LAPORAN Jobsheet-13 : How to Build API with Laravel Breeze in Laravel 11
TUGAS PEMROGRAMAN MOBILE

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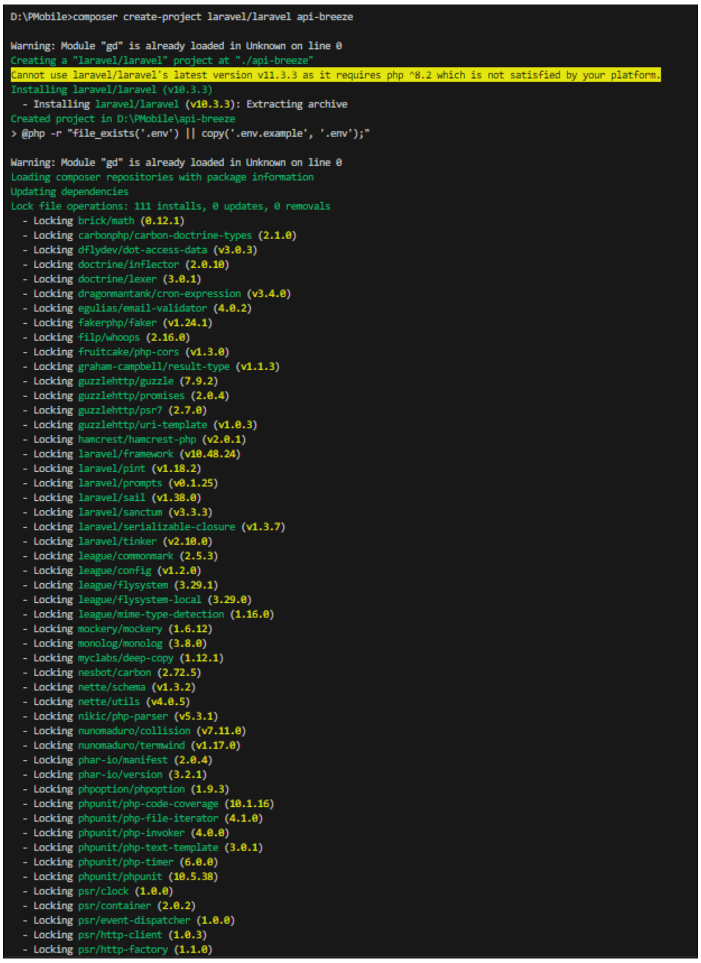
JURUSAN TEKNOLOGI INFORMASI
PRODI D-IV SISTEM INFORMASI BISNIS
POLITEKNIK NEGERI MALANG
2024

Praktikum 1: Membangun API dengan Laravel Breeze di Laravel 11

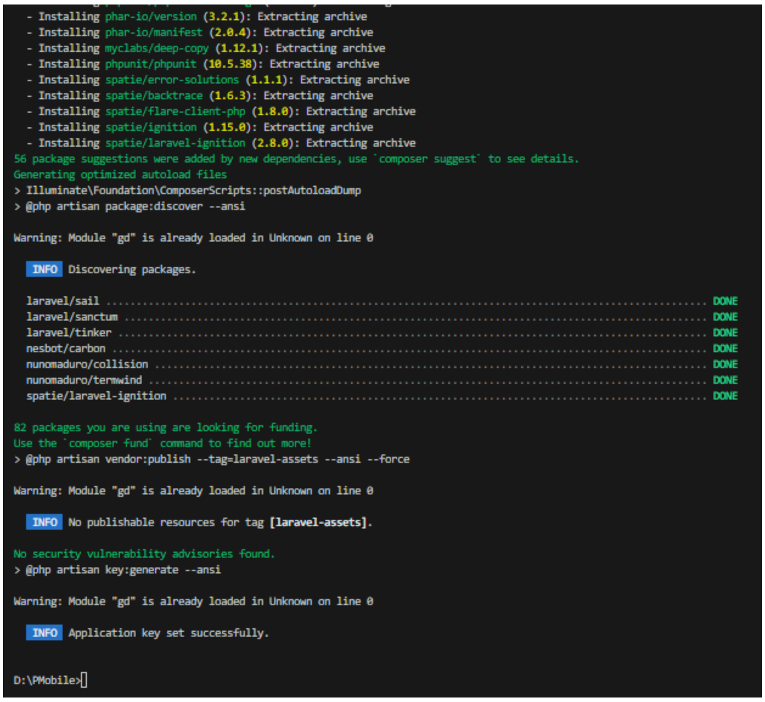
Panduan langkah demi langkah dalam membangun API sederhana dengan otentikasi menggunakan Laravel Breeze di Laravel 11.

Langkah 1:

Pertama, buat proyek Laravel baru menggunakan installer Laravel atau Composer menggunakan perintah `laravel new api-breeze` atau melalui Composer dengan perintah composer `create-project laravel/laravel api-breeze`.

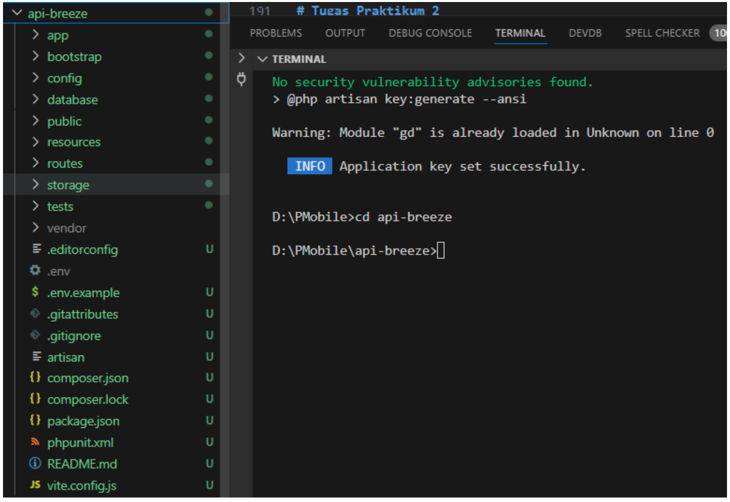


```
D:\PMobile>composer create-project laravel/laravel api-breeze

Warning: Module "gd" is already loaded in Unknown on line 0
Creating a "laravel/laravel" project at "./api-breeze"
Cannot use laravel/laravel's latest version v11.3.3 as it requires php ^8.2 which is not satisfied by your platform.
Installing laravel/laravel (v10.3.3)
  - Installing laravel/laravel (v10.3.3): Extracting archive
Created project in D:\PMobile\api-breeze
> @php -r "file_exists('.env') || copy('.env.example', '.env');"

Warning: Module "gd" is already loaded in Unknown on line 0
Loading composer repositories with package information
Updating dependencies
Lock file operations: 111 installs, 0 updates, 0 removals
  - Locking brick/math (0.12.1)
  - Locking carbonphp/carbon-doctrine-types (2.1.0)
  - Locking dflydev/dot-access-data (v3.0.3)
  - Locking doctrine/inflector (2.0.10)
  - Locking doctrine/lexer (3.0.1)
  - Locking dragonmantank/cron-expression (v3.4.0)
  - Locking egulias/email-validator (4.0.2)
  - Locking fakerphp/faker (v1.24.1)
  - Locking filp/whoops (2.16.0)
  - Locking fruitcake/php-cors (v1.3.0)
  - Locking graham-campbell/result-type (v1.1.3)
  - Locking guzzlehttp/guzzle (7.9.2)
  - Locking guzzlehttp/promises (2.0.4)
  - Locking guzzlehttp/psr7 (2.7.0)
  - Locking guzzlehttp/uri-template (v1.0.3)
  - Locking hamcrest/hamcrest-php (v2.0.1)
  - Locking laravel/framework (v10.48.24)
  - Locking laravel/pint (v1.18.2)
  - Locking laravel/prompts (v0.1.25)
  - Locking laravel/sail (v1.38.0)
  - Locking laravel/sanctum (v3.3.3)
  - Locking laravel/serializable-closure (v1.3.7)
  - Locking laravel/tinker (v2.10.0)
  - Locking league/commonmark (2.5.3)
  - Locking league/config (v1.2.0)
  - Locking league/flysystem (3.29.1)
  - Locking league/flysystem-local (3.29.0)
  - Locking league/mime-type-detection (1.16.0)
  - Locking mockery/mockery (1.6.12)
  - Locking monolog/monolog (3.8.0)
  - Locking myclabs/deep-copy (1.12.1)
  - Locking nesbot/carbon (2.72.5)
  - Locking nette/schema (v1.3.2)
  - Locking nette/utils (v4.0.5)
  - Locking nikic/php-parser (v5.3.1)
  - Locking nunomaduro/collision (v7.11.0)
  - Locking nunomaduro/termwind (v1.17.0)
  - Locking phar-io/manifest (2.0.4)
  - Locking phar-io/version (3.2.1)
  - Locking phpoption/phpoption (1.9.3)
  - Locking phpunit/php-code-coverage (10.1.16)
  - Locking phpunit/php-file-iterator (4.1.0)
  - Locking phpunit/php-invoker (4.0.0)
  - Locking phpunit/php-text-template (3.0.1)
  - Locking phpunit/php-timer (6.0.0)
  - Locking phpunit/phpunit (10.5.38)
  - Locking psr/clock (1.0.0)
  - Locking psr/container (2.0.2)
  - Locking psr/event-dispatcher (1.0.0)
  - Locking psr/http-client (1.0.3)
  - Locking psr/http-factory (1.1.0)
```



```
  - Installing phar-io/version (3.2.1): Extracting archive
  - Installing phar-io/manifest (2.0.4): Extracting archive
  - Installing myclabs/deep-copy (1.12.1): Extracting archive
  - Installing phpunit/phpunit (10.5.38): Extracting archive
  - Installing spatie/error-solutions (1.1.1): Extracting archive
  - Installing spatie/backtrace (1.6.3): Extracting archive
  - Installing spatie/flare-client-php (1.8.0): Extracting archive
  - Installing spatie/ignition (1.15.0): Extracting archive
  - Installing spatie/laravel-ignition (2.8.0): Extracting archive
56 package suggestions were added by new dependencies, use `composer suggest` to see details.
Generating optimized autoload files
> Illuminate\Foundation\ComposerScripts::postAutoloadDump
> @php artisan package:discover --ansi

Warning: Module "gd" is already loaded in Unknown on line 0

  INFO  Discovering packages.

  laravel/sail ........................................................................... DONE
  laravel/sanctum ........................................................................ DONE
  laravel/tinker ......................................................................... DONE
  nesbot/carbon .......................................................................... DONE
  nunomaduro/collision ................................................................... DONE
  nunomaduro/termwind .................................................................... DONE
  spatie/laravel-ignition ................................................................ DONE

82 packages you are using are looking for funding.
Use the `composer fund` command to find out more!
> @php artisan vendor:publish --tag=laravel-assets --ansi --force

Warning: Module "gd" is already loaded in Unknown on line 0

  INFO  No publishable resources for tag [laravel-assets].

No security vulnerability advisories found.
> @php artisan key:generate --ansi

Warning: Module "gd" is already loaded in Unknown on line 0

  INFO  Application key set successfully.


D:\PMobile>
```

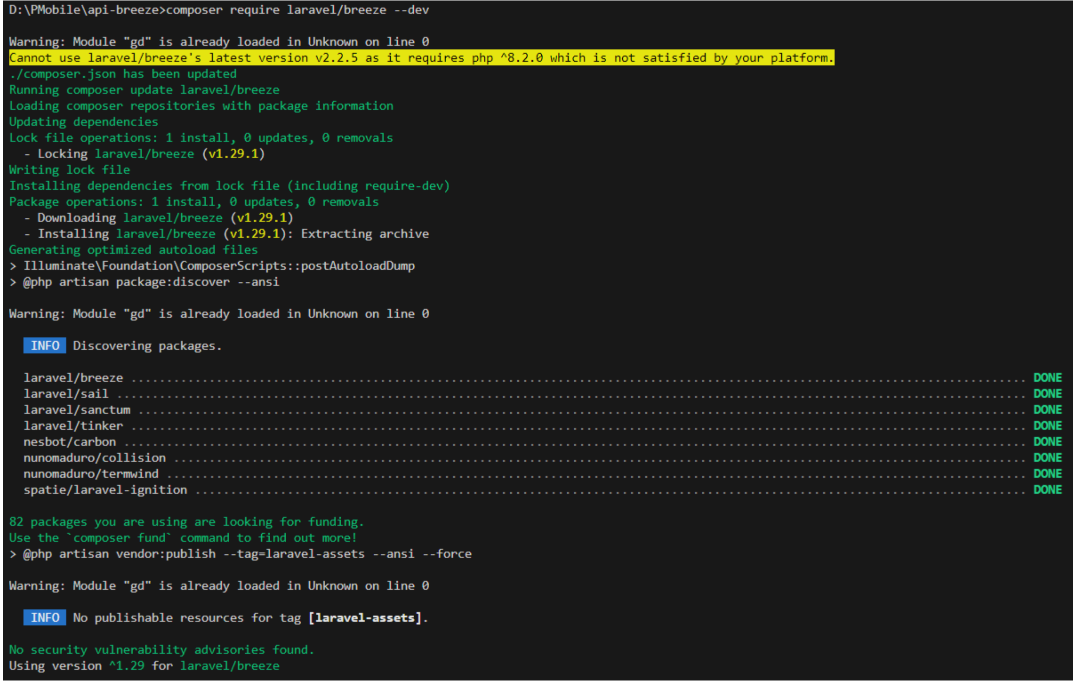
Lanjutkan dengan masuk ke folder proyek `cd api-breeze`



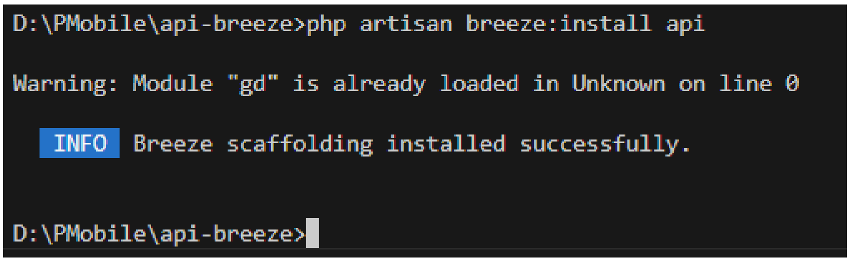
```
No security vulnerability advisories found.
> @php artisan key:generate --ansi

Warning: Module "gd" is already loaded in Unknown on line 0

  INFO  Application key set successfully.


D:\PMobile>cd api-breeze

D:\PMobile\api-breeze>
```

Langkah 2 :

Selanjutnya, instal Laravel Breeze dan dependensinya menggunakan perintah `composer require laravel/breeze -dev php artisan breeze:install api`. Perintah ini akan menginstal Breeze dan menyiapkan scaffolding yang diperlukan untuk otentikasi API.



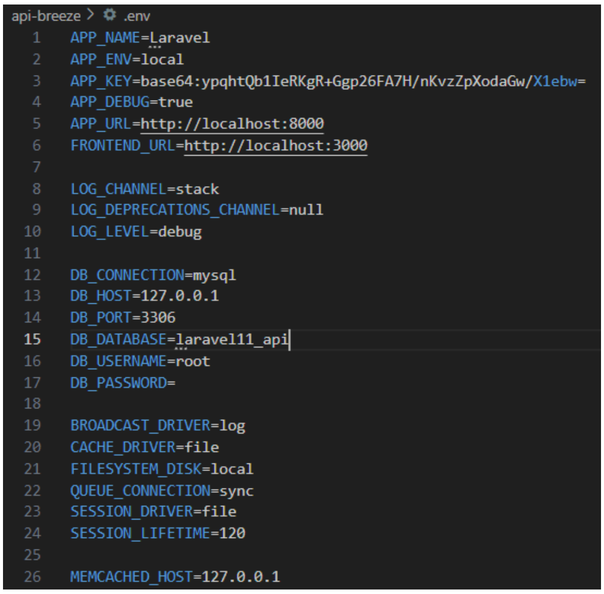
```
D:\PMobile\api-breeze>composer require laravel/breeze --dev

Warning: Module "gd" is already loaded in Unknown on line 0
Cannot use laravel/breeze's latest version v2.2.5 as it requires php ^8.2.0 which is not satisfied by your platform.
./composer.json has been updated
Running composer update laravel/breeze
Loading composer repositories with package information
Updating dependencies
Lock file operations: 1 install, 0 updates, 0 removals
  - Locking laravel/breeze (v1.29.1)
Writing lock file
Installing dependencies from lock file (including require-dev)
Package operations: 1 install, 0 updates, 0 removals
  - Downloading laravel/breeze (v1.29.1)
  - Installing laravel/breeze (v1.29.1): Extracting archive
Generating optimized autoload files
> Illuminate\Foundation\ComposerScripts::postAutoloadDump
> @php artisan package:discover --ansi

Warning: Module "gd" is already loaded in Unknown on line 0

  INFO  Discovering packages.

  laravel/breeze ..................................................................................................... DONE
  laravel/sail ....................................................................................................... DONE
  laravel/sanctum .................................................................................................... DONE
  laravel/tinker ..................................................................................................... DONE
  nesbot/carbon ...................................................................................................... DONE
  nunomaduro/collision ............................................................................................... DONE
  nunomaduro/termwind ................................................................................................ DONE
  spatie/laravel-ignition ............................................................................................ DONE

82 packages you are using are looking for funding.
Use the `composer fund` command to find out more!
> @php artisan vendor:publish --tag=laravel-assets --ansi --force

Warning: Module "gd" is already loaded in Unknown on line 0

  INFO  No publishable resources for tag [laravel-assets].

No security vulnerability advisories found.
Using version ^1.29 for laravel/breeze
```



```
D:\PMobile\api-breeze>php artisan breeze:install api

Warning: Module "gd" is already loaded in Unknown on line 0

  INFO  Breeze scaffolding installed successfully.


D:\PMobile\api-breeze>
```

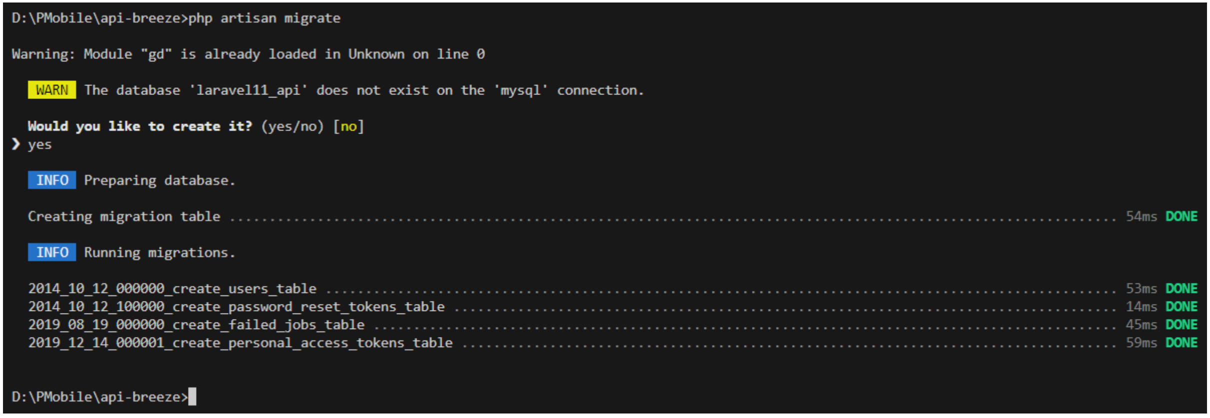
Langkah 3 :

Konfigurasi Database dan Jalankan Migrasi dengan perbarui file `.env` dengan `kredensial database`.

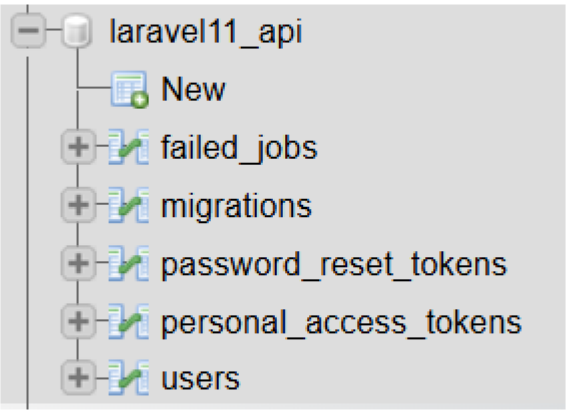


```
APP_NAME=Laravel
APP_ENV=local
APP_KEY=base64:ypqhtQb1IeRKgR+Ggp26FA7H/nKvzZpXodaGw/X1ebw=
APP_DEBUG=true
APP_URL=http://localhost:8000
FRONTEND_URL=http://localhost:3000

LOG_CHANNEL=stack
LOG_DEPRECATIONS_CHANNEL=null
LOG_LEVEL=debug

DB_CONNECTION=mysql
DB_HOST=127.0.0.1
DB_PORT=3306
DB_DATABASE=laravel11_api
DB_USERNAME=root
DB_PASSWORD=

BROADCAST_DRIVER=log
CACHE_DRIVER=file
FILESYSTEM_DISK=local
QUEUE_CONNECTION=sync
SESSION_DRIVER=file
SESSION_LIFETIME=120

MEMCACHED_HOST=127.0.0.1
```

Jalankan migrasi dengan perintah berikut di terminal `php artisan migrate`

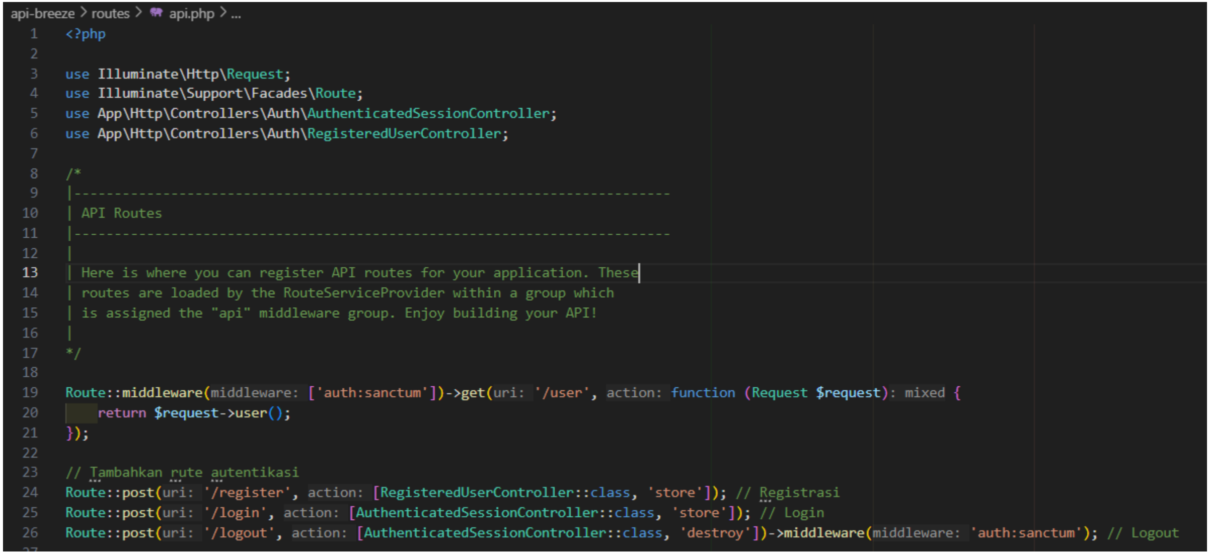


```
D:\PMobile\api-breeze>php artisan migrate

Warning: Module "gd" is already loaded in Unknown on line 0

  WARN  The database 'laravel11_api' does not exist on the 'mysql' connection.

  Would you like to create it? (yes/no) [no]
❯ yes

  INFO  Preparing database.

  Creating migration table .............................................................................................. 54ms DONE

  INFO  Running migrations.

  2014_10_12_000000_create_users_table .................................................................................. 53ms DONE
  2014_10_12_100000_create_password_reset_tokens_table .................................................................. 14ms DONE
  2019_08_19_000000_create_failed_jobs_table ............................................................................ 45ms DONE
  2019_12_14_000001_create_personal_access_tokens_table ................................................................. 59ms DONE


D:\PMobile\api-breeze>
```



Langkah 4 :

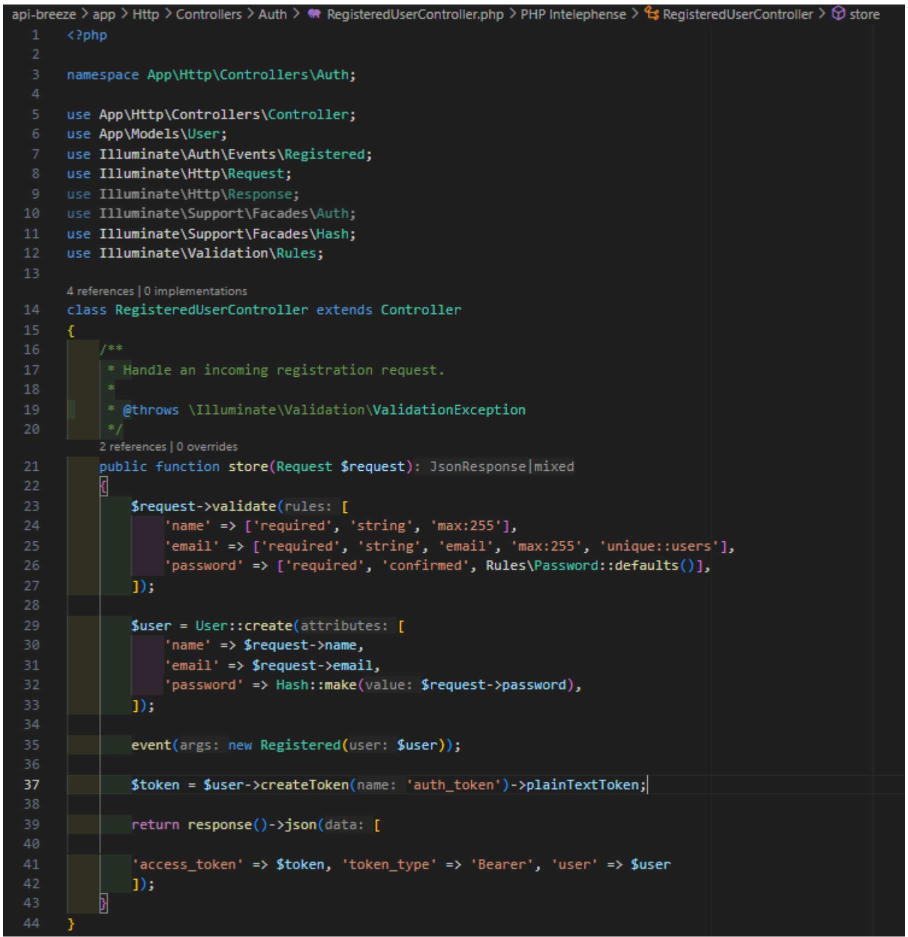
Buat Endpoint Autentikasi dengan menambahkan rute di `routes/api.php` seperti Berikut



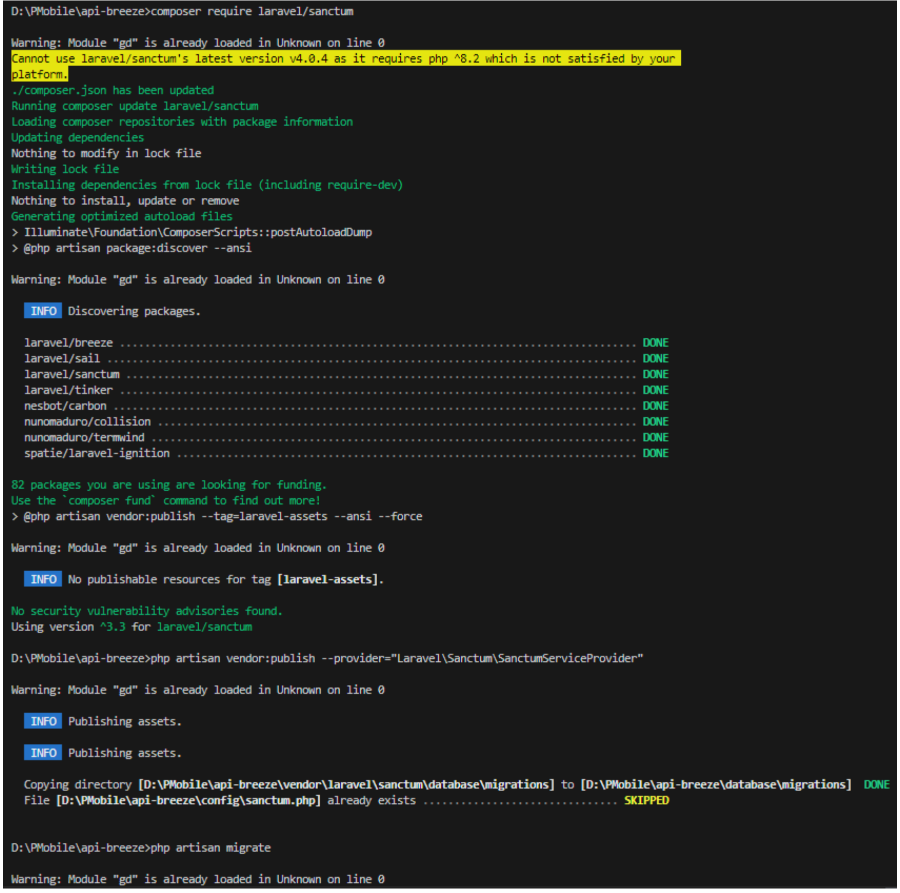
```php
<?php

use Illuminate\Http\Request;
use Illuminate\Support\Facades\Route;
use App\Http\Controllers\Auth\AuthenticatedSessionController;
use App\Http\Controllers\Auth\RegisteredUserController;

/*
|--------------------------------------------------------------------------
| API Routes
|--------------------------------------------------------------------------
|
| Here is where you can register API routes for your application. These
| routes are loaded by the RouteServiceProvider within a group which
| is assigned the "api" middleware group. Enjoy building your API!
|
*/

Route::middleware(middleware: ['auth:sanctum'])->get(uri: '/user', action: function (Request $request): mixed {
    return $request->user();
});

// Tambahkan rute autentikasi
Route::post(uri: '/register', action: [RegisteredUserController::class, 'store']); // Registrasi
Route::post(uri: '/login', action: [AuthenticatedSessionController::class, 'store']); // Login
Route::post(uri: '/logout', action: [AuthenticatedSessionController::class, 'destroy'])->middleware(middleware: 'auth:sanctum'); // Logout
```

Langkah 5 :

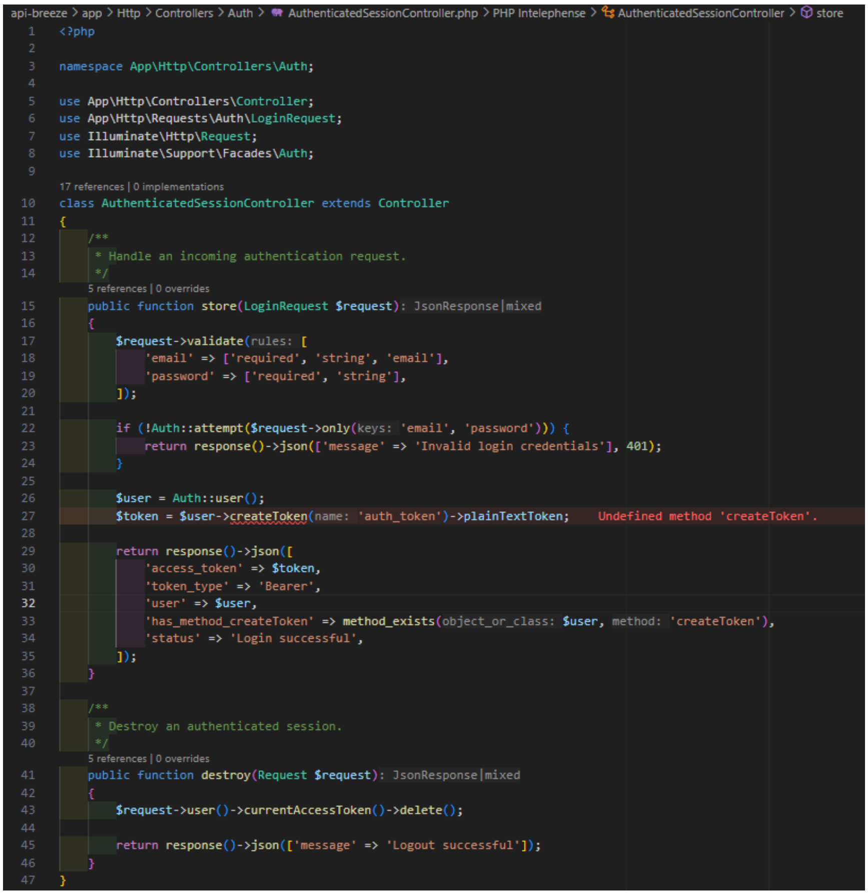
Perbarui Controller dengan sesuaikan `RegisteredUserController` dan `AuthenticatedSessionController` agar mengembalikan respons JSON.


api-breeze > app > Http > Controllers > Auth > RegisteredUserController.php > PHP Intelephense > RegisteredUserController > store

```php
<?php

namespace App\Http\Controllers\Auth;

use App\Http\Controllers\Controller;
use App\Models\User;
use Illuminate\Auth\Events\Registered;
use Illuminate\Http\Request;
use Illuminate\Http\Response;
use Illuminate\Support\Facades\Auth;
use Illuminate\Support\Facades\Hash;
use Illuminate\Validation\Rules;

4 references | 0 implementations
class RegisteredUserController extends Controller
{
    /**
     * Handle an incoming registration request.
     *
     * @throws \Illuminate\Validation\ValidationException
     */
    2 references | 0 overrides
    public function store(Request $request): JsonResponse|mixed
    {
        $request->validate(rules: [
            'name' => ['required', 'string', 'max:255'],
            'email' => ['required', 'string', 'email', 'max:255', 'unique::users'],
            'password' => ['required', 'confirmed', Rules\Password::defaults()],
        ]);

        $user = User::create(attributes: [
            'name' => $request->name,
            'email' => $request->email,
            'password' => Hash::make(value: $request->password),
        ]);

        event(args: new Registered(user: $user));

        $token = $user->createToken(name: 'auth_token')->plainTextToken;

        return response()->json(data: [

        'access_token' => $token, 'token_type' => 'Bearer', 'user' => $user
        ]);
    }
}
```



```
D:\PMobile\api-breeze>composer require laravel/sanctum

Warning: Module "gd" is already loaded in Unknown on line 0
Cannot use laravel/sanctum's latest version v4.0.4 as it requires php ^8.2 which is not satisfied by your
platform.
./composer.json has been updated
Running composer update laravel/sanctum
Loading composer repositories with package information
Updating dependencies
Nothing to modify in lock file
Writing lock file
Installing dependencies from lock file (including require-dev)
Nothing to install, update or remove
Generating optimized autoload files
> Illuminate\Foundation\ComposerScripts::postAutoloadDump
> @php artisan package:discover --ansi

Warning: Module "gd" is already loaded in Unknown on line 0

  INFO  Discovering packages.

  laravel/breeze ........................................................................... DONE
  laravel/sail ............................................................................. DONE
  laravel/sanctum .......................................................................... DONE
  laravel/tinker ........................................................................... DONE
  nesbot/carbon ............................................................................ DONE
  nunomaduro/collision ..................................................................... DONE
  nunomaduro/termwind ...................................................................... DONE
  spatie/laravel-ignition .................................................................. DONE

82 packages you are using are looking for funding.
Use the `composer fund` command to find out more!
> @php artisan vendor:publish --tag=laravel-assets --ansi --force

Warning: Module "gd" is already loaded in Unknown on line 0

  INFO  No publishable resources for tag [laravel-assets].

No security vulnerability advisories found.
Using version ^3.3 for laravel/sanctum

D:\PMobile\api-breeze>php artisan vendor:publish --provider="Laravel\Sanctum\SanctumServiceProvider"

Warning: Module "gd" is already loaded in Unknown on line 0

  INFO  Publishing assets.

  INFO  Publishing assets.

  Copying directory [D:\PMobile\api-breeze\vendor\laravel\sanctum\database\migrations] to [D:\PMobile\api-breeze\database\migrations]  DONE
  File [D:\PMobile\api-breeze\config\sanctum.php] already exists ................................ SKIPPED


D:\PMobile\api-breeze>php artisan migrate

Warning: Module "gd" is already loaded in Unknown on line 0
```

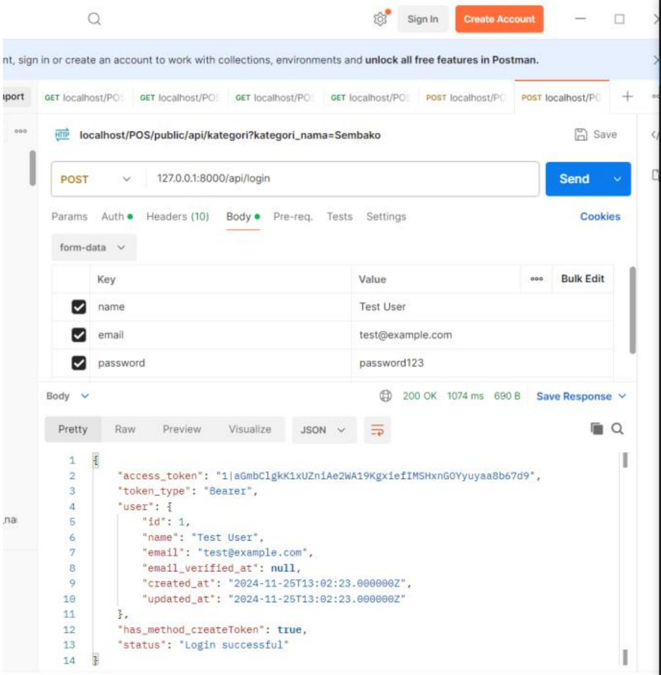


api-breeze > app > Http > Controllers > Auth > AuthenticatedSessionController.php > PHP Intelephense > AuthenticatedSessionController > store

```php
<?php

namespace App\Http\Controllers\Auth;

use App\Http\Controllers\Controller;
use App\Http\Requests\Auth\LoginRequest;
use Illuminate\Http\Request;
use Illuminate\Support\Facades\Auth;

class AuthenticatedSessionController extends Controller
{
    /**
     * Handle an incoming authentication request.
     */
    public function store(LoginRequest $request): JsonResponse|mixed
    {
        $request->validate(rules: [
            'email' => ['required', 'string', 'email'],
            'password' => ['required', 'string'],
        ]);

        if (!Auth::attempt($request->only(keys: 'email', 'password'))) {
            return response()->json(['message' => 'Invalid login credentials'], 401);
        }

        $user = Auth::user();
        $token = $user->createToken(name: 'auth_token')->plainTextToken;    Undefined method 'createToken'.

        return response()->json([
            'access_token' => $token,
            'token_type' => 'Bearer',
            'user' => $user,
            'has_method_createToken' => method_exists(object_or_class: $user, method: 'createToken'),
            'status' => 'Login successful',
        ]);
    }

    /**
     * Destroy an authenticated session.
     */
    public function destroy(Request $request): JsonResponse|mixed
    {
        $request->user()->currentAccessToken()->delete();

        return response()->json(['message' => 'Logout successful']);
    }
}
```

Langkah 6 :

Jalankan Laravel dengan menggunakan perintah `php artisan serve` dan lakukan tes cek API melalui Postman



localhost/POS/public/api/kategori?kategori_nama=Sembako

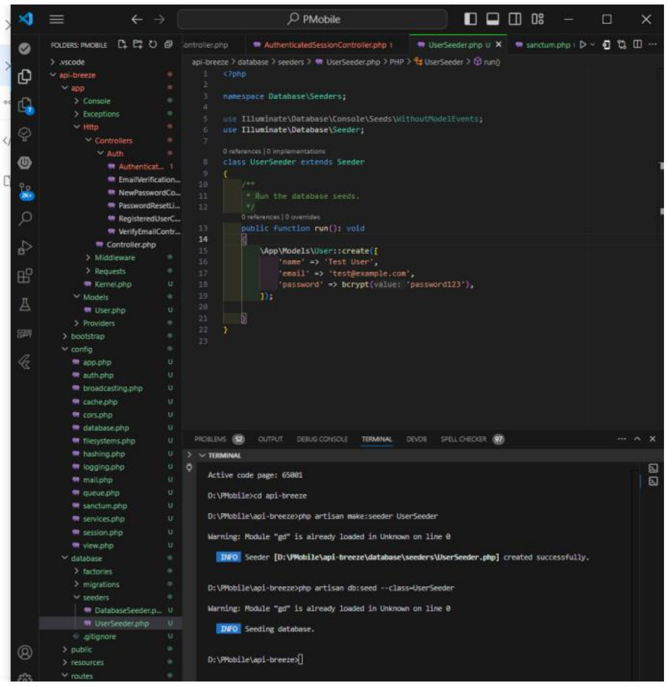
POST 127.0.0.1:8000/api/login

form-data

	Key	Value
☑	name	Test User
☑	email	test@example.com
☑	password	password123

Body 200 OK 1074 ms 690 B

```json
{
    "access_token": "1|aGmbClgkK1xUZniAe2WA19KgxiefIMSHxnGOYyuyaa8b67d9",
    "token_type": "Bearer",
    "user": {
        "id": 1,
        "name": "Test User",
        "email": "test@example.com",
        "email_verified_at": null,
        "created_at": "2024-11-25T13:02:23.000000Z",
        "updated_at": "2024-11-25T13:02:23.000000Z"
    },
    "has_method_createToken": true,
    "status": "Login successful"
}
```



api-breeze > database > seeders > UserSeeder.php > PHP > UserSeeder > run()

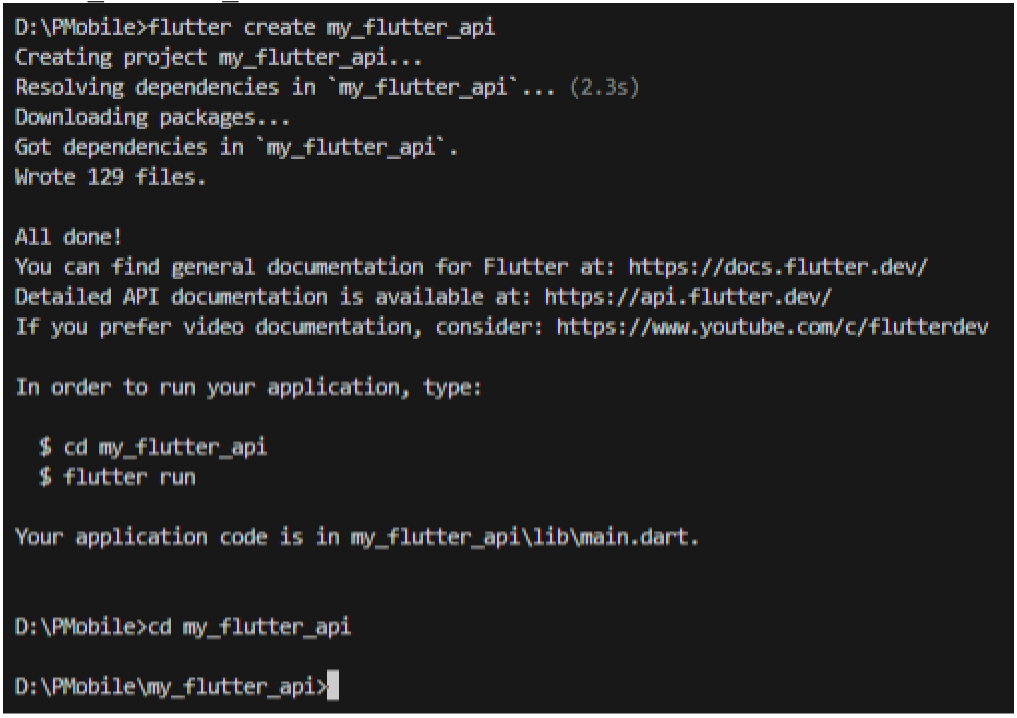
```php
<?php

namespace Database\Seeders;

use Illuminate\Database\Console\Seeds\WithoutModelEvents;
use Illuminate\Database\Seeder;

class UserSeeder extends Seeder
{
    /**
     * Run the database seeds.
     */
    public function run(): void
    {
        \App\Models\User::create([
            'name' => 'Test User',
            'email' => 'test@example.com',
            'password' => bcrypt(value: 'password123'),
        ]);

    }
}
```

```
Active code page: 65001

D:\PMobile>cd api-breeze

D:\PMobile\api-breeze>php artisan make:seeder UserSeeder

Warning: Module "gd" is already loaded in Unknown on line 0

   INFO  Seeder [D:\PMobile\api-breeze\database\seeders\UserSeeder.php] created successfully.

D:\PMobile\api-breeze>php artisan db:seed --class=UserSeeder

Warning: Module "gd" is already loaded in Unknown on line 0

   INFO  Seeding database.

D:\PMobile\api-breeze>
```

Praktikum 2: Membuat Aplikasi Mobile Flutter

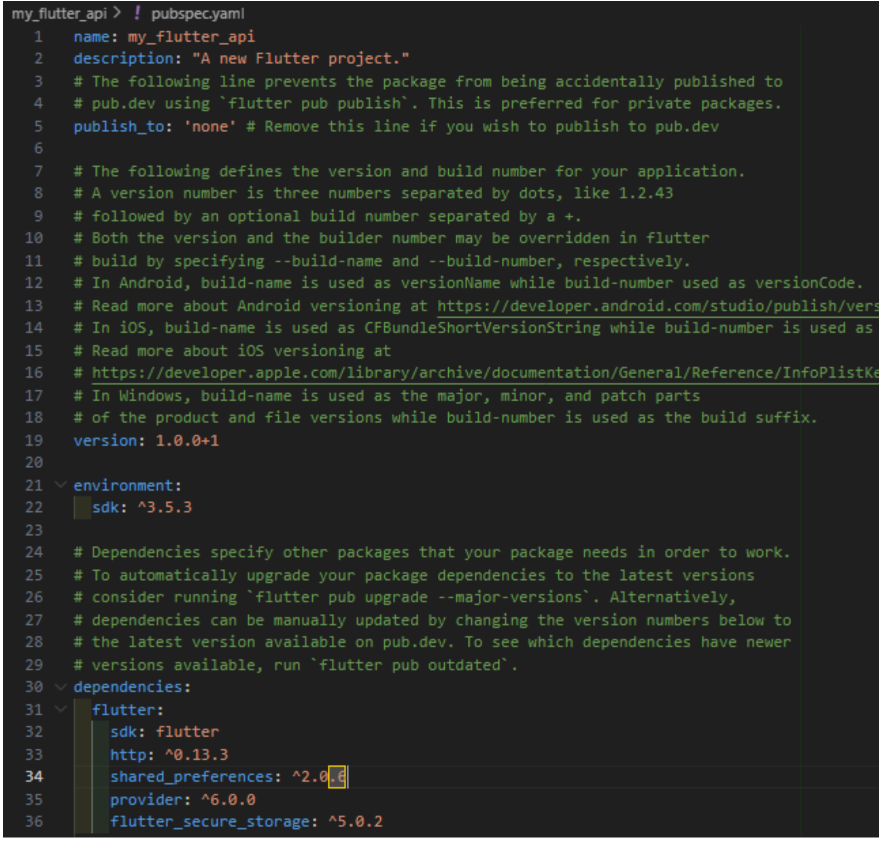
Langkah 1:

Persiapan Proyek Flutter dengan membuat proyek Flutter baru menggunakan perintah `flutter create my_flutter_app`
`cd my_flutter_app`



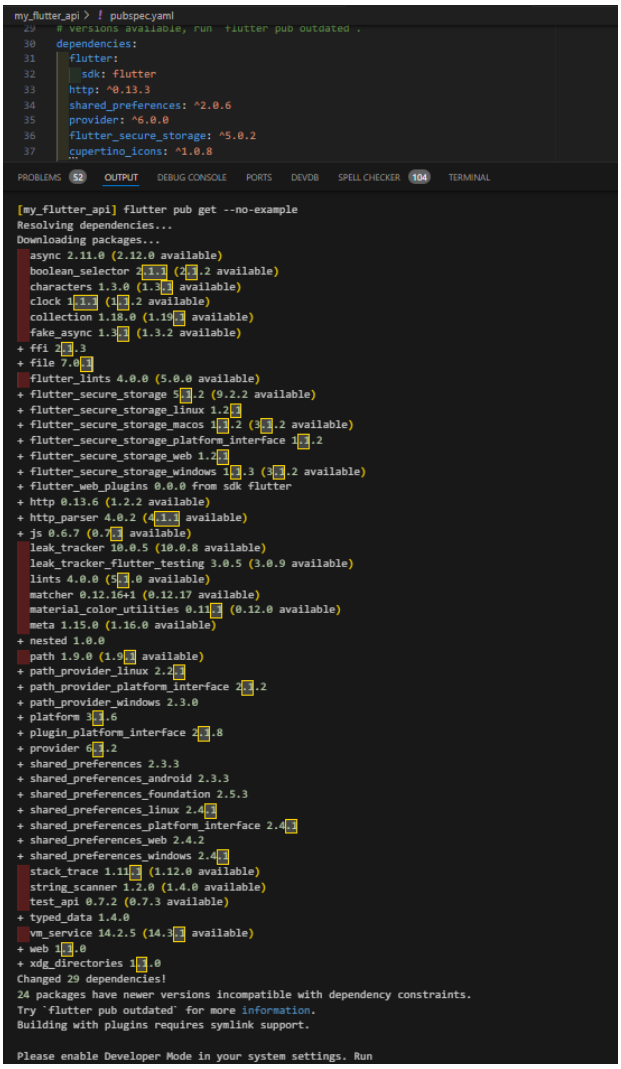
```
D:\PMobile>flutter create my_flutter_api
Creating project my_flutter_api...
Resolving dependencies in `my_flutter_api`... (2.3s)
Downloading packages...
Got dependencies in `my_flutter_api`.
Wrote 129 files.

All done!
You can find general documentation for Flutter at: https://docs.flutter.dev/
Detailed API documentation is available at: https://api.flutter.dev/
If you prefer video documentation, consider: https://www.youtube.com/c/flutterdev

In order to run your application, type:

  $ cd my_flutter_api
  $ flutter run

Your application code is in my_flutter_api\lib\main.dart.


D:\PMobile>cd my_flutter_api

D:\PMobile\my_flutter_api>
```

Tambahkan dependencies di `pubspec.yaml`



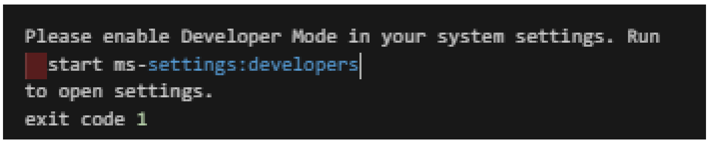
```yaml
name: my_flutter_api
description: "A new Flutter project."
# The following line prevents the package from being accidentally published to
# pub.dev using `flutter pub publish`. This is preferred for private packages.
publish_to: 'none' # Remove this line if you wish to publish to pub.dev

# The following defines the version and build number for your application.
# A version number is three numbers separated by dots, like 1.2.43
# followed by an optional build number separated by a +.
# Both the version and the builder number may be overridden in flutter
# build by specifying --build-name and --build-number, respectively.
# In Android, build-name is used as versionName while build-number used as versionCode.
# Read more about Android versioning at https://developer.android.com/studio/publish/vers
# In iOS, build-name is used as CFBundleShortVersionString while build-number is used as
# Read more about iOS versioning at
# https://developer.apple.com/library/archive/documentation/General/Reference/InfoPlistKe
# In Windows, build-name is used as the major, minor, and patch parts
# of the product and file versions while build-number is used as the build suffix.
version: 1.0.0+1

environment:
  sdk: ^3.5.3

# Dependencies specify other packages that your package needs in order to work.
# To automatically upgrade your package dependencies to the latest versions
# consider running `flutter pub upgrade --major-versions`. Alternatively,
# dependencies can be manually updated by changing the version numbers below to
# the latest version available on pub.dev. To see which dependencies have newer
# versions available, run `flutter pub outdated`.
dependencies:
  flutter:
    sdk: flutter
    http: ^0.13.3
    shared_preferences: ^2.0.6
    provider: ^6.0.0
    flutter_secure_storage: ^5.0.2
```

Tambahkan dependencies di `flutter pub get`



```
# versions available, run `flutter pub outdated`.
dependencies:
  flutter:
    sdk: flutter
  http: ^0.13.3
  shared_preferences: ^2.0.6
  provider: ^6.0.0
  flutter_secure_storage: ^5.0.2
  cupertino_icons: ^1.0.8
```

```
[my_flutter_api] flutter pub get --no-example
Resolving dependencies...
Downloading packages...
  async 2.11.0 (2.12.0 available)
  boolean_selector 2.1.1 (2.1.2 available)
  characters 1.3.0 (1.3.1 available)
  clock 1.1.1 (1.1.2 available)
  collection 1.18.0 (1.19.1 available)
  fake_async 1.3.1 (1.3.2 available)
+ ffi 2.1.3
+ file 7.0.1
  flutter_lints 4.0.0 (5.0.0 available)
+ flutter_secure_storage 5.1.2 (9.2.2 available)
+ flutter_secure_storage_linux 1.2.1
+ flutter_secure_storage_macos 1.1.2 (3.1.2 available)
+ flutter_secure_storage_platform_interface 1.1.2
+ flutter_secure_storage_web 1.2.1
+ flutter_secure_storage_windows 1.1.3 (3.1.2 available)
+ flutter_web_plugins 0.0.0 from sdk flutter
+ http 0.13.6 (1.2.2 available)
+ http_parser 4.0.2 (4.1.1 available)
+ js 0.6.7 (0.7.1 available)
  leak_tracker 10.0.5 (10.0.8 available)
  leak_tracker_flutter_testing 3.0.5 (3.0.9 available)
  lints 4.0.0 (5.1.0 available)
  matcher 0.12.16+1 (0.12.17 available)
  material_color_utilities 0.11.1 (0.12.0 available)
  meta 1.15.0 (1.16.0 available)
+ nested 1.0.0
  path 1.9.0 (1.9.1 available)
+ path_provider_linux 2.2.1
+ path_provider_platform_interface 2.1.2
+ path_provider_windows 2.3.0
+ platform 3.1.6
+ plugin_platform_interface 2.1.8
+ provider 6.1.2
+ shared_preferences 2.3.3
+ shared_preferences_android 2.3.3
+ shared_preferences_foundation 2.5.3
+ shared_preferences_linux 2.4.1
+ shared_preferences_platform_interface 2.4.1
+ shared_preferences_web 2.4.2
+ shared_preferences_windows 2.4.1
  stack_trace 1.11.1 (1.12.0 available)
  string_scanner 1.2.0 (1.4.0 available)
  test_api 0.7.2 (0.7.3 available)
+ typed_data 1.4.0
  vm_service 14.2.5 (14.3.1 available)
+ web 1.1.0
+ xdg_directories 1.1.0
Changed 29 dependencies!
24 packages have newer versions incompatible with dependency constraints.
Try `flutter pub outdated` for more information.
Building with plugins requires symlink support.

Please enable Developer Mode in your system settings. Run
```

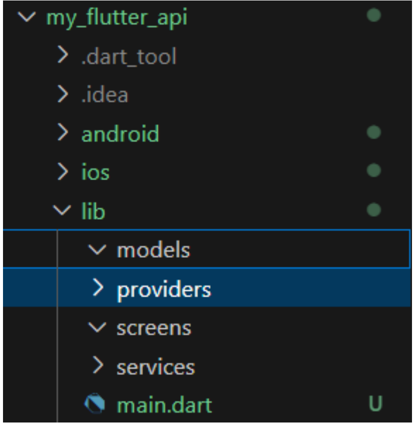


```
Please enable Developer Mode in your system settings. Run
  start ms-settings:developers
to open settings.
exit code 1
```

Langkah 2:

Buat `Splashscreen` dengan animasi dari `Lottie File`. Buat folder berikut untuk mengatur kode Anda dengan lebih baik:

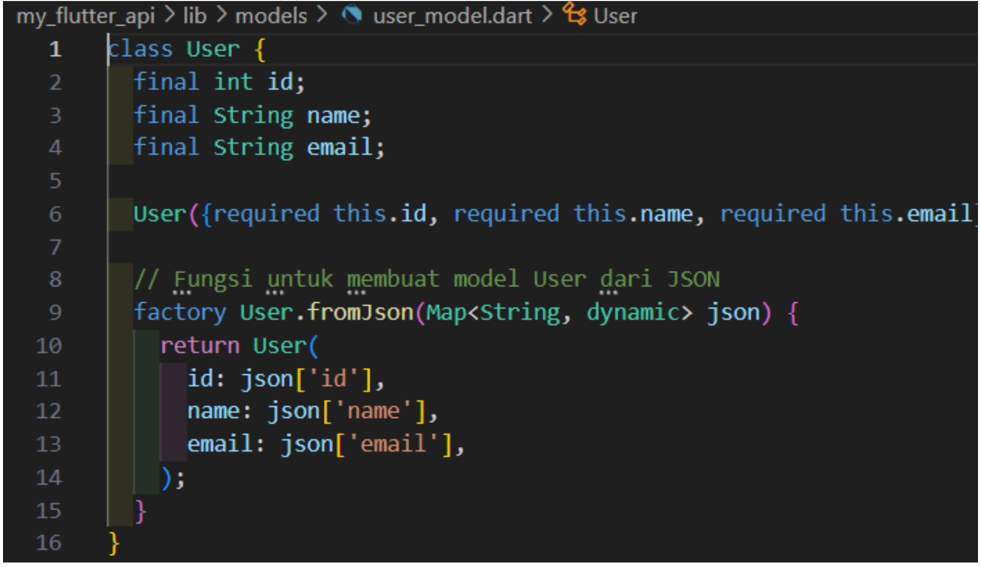
- `lib/screens/` untuk layar UI.
- `lib/services/` untuk layanan HTTP dan manajemen API.
- `lib/models/` untuk model data.
- `lib/providers/` untuk manajemen state menggunakan Provider.



```
v my_flutter_api
  > .dart_tool
  > .idea
  > android
  > ios
  v lib
    v models
    > providers
    v screens
    > services
    main.dart                U
```

Langkah 3:

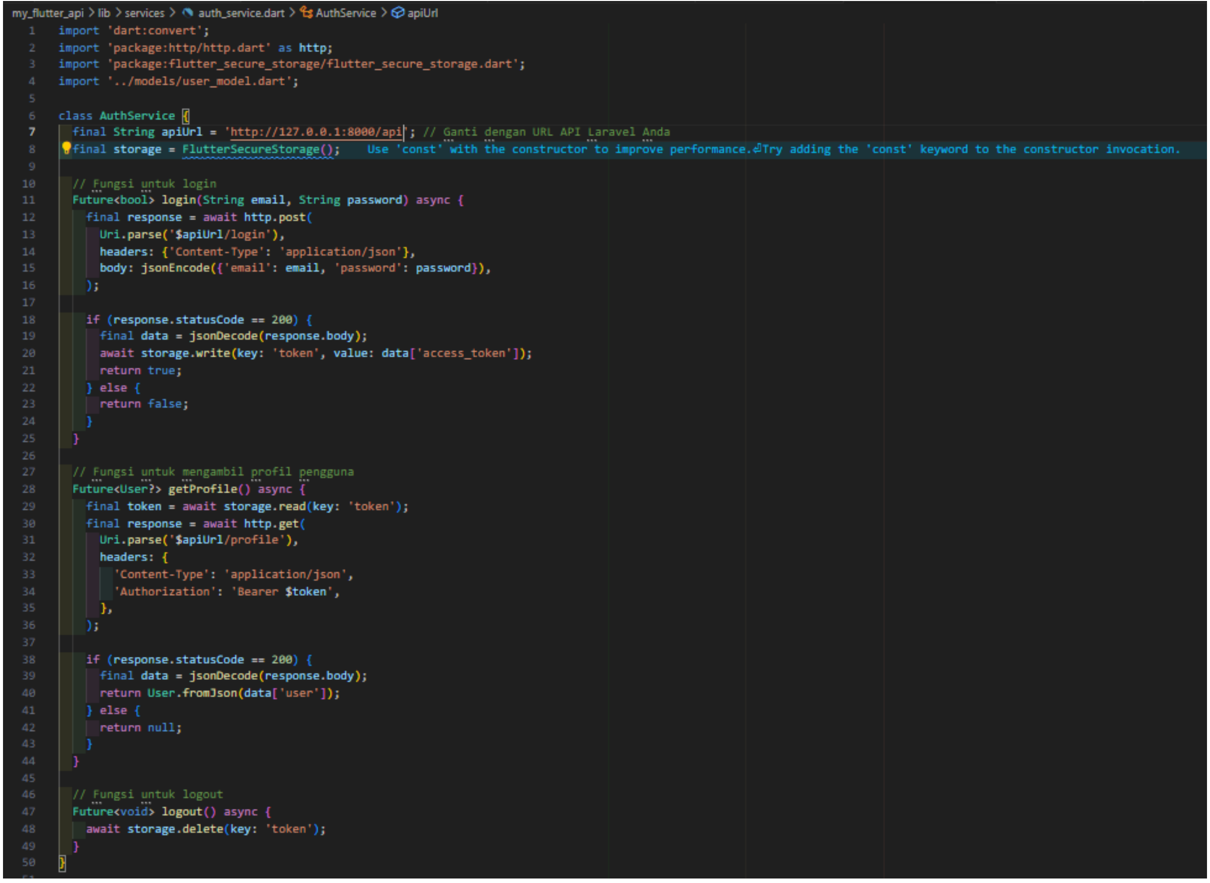
Buat Model Pengguna dengan nama file `user_model.dart` di `folder models` untuk representasi data pengguna.



```dart
class User {
  final int id;
  final String name;
  final String email;

  User({required this.id, required this.name, required this.email

  // Fungsi untuk membuat model User dari JSON
  factory User.fromJson(Map<String, dynamic> json) {
    return User(
      id: json['id'],
      name: json['name'],
      email: json['email'],
    );
  }
}
```

Langkah 4:

Buat Layanan API dengan nama file `auth_service.dart` di folder services untuk mengelola login, logout, dan profil pengguna.

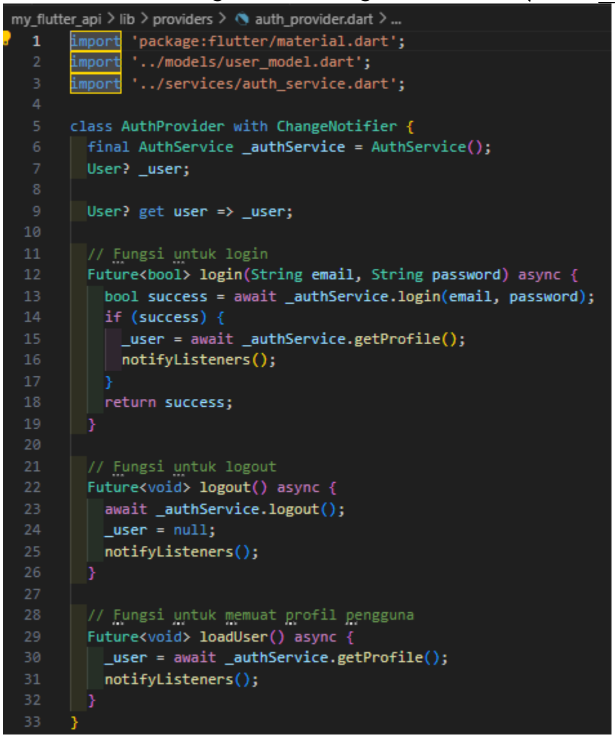


my_flutter_api > lib > services > auth_service.dart > AuthService > apiUrl

```dart
import 'dart:convert';
import 'package:http/http.dart' as http;
import 'package:flutter_secure_storage/flutter_secure_storage.dart';
import '../models/user_model.dart';

class AuthService {
  final String apiUrl = 'http://127.0.0.1:8000/api'; // Ganti dengan URL API Laravel Anda
  final storage = FlutterSecureStorage();    Use 'const' with the constructor to improve performance.⏎Try adding the 'const' keyword to the constructor invocation.

  // Fungsi untuk login
  Future<bool> login(String email, String password) async {
    final response = await http.post(
      Uri.parse('$apiUrl/login'),
      headers: {'Content-Type': 'application/json'},
      body: jsonEncode({'email': email, 'password': password}),
    );

    if (response.statusCode == 200) {
      final data = jsonDecode(response.body);
      await storage.write(key: 'token', value: data['access_token']);
      return true;
    } else {
      return false;
    }
  }

  // Fungsi untuk mengambil profil pengguna
  Future<User?> getProfile() async {
    final token = await storage.read(key: 'token');
    final response = await http.get(
      Uri.parse('$apiUrl/profile'),
      headers: {
        'Content-Type': 'application/json',
        'Authorization': 'Bearer $token',
      },
    );

    if (response.statusCode == 200) {
      final data = jsonDecode(response.body);
      return User.fromJson(data['user']);
    } else {
      return null;
    }
  }

  // Fungsi untuk logout
  Future<void> logout() async {
    await storage.delete(key: 'token');
  }
}
```

Langkah 5:

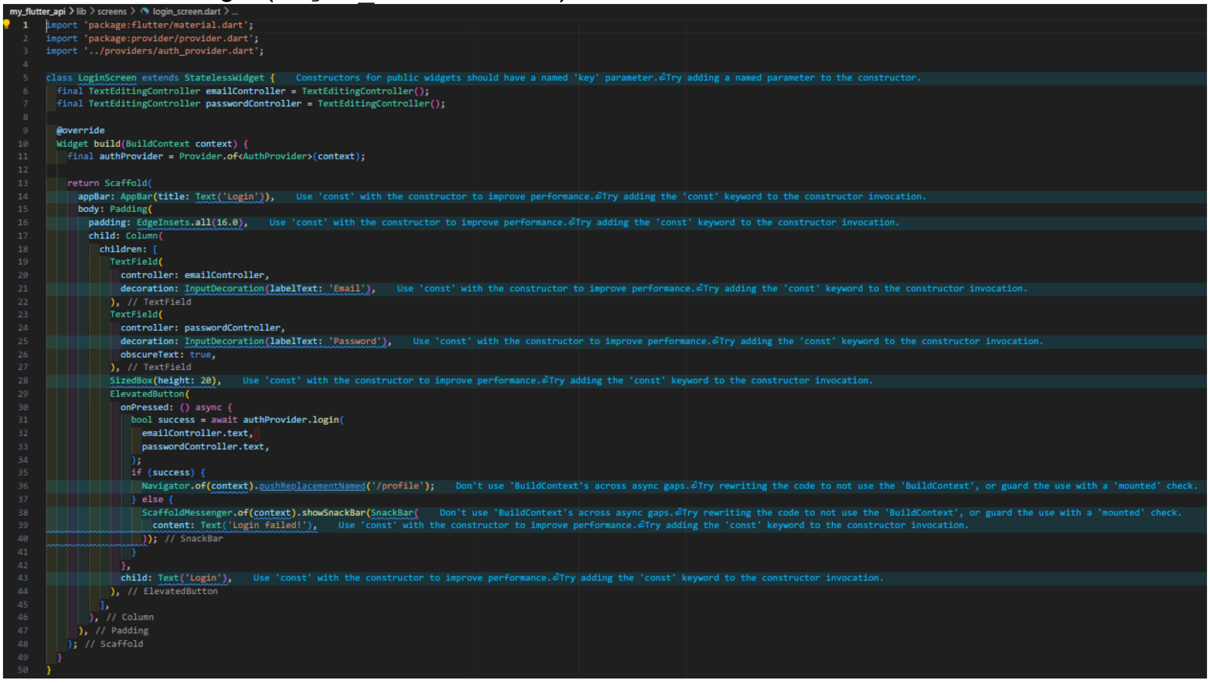
Buat State Management dengan Provider (`auth_provider.dart`) di folder `lib/providers/`



```dart
import 'package:flutter/material.dart';
import '../models/user_model.dart';
import '../services/auth_service.dart';

class AuthProvider with ChangeNotifier {
  final AuthService _authService = AuthService();
  User? _user;

  User? get user => _user;

  // Fungsi untuk login
  Future<bool> login(String email, String password) async {
    bool success = await _authService.login(email, password);
    if (success) {
      _user = await _authService.getProfile();
      notifyListeners();
    }
    return success;
  }

  // Fungsi untuk logout
  Future<void> logout() async {
    await _authService.logout();
    _user = null;
    notifyListeners();
  }

  // Fungsi untuk memuat profil pengguna
  Future<void> loadUser() async {
    _user = await _authService.getProfile();
    notifyListeners();
  }
}
```

Langkah 6:

Buat Halaman Login (`login_screen.dart`) di folder `lib/screens/`

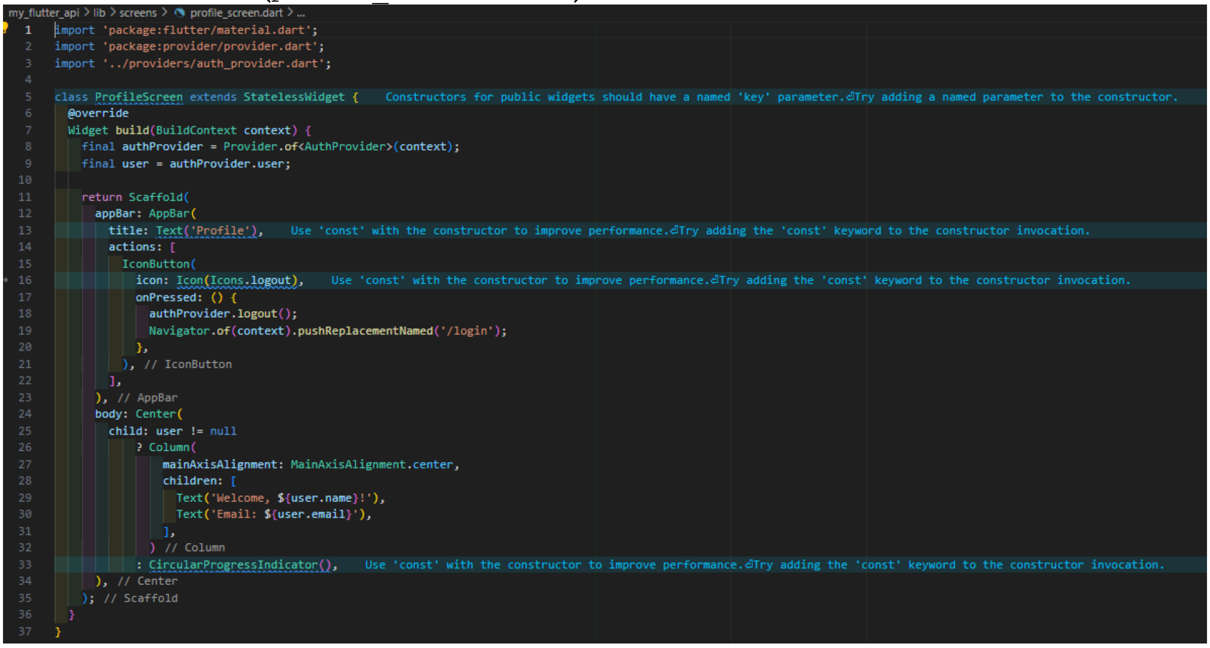


my_flutter_api > lib > screens > login_screen.dart > ...

```dart
import 'package:flutter/material.dart';
import 'package:provider/provider.dart';
import '../providers/auth_provider.dart';

class LoginScreen extends StatelessWidget {    Constructors for public widgets should have a named 'key' parameter.↵Try adding a named parameter to the constructor.
  final TextEditingController emailController = TextEditingController();
  final TextEditingController passwordController = TextEditingController();

  @override
  Widget build(BuildContext context) {
    final authProvider = Provider.of<AuthProvider>(context);

    return Scaffold(
      appBar: AppBar(title: Text('Login')),    Use 'const' with the constructor to improve performance.↵Try adding the 'const' keyword to the constructor invocation.
      body: Padding(
        padding: EdgeInsets.all(16.0),    Use 'const' with the constructor to improve performance.↵Try adding the 'const' keyword to the constructor invocation.
        child: Column(
          children: [
            TextField(
              controller: emailController,
              decoration: InputDecoration(labelText: 'Email'),    Use 'const' with the constructor to improve performance.↵Try adding the 'const' keyword to the constructor invocation.
            ), // TextField
            TextField(
              controller: passwordController,
              decoration: InputDecoration(labelText: 'Password'),    Use 'const' with the constructor to improve performance.↵Try adding the 'const' keyword to the constructor invocation.
              obscureText: true,
            ), // TextField
            SizedBox(height: 20),    Use 'const' with the constructor to improve performance.↵Try adding the 'const' keyword to the constructor invocation.
            ElevatedButton(
              onPressed: () async {
                bool success = await authProvider.login(
                  emailController.text,
                  passwordController.text,
                );
                if (success) {
                  Navigator.of(context).pushReplacementNamed('/profile');    Don't use 'BuildContext's across async gaps.↵Try rewriting the code to not use the 'BuildContext', or guard the use with a 'mounted' check.
                } else {
                  ScaffoldMessenger.of(context).showSnackBar(SnackBar(    Don't use 'BuildContext's across async gaps.↵Try rewriting the code to not use the 'BuildContext', or guard the use with a 'mounted' check.
                    content: Text('Login failed!'),    Use 'const' with the constructor to improve performance.↵Try adding the 'const' keyword to the constructor invocation.
                  )); // SnackBar
                }
              },
              child: Text('Login'),    Use 'const' with the constructor to improve performance.↵Try adding the 'const' keyword to the constructor invocation.
            ), // ElevatedButton
          ],
        ), // Column
      ), // Padding
    ); // Scaffold
  }
}
```

Langkah 7:

Buat Halaman Profil (`profil_screen.dart`) di folder `lib/screens/`

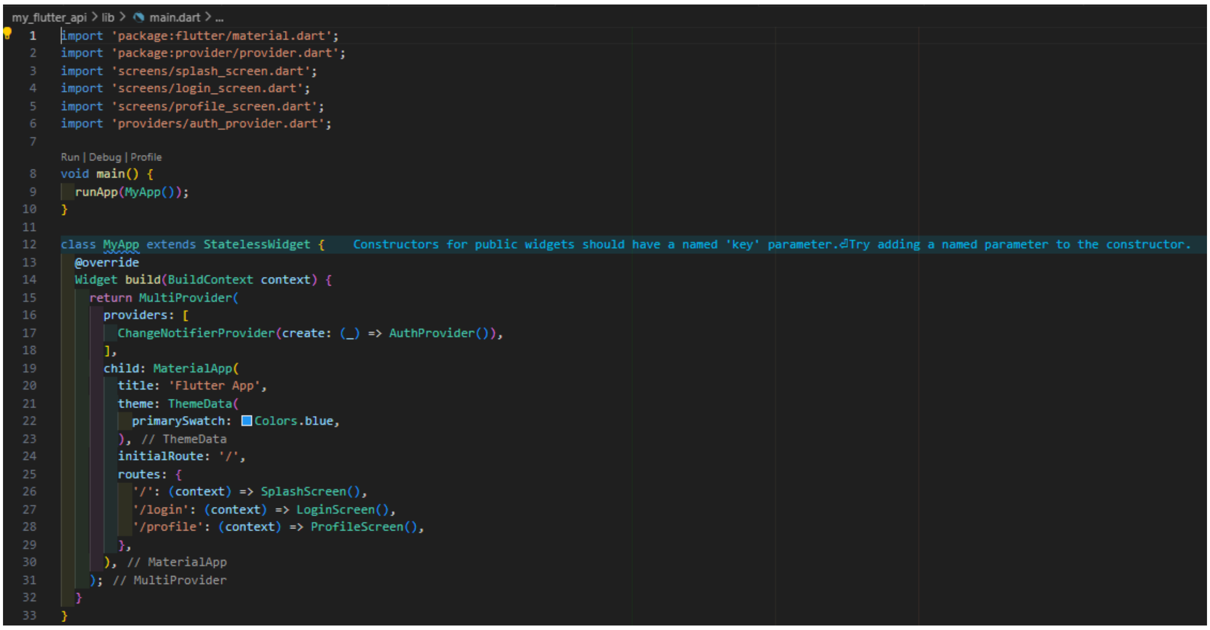


my_flutter_api > lib > screens > profile_screen.dart > ...

```dart
import 'package:flutter/material.dart';
import 'package:provider/provider.dart';
import '../providers/auth_provider.dart';

class ProfileScreen extends StatelessWidget {    Constructors for public widgets should have a named 'key' parameter.↵Try adding a named parameter to the constructor.
  @override
  Widget build(BuildContext context) {
    final authProvider = Provider.of<AuthProvider>(context);
    final user = authProvider.user;

    return Scaffold(
      appBar: AppBar(
        title: Text('Profile'),    Use 'const' with the constructor to improve performance.↵Try adding the 'const' keyword to the constructor invocation.
        actions: [
          IconButton(
            icon: Icon(Icons.logout),    Use 'const' with the constructor to improve performance.↵Try adding the 'const' keyword to the constructor invocation.
            onPressed: () {
              authProvider.logout();
              Navigator.of(context).pushReplacementNamed('/login');
            },
          ), // IconButton
        ],
      ), // AppBar
      body: Center(
        child: user != null
            ? Column(
                mainAxisAlignment: MainAxisAlignment.center,
                children: [
                  Text('Welcome, ${user.name}!'),
                  Text('Email: ${user.email}'),
                ],
              ) // Column
            : CircularProgressIndicator(),    Use 'const' with the constructor to improve performance.↵Try adding the 'const' keyword to the constructor invocation.
      ), // Center
    ); // Scaffold
  }
}
```

Langkah 8:

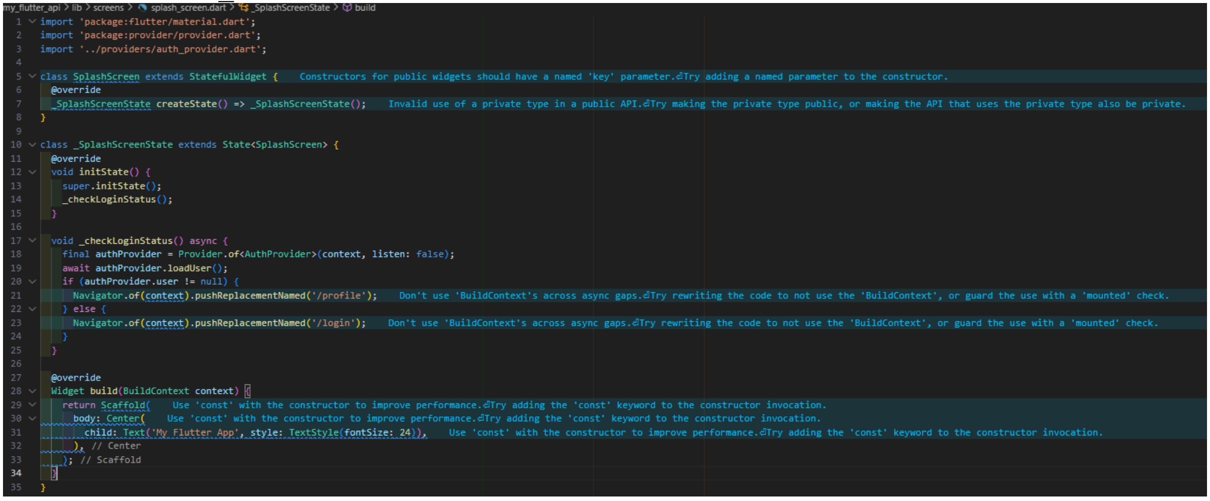
Mengatur Routing dan Provider di `main.dart`



```dart
import 'package:flutter/material.dart';
import 'package:provider/provider.dart';
import 'screens/splash_screen.dart';
import 'screens/login_screen.dart';
import 'screens/profile_screen.dart';
import 'providers/auth_provider.dart';

Run | Debug | Profile
void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {    Constructors for public widgets should have a named 'key' parameter.⏎Try adding a named parameter to the constructor.
  @override
  Widget build(BuildContext context) {
    return MultiProvider(
      providers: [
        ChangeNotifierProvider(create: (_) => AuthProvider()),
      ],
      child: MaterialApp(
        title: 'Flutter App',
        theme: ThemeData(
          primarySwatch: ■Colors.blue,
        ), // ThemeData
        initialRoute: '/',
        routes: {
          '/': (context) => SplashScreen(),
          '/login': (context) => LoginScreen(),
          '/profile': (context) => ProfileScreen(),
        },
      ), // MaterialApp
    ); // MultiProvider
  }
}
```

Langkah 9:

Buat file `splash_screen.dart` di folder `lib/screens/`

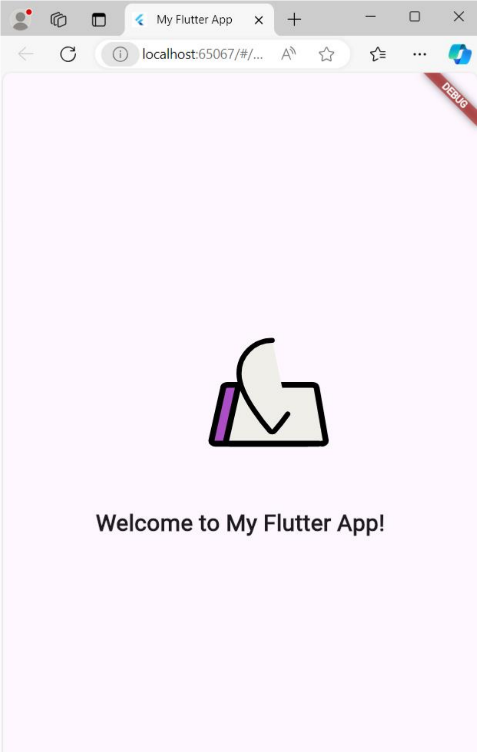

my_flutter_api > lib > screens > splash_screen.dart > _SplashScreenState > build

```dart
import 'package:flutter/material.dart';
import 'package:provider/provider.dart';
import '../providers/auth_provider.dart';

class SplashScreen extends StatefulWidget {    Constructors for public widgets should have a named 'key' parameter.⏎Try adding a named parameter to the constructor.
  @override
  _SplashScreenState createState() => _SplashScreenState();    Invalid use of a private type in a public API.⏎Try making the private type public, or making the API that uses the private type also be private.
}

class _SplashScreenState extends State<SplashScreen> {
  @override
  void initState() {
    super.initState();
    _checkLoginStatus();
  }

  void _checkLoginStatus() async {
    final authProvider = Provider.of<AuthProvider>(context, listen: false);
    await authProvider.loadUser();
    if (authProvider.user != null) {
      Navigator.of(context).pushReplacementNamed('/profile');    Don't use 'BuildContext's across async gaps.⏎Try rewriting the code to not use the 'BuildContext', or guard the use with a 'mounted' check.
    } else {
      Navigator.of(context).pushReplacementNamed('/login');    Don't use 'BuildContext's across async gaps.⏎Try rewriting the code to not use the 'BuildContext', or guard the use with a 'mounted' check.
    }
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(    Use 'const' with the constructor to improve performance.⏎Try adding the 'const' keyword to the constructor invocation.
      body: Center(    Use 'const' with the constructor to improve performance.⏎Try adding the 'const' keyword to the constructor invocation.
        child: Text('My Flutter App', style: TextStyle(fontSize: 24)),    Use 'const' with the constructor to improve performance.⏎Try adding the 'const' keyword to the constructor invocation.
      ), // Center
    ); // Scaffold
  }
}
```

Langkah 10:

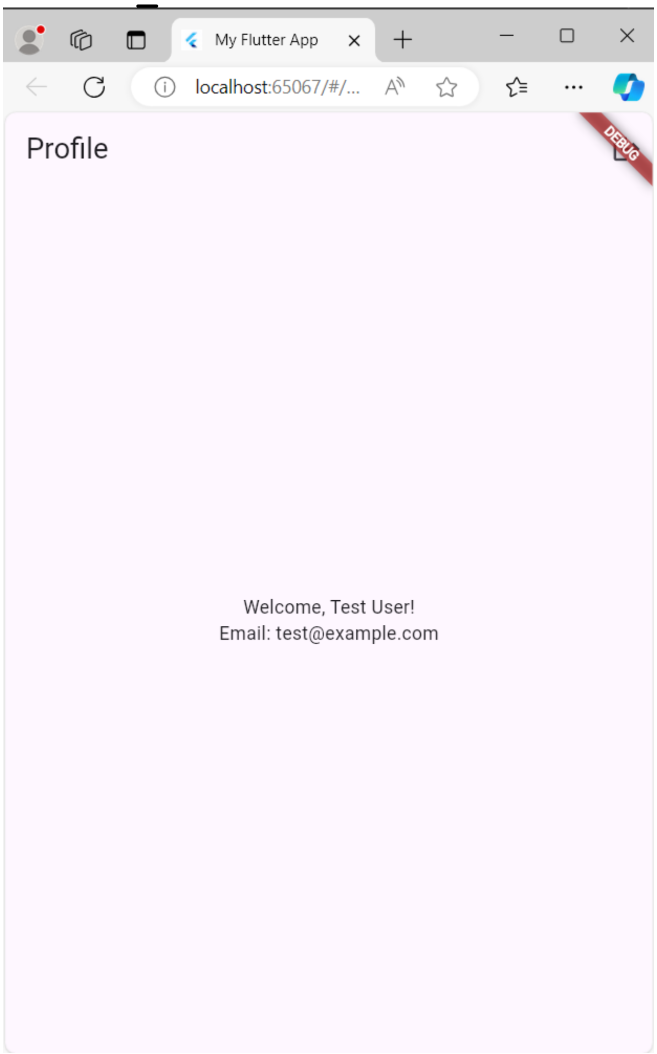
Output yang dihasilkan

- **`Splash_screen`**



Welcome to My Flutter App!

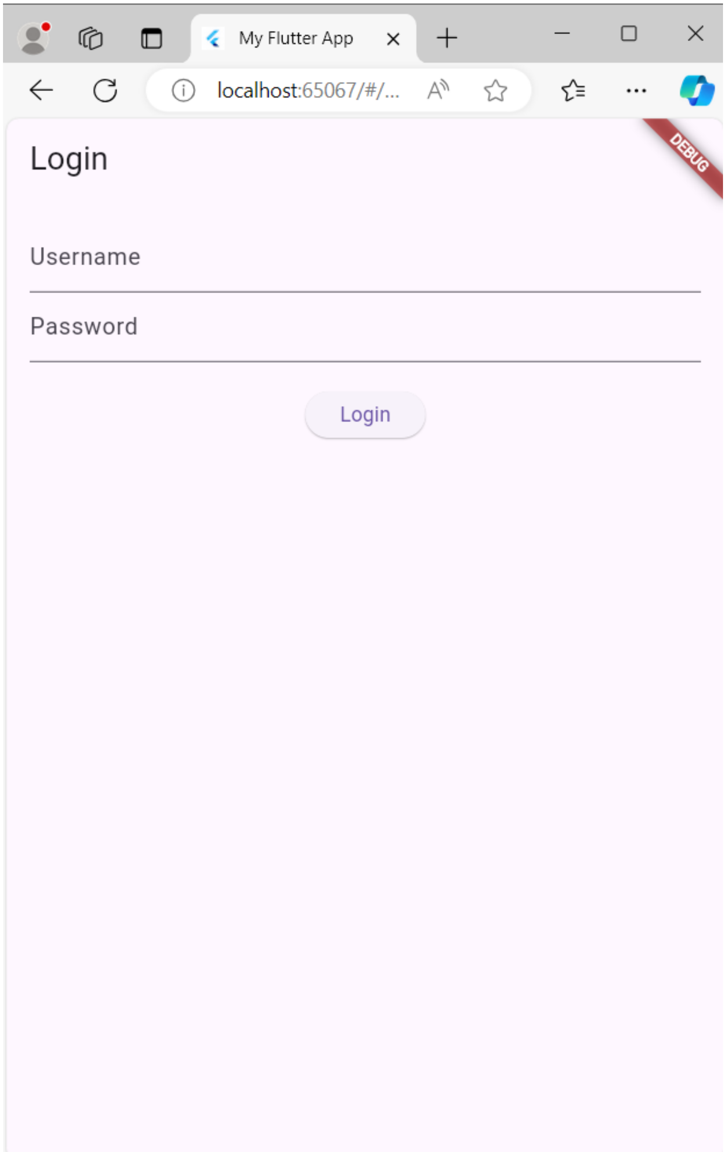
- `Profile_screen`



Profile

Welcome, Test User!
Email: test@example.com

- **Login_screen**

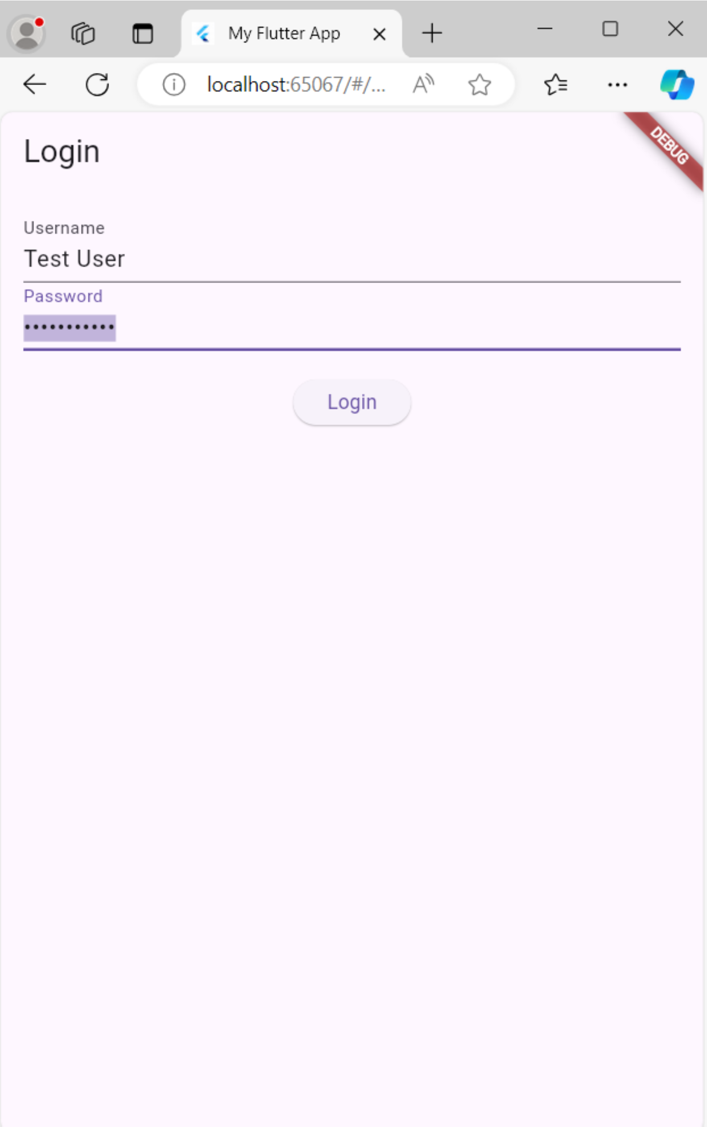


Login

Username

Password

Login



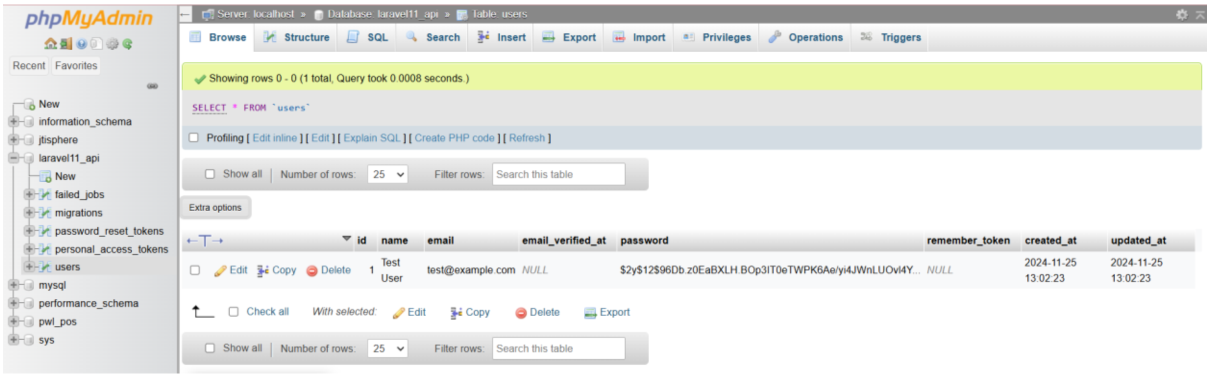
Login

Username
Test User

Password
•••••••••••

Login

- **Database**



✓ Showing rows 0 - 0 (1 total, Query took 0.0008 seconds.)

```
SELECT * FROM `users`
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

□ Show all | Number of rows: 25 Filter rows: Search this table

Extra options

←T→	id	name	email	email_verified_at	password	remember_token	created_at	updated_at
□ Edit Copy Delete	1	Test User	test@example.com	NULL	$2y$12$96Db.z0EaBXLH.BOp3lT0eTWPK6Ae/yi4JWnLUOvl4Y...	NULL	2024-11-25 13:02:23	2024-11-25 13:02:23

□ Check all With selected: Edit Copy Delete Export

□ Show all | Number of rows: 25 Filter rows: Search this table