

#### LARAVEL

# Creating Your First Laravel App and Adding Authentication

Learn how to build a Laravel CRUD application that includes authentication.





Last Updated On: January 09, 2020

✓ Laravel 6.0 is out! Check out <u>Build a Laravel 6 CRUD App with Authentication</u> to learn what new things Laravel can do for you.

**₱** This blog post covers Laravel 5.8.

**TL;DR:** Laravel is a great PHP framework. Currently, it is the most starred PHP project on <u>Github</u> and a lot of companies and people all over the world use it to build amazing applications. In this tutorial, I'll show you how easy it is to build a web application with Laravel and add authentication to it without breaking a sweat. Check out the repo to get the code.

Laravel is a free, open-source PHP framework designed for building web applications with an expressive and elegant syntax. Laravel has a high level of abstraction which shields the common developer from complex inner workings. Laravel saves you time and effort because it ships with a lot of features out of the box. These amazing features include:

- Database Migrations
- Eloquent ORM
- Authorization and Policies
- Scheduler
- Queuing

Laravel makes good use of already written and well-tested components from the PHP community. It is one of the few frameworks that comes with development environments such as <a href="Homestead">Homestead</a> and Valet. The documentation is very detailed and there is a large community based around

Laravel. Some of the notable communities are <u>laracasts.com</u>, <u>larajobs.com</u>, <u>laravel-news.com</u>, <u>laravel-news.com</sub>, <u>laravel-news.com</sub>, <u>laravel-news.com</sub>, <u>laravel-news.com</sub>, <u>laravel-news.com</sub>, <u>laravel-news.com</sub>, <u>laravel-news.com</code>, <u>laravel-news.com</code>, <u>laravel</u></u></u></u></u></u></u></u></u>

# "Laravel is one of the few frameworks that actually with development environments such as Homestead"



We'll be building a simple character listing app with Laravel 5.8. Our app will simply list 10 Game of Thrones characters and their real names. Once we add authentication to the app, all logged-in users will have the privilege of knowing these celebrity characters personally.

#### Let's Get Started

Laravel utilizes <u>Composer</u> to manage its dependencies. So, before using Laravel, make sure you have Composer installed on your machine. We can install Laravel by issuing the Composer <u>create-project</u> command in your terminal like so: <u>composer create-project --prefer-dist laravel/laravel GOT</u> or using the <u>laravel</u> installer.

It's faster to spin up a new app using the laravel command like so: laravel new GOT. Check out the Laravel docs to learn how to set up the Laravel installer.

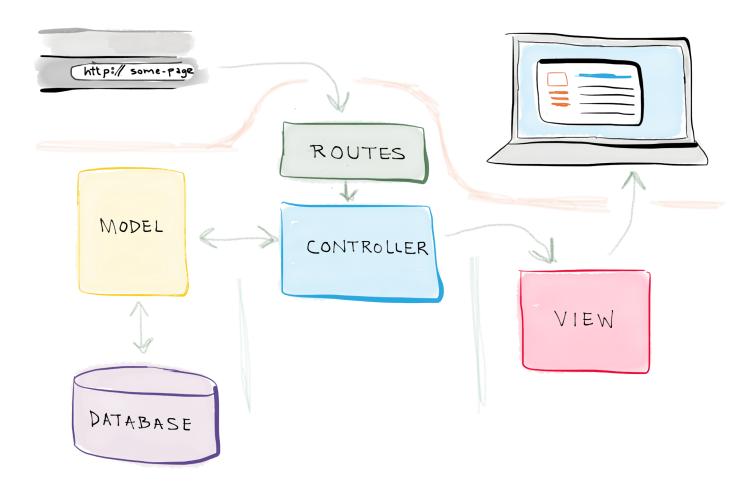
If you used the laravel installer command to create a new app, then you have to run composer install immediately after the previous command to install all the dependencies.

Now run the following in your terminal to launch your application:

php artisan serve

# **Explore Directory Structure**

Laravel applications follow the Model-View-Controller design pattern.



(Source: Self Taught Coders)

In a nutshell,

- Models query your database and return the necessary data.
- Views are pages that render data
- Controllers handle user requests, retrieve data from the models, and pass them to the views.

Read more about MVC here.

The app directory is the **meat** of your Laravel application. It houses the following directories:

Console - Contains all your Artisan commands

- Http Contains all your controllers, middleware, requests, and routes file
- Providers Contains all your application service providers. You can read more about Service Providers here
- Events Contains all your event classes
- | Exceptions | Contains your application exception handler and custom exception classes
- Jobs Contains all the jobs queued by your application
- Listeners Contains all the handler classes for your events
- Policies Contains the authorization policy classes for your application. Policies are used to determine if a user can perform a given action against a resource.

The other directories namely:

- boostrap | contains your framework autoloading files and generated cache files
- config contains your app's configuration files
- database contains your database migrations and seeds



- | storage | contains an your complied blade templates, the caches, and logs
- tests contains all your tests
- vendor contains your app dependencies

# **Setting Up The Controller**

Open up your terminal and in the project root directory, run the command below to create a ListController.

```
php artisan make:controller ListController
```

Open up app/Http/Controllers/ListController.php and configure it like so:

```
class ListController extends Controller
{
   public function show()
      $characters = [
        'Daenerys Targaryen' => 'Emilia Clarke',
        'Jon Snow'
                            => 'Kit Harington',
        'Arya Stark'
                           => 'Maisie Williams',
        'Melisandre'
                           => 'Carice van Houten',
        'Khal Drogo'
                           => 'Jason Momoa',
        'Tyrion Lannister' => 'Peter Dinklage',
        'Ramsay Bolton' => 'Iwan Rheon',
        'Petyr Baelish' => 'Aidan Gillen',
        'Brienne of Tarth' => 'Gwendoline Christie',
        'Lord Varys'
                       => 'Conleth Hill'
      ];
      return view('welcome')->withCharacters($characters);
   }
}
```

view('welcome')->withCharacters(\$characters) indicates that we are passing the
\$characters array to a view called welcome.blade.php. We'll create that view later in this post.

## **Setting Up The Model**

Laravel models are stored by default in the root of the app directory. The User model ships with the Laravel framework. Only the User model is needed in this application so we won't create any additional models. However, if you want to create more models, you can simply run the command below like so:

```
php artisan make:model <modelName>
```

where <modelName> represents the name of the model you want to create.

## **Setting Up The Routes**

Open up routes/web.php and configure it like so:

Once a request hits the / route, it invokes the show method of the ListController and renders the returned value in the welcome view. We'll configure the welcome view later in this post.

## **Setting Up Authentication**

We're going to be using Auth0 for authentication. Setting up the built-in authentication with Laravel is pretty **straightforward**, **but limited**. With Auth0, you'll have access to an easy-to-use dashboard, the ability to integrate social identity providers, two-factor authentication, passwordless login, and more. And luckily, it's just as easy to integrate with your Laravel application! Let's check it out.

If you don't already have an account, go ahead and sign up for a free Auth0 account here.

After you've signed up, head to the dashboard and click on "Applications". Click on "Create Application" and name the application "Laravel App" or anything you'd like. Then click on "Regular Web Application" and press create.

Next, you need to add the valid callback URLs and logout URLs in the dashboard.

Click on "Applications" and select the application you just created (or the default one). Next, click on "Settings".

Update these values as follows:

- Allowed callback URLs: http://localhost:8000/auth0/callback
- Logout URLs: http://localhost:8000

Next, go back to your terminal and install the Auth0 PHP plugin and Auth0 Laravel plugin:

```
composer require auth0/login:"~5.0"
```

Now open the config/app.php file and add the AuthO login service provider to the list of providers:

```
// ...
'providers' => [
    // ...
    Auth0\Login\LoginServiceProvider::class,
];
```

Then scroll down to the aliases array and add the AuthO facade:

Next, open app/Providers/AppServiceProvider.php and add the following under register():

You need to publish the plugin configuration. In your terminal, run:

```
php artisan vendor:publish
```

When it asks which file you'd like to publish, select Auth@\Login\LoginServiceProvider.

This will create the config/laravel-autho.php file. Open this up now and you'll see it's using some Autho variables. These are sensitive, so you need to add them to the env file.

Open up .env and add:

```
AUTH0_DOMAIN=your-auth0-domain.auth0.com

AUTH0_CLIENT_ID=your-client-id

AUTH0_CLIENT_SECRET=your-client-secret
```

To fill in these values, head back to <u>your Auth0 dashboard</u>, select your application, and click on "Settings".

While you have \_env open, double-check that APP\_URL matches your dev URL exactly, including the port. It should say APP\_URL=http://localhost:8000 . If not, update that now.

The last configuration step is to switch out the Laravel user driver to use Auth0.

Open up config/auth.php, scroll down to providers, and paste in:

```
'providers' => [
    'users' => [
        'driver' => 'auth0',
        ],
    ],
```

Now that you have the AuthO plugin configured, you just need to integrate it into the application.

#### **Integrating Auth0**

Open up routes/web.php and add these authentication routes:

```
Route::get( '/auth0/callback', '\Auth0\Login\Auth0Controller@callback' )->name
Route::get( '/login', 'Auth\Auth0IndexController@login' )->name( 'login' );
Route::get( '/logout', 'Auth\Auth0IndexController@logout' )->name( 'logout' )-
```

These routes will handle the login, logout, and redirect to Auth0 during login. Now you need to create that Auth0IndexController.

In your terminal, run:

```
php artisan make:controller Auth/Auth@IndexController
```

Open up app/Http/Controllers/Auth/Auth@IndexController.php and replace it with:

```
$authorize_params = [
      'scope' => 'openid profile email',
   ];
   return \App::make('auth0')->login(null, null, $authorize params);
 }
  /**
    * Log out of Auth0
   * @return mixed
    */
 public function logout()
   \Auth::logout();
   $logoutUrl = sprintf(
      'https://%s/v2/logout?client_id=%s&returnTo=%s',
     env('AUTHO_DOMAIN'),
     env('AUTHO_CLIENT_ID'),
     env('APP URL'));
   return \Redirect::intended($logoutUrl);
}
```

The scopes being requested in the login() function are: openid, profile, and email.

There is also a logout() function that will clear all session data to log the user out.

Now it's time to wire up the buttons so that users can sign in and out.

Open up your welcome.blade.php and configure it like so:

```
<!DOCTYPE html>
<html lang="{{ str_replace('_', '-', app()->getLocale()) }}">
 <head>
     <meta charset="utf-8">
     <meta name="viewport" content="width=device-width, initial-scale=1">
     <title>Laravel</title>
 </head>
 <body>
   <div class="flex-center position-ref full-height">
     @if (Route::has('login'))
     <div class="top-right links">
       @if(Auth::user())
         <a href="{{ url('/home') }}">Home</a>
         <a href="{{ url('/logout') }}">Logout</a>
       @else
         <a href="{{ route('login') }}">Login</a>
       @endif
     </div>
     @endif
     <div class="container">
       <div class="row">
         <div class="col-md-10 col-md-offset-1">
           <div class="panel panel-success">
             <div class="panel-heading">List of Game of Thrones Characters/d
             @if(Auth::user())
             <!-- Table -->
             >
                 Character
                 Real Name
```

```
@foreach($characters as $key => $value)
                {{ $key }}{{ $value }}
                @endforeach
            @endif
          </div>
          @if(Auth::guest())
          <a href="/login" class="btn btn-info"> You need to login to see th
          @endif
        </div>
       </div>
     </div>
   </div>
 </body>
</html>
```

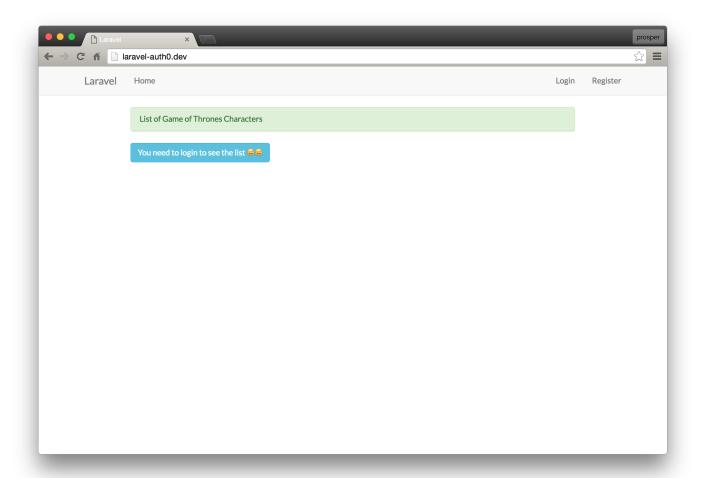
Here, we are looping through the \$\\$characters\$ array data passed from the ListController for appropriate rendering in the welcome view.

Auth::user() — You can check if a user is authenticated or not via this method from the Auth Facade. It returns true if a user is logged-in and false if a user is not. Check here for more about how Facades work in Larayel.

Auth::guest() — This does the opposite of Auth::user(). It returns true if a user is not logged in and false if a user is logged in. Check here to see all the methods you can call on the Auth Facade.

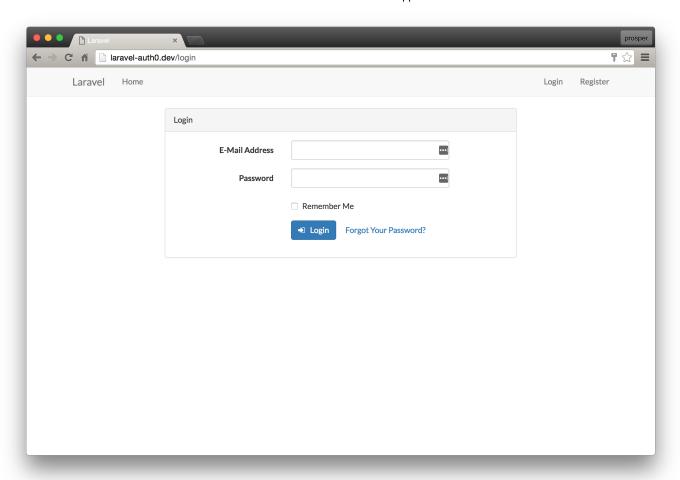
Now that we have all the routes and views setup, your application should look like this:

#### Landing Page

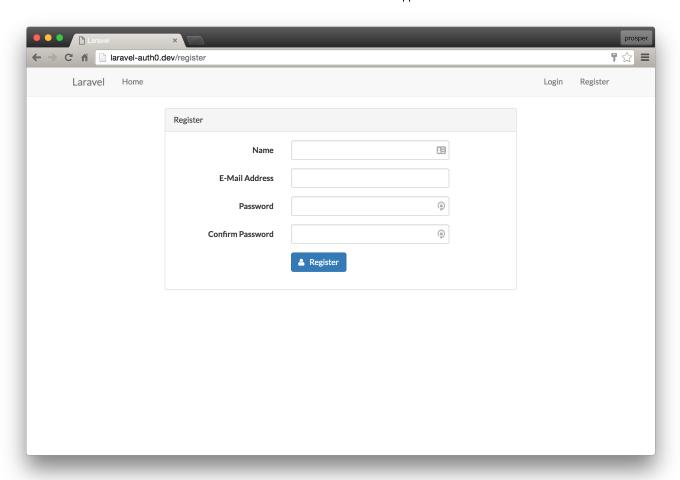


If you were to implement authentication on your own, you might have a login and register page like this:

Login Page



Register Page



Because we're using Auth0 for authentication, our application will redirect users to the Auth0 login page, so you don't have to create these on your own!

# **Using the Auth Middleware**

Middlewares provide a convenient mechanism for filtering HTTP requests entering your application. For example, **Laravel** includes a middleware that verifies the user of your application is authenticated. If the user is not authenticated, the middleware will redirect the user to the login screen. However, if the user is authenticated, the middleware will allow the request to proceed further. The app/Http/Middleware directory contains several middleware.

Let's check out how the auth middleware works.

Add a new route to your routes/web.php file like so:

```
Route::get('/got', [
  'middleware' => ['auth'],
  'uses' => function () {
    echo "You are allowed to view this page!";
}]);
```

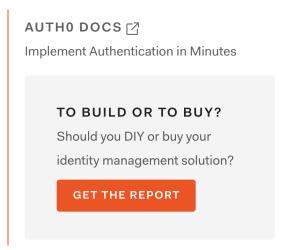
If you're still logged in, head to <a href="http://localhost:8000/got">http://localhost:8000/got</a> and you should get the message "You are allowed to view this page!". Now, log out, then try to access that route and you will be redirected back to Auth0 to sign in.

The Laravel auth middleware intercepted the request, checked if the user was logged-in, discovered that the user was not logged-in, then redirected the user back to the login route, which sent them to Autho.

# **Wrapping Up**

Well done! You have just built your first app with Laravel. Laravel is an awesome framework to work with. It focuses on simplicity, clarity and getting work done. As we saw in this tutorial, you can easily activate the built-in authentication to your Laravel applications. If you find yourself needing more, you can also integrate AuthO just as easily.

Please, let me know if you have any questions or observations in the comment section. ©









#### More like this



RUBY

# Ruby Authentication: Secure Your Rack Application with JWT



GOLANG

# **Authentication in Golang with JWTs**



VUE

Build an App with Vue.js: From Authentication to Calling an API

#### Follow the conversation







Renato Leite • 9 months ago

is this still working?

Is there any other tutorial with the new versions?



Holly Lloyd → Renato Leite • 4 months ago

Hi Renato! This tutorial has been updated to Laravel 5.8. If you'd like an even more in depth and newer one, we just published this one that's compatible with Laravel 6.0:

https://auth0.com/blog/buil...



Dan Arias Mod → Renato Leite • 9 months ago

Howdy, Renato Leite!

Our newest Laravel content includes GraphQL:

https://auth0.com/blog/deve...

We have it in our pipeline to publish an updated version of this post, I'd love if you could please share with me what would you like to see in such a post?

Thank you for reading and your feedback!



Photolancer Zone • 3 years ago

Nice article, thank you!

An easy way to try out Laravel in action is to use Laravel 5 Boilerplate / Starter Kit - https://github.com/Labs64/l...

node.js, etc.) environment and can start to evaluate Laravel right away.



Eze Sunday • 4 years ago • edited

Well, this helped me alot to get started with laravel.

Thank you Prosper.

Achieved much in a short time.



Prosper → Eze Sunday • 4 years ago

I'm glad this helped!



Akash Sharma • 4 months ago

yeah !! its is a informational Post. We can add authentication with middleware also in laravel and Multiple auth in laravel.



Alex Kramer • 2 years ago • edited

Hi, thanks for this tutorial it helped me get started alot quicker.

However the list appears to remain blank (the view shows) after some scanning through your work I figured it was because of the line in the foreach loop in your view:

Shouldn't this line:

Be:

?php echo \$key ??php echo \$value ?

That is what's working for me, but if it's a wrong approach I would still like to know EDIT: I changed the start tag for PHP to just the ? because otherwise it would disappear! That is probably what happened to your code too ?



Prosper → Alex Kramer • 2 years ago • edited

Hello **@Alex Kramer** please check the source code here https://github.com/auth0-bl...

The blog engine didn't render the code in that section. I'll find a way to escape it now and update the post so that it can be rendered properly. Sorry for the inconvenience.



Marcos Saldivar • 3 years ago

Hello, Prosper. What if I use an LDAP authentication provider? How would it be? Thank you for your attention, Marcos.



James Moore • 3 years ago • edited



Great Tutorial....

Note: It would be suggested to update the View.... so; instead of the Looping Construct looking like this:

@foreach(\$characters as \$key => \$value)

@endforeach

The Looping Construct looks rather like this:

@if (isset(\$characters))

@foreach(\$characters as \$key => \$value)

{{\$key}}

{{\$value}}

@endif

Otherwise, a Nice tutorial though.....



foysal • 3 years ago

I followed your tutorial. I used Laravel 5.3.10. You did not mention here the logout process. How user logout from the application. I faced the issue and made a post (http://stackoverflow.com/qu.... It is better if you help me. Thanks



Prosper → foysal • 3 years ago

Are you still having this issue? Replied on the stackoverflow thread



mahedy • 4 months ago

Great article thumbs up



Sam Watson • 5 months ago

Yeah you have share a great information about Laravel app creation and authentication I will try to implement this. on Laravel development keep posting....



Holly Lloyd → Sam Watson • 4 months ago

Hey Sam! We just published another Laravel authentication tutorial for the new 6.0 release. You can check that one out if you'd like something a little more up to date! https://auth0.com/blog/buil...



Maximiliano Chiale • 5 months ago

why the login method is different with https://auth0.com/docs/quic... this on the guide??



Holly Lloyd → Maximiliano Chiale • 4 months ago

Hey Maximiliano! This tutorial is actually just showing how to use Laravel's built-in authentication. If you'd like to use Auth0, we just published a new tutorial on how to integrate Auth0 with Laravel 6.0!

https://auth0.com/blog/buil...



Ravikumar Phad • 2 years ago • edited

Very Nice Tutorial Prosper....Thank you very Much.



Stop Medicaid Theft • 2 years ago • edited

In the "Setting Up The Controller" section of this article it says, "Open up your terminal and run the command below to create a ListController".

Type "php artisan make:controller ListController".

What directory should I be in when I type "php artisan make:controller ListController"?



**Prosper** → Stop Medicaid Theft • 2 years ago

**@Stop Medicaid Theft** The root directory



Nay Oo Kyaw • 2 years ago

Very Great topic in Laravel



Izabel • 2 years ago

Hi Prosper!The tutorial is great, appreaciate for your time!

I am new to Laravel and I faced the following problem:

I made the installation on web hosting and execute commands using ssh. Everything went fine until executing the following:

php artisan migrate

I made modifications to database.config file and .env file which are currently pointing to my sql server on a different server and it throws the following error:

'[Illuminate\Database\QueryException]
SQLSTATE[HY000] [2002] Connection refused (SQL: select \* from information\_s chema.tables where table schema = Carrot and table name = migrations)'

Do I need to make any modifications on that database? I read many articles, however I was unable to find the answer.

Can you please assist with that problem?



Gia Thiện • 2 years ago

Great!



Kunal • 2 years ago

I just followed your tutorial to create an application in laravel 5.4 using composer. I followed your steps until the migrations properly. But I am getting a notfoundexception error as i click on login page or the register page. Please provide an explanation for the same.



^ | ✓ • Reply • Share >



Kamil Zaworski • 3 years ago

Hi I have an error:

ErrorException in AliasLoader.php line 66: Class 'Auth0\Login\Facade\Auth0' not found

What could be the reason?



kylesean • 3 years ago

well,thanks for your tutorial.By the way,could you tell what's the tool used to paint that mvc picture?



adobot Mod → kylesean • 3 years ago

That image comes from SelfThoughtCoders. Might want to check out their site and see if they share that info:)



el\_charlie • 3 years ago

Hi,

I'm new in this Laravel thing but I can't follow the tutorial properly. I don't have the app/Http/routes.php file.

What can I do?



adobot Mod → el\_charlie • 3 years ago

Are you starting up your application with Composer? If so the routes.php file should be created automatically. Let me know if that works.



el\_charlie → adobot • 3 years ago

Either with composer or when using "laravel new rojectname>" I don't get
the routes.php. I do have a routes folder and some phps in there.



Prosper → el\_charlie • 3 years ago

What version of laravel are you using?

If you are using 5.3 or 5.4, then there is no routes.php file, rather it will give you a routes folder. Inside the routes directory, you'll see an api.php, console.php and web.php file...that's where your routes are defined.

Note: This tutorial was developed with Laravel 5.2



Eric Rosenberg → Prosper • 3 years ago

Can you share what to do in the "Setting Up The Routes" section on the newer versions? I opened all three of the new routes files but don't see a section for application routes.



Eric Rosenberg → Eric Rosenberg • 3 years ago

I figured this one out. I added it to the web.php file and everything is working.



Avatar This comment was deleted.



Binod Kumar → Guest • 2 years ago

never seen a easy tutorial of laravel like this god bless ya...



syam • 3 years ago

soryy.. can you help me?? i need this project, can i download this master file??



Kim Maida Mod → syam • 3 years ago

Yes, absolutely! The source code for this tutorial is available here: https://github.com/auth0/la... Cheers!



Sacchidanand Tiwari → Kim Maida • 3 years ago

But Sql file is not available.



adobot Mod A Sacchidanand Tiwari • 3 years ago

Hi There, you will find the database migration files here: https://github.com/auth0/la...

Thanks!



Adam Tesluk • 3 years ago • edited

I followed the tutorial. Do you know what causes this error? Undefined variable: line 15 in welcome.blade.php



Adharul M Adam Tesluk • 3 years ago

Perhaps you forgot to write in routes/web.php:

Route::get('/','ListController@show');



Daniel Soulz • 3 years ago

really thanks:) please write more, cant wait to read another great posts. Thanks again!

↑ \* • Kepiy • Snare >



Awadhesh Kumar • 3 years ago

Hi.

I followed this tutorial. I am using Laravel 5.3, I have facing a problem to connecting database, can u help me please



Jay Mayu → Awadhesh Kumar • 3 years ago

open the .env file and update your db connection details.



Francis Rodrigues • 3 years ago

There are a problem during login process. The user is redirected by /login/callback, but is true it could be redirected by "/auth0/callback".



Prosper → Francis Rodrigues • 3 years ago

Hi Francis, what exactly seems to be the challenge here? Could you please elaborate?



kelvin olive → Prosper • 3 years ago

Please can I reach you via email?

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