

# Laporan REST API dengan Lumen: Sistem Bank

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## A. Database & Tabel

1. Database: bank
2. Struktur tabel “account”

#	Nama	Jenis	Penyortiran	Atribut	Tak Termilai	Bawaan	Komentar	Ekstra	Tindakan
1	id 	int(2)			Tidak	Tidak ada		AUTO_INCREMENT	 Ubah  Hapus  Lainnya
2	account_holder	varchar(100)	utf8mb4_general_ci		Tidak	Tidak ada			 Ubah  Hapus  Lainnya
3	account_type	varchar(20)	utf8mb4_general_ci		Tidak	Tidak ada			 Ubah  Hapus  Lainnya
4	balance	double			Tidak	Tidak ada			 Ubah  Hapus  Lainnya
5	currency	varchar(10)	utf8mb4_general_ci		Tidak	Tidak ada			 Ubah  Hapus  Lainnya
6	opened_date	date			Tidak	Tidak ada			 Ubah  Hapus  Lainnya

id\_account = primary\_key & Auto Increment

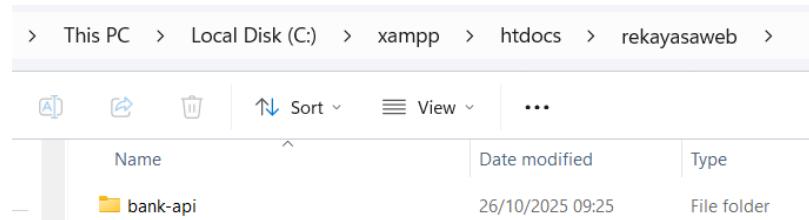
## B. Isi Tabel

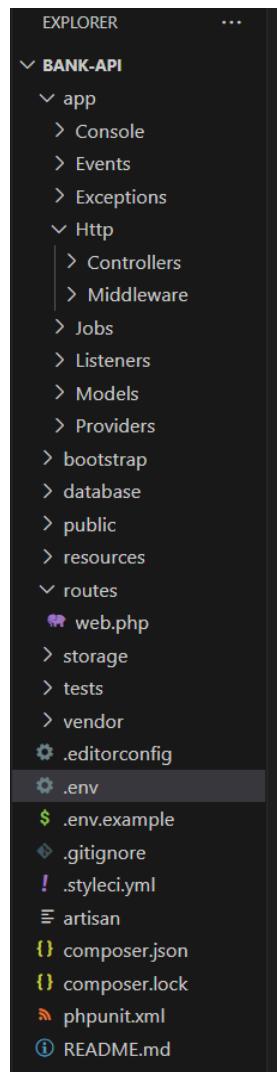
account_holder	account_type	balance	currency	opened_date
Alvin Aditya	Savings	1000000	IDR	2025-10-26
Halim Tariq	Savings	2500000	IDR	2025-10-26
Sholifudin Hudaf	Checking	15000000	IDR	2025-10-20

## C. Server Requirements

1. PHP => 7.3
2. OpenSSL PHP Extension
3. PDO PHP Extension
4. Mbstring PHP Extension
5. Composer : Download composer atau Install composer

## D. Folder project hasil instalasi





## E. Konfiurasi APP\_URL dan Database (.env)

➤ File .env (bank\\.env)

```
.env
1 APP_NAME=Bank-API
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=
10
11 DB_CONNECTION=mysql
12 DB_HOST=127.0.0.1
13 DB_PORT=3306
14 DB_DATABASE=bank
15 DB_USERNAME=root
16 DB_PASSWORD=
17
18 CACHE_DRIVER=file
19 QUEUE_CONNECTION=sync
20
```

## F. Aktivasi Fungsi Eloquent dan Facades

- Edit file: wisata\bootstrap\app.php
- Uncomment (hilangkan //) baris berikut:

```
// $app->withFacades();
```

```
// $app->withEloquent();
```

- Menjadi

```
$app->withFacades();
```

```
$app->withEloquent();
```

## G. Buat Model “Account”

- Buat file: bank\app\Models\Account.php

```
ip > Models > Account.php > ...
1  <?php
2  namespace App\Models;
3  use Illuminate\Database\Eloquent\Model;
4
5  9 references | 0 implementations
6  class Account extends Model
7  {
8      0 references
9      protected $table = 'accounts';
10     0 references
11     public $timestamps = false;
12
13     0 references
14     protected $fillable = [
15         'account_holder', 'account_type', 'balance', 'currency', 'opened_date'
16     ];
17 }
```

## H. Buat Controller “AccountController”

- Buat file: bank\app\Http\Controllers\AccountController.php

```

app > Http > Controllers > AccountController.php > ...
1  <?php
2
3  namespace App\Http\Controllers;
4  use Illuminate\Http\Request;
5  use App\Models\Account;
6
7  // Menampilkan semua akun
8  class AccountController extends Controller
9  {
10     public function showAll(): JsonResponse
11     {
12         return response()->json(data: Account::all());
13     }
14
15     // Menampilkan akun berdasarkan ID
16     public function showOne($id): JsonResponse
17     {
18         return response()->json(data: Account::find(id: $id));
19     }
20
21     // Membuat akun baru
22     public function create(Request $request): JsonResponse
23     {
24         $account = Account::create(attributes: $request->all());
25         return response()->json(data: $account, status: 201);
26     }
27
28     // Memperbarui akun (PUT)
29     public function update($id, Request $request): JsonResponse
30     {
31         $account = Account::findOrFail(id: $id);
32         $account->update(attributes: $request->all());
33         return response()->json(data: $account, status: 200);
34     }

```

## I. Buat Controller “AccountController”

- Lanjutan

```

34     }
35
36     // Menghapus akun
37     public function delete($id): Response|ResponseFactory
38     {
39         Account::findOrFail(id: $id)->delete();
40         return response(content: 'Account deleted successfully', status: 200);
41     }
42 }
43

```

## J. Konfigurasi Routing

- Edit file: bank\routes\web.php
- Tambahkan routing berikut:

```

$router->group(attributes: ['prefix' => 'api'], callback: function () use ($router): void {
    // Account endpoints
    $router->get(uri: 'accounts', action: ['uses' => 'AccountController@showAll']);
    $router->get(uri: 'accounts/{id}', action: ['uses' => 'AccountController@showOne']);
    $router->post(uri: 'accounts', action: ['uses' => 'AccountController@create']);
    $router->put(uri: 'accounts/{id}', action: ['uses' => 'AccountController@update']);
    $router->delete(uri: 'accounts/{id}', action: ['uses' => 'AccountController@delete']);
}

```

## K. Ujicoba REST API Lumen menggunakan POSTMAN

- Jalankan sever database MySQL
- Jalankan server web dengan perintah berikut:

- php -S localhost:8000 -t public

```
C:\xampp\htdocs>cd rekayasaweb\bank-api
C:\xampp\htdocs\rekayasaweb\bank-api>code .
C:\xampp\htdocs\rekayasaweb\bank-api>php -S localhost:8000 -t public
[Sun Oct 26 09:55:21 2025] PHP 8.2.12 Development Server (http://localhost:8000) started
[Sun Oct 26 10:17:07 2025] [::1]:31467 Accepted
```

## L. Tampilan request GET: api/accounts

GET Send

http://localhost:8000/api/accounts

Params Authorization Headers (8) **Body** Scripts Settings

none  form-data  x-www-form-urlencoded  raw  binary  GraphQL **JSON** Cookies

Beautify

```

1 {
2   "account_holder": "Sholifudin Hudaf",
3   "account_type": "Checking",
4   "balance": 15000000,
5   "currency": "IDR",
6   "opened_date": "2025-10-20"
7 }
8

```

## M. Tampilan request GET: api/accounts/{id}

Body Cookies Headers (6) Test Results | ↻

{ } **JSON** ▶ Preview ⚗ Visualize | ▾

<b>id</b>	1
<b>account_holder</b>	Alvin Aditya
<b>account_type</b>	Savings
<b>balance</b>	1000000
<b>currency</b>	IDR
<b>opened_date</b>	2025-10-26

## N. Tampilan request POST: api/accounts/

POST <http://localhost:8000/api/accounts/>

**Body** (8) **JSON**

```

1 {
2   "account_holder": "Rafa Satria",
3   "account_type": "Investment",
4   "balance": 5000000,
5   "currency": "IDR",
6   "opened_date": "2025-09-15"
7 }
8

```

Send

Params Authorization Headers (8) Body Scripts Settings Cookies Beautify

201 Created 141 ms 324 B

Body	Cookies	Headers (6)	Test Results
{ } JSON	Preview	Visualize	
account_holder	Rafa Satria		
account_type	Investment		
balance	5000000		
currency	IDR		
opened_date	2025-09-15		
id	4		

## O. Tampilan request PUT: api/accounts/{id}

PUT <http://localhost:8000/api/accounts/4>

**Body** (8) **JSON**

```

1 {
2   "account_holder": "Rafa Satria",
3   "account_type": "Investment",
4   "balance": 7500000,
5   "currency": "IDR",
6   "opened_date": "2025-09-15"
7 }
8

```

Send

Params Authorization Headers (8) Body Scripts Settings Cookies Beautify

201 Created 141 ms

Body	Cookies	Headers (6)	Test Results
{ } JSON	Preview	Visualize	
id	4		
account_holder	Rafa Satria		
account_type	Investment		
balance	7500000		
currency	IDR		
opened_date	2025-09-15		

## P. Tampilan request DELETE: api/accounts/{id}

**DELETE** ▾ | <http://localhost:8000/api/accounts/4>

---

Params   Authorization   Headers (6)   **Body**   Scripts   Settings

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

This request does not have a body

---

Body   Cookies   Headers (6)   Test Results | ⏱

HTML    Preview    Visualize | ▾

Account deleted successfully