

# 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 Ternilai	Bawaan	Komentar	Ekstra	Tindakan
<input type="checkbox"/>	1 id	int(2)			Tidak	Tidak ada		AUTO_INCREMENT	Ubah  Hapus Lainnya
<input type="checkbox"/>	2 account_holder	varchar(100)	utf8mb4_general_ci		Tidak	Tidak ada			Ubah  Hapus Lainnya
<input type="checkbox"/>	3 account_type	varchar(20)	utf8mb4_general_ci		Tidak	Tidak ada			Ubah  Hapus Lainnya
<input type="checkbox"/>	4 balance	double			Tidak	Tidak ada			Ubah  Hapus Lainnya
<input type="checkbox"/>	5 currency	varchar(10)	utf8mb4_general_ci		Tidak	Tidak ada			Ubah  Hapus Lainnya
<input type="checkbox"/>	6 opened_date	date			Tidak	Tidak ada			Ubah  Hapus Lainnya

id\_account = primary\_key & Auto Increment

## B. Isi Tabel

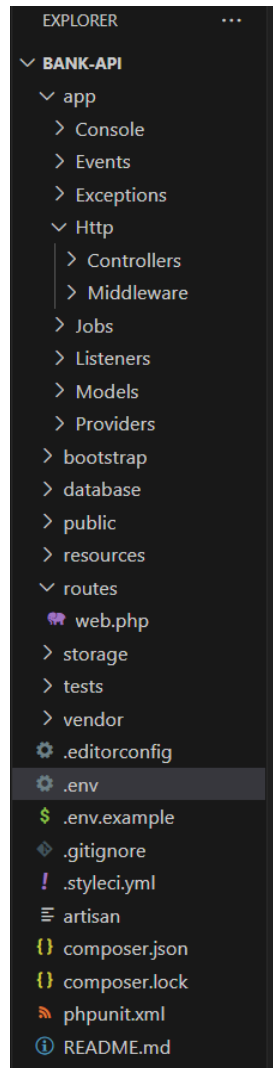
account_holder	account_type	balance	currency	opened_date
Alvin Aditya	Savings	1000000	IDR	2025-10-26
Halim Tariq	Savings	2500000	IDR	2025-10-26
Sholifudin Hudaf	Checking	15000000	IDR	2025-10-20

## 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

> This PC > Local Disk (C:) > xampp > htdocs > rekayasaweb >		
Sort View ...		
Name	Date modified	Type
bank-api	26/10/2025 09:25	File folder



## E. Konfigurasi 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

```
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  0 references | 0 implementations
8  class AccountController extends Controller
9  {
10     // Menampilkan semua akun
11     0 references | 0 overrides
12     public function showAll(): JsonResponse
13     {
14         return response()->json(data: Account::all());
15     }
16
17     // Menampilkan akun berdasarkan ID
18     0 references | 0 overrides
19     public function showOne($id): JsonResponse
20     {
21         return response()->json(data: Account::find(id: $id));
22     }
23
24     // Membuat akun baru
25     0 references | 0 overrides
26     public function create(Request $request): JsonResponse
27     {
28         $account = Account::create(attributes: $request->all());
29         return response()->json(data: $account, status: 201);
30     }
31
32     // Memperbarui akun (PUT)
33     0 references | 0 overrides
34     public function update($id, Request $request): JsonResponse
35     {
36         $account = Account::findOrFail(id: $id);
37         $account->update(attributes: $request->all());
38         return response()->json(data: $account, status: 200);
39     }
40 }

```

## I. Buat Controller “AccountController”

➤ Lanjutan

```

34     }
35
36     // Menghapus akun
37     0 references | 0 overrides
38     public function delete($id): Response|ResponseFactory
39     {
40         Account::findOrFail(id: $id)->delete();
41         return response(content: 'Account deleted successfully', status: 200);
42     }
43 }

```

## J. Konfigurasi Routing

➤ Edit file: bank/routes/web.php

➤ Tambahkan routing berikut:

```

$route->group(attributes: ['prefix' => 'api'], callback: function () use ($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

http://localhost:8000/api/accounts

Send

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

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

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

POST http://localhost:8000/api/accounts/ Send

Params Authorization Headers (8) Body Scripts Settings Cookies Beautify

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL JSON

```
1 {
2   "account_holder": "Rafa Satria",
3   "account_type": "Investment",
4   "balance": 50000000,
5   "currency": "IDR",
6   "opened_date": "2025-09-15"
7 }
8
```

Body Cookies Headers (6) Test Results 201 Created 141 ms 324 B

{ } JSON Preview Visualize

account_holder	Rafa Satria
account_type	Investment
balance	50000000
currency	IDR
opened_date	2025-09-15
id	4

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

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

Params Authorization Headers (8) Body Scripts Settings

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL JSON

```
1 {
2   "account_holder": "Rafa Satria",
3   "account_type": "Investment",
4   "balance": 75000000,
5   "currency": "IDR",
6   "opened_date": "2025-09-15"
7 }
8
```

Body Cookies Headers (6) Test Results

{ } JSON Preview Visualize

id	4
account_holder	Rafa Satria
account_type	Investment
balance	75000000
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