How to Build an API with Laravel Breeze in Laravel 11

A step-by-step guide on building a simple API with authentication using Laravel Breeze in Laravel 11.

Step 1: Install Laravel

First, create a new Laravel project using the Laravel installer or Composer.

```
laravel new api-breeze

# Or via Composer

composer create-project laravel/laravel api-breeze

cd api-breeze
```

Step 2: Install Laravel Breeze

Next, install Laravel Breeze and its dependencies.

```
composer require laravel/breeze --dev

php artisan breeze:install api
```

This command will install Breeze and set up the necessary scaffolding for API authentication.

Step 3: Configure the Database and Run Migrations

1. Update your .env file with your database credentials:

```
DB_CONNECTION=mysql

DB_HOST=127.0.0.1

DB_PORT=3306

DB_DATABASE=laravel11_api

DB_USERNAME=root

DB_PASSWORD=
```

1. Run the migrations to set up your database tables:

```
php artisan migrate
```

Step 4: Create Authentication Endpoints

Laravel Breeze provides the necessary endpoints for registration, login, and logout. The routes are defined in routes/api.php.

```
use App\Http\Controllers\Auth\AuthenticatedSessionController;

use App\Http\Controllers\Auth\RegisteredUserController;

use Illuminate\Support\Facades\Route;


Route::post('/register', [RegisteredUserController::class, 'store']);

Route::post('/login', [AuthenticatedSessionController::class, 'store']);

Route::post('/logout', [AuthenticatedSessionController::class, 'destroy'])->middleware('auth:sanctum');
```

Step 5: Update Controllers

Modify the RegisteredUserController and AuthenticatedSessionController to return JSON responses.

RegisteredUserController.php

```
namespace App\Http\Controllers\Auth;


use App\Models\User;

use Illuminate\Auth\Events\Registered;

use Illuminate\Http\Request;

use Illuminate\Support\Facades\Hash;
```

```php
use Illuminate\Validation\Rules;
use App\Http\Controllers\Controller;

class RegisteredUserController extends Controller
{
  public function store(Request $request)
  {
    $request->validate([
      'name' => ['required', 'string', 'max:255'],
      'email' => ['required', 'string', 'email', 'max:255', 'unique:users'],
      'password' => ['required', 'confirmed', Rules\Password::defaults()],
    ]);

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

    event(new Registered($user));

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

    return response()->json([
            'access_token' => $token,
            'token_type' => 'Bearer',
            'user' => $user
        ]);
    }
}
```

AuthenticatedSessionController.php

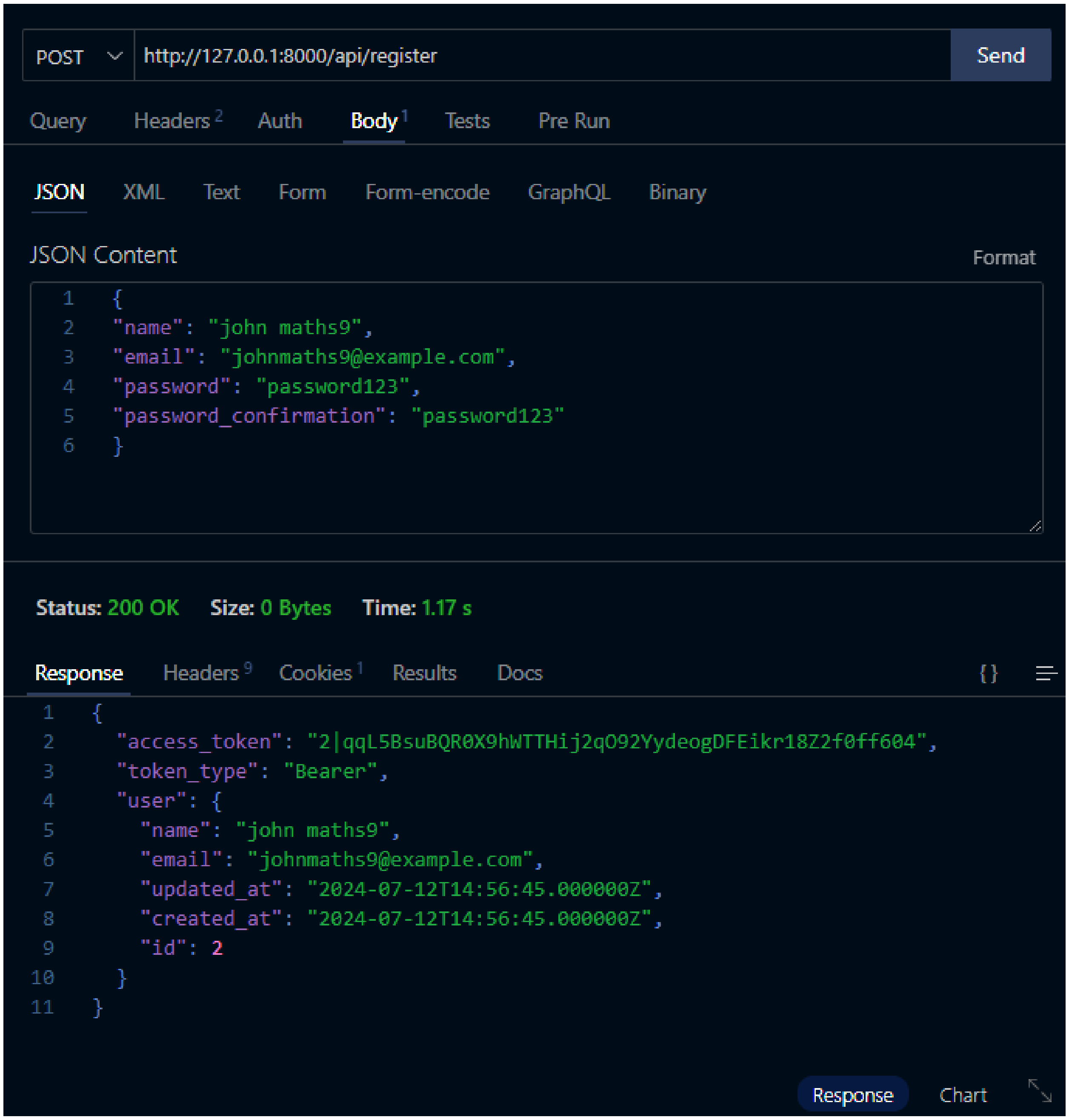
```
namespace App\Http\Controllers\Auth;

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

class AuthenticatedSessionController extends Controller
{
    public function store(Request $request)
    {
        $request->validate([
            'email' => ['required', 'string', 'email'],
            'password' => ['required', 'string'],
        ]);

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

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

        return response()->json([
            'access_token' => $token,
            'token_type' => 'Bearer',
            'user' => $user,
            'status' => 'Login successful',
        ]);
    }

    public function destroy(Request $request)
    {
        $request->user()->currentAccessToken()->delete();

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

Step 5: Run Laravel App

```
php artisan serve
```

Step 6: Check following API

Test Your API with Thunder Client

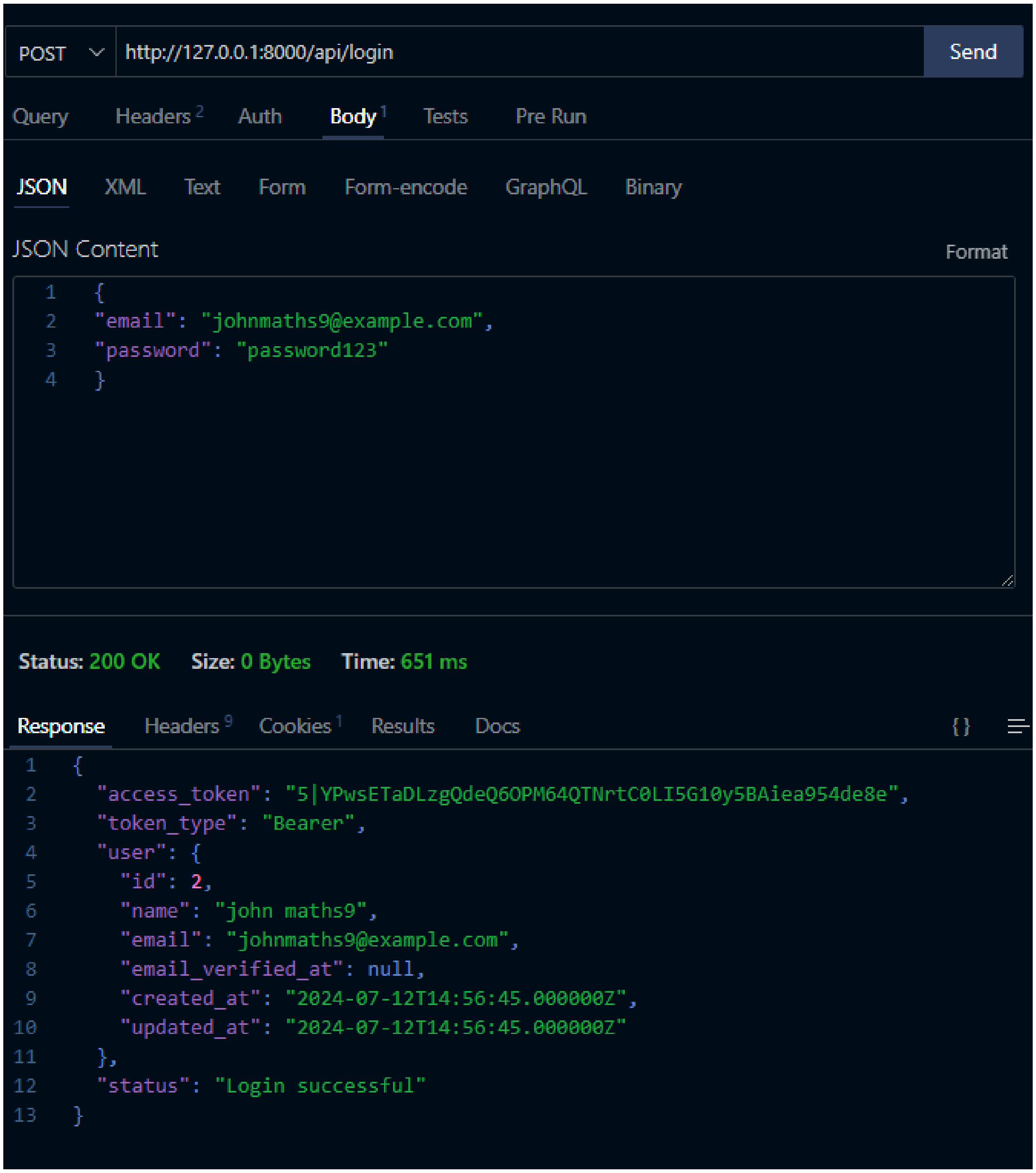


http://127.0.0.1:8000/api/register

```
{
"name": "john maths9",
"email": "johnmaths9@example.com",
"password": "password123",
"password_confirmation": "password123"
}
```

Status: 200 OK   Size: 0 Bytes   Time: 1.17 s

```
{
  "access_token": "2|qqL5BsuBQR0X9hWTTHij2qO92YydeogDFEikr18Z2f0ff604",
  "token_type": "Bearer",
  "user": {
    "name": "john maths9",
    "email": "johnmaths9@example.com",
    "updated_at": "2024-07-12T14:56:45.000000Z",
    "created_at": "2024-07-12T14:56:45.000000Z",
    "id": 2
  }
}
```



http://127.0.0.1:8000/api/login

```
{
"email": "johnmaths9@example.com",
"password": "password123"
}
```

Status: 200 OK   Size: 0 Bytes   Time: 651 ms

```
{
  "access_token": "5|YPwsETaDLzgQdeQ6OPM64QTNrtC0LI5G10y5BAiea954de8e",
  "token_type": "Bearer",
  "user": {
    "id": 2,
    "name": "john maths9",
    "email": "johnmaths9@example.com",
    "email_verified_at": null,
    "created_at": "2024-07-12T14:56:45.000000Z",
    "updated_at": "2024-07-12T14:56:45.000000Z"
  },
  "status": "Login successful"
}
```

Pembuatan Aplikasi Mobile Flutter,
Langkah 1: Persiapan Proyek Flutter

1. **Buat Proyek Flutter Baru:**

bash

```
flutter create my_ flutter_app

cd my_ _flutter_app
```

2. **Tambahkan Dependencies:**

Buka **pubspec.yaml** dan tambahkan beberapa dependencies yang diperlukan:

yaml

```
dependencies:
  flutter:
    sdk: flutter
  http: ^0.13.3
  shared_preferences: ^2.0.6
  provider: ^6.0.0
  flutter_secure_storage: ^5.0.2
```

Jalankan **flutter pub get** untuk mengunduh dependencies.

Buat Splashscreen dengan animasi dari Lottie File

Langkah 2: Mengatur Struktur Proyek

Buat folder berikut untuk mengatur kode Anda dengan lebih baik:

- **lib/screens/** untuk menyimpan file layar (UI).

- **lib/services/** untuk layanan HTTP dan manajemen API.
- **lib/models/** untuk model data.
- **lib/providers/** untuk manajemen state menggunakan Provider.

Langkah 3: Membuat Model Pengguna

Buat file **user_model.dart** di **lib/models/**:

dart

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

  User({required this.id, required this.name, required this.email});

  factory User.fromJson(Map<String, dynamic> json) {
    return User(
      id: json['id'],
      name: json['name'],
      email: json['email'],
    );
  }
}
```

Langkah 4: Membuat Layanan API

Buat file **auth_service.dart** di **lib/services/**:

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://your-laravel-api-url.com/api';
 final storage = FlutterSecureStorage();

 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['token']);
   return true;
  } else {
   return false;
  }
 }
```

```
  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;
    }
  }

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

Langkah 5: Menyusun State Management dengan Provider

Buat file **auth_provider.dart** di **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;

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

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

 Future<void> loadUser() async {
  _user = await _authService.getProfile();
  notifyListeners();
 }
}
```

Langkah 6: Membuat Halaman Login

Buat file **login_screen.dart** di **lib/screens/**:

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

class LoginScreen extends StatelessWidget {
 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')),
body: Padding(
 padding: EdgeInsets.all(16.0),
 child: Column(
  children: [
   TextField(
    controller: emailController,
    decoration: InputDecoration(labelText: 'Email'),
   ),
   TextField(
    controller: passwordController,
    decoration: InputDecoration(labelText: 'Password'),
    obscureText: true,
   ),
   SizedBox(height: 20),
   ElevatedButton(
    onPressed: () async {
     bool success = await authProvider.login(
      emailController.text,
      passwordController.text,
     );
     if (success) {
      Navigator.of(context).pushReplacementNamed('/profile');
     } else {
```

```
              ScaffoldMessenger.of(context).showSnackBar(SnackBar(
                content: Text('Login failed!'),
              ));
            }
          },
          child: Text('Login'),
        ),
      ],
    ),
  ),
);
}
}
```

Langkah 7: Membuat Halaman Profil

Buat file **profile_screen.dart** di **lib/screens/**:

dart

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

class ProfileScreen extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    final authProvider = Provider.of<AuthProvider>(context);
final user = authProvider.user;

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

Langkah 8: Mengatur Routing dan Provider

Buka **main.dart** dan atur routing serta Provider:

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';

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MultiProvider(
      providers: [
        ChangeNotifierProvider(create: (_) => AuthProvider()),
      ],
      child: MaterialApp(
        title: 'Flutter App',
        theme: ThemeData(
          primarySwatch: Colors.blue,
        ),
        initialRoute: '/',
        routes: {
          '/': (context) => SplashScreen(),
          '/login': (context) => LoginScreen(),
          '/profile': (context) => ProfileScreen(),
        },
      ),
    );
  }
}
```

Langkah 9: Menyiapkan Splash Screen

Buat file **splash_screen.dart** di **lib/screens/**:

dart

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

```
class SplashScreen extends StatefulWidget {
 @override
 _SplashScreenState createState() => _SplashScreenState();
}

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');
  } else {
   Navigator.of(context).pushReplacementNamed('/login');
  }
 }

 @override
 Widget build(BuildContext context) {
  return Scaffold(
   body: Center(
    child: Text('My Flutter App', style: TextStyle(fontSize: 24)),
   ),
  );
 }
}
```

Langkah 10: Menjalankan Aplikasi

Pastikan API Laravel Anda sudah berjalan dan endpoint login serta profil sudah tersedia. Jalankan aplikasi Flutter: