# Introdução ao Laravel

**Tomatcher: Gustavo Lemos** 

## A stack abordada:

Windows

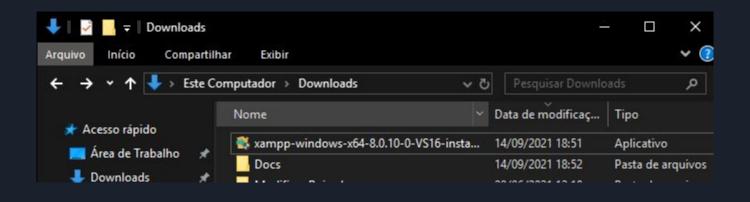
Postgresql

PHP8-(XAMPP+Composer)

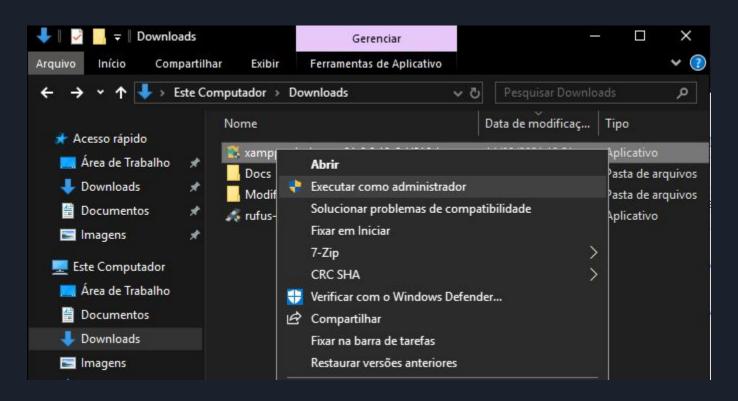
VSCode

Preparando o ambiente

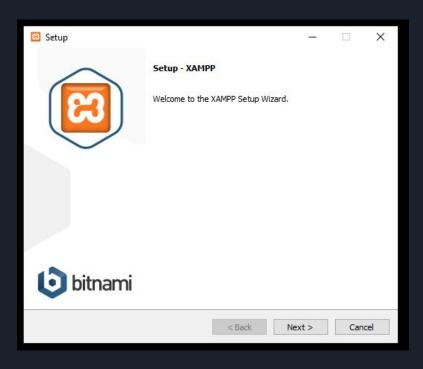
## XAMPP - Instalação



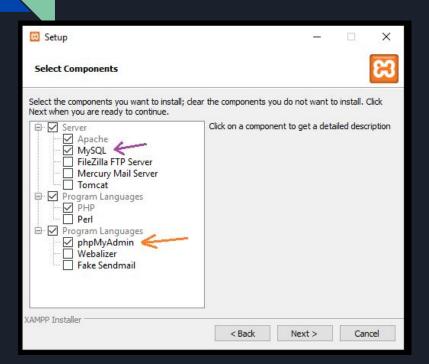
## XAMPP - Instalação

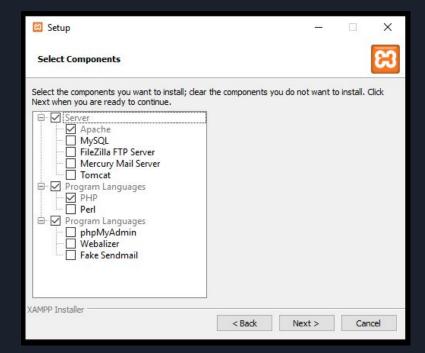


## XAMPP - Instalação

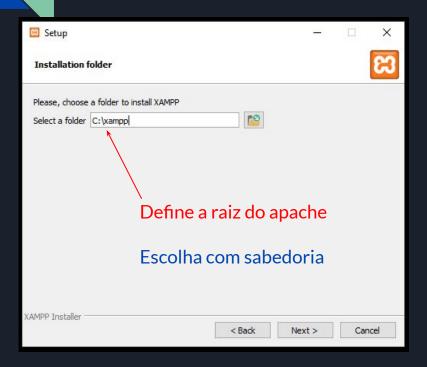


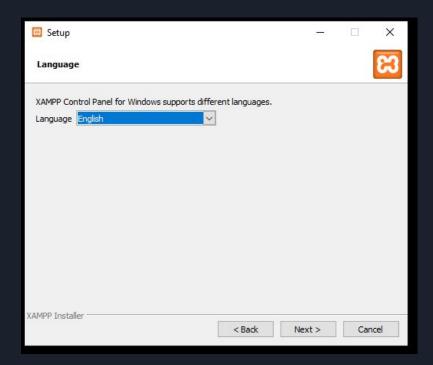
## XAMPP - Instalação (pt2)



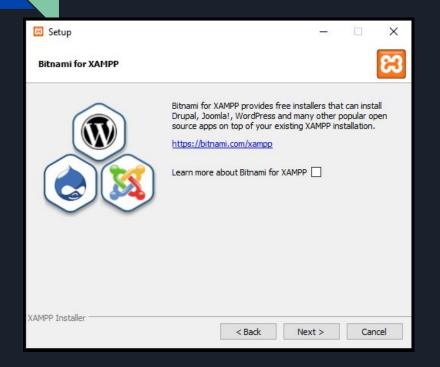


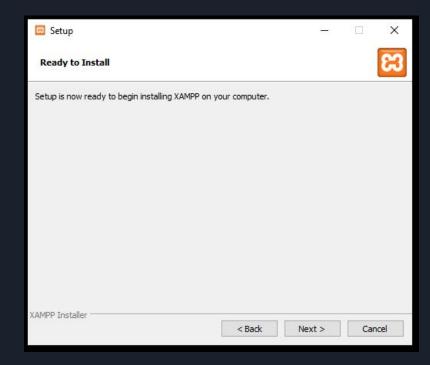
## XAMPP - Instalação (pt3)





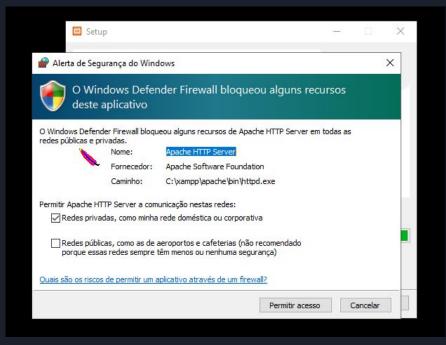
## XAMPP - Instalação (pt4)





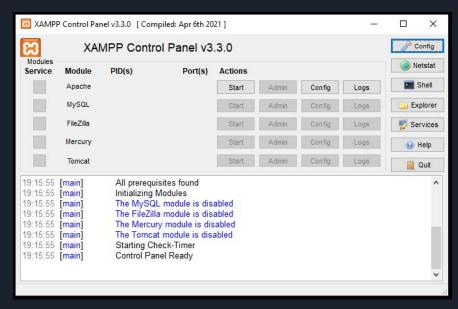
## XAMPP - Instalação (pt5)



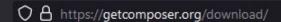


## XAMPP - Instalação ( finalmente!!! ) \0/\o/\O/





## Instalação do composer







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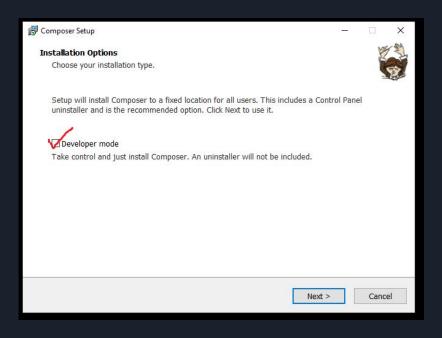
### Windows Installer

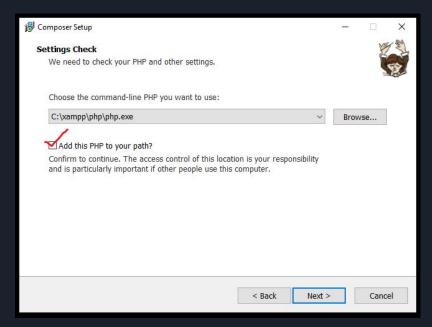
The installer - which requires that you have PHP already installed - will download Composer for you and set up your PATH environment variable so you can simply call composer from any directory.

Download and run Composer-Setup.exe - it will install the latest composer version whenever it is executed.

Command-line installation

## Instalação do composer





## O laravel exige os seguintes módulos:

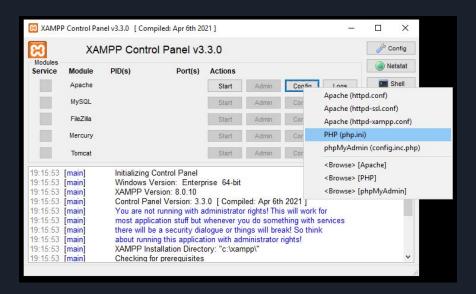
- BCMath PHP Extension
- -> funções matemáticas
- Ctype PHP Extension
- -> manipulação de caracteres
- Fileinfo PHP Extension
- JSON PHP Extension
- Mbstring PHP Extension
- OpenSSL PHP Extension
- PDO PHP Extension
- Tokenizer PHP Extension
- XML PHP Extension

- -> maniputalação de strings
- -> funções de criptografia
- -> conexão com o banco de dados
- -> interface para modificar o php

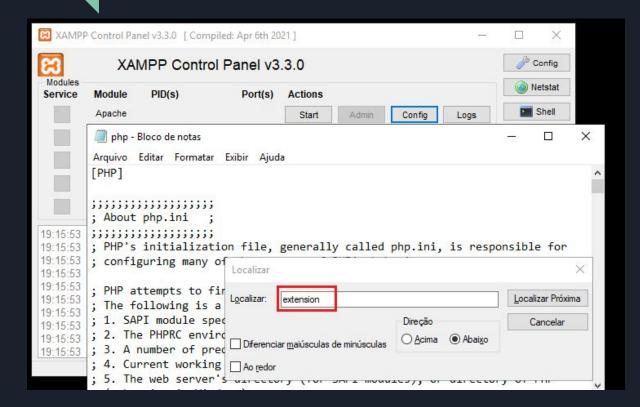
Obs: Muitas extensões já estão habilitadas no PHP 8 (os casos podem variar)

## Habilitando os módulos Arquivo de configuração do PHP ( php.ini )

Painel XAMPP -> Apache -> Botão "Cofig" -> Opção php.in



## Edição de módulos (php.ini)



Com o php.ini aberto, pressione Ctrl + f e busque por:

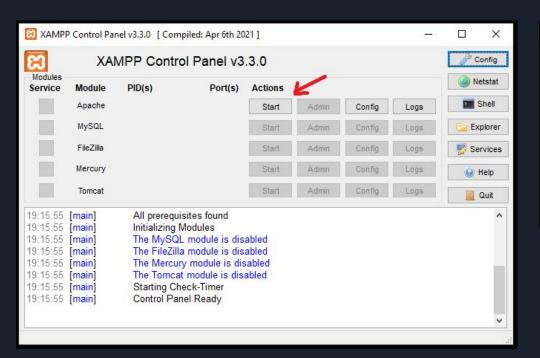
extension

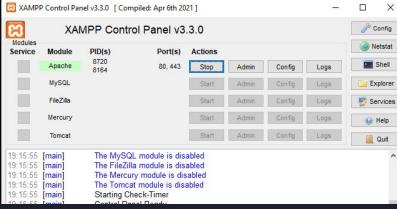
## Edição de módulos (php.ini)

<u> </u>					
php - Bloco de notas	_		-		×
Arquivo Editar Formatar Exit	oir Ajuda				
<pre>; extension folders a ; Be sure to appropri ; extension=bz2</pre>	located in the extensions/ as well as the separate PEC ately set the extension_di	L DLL download (Ph	HP 5+).	1	^
extension=curl :extension=ffi	Localizar		×		
:extension=ftp	Localizar: extension		Localizar Próxima	i	
extension=fileinfo	Eucaiza. Attension		<u>Localizar i Toxima</u>		
;extension=gd		Direção	Cancelar		
extension=gettext	Diferenciar maiúsculas de minúsculas				
;extension=gmp	Ao redor				
;extension=intl	□ Ab (edo)				
;extension=imap ;extension=ldap					
extension=mbstring					
	lust be after mbstring as i	t depends on it			
extension=mysqli	200				
	Use with Oracle Database 1				
	Use with Oracle Database 19	Instant Client			
;extension=odbc					
<pre>;extension=openssl ;extension=pdo firebird</pre>					
extension=pdo_Firebird					
:extension=pdo_mysqr					
;extension=pdo odbc					
;extension=pdo_pgsql					
extension=pdo_sqlite					
;extension=pgsql					
;extension=shmop					

php - Bloco de notas			
Arquivo Editar Formatar Exibir Ajuda			
; - Many DLL files are located in the extension; extension folders as well as the separate PI ; Be sure to appropriately set the extension_of ; extension=hz2	CL DLL download (PHP		,
extension=curl Localizar		×	
;extension=ffi ;extension=ftp		Localizar Próxima	
extension=fileinfo ;extension=gd	Direção	Cancelar	
extension=gettext Diferenciar <u>m</u> aiúsculas de minúsculas ;extension=gmp	S <u>A</u> cima  ● Abai <u>x</u> o		
;extension=intl □ Ao redor			
;extension=imap ;extension=ldap			
extension=mostring			
extension=exif ; Must be after mbstring as	it depends on it		
extension=mysqli			
;extension=oci8_12c ; Use with Oracle Database			
;extension=oci8_19 ; Use with Oracle Database :	9 Instant Client		
;extension=odbc			
;extension=openssl ;extension=pdo firebird			
extension=pdo mysql	omentar		
	escomentar		
;extension=pdo_odbc	oicional		
,extension-pao_pgsqi	Jicional		
extension=pdo_sqlite			
;extension=pgsql			
;extension=shmop			

## Start no Apache





## Instalação do composer







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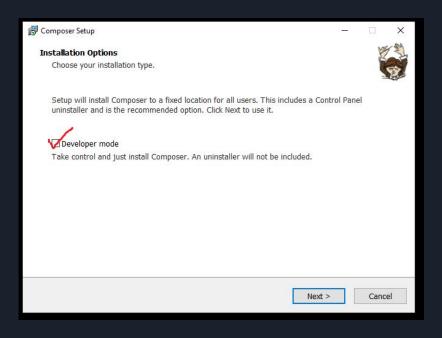
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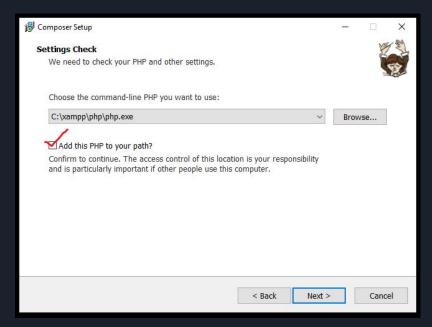
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Command-line installation

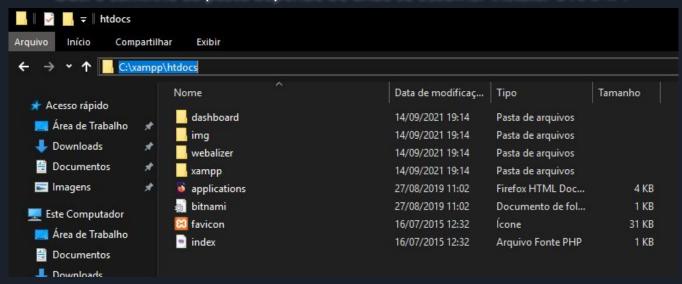
## Instalação do composer





## Pasta raiz dos projetos no servidor Apache

Todos os projetos do php devem ser armazenados nessa pasta Obs: o caminho da pasta depende de onde se escolher instalar o XAMPP



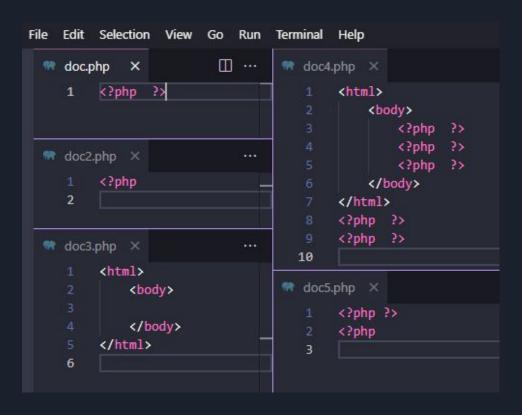
Dica: crie um atalho da raiz dos projetos para um local mais conveniente

### Criando o database

```
SQL Shell (psql)
postgres-# \l
fiscaliza db
                 postgres
                             UTF8
                                          Portuguese Brazil.1252
                                                                      Portuguese Brazil.1252
                                          Portuguese Brazil.1252
                                                                      Portuguese Brazil.1252
 postgres
                             UTF8
                 postgres
                                                                      Portuguese Brazil.1252
template0
                             UTF8
                                          Portuguese Brazil.1252
                                                                                                  =c/postgres
                 postgres
                                                                                                  postgres=CTc/postgres
template1
                 postgres
                             UTF8
                                          Portuguese Brazil.1252
                                                                      Portuguese Brazil.1252
                                                                                                  =c/postgres
                                                                                                  postgres=CTc/postgres
                             UTF8
                                          Portuguese Brazil.1252
                                                                      Portuguese Brazil.1252
teste db
                 postgres
                             UTF8
                                          Portuguese Brazil.1252
                                                                      Portuguese Brazil.1252
                 postgres
users
postgres=# create database pokemon;
CREATE DATABASE
postgres=# \1
fiscaliza db
               postgres
                         UTF8
                                   Portuguese Brazil.1252
                                                           Portuguese Brazil.1252
                                   Portuguese Brazil.1252
                                                           Portuguese Brazil.1252
pokemon
               postgres
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template1
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                                   Portuguese Brazil.1252
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                                                                                  =c/postgres
               postgres
                                                                                  postgres=CTc/postgres
teste db
               postgres
                         UTF8
                                   Portuguese Brazil.1252
                                                           Portuguese Brazil.1252
```

## Mini-tour no mundo do PHP

## Estrutura básica de um arquivo php



## As variáveis do php são gananciosas

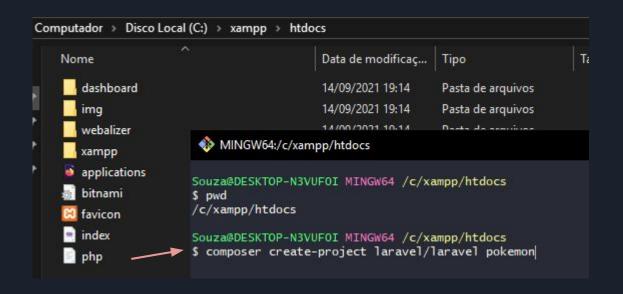
```
m doc.php X
       <?php
     $x = 'cachorro';
  4 $$x = 'gato'; // equivale a $cachorro = 'gato';
      $$$x = 'rato'; // equivale a $gato = 'rato'; ou $$cachorro = 'rato';
      echo $cachorro . "\n";
      echo $gato . ' \n ';
       echo $$cachorro . "\n";
                                 TERMINAL
 Souza@DESKTOP-N3VUF0I MINGW64 /c/xampp/htdocs
 $ php doc.php
 gato
 rato \n rato
```

## Constantes mágicas

```
__LINE__ -> retorna o número da linha que foi utilizada
__FILE _ -> caminho absoluto do arquivo que foi utilizada
__DIR_ -> caminho absoluto da pasta
__FUNCTION_ -> nome da função quando está dentro de uma
__CLASS__ -> nome da classe quando está dentro de uma
__TRAIT_ -> nome da trait quando está dentro de uma
__METHOD_ -> nome da métodoquando está dentro de um
NAMESPACE -> nome do namespace o qual se insere
```

## Instalando o Laravel

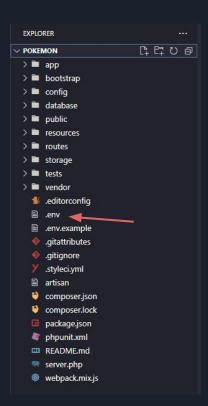
## Criação do projeto



## Abrindo o projeto

Souza@DESKTOP-N3VUFOI MINGW64 /c/xampp/htdocs
\$ cd pokemon/

Souza@DESKTOP-N3VUFOI MINGW64 /c/xampp/htdocs/pokemon
\$ codium .



# Configurando o DB no projeto

ANTES DEPOIS

```
■ .env
           ×
       APP NAME=Laravel
       APP ENV=local
       APP KEY=base64:pQXrbYkFt/C0rkPdcrMgXsb0/UbG4FSrEp5/WmgeFU8=
       APP DEBUG=true
       APP URL=http://localhost
       LOG CHANNEL=stack
       LOG LEVEL=debug
       DB CONNECTION=mysql
       DB HOST=127.0.0.1
       DB PORT=3306
       DB DATABASE=laravel
       DB USERNAME=root
       DB PASSWORD=
```

# Configurando o driver padrão de conexão com o DB

### **ANTES**

**EXPLORER** 

∨ POKEMON

> 🖿 app

> bootstrap

app.php auth.php

cache.php cors.php database.php

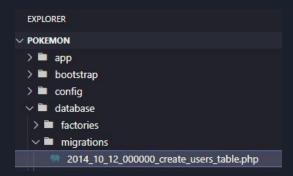
broadcasting.php

# database.php X use Illuminate\Support\Str; return [ 'default' => env('DB\_CONNECTION', 'mysql'), 18

### DEPOIS

```
m database.php X 🖹 .env
       use Illuminate\Support\Str;
       return
           'default' => env('DB_CONNECTION', 'pgsql'),
  18
```

## Verificando o script de Construção da tabela Users



### Obs:

Qualquer alteração, adição ou exclusão de colunas também deverá ser explicita em app/Models/Users.php

```
2014 10 12 000000 create users table.php X
       use Illuminate\Database\Migrations\Migration;
       use Illuminate \Database \Schema \Blueprint;
       use Illuminate\Support\Facades\Schema;
       class CreateUsersTable extends Migration
             @return void
           public function up()
               Schema::create('users', function (Blueprint $table) {
                   $table->id();
                   $table->string('name');
                   $table->string('email')->unique();
                   $table->timestamp('email_verified_at')->nullable();
                   $table->string('password');
                   $table->rememberToken();
                   $table->timestamps();
```

## Configurando Serviço de Autenticação (Passport)

# Acrescentando o Passport como dependência do projeto

Souza@DESKTOP-N3VUFØI MINGW64 /c/xampp/htdocs/pokemon
\$ composer require laravel/passport

## Gerando as chaves de Criptografia dos tokens

Souza@DESKTOP-N3VUFØI MINGW64 /c/xampp/htdocs/pokemon

\$ php artisan passport:install

Personal access client created successfully.

Client ID: 1

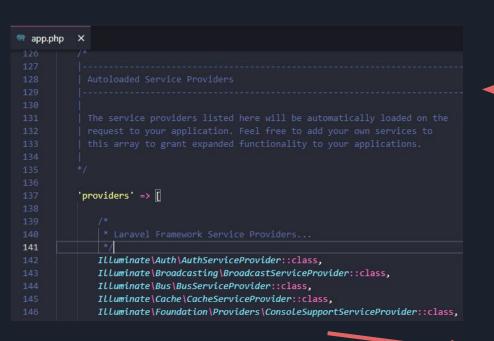
Client secret: JSPUamB16V4cotn2sllaBvXGay8x3C7GnvcZTg5G

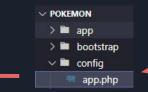
Password grant client created successfully.

Client ID: 2

Client secret: n4KHPw1twTbXYvLTMXqytsqeIhLiu814MtC67AXO

## Ajustar Passport como provedor de serviços





## Configurando o driver do Passport

```
EXPLORER

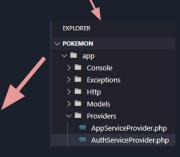
∨ POKEMON

                                                                                                                    > app
                                                                                                                    > bootstrap

✓ i config
                                                                                                                       m app.php
                                                                                                                       auth.php
                                                                                                        'guards' => [
                                                                                                            'web' => [
                                                                                                               'driver' => 'session',
                                                                                                               'provider' => 'users',
'guards' => [
    'web' => [
                                                                                                           'api' => [
       'driver' => 'session',
                                                                                                               'driver' => 'passport',
       'provider' => 'users',
                                                                                                               'provider' => 'users'
   ],
],
```

## Configurar provedor de serviço de autenticação

```
AuthServiceProvider.php X
     namespace App\Providers;
     use Illuminate\Foundation\Support\Providers\AuthServiceProvider as ServiceProvider:
     use Illuminate\Support\Facades\Gate;
     class AuthServiceProvider extends ServiceProvider
          * @var array
         protected $policies = [
          * @return void
         public function boot()
             $this->registerPolicies();
```



```
namespace App\Providers;
use Illuminate\Foundation\Support\Providers\AuthServiceProvider as ServiceProvider;
use Illuminate\Support\Facades\Gate:
use Laravel\Passport\Passport;
class AuthServiceProvider extends ServiceProvider
    * @var array
   protected $policies = [
        'App\Models\Model' => 'App\Policies\ModelPolicy',
    * @return void
    public function boot()
       $this->registerPolicies();
       Passport::Routes();
```

#### Configurar serviço de token na classe User

**EXPLORER** 

✓ POKEMON
✓ ■ app

> Console
> Exceptions

User.php

> Http

Models

```
User.php X
    <?php
    namespace App\Models;
    use Illuminate\Contracts\Auth\MustVerifyEmail;
    use Illuminate\Database\Eloquent\Factories\HasFactory;
    use Illuminate\Foundation\Auth\User as Authenticatable;
    use Illuminate\Notifications\Notifiable;
    use Laravel\Sacntum\WasApiTokens:
    class User extends Authenticatable
        use HasApiTokens, HasFactory, Notifiable;
```

```
User.php X

1 <?php
2
3 namespace App\Models;
4
5 use Illuminate\Contracts\Auth\MustVerifyEmail;
6 use Illuminate\Database\Eloquent\Factories\HasFactory;
7 use Illuminate\Foundation\Auth\User as Authenticatable;
8 use Illuminate\Notifications\Notifiable;
9 use Laravel\Passport\HasApiTokens;
10
11 class User extends Authenticatable
12 \{
13 use HasApiTokens, HasFactory, Notifiable;
```

#### Gerando o database

```
Souza@DESKTOP-N3VUF0I MINGW64 /c/xampp/htdocs/pokemon

$ php artisan migrate 
Migration table created successfully.

Migrating: 2014 10 12 000000 create users table

Migrated: 2014 10 12 100000 create users table (9.58ms)

Migrating: 2014 10 12 100000 create password resets table

Migrated: 2014 10 12 100000 create password resets table (5.56ms)

Migrating: 2016 06 01 000001 create oauth auth codes table

Migrated: 2016 06 01 000001 create oauth auth codes table (7.15ms)

Migrating: 2016 06 01 000002 create oauth access tokens table

Migrated: 2016 06 01 000002 create oauth access tokens table (7.32ms)

Migrating: 2016 06 01 000003 create oauth refresh tokens table

Migrated: 2016 06 01 000003 create oauth refresh tokens table

Migrating: 2016 06 01 000003 create oauth clients table
```

# Implementando autenticação e autorização

### Criar métodos de autenticação

```
Souza@DESKTOP-N3VUF0I MINGW64 /c/xampp/htdocs/pokemon
                             $ php artisan make:controller API/SignController
                             Controller created successfully.
                                                     SignController.php X
                                                          <?php
 EXPLORER
∨ POKEMON
                                                          namespace App\Http\Controllers\API;
 v 🖹 app
   > Console
                                                          use App\Http\Controllers\Controller;
   > Exceptions
                                                          use Illuminate\Http\Request;

✓ 

Http

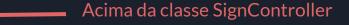
                                                          class SignController extends Controller

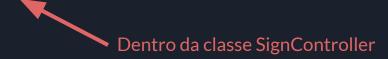
∨ ■ Controllers

    V P API
                                                                               Inserir métodos aqui
           SignController.php
                                                    12
```

#### Método de cadastro (signUp)

```
use App\Models\User;
use Illuminate\Support\Facades\Hash;
```





### Método de login (signIn)

use Auth;





### Método de logout (signOut)

```
public function signOut( Request $request ){
    $exito = $request->user()->token()->delete();
    if( !$exito ) return response()->json( [ 'mensagem' => 'Erro, falha na autenticação' ] );
    return response()->json( [ 'mensagem' => 'Deslogado com sucesso' ] );
}
```

Dentro da classe SignController

### Configurando as rotas da api

```
😭 api.php 💢
  EXPLORER
                            <?php
∨ POKEMON
                            use Illuminate\Http\Request;
 > 🖿 app
                            use Illuminate\Support\Facades\Route;
 > bootstrap
  confia
  database
 > iii public
  > resources

✓ ■ routes

        api.php
                            Route::middleware(('auth:sanctum'))->get('/user', function (Request $request) {
                                return $request->user();
```

```
api.php X
     namespace App\Http\Controllers\API;
     use Illuminate\Http\Reauest:
     use Illuminate\Support\Facades\Route;
     Route::post( 'cadastro', [ SignController::class, 'signUp' ] );
     Route::post( 'login', [ SignController::class, 'signIn' ] );
22 ~ Route::middleware('auth:api')->group( function () {
         Route::post( 'logout', [ SignController::class, 'signOut' ] );
```

### CRUD

#### Crud de uma classe chamada Pokemon

#### Atributos:

- Nome;
- Tipo;
- Peso;

Um usuário pode ter vários pokemon e um pokemom pertence a um usuário

#### Criando os arquivos para realizar o CRUD de Pokemons

Souza@DESKTOP-N3VUF0I MINGW64 /c/xampp/htdocs/pokemon
\$ php artisan make:model Pokemon -mc
Model created successfully.
Created Migration: 2021\_09\_19\_225901\_create\_pokemon\_table
Controller created successfully.

#### Obs:

php artisan make:model < nome-da-model > ( cria a classe model ) os parâmetros -mc criam, respectivamente:

- a migration (script de criação da tabela)
- o controller



### Editando a migration da classe Pokemon

```
2021_09_19_225901_create_pokemon_table.php X
    <?php
    use Illuminate \Database \Migrations \Migration;
    use Illuminate\Database\Schema\Blueprint;
    use Illuminate\Support\Facades\Schema;
    class CreatePokemonTable extends Migration
          * @return void
        public function up()
            Schema::create('pokemon', function (Blueprint $table) {
                 $table->id();
                 $table->timestamps();
            });
```

```
> ■ app
> ■ bootstrap
> ■ config

> ■ database
> ■ factories

■ migrations

② 2014_10_12_100000_create_users_table.php
③ 2014_10_12_100000_create_password_resets_table.php
② 2019_08_19_000000_create_password_resets_table.php
② 2019_12_14_000001_create_personal_access_tokens_table_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_passed_
```

#### Editando a model da classe Pokemon

```
POKEMON

app

Console

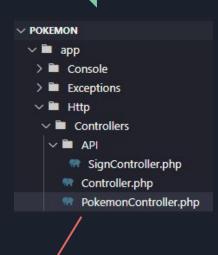
Exceptions

Http

Models

Pokemon.php
```

### Editando o controller da classe Pokemon



Movendo o arquivo PokemonController.php para app/Http/Controllers/API

```
∨ POKEMON
                                             PokemonController.php X
 ∨ ■ app
                                                     <?php
  > Console
                                                    namespace App\Http\Controllers;
  > Exceptions

✓ 

Http

                                                    use Illuminate\Http\Request;

∨ ■ Controllers

     V E API
                                                    class PokemonController extends Controller
          PokemonController.php
        SignController.php
       Controller.php
                                                                       PokemonController.php X
                                                                                <?php
                                                                                namespace App\Http\Controllers\API;
      VSCodium
                                                                                use App\Http\Controllers\Controller;
           Are you sure you want to move 'PokemonController.php' into 'API'?
                                                                                use Illuminate\Http\Request;
                                     Move
                                              Cancel
       Do not ask me again
                                                                                class PokemonController extends Controller
```

Add funções CRUD

dentro do escopo

10

### Editando o controller da classe Pokemon ( create )

```
Acima da classe PokemonController
use App\Models\Pokemon;
use Auth;
public function create( Request $request ){
    $user = Auth::user();
    Pokemon::create( [
        'nome' => $request->nome,
        'tipo' => $request->tipo,
        'peso' => $request->peso,
        'user id' => $user->id
    ]);
    return response()->json( [ 'mensagem' => 'pokemon cadastrado com sucesso' ] );
```

### Editando o controller da classe Pokemon ( retrieve )

### Editando o controller da classe Pokemon ( update )

```
public function update( Request $request ){
   $user = Auth::user();
   $resultado = Pokemon::where( 'user_id', $user->id )
                            ->update([
                                'nome' => $request->nome,
                                'tipo' => $request->tipo,
                                'peso' => $request->peso
                           ]);
   if( $resultado )
       return response()->json( [ 'mensagem' => 'Alterado com sucesso' ] );
   else
       return response()->json( [ 'mensagem' => 'Erro' ] );
```

### Editando o controller da classe Pokemon ( delete )

### Criando rotas para os novos controllers

```
EXPLORER
∨ POKEMON
                                    namespace App\Http\Controllers\API:
 > 🛅 app
  > bootstrap
                                    use Illuminate\Http\Reauest:
                                    use Illuminate\Support\Facades\Route;
  confia
  > adatabase
  > iii public
  > resources

∨ i routes

         api.php
                                    Route::post( 'cadastro', [ SignController::class, 'signUp' ] );
                                    Route::post( 'login', [ SignController::class, 'signIn' ] );
                               22 ~ Route::middleware('auth:api')->group( function () {
                                        Route::post( 'logout', [ SignController::class, 'signOut' ] );
```

B);

```
<?php
namespace App\Http\Controllers\API;
use Illuminate\Http\Request;
use Illuminate\Support\Facades\Route;
Route::post( 'cadastro', [ SignController::class, 'signUp' ] );
Route::post( 'login', [ SignController::class, 'signIn' ] );
Route::middleware('auth:api')->group(function() {
    Route::post( 'logout', [ SignController::class, 'signOut' ] );
   Route::post( 'novo', [ PokemonController::class, 'create' ] );
   Route::post( 'lista', [ PokemonController::class, 'retrieve' ] );
   Route::post( 'alteracao', [ PokemonController::class, 'update' ] );
   Route::post( 'exclusao', [ PokemonController::class, 'delete' ] );
});
```

#### Reconstruindo o banco de dados & executando a aplicação

```
Souza@DESKTOP-N3VUF0I MINGW64 /c/xampp/htdocs/pokemon

$ php artisan migrate

Migrating: 2021_09_19_225901_create_pokemon_table

Migrated: 2021_09_19_225901_create_pokemon_table (26.99ms)
```

```
Souza@DESKTOP-N3VUFØI MINGW64 /c/xampp/htdocs/pokemon
$ php artisan serve
Starting Laravel development server: http://127.0.0.1:8000
```

#### O que não foi abordado

- Criação de uuids;
- Validação dos requests;
- Front-end;
- Schedules para a limpeza da tabela de tokens;
- Formas de logout;
- DatabaseSeeders & DataFactory;
- Detalhes sobre o Eloquent;
- Detalhes sobre o QueryBuilder;

Visto que existe diversos tipos de pokemon, definí-los como enum não é uma boa ideia, o ideal é criar uma tabela de tipos, porém como o objetivo é apenas ilustrar uma introdução optou-se pelo enum

