# Step for Laravel - User Roles and Permissions Management

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- Step 1: Laravel 12 Installation
- Step 2: Add UserController and routing
- Step 3: Create Product Migration
- Step 4: Create Models
- Step 5: Create RoleController and routing
- Step 6: Create Authentication
- Step 7: Add Package Middleware
- Step 8: Add Controllers
- Step 9: Add Blade Files
- Step 10: Create Seeder For Permissions and AdminUser

#### 1. Laravel 12 Installation

a. [Creating an Application]

laravel new Laravel User Roles Permissions mgm

# b. [Migrate database]

```
> P vendor
                                        23 DB_CONNECTION=mysql
 & .editorconfig
                                        24 DB HOST=127.0.0.1
 뷰 .env 🚤
                                        25 DB PORT=3306
 뷰 .env.example
                                        26
                                             DB_DATABASE=laravel_user_roles_permissions_mgm
 gitattributes
                                        27
                                             DB_USERNAME=root
 .gitignore
                                             DB_PASSWORD=123456
                                        28
 👺 artisan
```

# Before run php artisan migrate go to set AppServiceProvider.php

```
app > Providers > @ AppServiceProvider.php > ધ AppServiceProvider

√ Image: app

mathematical app

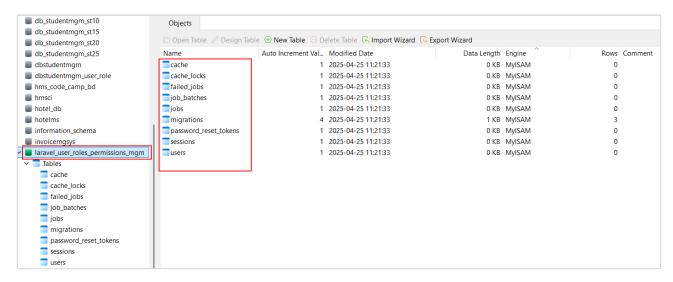
mathematica
         > III Http
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        */
                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
           > I Models
                                                                                                                                                                                                                                                                                                                                                                                                                                                         21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             public function boot(): void

✓ Froviders

                                                                                                                                                                                                                                                                                                                                                                                                                                                         22
                                              AppServiceProvider.php
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schema::defaultStringLength(250);
                                                                                                                                                                                                                                                                                                                                                                                                                                                         23
    ∨ ា bootstrap
                                                                                                                                                                                                                                                                                                                                                                                                                                                         24
            > cache
                                                                                                                                                                                                                                                                                                                                                                                                                                                         25
                              app.php
```

#### Then php artisan migrate

### Check your database



c. Install and configure basic frontend scaffolding provided by the *laravel/ui* package Link: https://github.com/laravel/ui

```
composer require laravel/ui
```

```
user@MSI MINGW64 /d/wamp64/www/dev/laravel12/Laravel_User_Roles_Permissions_mgm $ composer require laravel/ui ./composer.json has been updated Running composer update laravel/ui Loading composer repositories with package information Updating dependencies Lock file operations: 1 install, 0 updates, 0 removals - Locking laravel/ui (v4.6.1)
```

d. [Generate login / registration]

php artisan ui bootstrap -auth (choose this For Bootstrap:)

php artisan ui vue --auth

php artisan ui react –auth

```
user@MSI MINGW64 /d/wamp64/www/dev/laravel12/Laravel_User_Roles_Permissions_mgm
$ php artisan ui bootstrap --auth
The [Controller.php] file already exists. Do you want to replace it? (yes/no) [yes]
yes
INFO Authentication scaffolding generated successfully.
INFO Bootstrap scaffolding installed successfully.
WARN Please run [npm install && npm run dev] to compile your fresh scaffolding.
```

Before compiling your CSS, install your project's frontend dependencies using the

Node package manager (NPM):

### npm install

```
user@MSI MINGW64 /d/wamp64/www/dev/laravel12/Laravel_User_Roles_Permissions_mgm

$ npm install

added 172 packages, and audited 173 packages in 37s
```

And then running: npm run build

# php artisan serv



#### Remove

```
<!-- Fonts -->

√ Image: V resources

                          10
                                       <link rel="preconnect" href="https://fonts.bunny.net">
> E css
                          11
                                       <link href="https://fonts.bunny.net/css?family=instrument-sans:400,500,600" rel="stylesheet" />
> 🚾 js
                          12

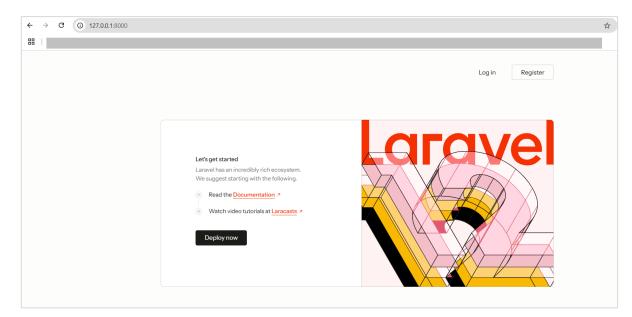
✓ Io views

                          13
                                       @if (file_exists(public_path('build/manifest.json')) || file_exists(public_path('hot')))
> 🖭 auth
                          14
✓ 📻 layouts
                          15
                                           @vite(['resources/css/app.css', 'resources/js/app.js'])
                          16
   light home.blade.php
                          17
                                           <style>
👺 welcome.blade.php
                                               /*! tailwindcss v4.0.7 | MIT License | https://tailwindcss.com */@layer theme{:root,:host{--
                          18
> 🔯 routes
                          19
                                            </style>
> m storage
                          20
> 🛅 tests
```

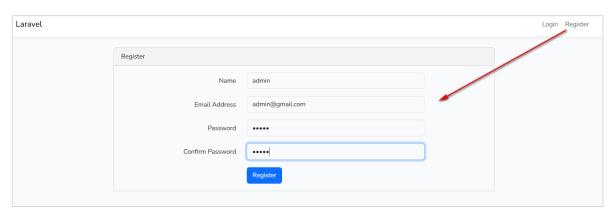
#### After

```
<link rel="preconnect" href="https://fonts.bunny.net">
                         10
> E css
                                      <link href="https://fonts.bunny.net/css?family=instrument-sans:400,500,600" rel="stylesheet" />
> 📑 is
                        11
> 🔯 sass
                        12
∨ 📭 views
                        13
                                      <!-- Styles / Scripts -->
                        14
∨ 📻 layouts
                        15
  🧽 app.blade.php
                        16
                                              /*! tailwindcss v4.0.7 | MIT License | https://tailwindcss.com */@layer theme{:root,:host{--
  home.blade.php
                        17
                                          </style>
 welcome.blade.php
                        18
routes
                        19
                                  </head>
> 🖿 storage
```

#### Check browser



# Click on the register



# After registered



# 2. Add UserController

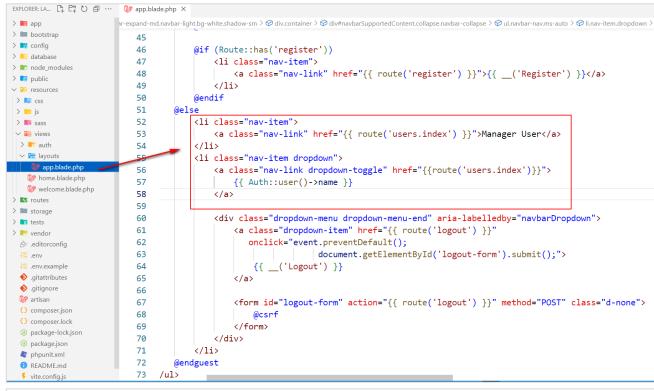
php artisan make:controller UserController –resource

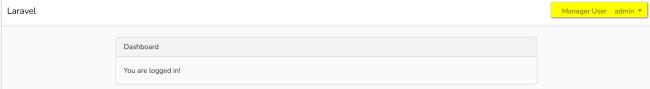
user@MSI MINGW64 /d/wamp64/www/dev/laravel12/Laravel\_User\_Roles\_Permissions\_mgm
\$ php artisan make:controller UserController --resource\_
INFO Controller [D:\wamp64\www\dev\laravel12\Laravel\_User\_Roles\_Permissions\_mgm\app\Http\Controllers\UserController.php] created successfully.

# Creating a route user

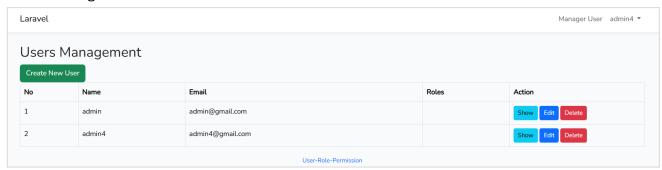
Route::resource('users', UserController::class);

# Custom app.blade.php





# Users Management



## 3. Create Product Migration

#### php artisan make:migration create products table

```
ser@MSI MINGW64 /d/wamp64/www/dev/laravel12/Larave
php artisan make:migration create_products_table
                                                                  _User_Roles_Permissions_mgm
   INFO Migration [D:\wamp64\www\dev\laravel12\Laravel_User_Roles_Permissions_mgm\database\migrations/20
25_04_26_101746_create_products_table.php] created successfully.
                                                  TT
> factories
                                                  12
                                                             public function up(): void

✓ Image of migrations

                                                  13
  0001_01_01_000000_create_users_table.php
                                                  14
                                                                  Schema::create('products', function (Blueprint $table) {
  0001_01_01_000001_create_cache_table.php
                                                  15
                                                                      $table->id();
   0001_01_01_000002_create_jobs_table.php
                                                  16
                                                                      $table->string("name");
  2025_04_26_101746_create_products_table.php _
                                                   17
                                                                       $table->timestamps();
> m seeders
                                                  18
                                                                 });
  .gitignore
                                                  19
  database.sqlite
```

#### php artisan migrate

#### php artisan make:model Product

```
user@MSI MINGW64 /d/wamp64/www/dev/laravel12/Laravel_User_Roles_Permissions_mgm

$ php artisan make:model Product

INFO Model [D:\wamp64\www\dev\laravel12\Laravel_User_Roles_Permissions_mgm\app\Models\Product.php]
eated successfully.
```

# php artisan make:controller ProductController -r

```
user@MSI MINGW64 /d/wamp64/www/dev/laravel12/Laravel_User_Roles_Permissions_mgm

$ php artisan make:controller ProductController -r

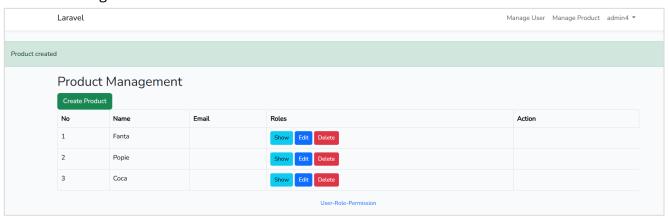
INFO | Controller [D:\wamp64\www\dev\laravel12\Laravel_User_Roles_Permissions_mgm\app\Http\Controllers\
ProductController.php] created successfully.
```

#### Check route product

```
php artisan route:list --name='products'

GET|HEAD products products products.store productController@index products/{products} products.create products.show productController@show put|PATCH products/{product} products products/{product} products.update productcontroller@update products/{product} products.destroy products.destr
```

# **Product Management**

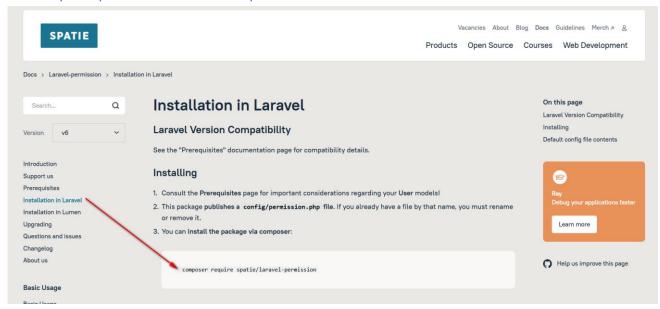


#### 4. Create Models

Manage user permissions and roles in a database.

Spatie roles and permissions

link: https://spatie.be/docs/laravel-permission/v6/introduction



# composer require spatie/laravel-permission

php artisan vendor:publish --provider="Spatie\Permission\PermissionServiceProvider"

```
user@MSI MINGW64 /d/wamp64/www/dev/laravel12/Laravel_User_Roles_Permissions_mgm
$ php artisan vendor:publish --provider="Spatie\Permission\PermissionServiceProvider"

INFO Publishing assets.

Copying file [D:\wamp64\www\dev\laravel12\Laravel_User_Roles_Permissions_mgm\vendor\spatie\laravel-permission\config\permission.php] to [D:\wamp64\www\dev\laravel12\Laravel_User_Roles_Permissions_mgm\config\permission.php]

Copying file [D:\wamp64\www\dev\laravel12\Laravel_User_Roles_Permissions_mgm\vendor\spatie\laravel-permission\database\migrations\create_permission_tables.php.stub] to [D:\wamp64\www\dev\laravel12\Laravel_User_Roles_Permission_tables.php]

DONE

Roles_Permissions_mgm\database\migrations\2025_04_26_112941_create_permission_tables.php]

DONE
```

#### You should publish the migration and the **config/permission.php** config file with:

```
√ Image configure

✓ Image 
    app.php
                                                                                                                            3
                                                                                                                                       return [
      auth.php
                                                                                                                            4
      cache.php
                                                                                                                            5
                                                                                                                                                    'models' => [
      atabase.php
                                                                                                                           6
      filesystems.php
      logging.php
                                                                                                                            8
                                                                                                                                                               * When using the "HasPermissions" trait from this package, we need to know which
       mail.php
                                                                                                                                                               * Eloquent model should be used to retrieve your permissions. Of course, it
                                                                                                                           9
                                                                                                                                                               * is often just the "Permission" model but you may use whatever you like.
                                                                                                                         10
       queue.php
      services.php
                                                                                                                         11
     session.php
                                                                                                                         12
                                                                                                                                                               * The model you want to use as a Permission model needs to implement the
                                                                                                                                                                * `Spatie\Permission\Contracts\Permission` contract.
> 📴 database
                                                                                                                         13
> node_modules
> m public
                                                                                                                         15
> 📻 resources
                                                                                                                                                               'permission' => Spatie\Permission\Models\Permission::class.
                                                                                                                        16
> K routes
                                                                                                                        17
> m storage
                                                                                                                         18
> 📺 tests
                                                                                                                                                               * When using the "HasRoles" trait from this package, we need to know which
                                                                                                                        19
> 📭 vendor
                                                                                                                                                               * Eloquent model should be used to retrieve your roles. Of course, it
                                                                                                                         20
   & .editorconfig
                                                                                                                         21
                                                                                                                                                               * is often just the "Role" model but you may use whatever you like.
    뷰 .env
                                                                                                                         22
     # .env.example
                                                                                                                         23
                                                                                                                                                               * The model you want to use as a Role model needs to implement the
    .gitattributes
                                                                                                                                                                * `Spatie\Permission\Contracts\Role` contract.

    aitianore

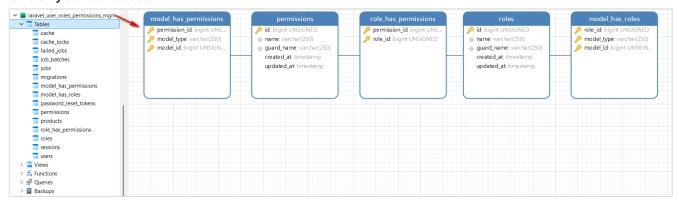
                                                                                                                        24
    👺 artisan
                                                                                                                         25
    () composer.ison
                                                                                                                         26
    () composer.lock
                                                                                                                        27
                                                                                                                                                               'role' => Spatie\Permission\Models\Role::class,
    package-lock.json
                                                                                                                         28
    package.ison
                                                                                                                         29
   phpunit.xml
```

# Migrations -> 2025\_04\_26\_112941\_create\_permission\_tables.php

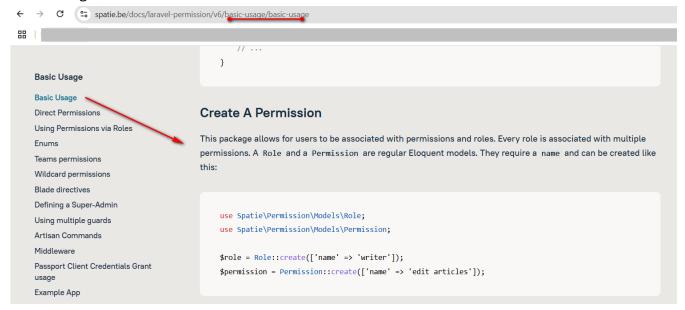
```
database > migrations > @ 2025_04_26_112941_create_permission_tables.php > .
  auth.php
                                               10
                                                          st Run the migrations.
  cache.php
                                               11
  atabase.php
  filesystems.php
                                               12
                                                         public function up(): void
  logging.php
                                               13
  amail.php
                                               14
                                                             $teams = config('permission.teams');
  permission.php
                                               15
                                                             $tableNames = config('permission.table_names');
  a queue.php
                                               16
                                                             $columnNames = config('permission.column_names');
  services.php
                                                             $pivotRole = $columnNames['role_pivot_key'] ?? 'role_id';
                                               17
  session.php
                                                             $pivotPermission = $columnNames['permission_pivot_key'] ?? 'permission_id';
                                               18
 database
                                               19
> a factories
                                               20
                                                             if (empty($tableNames)) {
                                                                 throw new \Exception('Error: config/permission.php not loaded. Run [php artisan
                                               21
   0001_01_01_000000_create_users_table.php
   0001_01_01_000001_create_cache_table.php
                                               22
   0001_01_01_000002_create_jobs_table.php
                                               23
                                                             if ($teams && empty($columnNames['team_foreign_key'] ?? null)) {
   2025_04_26_101746_create_products_table.php
                                                                  throw new \Exception('Error: team_foreign_key on config/permission.php not loade
     2025 04 26 112941 create permission tables.php
                                               25
                                                             }
 > m seeders
                                               26
  .gitignore
                                               27
                                                             Schema::create($tableNames['permissions'], static function (Blueprint $table) {
   database.sglite
                                               28
                                                                  // $table->engine('InnoDB');
> node modules
                                               29
                                                                  $table->bigIncrements('id'); // permission id
> m public
                                                                  $table->string('name');
                                                                                                  // For MyISAM use string('name', 225); // (or 166
                                               30
> resources
                                                                  $table->string('guard_name'); // For MyISAM use string('guard_name', 25);
                                               31
> Is routes
                                                                  $table->timestamps();
                                               32
> storage
                                               33
> m tests
                                                                 $table->unique(['name', 'guard_name']);
> P vendor
                                               34
 & .editorconfig
                                               35
                                                             });
 뷰 .env
                                               36
 ## .env.example
                                               37
                                                             Schema::create($tableNames['roles'], static function (Blueprint $table) use ($teams,
 .gitattributes
```

#### Migrate *permission* table

### Check your database



#### **Basic Usage**



### Create permissionSeeder

#### php artisan make:seeder PermissionSeeder

```
user@MSI MINGW64 /d/wamp64/www/dev/laravel12/Laravel_User_Roles_Permissions_mgm

$ php artisan make:seeder PermissionSeeder

INFO Seeder [D:\wamp64\www\dev\laravel12\Laravel_User_Roles_Permissions_mgm\database\seeders\PermissionSeeder.php] created successfully.
```

#### use Spatie\Permission\Models\Permission;

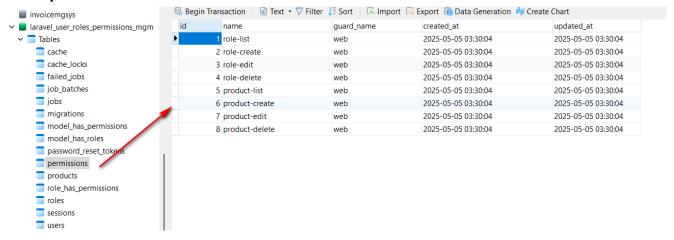
click link: https://spatie.be/docs/laravel-permission/v6/basic-usage/basic-usage

```
database
 > m factories
                             14
                                       public function run(): void
 > migrations
                             15
                             16
                                           $permissions = [
 17
                                                "role-list",
   DatabaseSeeder.php
                                                "role-create"
                              18
 PermissionSeeder.php
                                                "role-edit",
   .gitignore
                                                "role-delete",
                             20
   database.sqlite
                             21
> node_modules
                                                "product-list",
                             22
> 🧰 public
                             23
                                                "product-create",
> resources
                                                "product-edit",
                             24
> 🔯 routes
                             25
                                                "product-delete"
> storage
                             26
                                           ];
> 🛐 tests
                             27
> 📭 vendor
                                           foreach($permissions as $key => $permission){
                             28
  & .editorconfig
                             29
                                                $permission = Permission::create(['name' => $permission]);
  tt .env
                             30
  밖 .env.example
                             31
  .gitattributes
                             32
```

## Cmd: php artisan db:seed PermissionSeeder

```
user@MSI MINGW64 /d/wamp64/www/dev/laravel12/Laravel_User_Roles_Permissions_mgm
$ php artisan db:seed PermissionSeeder
INFO Seeding database.
```

#### Check **permissions** table



# 5. Create RoleController and routing

Cmd: php artisan make:controller RoleController -r

```
user@MSI MINGW64 /d/wamp64/www/dev/laravel12/Laravel_User_Roles_Permissions_mgm
$ php artisan make:controller RoleController -r
INFO Controller [D:\wamp64\www\dev\laravel12\Laravel_User_Roles_Permissions_mgm\app\Http\Controllers\RoleController.php] created successfully.
```

#### Create a route role

Route::resource('roles', RoleController::class);

```
Route::get('/home', [App\Http\Controllers\HomeController::class, 'index'])->name('home');

console.php

web.php

Route::resource('users', UserController::class);

Route::resource('products', ProductController::class);

Route::resource('roles', RoleController::class);

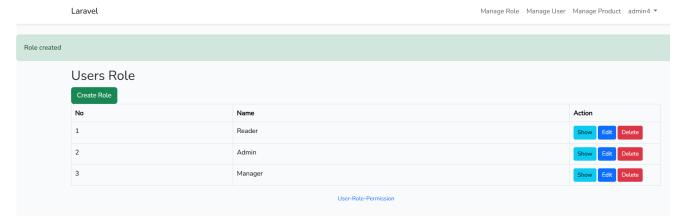
resource('roles', RoleController::class);
```

#### Check the route list

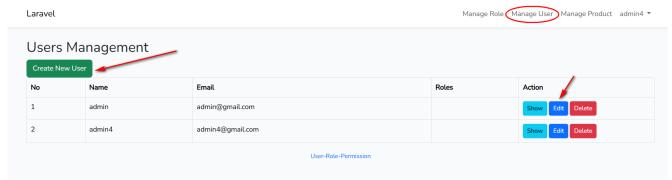
```
php
class RoleController extends Controller
    public function index()
       $roles = Role::all();
        return view('roles.index',compact('roles'));
    public function create()
        $permissions = Permission::all();
        return view('roles.create', compact('permissions'));
    public function store(Request $request)
        //dd($request->all());
        $request->validate([
            'name' => 'required'
       $role = Role::create(['name' => $request->name]);
        $role->syncPermissions([$request->permissions]);
       return redirect()->route('roles.index')->with('success', 'Role created');
    }
    public function show(string $id)
        $role = Role::find($id);
        return view('roles.show',compact('role'));
    public function edit(string $id)
        $permissions = Permission::all();
        $role = Role::find($id);
        return view('roles.edit',compact('role','permissions'));
    public function update(Request $request, string $id)
        $request->validate([
            'name' => 'required'
        $role = Role::find($id);
       $role->name = $request->name;
        $role->save();
        $role->syncPermissions([$request->permissions]);
        return redirect()->route('roles.index')->with('success', 'Role updated');
    public function destroy(string $id)
        $role = Role::find($id);
        $role->delete();
        return redirect()->route('roles.index')->with('success', 'Role deleted');
```

# 6. Create Authentication

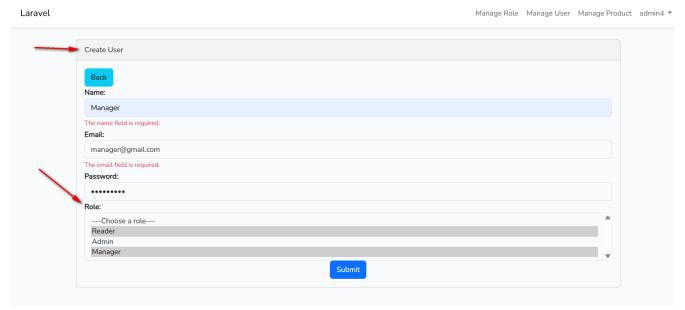
Let's check your URL



# Custom User page



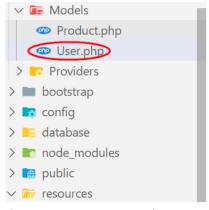
# Assign role to user



# Fix err

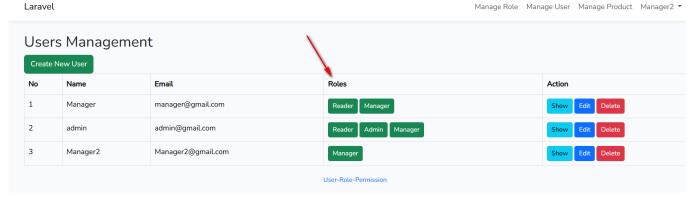


#### Add HasRoles to User model

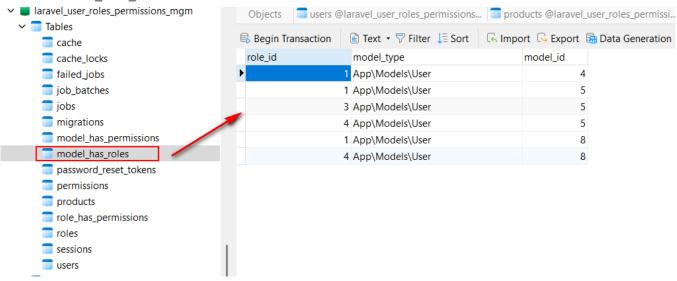


```
3
     namespace App\Models;
 4
 5
     // use Illuminate\Contracts\Auth\MustVerifyEmail;
 6
     use Illuminate\Database\Eloquent\Factories\HasFactory;
 7
     use Illuminate\Foundation\Auth\User as Authenticatable;
 8
     use Illuminate\Notifications\Notifiable;
     use Spatie\Permission\Traits\HasRoles;
9
10
     class User extends Authenticatable
11
12
     {
         use HasFactory, Notifiable, HasRoles;
13
```

#### Go to create user again



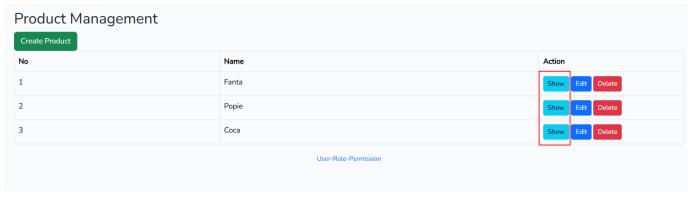
#### Check model\_has\_roles table



# Login to different user levels



# Blade directives with product



# @can('product-create')

//

#### @endcan

```
@extends('layouts.app')
@section('content')
   <div class="container">
      <div class="row justify-content-center">
          <div class="col-lg-12 margin-tb">
             <div class="pull-left">
                 <h2>Product Management</h2>
              </div>
              <div class="pull-right">
                 @can('product-create')
                    <a class="btn btn-success" href="{{ route('products.create') }}"> Create Product</a>
                 @endcan
              </div>
          </div>
       </div>
       No
          Name
          Action
       @foreach ($products as $key => $product)
       {{ ++$key }}
          {{ $product->name }}
          <form action="{{ route('products.destroy',$product->id) }}" method="POST">
                 @method('delete')
                     <a class="btn btn-info btn-sm" href="{{ route('products.show',$product->id) }}">Show</a>
                 @endcan
                  @can('product-edit')
                    <a class="btn btn-primary btn-sm" href="{{ route('products.edit',$product->id) }}">Edit</a>
                     <button class="btn btn-danger btn-sm" onclick="return confirm('Are you sure to delete it?')" href="{{</pre>
 route('products.destroy',$product->id) }}">Delete</button>
                 @endcan
              </form>
          @endforeach
      {{-- {!! $data->render() !!} --}}
       <small>User-Role-Permission</small>
   </div>
@endsection
```

After assigned a role to access the product action



# 7. Add Package Middleware

In Laravel 12 open /bootstrap/app.php and register them there:

```
$middleware->alias([
```

'role' => \Spatie\Permission\Middleware\RoleMiddleware::class,

'permission' => \Spatie\Permission\Middleware\PermissionMiddleware::class,

'role\_or\_permission' => \Spatie\Permission\Middleware\RoleOrPermissionMiddleware::class,

```
]);
                                   return Application::configure(basePath: dirname(__DIR__))

✓ Image: Models

                              8
                                       ->withRouting(
   Product.php
                              9
                                          web: __DIR__.'/../routes/web.php',
   User.php
                                           commands: __DIR__.'/../routes/console.php',
                             10

∨ Froviders

                                          health: '/up',
                             11
   AppServiceProvider.php
                             12
bootstrap
                                       ->withMiddleware(function (Middleware $middleware) {
                             13
                                           $middleware->alias([
                             14
                             15
                                               'role' => \Spatie\Permission\Middleware\RoleMiddleware::class,
 app.php
                                               'permission' => \Spatie\Permission\Middleware\PermissionMiddleware::class,
                             16
  providers.php
                                               'role_or_permission' => \Spatie\Permission\Middleware\RoleOrPermissionMiddleware::class
                             17
/ 🔯 config
                             18
 app.php
                             19
 auth.php
                             20
                                       ->withExceptions(function (Exceptions $exceptions) {
                             21
  cache.php
                                       })->create();
                             22
  atabase.php
                             23
  filesystems.php
```

# \$this->middleware(['permission:role-create'],["only" => ["create","store"]]);

```
9

∨ In Http \ Controllers

                                                                                                                                                                                             class RoleController extends Controller
                                                                                                                                                                10
       > 🖺 Auth
                                                                                                                                                                                                                   public function __construct()
                                                                                                                                                                11
                 Controller.php
                                                                                                                                                                12
                 HomeController.php
                                                                                                                                                                13
                                                                                                                                                                                                                                          // examples:
                 ProductController.php
                                                                                                                                                                 14
                                                                                                                                                                                                                                         $this->middleware(['permission:role-create'],["only" => ["create","store"]]);
               RoleController.php
                                                                                                                                                                15
                UserController.php
                                                                                                                                                                16
                                                                                                                                                                17
                                                                                                                                                                                                                  public function index()

✓ Models

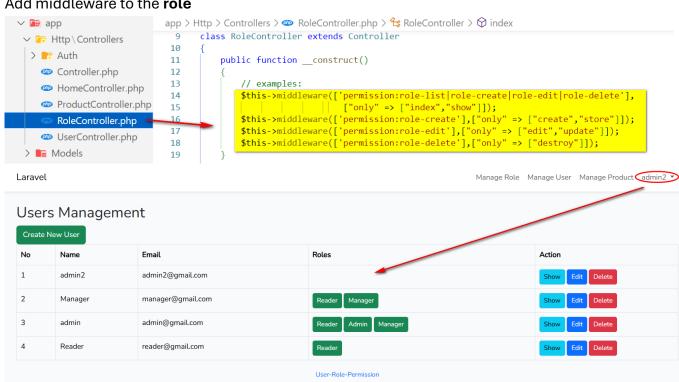
                                                                                                                                                                18
                                                                                                                                                                                                                  {
                 Product.php
                                                                                                                                                                                                                                        $roles = Role::all();
                                                                                                                                                                19
                 User.php
                                                                                                                                                                20
                                                                                                                                                                                                                                        return view('roles.index',compact('roles'));

∨ Image: Value of the providers of 
                                                                                                                                                                 21
                        AnnCanica Provider phn
```

### Add middleware to the **product**



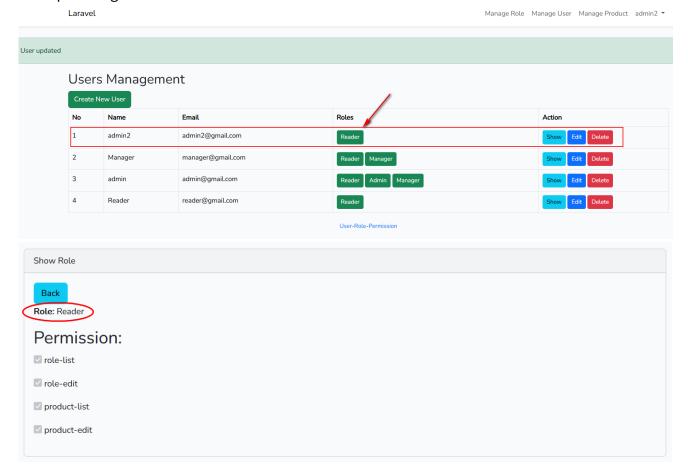
#### Add middleware to the role



### Check route user doesn't have permission



# Example Assign to user admin2



# Show user permission

# Admin2 can't access [role-create|role-delete ]&[ product-create|product-delete]

