang sekarang, path-nya disamarkan menggunakan nama acak karena sudah di-*hash*.

TUGAS

Implementasikan API untuk upload file/gambar pada tabel lainnya yaitu tabel m_barang dan gunakan pada transaksi. Uji coba dengan method GET untuk memanggil data yang sudah di inputkan.

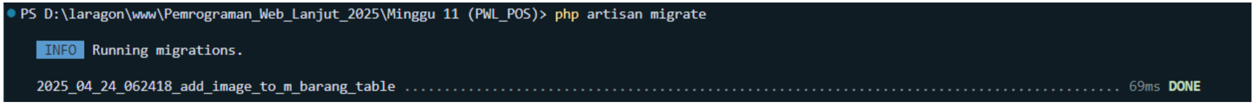
⇨ Barang

- Upload image m_barang migrations



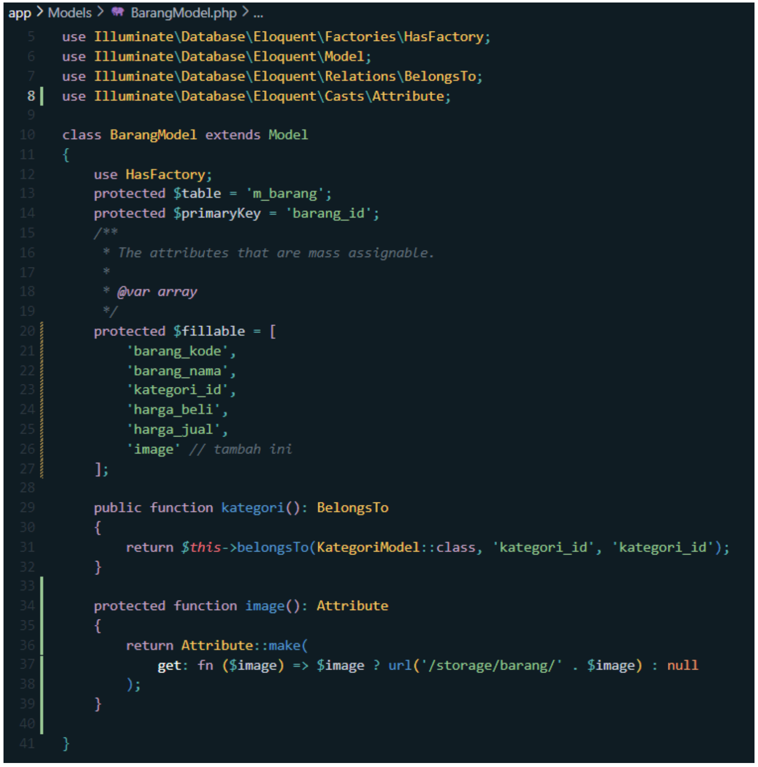
database > migrations > 2025_04_24_062418_add_image_to_m_barang_table.php > ...

```php
<?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::table('m_barang', function (Blueprint $table) {
            $table->string('image')->nullable(); // boleh null
        });
    }

    public function down(): void
    {
        Schema::table('m_barang', function (Blueprint $table) {
            $table->dropColumn('image');
        });
    }
};
```



```
PS D:\laragon\www\Pemrograman_Web_Lanjut_2025\Minggu 11 (PWL_POS)> php artisan migrate

   INFO  Running migrations.

   2025_04_24_062418_add_image_to_m_barang_table ............................................................................ 69ms DONE
```

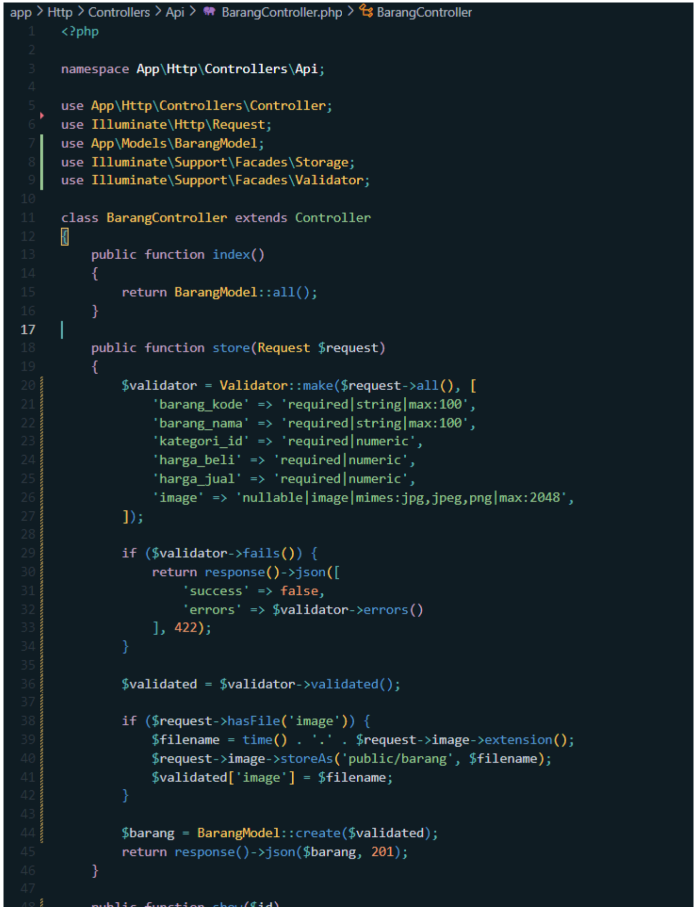
- BarangModel



app > Models > BarangModel.php > ...

```php
use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\Model;
use Illuminate\Database\Eloquent\Relations\BelongsTo;
use Illuminate\Database\Eloquent\Casts\Attribute;

class BarangModel extends Model
{
    use HasFactory;
    protected $table = 'm_barang';
    protected $primaryKey = 'barang_id';
    /**
     * The attributes that are mass assignable.
     *
     * @var array
     */
    protected $fillable = [
        'barang_kode',
        'barang_nama',
        'kategori_id',
        'harga_beli',
        'harga_jual',
        'image' // tambah ini
    ];

    public function kategori(): BelongsTo
    {
        return $this->belongsTo(KategoriModel::class, 'kategori_id', 'kategori_id');
    }

    protected function image(): Attribute
    {
        return Attribute::make(
            get: fn ($image) => $image ? url('/storage/barang/' . $image) : null
        );
    }

}
```

- Barang Controller

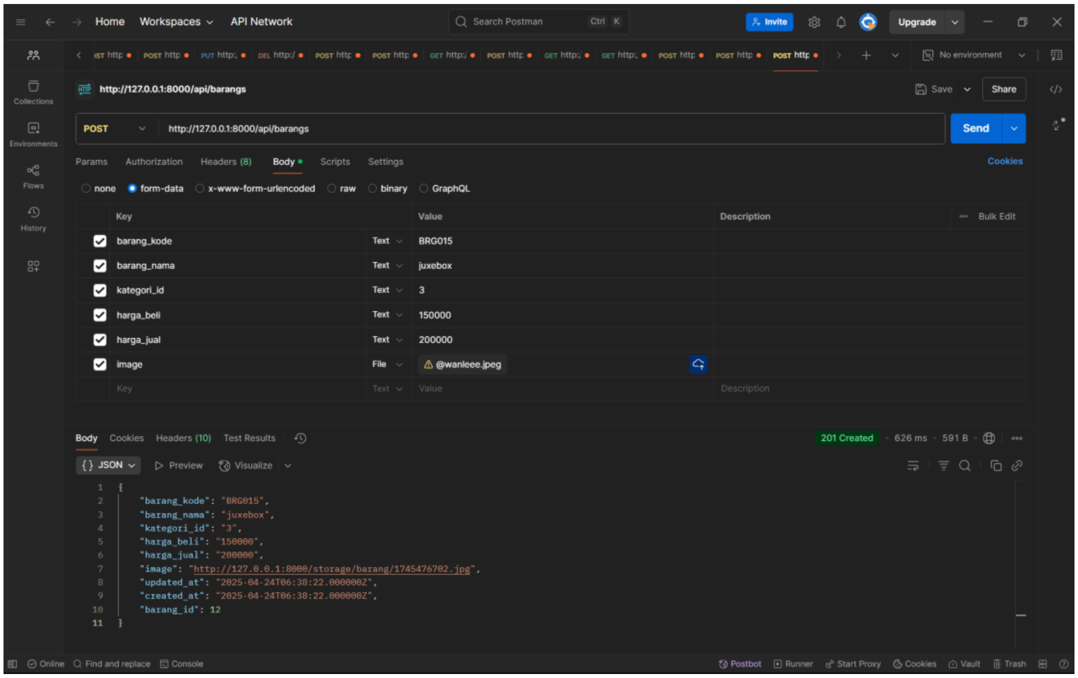


app > Http > Controllers > Api > BarangController.php > BarangController

```php
<?php

namespace App\Http\Controllers\Api;

use App\Http\Controllers\Controller;
use Illuminate\Http\Request;
use App\Models\BarangModel;
use Illuminate\Support\Facades\Storage;
use Illuminate\Support\Facades\Validator;

class BarangController extends Controller
{
    public function index()
    {
        return BarangModel::all();
    }

    public function store(Request $request)
    {
        $validator = Validator::make($request->all(), [
            'barang_kode' => 'required|string|max:100',
            'barang_nama' => 'required|string|max:100',
            'kategori_id' => 'required|numeric',
            'harga_beli' => 'required|numeric',
            'harga_jual' => 'required|numeric',
            'image' => 'nullable|image|mimes:jpg,jpeg,png|max:2048',
        ]);

        if ($validator->fails()) {
            return response()->json([
                'success' => false,
                'errors' => $validator->errors()
            ], 422);
        }

        $validated = $validator->validated();

        if ($request->hasFile('image')) {
            $filename = time() . '.' . $request->image->extension();
            $request->image->storeAs('public/barang', $filename);
            $validated['image'] = $filename;
        }

        $barang = BarangModel::create($validated);
        return response()->json($barang, 201);
    }

    public function show($id)
```

- Postman

Post



http://127.0.0.1:8000/api/barangs

POST http://127.0.0.1:8000/api/barangs

○ none ● form-data ○ x-www-form-urlencoded ○ raw ○ binary ○ GraphQL

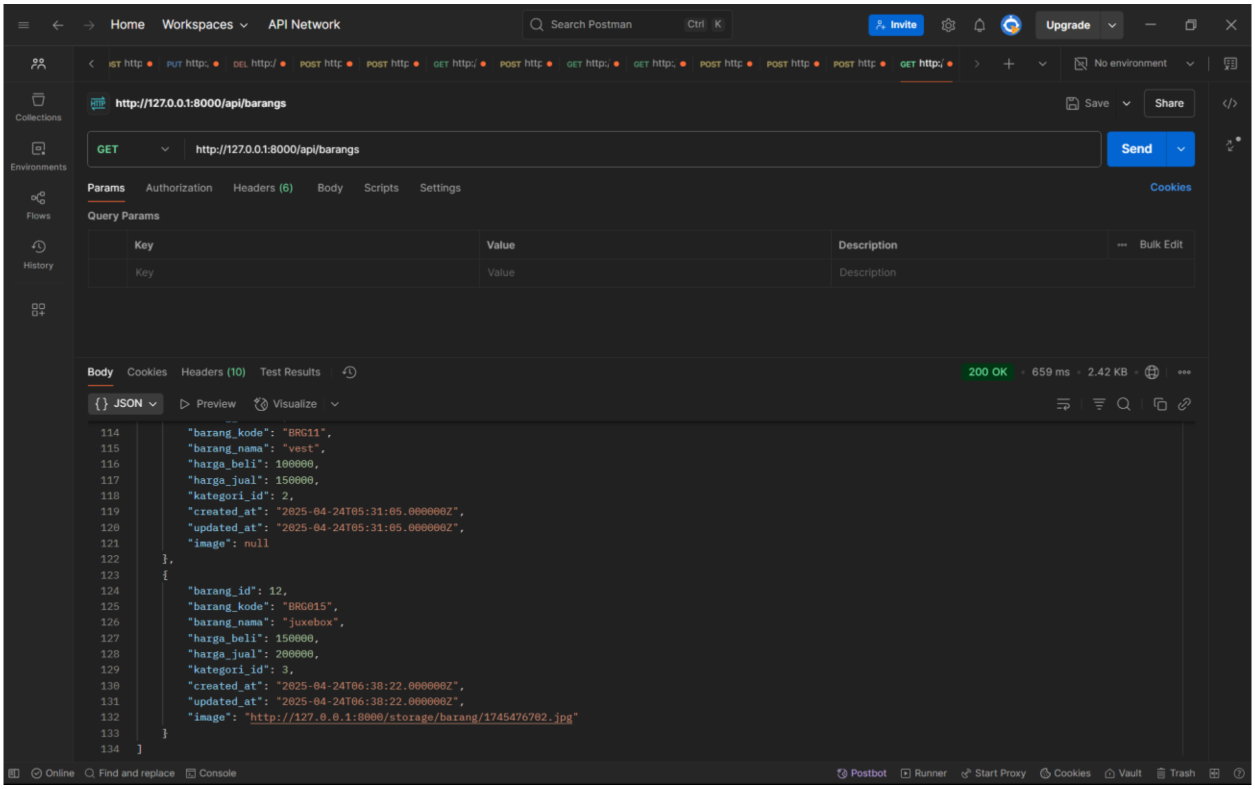
	Key		Value	Description
☑	barang_kode	Text	BRG015	
☑	barang_nama	Text	juxebox	
☑	kategori_id	Text	3	
☑	harga_beli	Text	150000	
☑	harga_jual	Text	200000	
☑	image	File	⚠ @wanleee.jpeg	

201 Created · 626 ms · 591 B

{} JSON

```json
{
    "barang_kode": "BRG015",
    "barang_nama": "juxebox",
    "kategori_id": "3",
    "harga_beli": "150000",
    "harga_jual": "200000",
    "image": "http://127.0.0.1:8000/storage/barang/1745476702.jpg",
    "updated_at": "2025-04-24T06:38:22.000000Z",
    "created_at": "2025-04-24T06:38:22.000000Z",
    "barang_id": 12
}
```

Get



http://127.0.0.1:8000/api/barangs

GET http://127.0.0.1:8000/api/barangs

Query Params

Key	Value	Description
Key	Value	Description

200 OK · 659 ms · 2.42 KB

```
            "barang_kode": "BRG11",
            "barang_nama": "vest",
            "harga_beli": 100000,
            "harga_jual": 150000,
            "kategori_id": 2,
            "created_at": "2025-04-24T05:31:05.000000Z",
            "updated_at": "2025-04-24T05:31:05.000000Z",
            "image": null
        },
        {
            "barang_id": 12,
            "barang_kode": "BRG015",
            "barang_nama": "juxebox",
            "harga_beli": 150000,
            "harga_jual": 200000,
            "kategori_id": 3,
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