# 3 Development stack

Tuesday, August 9, 2022 4:10 PM

PHP

DB ( MySQL, MariaDB )
Web Server (Optional)
Composer ( php manager - dependency manger )
Laravel Installer (Optional)

composer install

 $composer\ create-project\ --prefer-dist\ laravel/laravel\ project-name$ 

Laravel new project-name

### **Stacks**

#### 1. XAMPP

- a. Php, MariaDB, Apache, PHPMyAdmin
- b. Mac, Windows, Linux

#### 2. Valet

- a. Serve your site with minimal setting
- b. Require Homebrew
- c. Only for Mac

### 3. Sail

a. Is light-weight CLI for interacting with Docker

### **Other**

Sublime text VS Code

Node.js ( npm, jaan) git

#### Run

Php artisan serve --host=[hostname] --port=[portNo]

### Migration

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Any database related configuration /.env /config/database.php

E.g.

Php artisan make:migration create\_[companies]\_table Creates

/database/migrations/[date]create\_companies\_table.php

Tow methods

Up() > executed when we do migration

Down() > executed when we undo migration (rollback)

Php artisan migrate
Php artisan migration:rollback

```
<?php
use Illuminate\Database\Migrations\Migration;
use Illuminate\Database\Schema\Blueprint;
use Illuminate\Support\Facades\Schema;
class CreateCompaniesTable extends Migration
      * Run the migrations.
      * areturn void
     public function up()
          Schema::create('companies', function (Blueprint $table) {
              $table->id();
              $table > string('name');
$table -> string('address') -> nullable();
$table -> string('website') -> nullable();
$table -> string('email');
               $table->timestamps();
          });
      * Reverse the migrations.
      * areturn void
     public function down()
         Schema::dropIfExists('companies');
```

### Seeding

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Seeder files r in /database/seeds/

Php artian make:seeder [Companies]TableSeeder Php artisan db:seed {--class=[Companies]TableSeeder}

Main seeder file

/database/seeds/DatabaseSeeder.php
- db:seed calls this seeder file

### Seeding with faker library

- Generates realistic data for tables like company, address, DomainName, email, name ...

```
use Faker\Factory as Faker;

$faker = Faker::create();

$faker->company(),

$faker->name(),

$faker->address(),
```

#### E.g.

```
<?php
namespace Database\Seeders;
use Illuminate\Database\Seeder;
use Illuminate\Support\Facades\DB;
use Faker\Factory as Faker;
class CompaniesTableSeeder extends Seeder
     * Run the database seeds.
      * @return void
     public function run()
         DB::table('companies')->truncate();
$companies = [];
         $faker = Faker::create();
         foreach(range(1,10) as $index){
    $companies[] = [
                   'name' => $faker->company(),
                   'address' => $faker->address(),
'website' => $faker->domainName(),
                   'email' => $faker->email(),
'created_at' => now(),
                   'updated_at' => now(),
         DB::table('companies')->insert($companies);
```

# **Eloquent Model**

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Model representing business data and logic Model object is responsible retrieving and processing data in a certain table

### **Eloquent ORM**

- Active recorded pattern for accessing data from DB
- Database view/tables is represented by a class/rules; object instances is tied to a single row or data
- **ORM** (object relational mapping) DB abstraction layer providing single interface to interact with different database types

### Table maing conventions

| Model  | Table                                 |
|--|---------------------------------------|
| Singular   | Plural                                |
| $The {\it First Later Of Each Word Capitalized}$ | all_lowerchase_underscores_separating |
| Company  | companies                             |
| PurchaseOrder                                    | purchase_orders                       |

Eloquent common commands

| Company::take(3)                | Return Builder                              |
|---------------------------------|---|
| Company::take(3)->get();        | Return Collections of arrays raped with all |
| Company::take(3)->get()->all(); | Returns array of data                       |
| Company::find(1,3,5);           | Returns companies with Id 1,3&5             |
| Company::whereid(1);            | Returns companies with Id 1                 |
| Company::destroy(1, 3)          | Returns 2 for succuss row affected          |

php artisan make:model [Company]
Inside
/App/Models/

# Mass Assignment

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### Assigning multiple data to Eloquent using array

- 1. Array attributes must be the same or u need to specify foldables inside the model
- 2. Or guarded to guard attributes that cannot be filed in mass

```
use Illuminate\Database\Eloquent\Model;

class Company extends Model
{
    protected $fillable = ['name', 'address', 'email', ''];
}

/*
use Illuminate\Database\Eloquent\Model;

class Company extends Model

protected $guarkded = [];

/*
```

# Exercise 1

Thursday, August 11, 2022 10:43 PM

php artisan make:model Contact -m

Crate model + migration

### 090 Eloquent Relationship - Inserting & updating Models

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- Manages relationship between two models
  - o One to one
  - o One to many
  - o One to many (Inverse)
  - Many to many
  - o Defining custom intermediate table models
  - o Has one through
  - o Has many through

### ONE TO MANY

### E.g. Company has many contacts

```
Company.php
```

```
<?php
namespace App\Models;
use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\Model;
class Company extends Model
{
    use HasFactory;
    public function contacts()
    {
        return $this->hasMany(Contact::class,
    'company_id');
    }
}
```

### Insert data

E.g. insert two contacts for a company
\$contacts = [\$contact1, \$contact2]
\$company->contacts()->saveMany(\$contacts);
\$company->contacts()->createMany(\$contacts);

### Delete

\$company->contacts()->delete()

### Contact.php

```
<?php
namespace App\Models;
use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\Model;
class Contact extends Model
{
    use HasFactory;
    public function company()
    {
        return $this->belongsTo(Company::class, 'id');
    }
}
```

# 010 Eloquent Relationship - Querying Relations -

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### Relationship method

\$company->contacts()->get(); gets all company contacts
\$company->contacts()->find(3); company contact with contact id 3
\$company->contacts()->orderBy('id', 'desc')->first();

### **Dynamic property**

\$company->contacts gets all company contacts ( eloquent collection )
\$company->contacts->email don't work b/c many contact one-to-many relations
\$contact->company gets contacts company
\$contact->company->name

### 011 Model Factories

Monday, August 29, 2022 3:27 PI

php artisan make:factory ContactFactory -m Contact create factory for contact table inside /database/factories/ContactFactory.php don't have to specify the model name

```
<?php
namespace Database\Factories;
use App\Models\Company;
use Illuminate\Database\Eloquent\Factories\Factory;
use Faker\Factory as Faker;
class ContactFactory extends Factory
                                                  CREATING MODELS USING FACTORIES
  * Define the model's default state.
  * @return array
                                                  factory(Contact::class) → create()
                                                                                          Contact::factory() → create()
  public function definition()
    $faker = Faker::create();
                                                    factory(Contact::class) → make()
                                                                                           Contact::factory()→make()
    return [
                                                                                               Contact::factory()
                                                      factory(Contact::class, 5)
                                                                                                    →count(5)
      'first_name' => $faker->firstName(),
                                                               →create()
                                                                                                    →create()
      'last name' => $faker->lastName(),
      'phone' => $faker->phone(),
      'email' => $faker->email(),
      'address' => $faker->address(),
      'company id' => Company::pluck('id')->random()
    ];
```

```
<?php
namespace Database\Seeders;
use App\Models\Contact;
use Faker\Factory as Faker;
use Illuminate\Database\Seeder;
use Illuminate\Support\Facades\DB;
class ContactsTableSeeder extends Seeder
{
    /**
    * Run the database seeds.
    *
    @return void
    */
    public function run()
    {
        Contact::factory()->count(50)->create();
     }
}
```

```
ContactsTableSeeder::class,
]);
// $this->call(ContactsTableSeeder::class);
}
php artisan migrate:fresh --seed
```

# 04 - Routing, Controllers & Views

Tuesday, August 30, 2022 3:51 PM

# 001 Basic Routing

Tuesday, August 30, 2022 3:51 PM

Is the mechanism to route requests to associated actions

Route::[method]('request', 'map action');

/routes/web.php /routes/api.php /routes/console.php

```
Route::get('/', function () {
    return view('welcome');
});

Route::get('/contacts/{id}', function($id){
    return Contact::find($id);
});
```

### 002 Named Routes

Tuesday, August 30, 2022 4:27 PM

We can user route naming

Php artisan route:list
Php artisan route:list --path=contacts -r all routes containing contacts in reverse order

```
Route::get('/contacts/{id}', function($id){
   return Contact::find($id);
})->name('contacts.show');

//And call inside blade

<a href="{{ route('contacts.show', 1) }}" class="</a>
```

### 003 Views

Tuesday, August 30, 2022 4:38 PM

Is a representation layer for users to interact

Two view file types

</div>

- i. Plain .php rendered in php engine
- ii. blade.php file rendered using blade engine to plain php located inside /storate/framework/views/\*

```
/resources/views/*
```

```
/route/Web.php
Route::get('/contacts/{id}', function($id){
    $contact = Contact::find($id);
    return view('contacts.show', compact('contact'));
})->name('contacts.show');

/resources/views/contacts/show.blade.php
<h2>contacts view</h2>

<a href="{{ route('contacts.index') }}">Home</a>
<a href="{{ route('contacts.create') }}">Add New</a>
<a href=""{{ route('contacts.create') }}">show 1 Contact</a>
<div>
{ $contact }}
```

### 004 Controllers

Tuesday, August 30, 2022 4:59 PM

#### MVC

Model - represent business logic
View - visual representation
Controller - manage flow of application by redirecting traffics between models and views - it performs some logic and pass result to views

/app/Http/Controllers

```
php artisan make:controller ContactController.php named by singular
-r with methods (index, show, edit, update, delete ..)
-m [ModelName] with methods using model binding
       /app/Http/Controllers/ContactController.php
       <?php
       namespace App\Http\Controllers;
       use App\Models\Contact;
       use Illuminate\Http\Request;
       class ContactController extends Controller
                                                                          Implementation using Controllers
          public function index(){
            return view('contacts.index');
         public function create(){
            return view('contacts.create');
         public function show($id){
            $contact = Contact::find($id);
            return view('contacts.show', compact('contact'));
```

### /routes/web.php

```
Route::get('/contacts', [ContactController::class, 'index'])->name('contacts.index');
Route::get('/contacts/create', [ContactController::class, 'create'])->name('contacts.create');
Route::get('/contacts/{id}', [ContactController::class, 'show'])->name('contacts.show');
```

# 005 Building Application Layout using Blade Template Inheritance

Wednesday, August 31, 2022 3:47 PM

Assets inside /public
{{ asset(") }}
Directives
@yeild(") reserve spots for section to be included
@section(") are partial codes that are yielded
@endsection(")
@extends(")
@include(") include partial files

Separating file help us when making changes

# 001 Displaying all contacts

Wednesday, August 31, 2022 4:03 PM

Controler fatch data and pass to view

### /app/Http/Controllers/ContactController.php

```
<?php
namespace App\Http\Controllers;
use App\Models\Contact;
use Illuminate\Http\Request;
class ContactController extends Controller
{
   public function index(){
     $contacts = Contact::orederBy('first_mane','asc')->get();
     return view('contacts.index', compact('contacts'));
}
```

### /resources/vews/contacts/index.blade.php

```
@if ($contacts->count())
     @foreach ($contacts as $index=>$contact )
       {{ $index+1 }}
       {{ $contact->first name }}
       {{ $contact->last_name }}
       {{ $contact->email }}
       {{ $contact->company->name }}
       <a href="show.html" class="btn btn-sm btn-circle btn-outline-info"
           title="Show"><i class="fa fa-eye"></i></a>
         <a href="form.html" class="btn btn-sm btn-circle btn-outline-secondary"
           title="Edit"><i class="fa fa-edit"></i></a>
         <a href="#" class="btn btn-sm btn-circle btn-outline-danger"
           title="Delete" onclick="confirm('Are you sure?')"><i
            class="fa fa-times"></i></a>
       @endforeach
    @endif
```

# 002 Adding pagination

Wednesday, August 31, 2022 4:42 PM /app/Providers/AppServiceProvider.php <?php namespace App\Http\Controllers; Fetch with paginate of 10 use App\Models\Contact; use Illuminate\Http\Request; class ContactController extends Controller public function index(){ \$contacts = Contact::orderBy('first\_name','asc')->paginate(10); return view('contacts.index', compact('contacts')); /resource/views/contacts/index.blade.php Place pagination link to views <div class="pagination justify-content-center"> {{ \$contacts->links() }} </div> /app/Providers/AppServiceProvider.php <?php namespace App\Providers; use Illuminate\Support\ServiceProvider; use Illuminate\Pagination\Paginator; class AppServiceProvider extends ServiceProvider **Enable bootstrap** \* Register any application services. \* @return void public function register() // \* Bootstrap any application services. \* @return void public function boot() //

//\Illuminate\Pagination\Paginator::useBootstrap();

Paginator::useBootstrap();

## 003 Exercise 3 - Display all companies on dropdown list

Wednesday, August 31, 2022 4:51 PM

</div>

### /app/Http/Controllers/ContactController.php <?php namespace App\Http\Controllers; use App\Models\Company; use App\Models\Contact; use Illuminate\Http\Request; class ContactController extends Controller public function index(){ Optional \$companies = Company::select('id','name')->get(); \$companies = Company::orderBy('name)->pluck('name','id'); \$contacts = Contact::orderBy('first name', 'asc')->paginate(10); return view('contacts.index', compact('contacts','companies')); /resources/views/contacts/\_filter.blade.php <div class="row"> <div class="col-md-6"></div> <div class="col-md-6"> <div class="row"> <div class="col"> <select class="custom-select"> <option value="" selected>All Companies @if (\$companies->count()) @foreach (\$companies as \$company ) <option value="{{ \$company->id }}">{{ \$company->name }} @endforeach @endif </select> </div> <div class="col"> <div class="input-group mb-3"> <input type="text" class="form-control" placeholder="Search..." aria-label="Search..." aria-describedby="button-addon2"> <div class="input-group-append"> <button class="btn btn-outline-secondary" type="button"> <i class="fa fa-refresh"></i> <button class="btn btn-outline-secondary" type="button" id="button-addon2"> <i class="fa fa-search"></i> </button> </div> </div> </div> </div> </div>

### 004 Filtering contacts by company

Wednesday, August 31, 2022 5:07 PM

Using java script change url link
Then on contact controller query where request is available

```
/public/js/app.js
document.getElementById('filter company id').addEventListener('change', function () {
 let companyId = this.value | | this.options[this.selectedIndex].value
  window.location.href = window.location.href.split('?')[0] + '?company_id=' + companyId
})
/ap/Http/controllers/ContactController.php
namespace App\Http\Controllers;
use App\Models\Company;
use App\Models\Contact;
use Illuminate\Http\Request;
class ContactController extends Controller
  public function index()
    //$companies = Company::select('id','name')->prepend(",'All Company')->get();
    $companies = Company::orderBy('name')->pluck('name', 'id')->prepend('All Company', ");
    $contacts = Contact::orderBy('first_name', 'asc')->where(function ($query) {
      if ($compony_id = request('company_id')) {
        $query->where('company_id', $compony_id);
    })->paginate(10);
    return view('contacts.index', compact('contacts', 'companies'));
```

 On select change append compnay\_id to url and pass to controller

 Controller where close if company\_id is in request then filters fetched data

/resource/view/contacts/index.blade.php

<div class="pagination justify-content-center">
 {{ \$contacts->appends(request()->only('company\_id'))->links() }}
</div>

• To fix pagination error on request new data

### 001 Handling Form

Thursday, September 1, 2022 2:13 PM

```
/routes/web.php
Route::post('/contacts', [ContactController::class, 'store'])->name('contacts.store');

/resources/views/contacts/create.blade.php

<form action="{{ route('contacts.store') }}" method="POST">
          @csrf
          @method('POST')
          @include('contacts._form')
          </form>
```

#### Restful resource

| Acton   | URL                      | Verb/method | Name              |
|---------|--------------------------|-------------|-------------------|
| Index   | /contacts                | GET         | Contacts.index    |
| Create  | /contacts/create         | GET         | Contacts.create   |
| Store   | /contacts                | POST        | Contacts.store    |
| Show    | /contacts/{contact}      | GET         | Contacts.show     |
| Edit    | /contacts/{contact}/edit | GET         | Contacts.edit     |
| Update  | /contacts/{contact}      | PUT/PATCH   | Contact.update    |
| Destroy | /contact/{contact}       | DELET       | Contacts.destrory |

### /app/Http/Controllers/ContactController.php namespace App\Http\Controllers; use App\Models\Company; use App\Models\Contact; use Illuminate\Http\Request; class ContactController extends Controller public function index() //\$companies = Company::select('id','name')->prepend(",'All Company')->get(); \$companies = Company::orderBy('name')->pluck('name', 'id')->prepend('All Company', ''); \$contacts = Contact::orderBy('first\_name', 'asc')->where(function (\$query) { if (\$compony\_id = request('company\_id')) { \$query->where('company\_id', \$compony\_id); })->paginate(10); return view('contacts.index', compact('contacts', 'companies')); public function create() \$companies = Company::orderBy('name')->pluck('name', 'id')->prepend('All Company', ''); return view('contacts.create', compact('companies')); public function store(Request \$request) dd(\$request);

### 002 Adding Form Validation

Friday, September 2, 2022 1:21 PM

### /app/Http/Controllers/ContactController.php

```
public function store(Request $request)
{
    $request->validate([
        'first_name' => 'required',
        'last_name' => 'required',
        'email' => 'required | email',
        'address' => 'required',
        'company_id' => 'required | exists:companies,id'
]);
    dd($request->all());
}
```

#### Restful resource

| Acton   | URL                      | Verb/method | Name              |
|---------|--------------------------|-------------|-------------------|
| Index   | /contacts                | GET         | Contacts.index    |
| Create  | /contacts/create         | GET         | Contacts.create   |
| Store   | /contacts                | POST        | Contacts.store    |
| Show    | /contacts/{contact}      | GET         | Contacts.show     |
| Edit    | /contacts/{contact}/edit | GET         | Contacts.edit     |
| Update  | /contacts/{contact}      | PUT/PATCH   | Contact.update    |
| Destroy | /contact/{contact}       | DELET       | Contacts.destrory |

### /resources/views/contacts/\_form.blade.php

# 003 Persisting validated data into database

Friday, September 2, 2022 1:46 PM

### Mass assignment

```
/app/Http/Controllers/ContactController.php
```

### OR

### /app/Http/Controllers/ContactController.php

```
$contact = new Contact();
$contact->first_name = $request->first_name;
$contact->last_name = $request->last_name;
$contact->email = $request->email;
$contact->address = $request->address;
$contact->company_id = $request->company_id;
$contact->save();
```

#### Restful resource

| Acton   | URL                      | Verb/method | Name              |
|---------|--------------------------|-------------|-------------------|
| Index   | /contacts                | GET         | Contacts.index    |
| Create  | /contacts/create         | GET         | Contacts.create   |
| Store   | /contacts                | POST        | Contacts.store    |
| Show    | /contacts/{contact}      | GET         | Contacts.show     |
| Edit    | /contacts/{contact}/edit | GET         | Contacts.edit     |
| Update  | /contacts/{contact}      | PUT/PATCH   | Contact.update    |
| Destroy | /contact/{contact}       | DELET       | Contacts.destrory |

```
Friday, September 2, 2022 5:15 PM
```

#### Solution

```
Add route
/route/web.php
```

```
Route::get['/contacts/{id}/edit', [ContactController::class, 'edit']) > name('contacts.edit'); \\ Route::put['/contacts/{id}', [ContactController::class, 'update']) - name('contacts.update'); \\ Route::put['/contacts] - name('contacts.update') - name('contacts.update'); \\ Route::put['/contacts.update'] - name('contacts.update') - name('contacts.update'
```

#### /app/Http/Controllers/ContactController.php

### /resource/views/contacts/edit.blade.php

```
@extends('layouts.main')
@section('title', 'Contact App | Create Contacts')
@section('content')
 <main class="py-5">
   <div class="container">
    <div class="row justify-content-md-center">
      <div class="col-md-8">
      <div class="card">
       <div class="card-header card-title">
        <strong>Edit Contact</strong>
        </div>
        <div class="card-body">
         <form action="{{ route('contacts.update', $contact->id) }}" method="POST">
            @csrf
            @method('PUT')
            @include('contacts. form')
          </form>
        </div>
      </div>
      </div>
    </div>
    </div>
 </main>
@endsection
```

### Update form old(",data) /resource/views/contacts/ form.blade.php

```
</div>
   </div>
   <div class="form-group row">
     <label for="last_name" class="col-md-3 col-form-label">Last Name</label>
     <div class="col-md-9">
      <input type="text" name="last_name" value="{{ old('last_name', $contact->last_name) }}}" id="last_name" class="form-control @error('last_name') is-invalid @enderror">
      @error('last_name')
        <div class="invalid-feedback">
         {{ $message }}
        </div>
      @enderror
     </div>
   </div>
   <div class="form-group row">
    <|abel for="email" class="col-md-3 col-form-label">Email</label>
     <div class="col-md-9">
      @error('email')
        <div class="invalid-feedback">
         {{ $message }}
        </div>
      @enderror
    </div>
   </div>
   -
<div class="form-group row">
    <label for="phone" class="col-md-3 col-form-label">Phone</label>
     <div class="col-md-9">
      <input type="text" name="phone" value="{{ old('phone', $contact->phone') }}" id="phone" class="form-control @error('phone') is-invalid @enderror">
      @error('phone')
        <div class="invalid-feedback">
         {{ $message }}
      @enderror
     </div>
   </div>
   <div class="form-group row">
     <label for="name" class="col-md-3 col-form-label">Address</label>
     <div class="col-md-9">
      @error('address')
        <div class="invalid-feedback">
         {{ $message }}
        </div>
      @enderror
    </div>
   </div>
   <div class="form-group row">
    <label for="company_id" class="col-md-3 col-form-label">Company</label>
     <div class="col-md-9">
      @foreach ($companies as $id => $name)
         @endforeach
      </select>
      @error('company_id')
<div class="invalid-feedback">
         {{ $message }}
        </div>
      @enderror
     </div>
   </div>
   <div class="form-group row mb-0">
     <div class="col-md-9 offset-md-3">
      <button type="submit" class="btn btn-primary">{{ $contact->exists ? 'Update' : 'Save' }}</button>
      <a href="{{ route('contacts.index') }}" class="btn btn-outline-secondary">Cancel</a>
    </div>
   </div>
 </div>
</div>
```

## 005 Deleting the Data

Friday, September 2, 2022 6:07 PM

```
Add route
```

```
/routes/web.php
```

Route::delete('/contacts/{id}', [ContactController::class, 'destroy'])->name('contacts.destroy');

### Add destroy attribute to controller

```
public function destroy($id)
{
    Contact::destroy($id);
    return redirect()->route('contacts.index')->with('message', 'Contact has been deleted successfully');
}
```

### Adding link and form

```
/resources/views/contacts/index.php
```

### Using JavaScript - get link action and submit form

```
/public/js/app.js
```

```
document.querySelectorAll('.btn-delete').forEach((button) => {
  button.addEventListener('click', function(event){
    event.preventDefault()
    if(confirm("Are you sure?")){
        let action = this.getAttribute('href')
        let form = document.getElementById('form-delete')
        form.setAttribute('action',action)
        form.submit()
    }
})
```

### 001 Building a Search Form

```
Saturday, September 3, 2022 3:17 PM
```

Use get method for search input Then submit using JavaScript

/resources/views/contacts/\_filter.blade.php

```
<form action="">
    <div class="row">
      <div class="col">
        <select id="filter_company_id" name="company_id" class="custom-select">
           {{-- <option value="" selected>All Companies</option> --}}
           @if ($companies->count())
             @foreach ($companies as $id => $name)
               <option {{ $id == request('company id') ? 'selected' : " }} value="{{ $id }}">
                 {{ $name }}</option>
             @endforeach
           @endif
        </select>
      </div>
      <div class="col">
        <div class="input-group rqb-3">
           <input name="search"
                                  d="search" value="{{ request('search') }}"
                                                                           type="text" class="form-control" placeholder="Search..." aria-label="Search..."
             aria-describedby="button-addon2
           <div class="input-group-append">
             <button id="btn-clear" class="btn btn-outline-secondary" type="button">
               <i class="fa fa-refresh"></i>
             </button>
             <button class="btn btn-outline-secondary" type="submit" id="button-addon2">
               <i class="fa fa-search"></i>
             </button>
           </div>
        </div>
      </div>
    </div>
   </form>
```

Just add a where inside query function when get-request has search

```
<?php
namespace App\Http\Controllers;
use App\Models\Company;
use App\Models\Contact;
use Illuminate\Http\Request;
class ContactController extends Controller
  public function index()
    //$companies = Company::select('id','name')->prepend('','All Company')->get();
    $companies = Company::orderBy('name')->pluck('name', 'id')->prepend('All Company', ");
    $contacts = Contact::orderBy('id', 'desc')->where(function ($query) {
      if ($compony_id = request('company_id')) {
        $query->where('company_id', $compony_id);
     if ($search = request('search')) {
        $query->where('first_name', 'LIKE', "%{$search}%");
    })->paginate(10);
    // dd($contacts);
    return view('contacts.index', compact('contacts', 'companies'));
```

}

```
Saturday, September 3, 2022 9:37 PM
```

Local scopes allow u to define common sets of constraints that u may easily re-use throughout ur application. Like u need to retrieve popular users many times throughout ur application.

- · Are defined inside the models
- Used like query methods in Eloquent

```
public function scope[Name]($query){
     return $query->[Method]
/app/Models/Contact.php
<?php
namespace App\Models;
use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\Model;
class Contact extends Model
  use HasFactory;
  protected $fillable = ['first_name', 'last_name', 'address', 'email', 'phone', 'company_id'];
  public function company()
    return $this->belongsTo(Company::class);
  public function scopeLatestFirst($query)
    return $query->orderBy('id', 'desc');
  public function scopeFilter($query)
    if ($compony_id = request('company_id')) {
      $query->where('company_id', $compony_id);
    if ($search = request('search')) {
      $query->where('first_name', 'LIKE', "%{$search}%");
    return $query;
```

# /app/Http/Controllers/ContactController.php <?php namespace App\Http\Controllers;

```
use App\Models\Company;
use App\Models\Contact;
use Illuminate\Http\Request;
class ContactController extends Controller
{
    public function index()
    {
        // $companies = Company::select('id','name')->prepend('','All Company')->get();
        $companies = Company::orderBy('name')->pluck('name', 'id')->prepend('All Company', '');
        $contacts = Contact::latestFirst()->filter()->paginate(10);

        // dd($contacts);
        return view('contacts.index', compact('contacts', 'companies'));
    }
}
```

# 003 Global Scopes

```
Sunday, September 11, 2022 6:24 PM
```

Global scopes allow you to add constraints to all queries for a given model. Reduce redundant queries in a model

Use Illuminate\Database\Eloquent\Scope

```
Class MyCustomeScope implements Scope
{
          Public function apply(Builder $builder, Model $model)
          {
              }
}
```

### /app/Scopes/FilterScope.php

```
<?php
namespace App\Scopes;
use Illuminate\Database\Eloquent\Scope;
use Illuminate\Database\Eloquent\Builder;
use Illuminate\Database\Eloquent\Model;
use Illuminate\Database\Eloquent\Model;
class FilterScope implements Scope
{
   public function apply(Builder $builder, Model $model)
   {
      if ($compony_id = request('company_id')) {
           $builder->where('company_id', $compony_id);
      }
      if ($search = request('search')) {
           $builder->where('first_name', 'LIKE', "%{$search}%");
      }
      return $builder;
    }
}
```

### /app/Models/Contact.php

```
<?php
namespace App\Models;
use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\Model;
use App\Scopes\FilerScope;
class Contact extends Model
{
    use HasFactory;
    protected $fillable = ['first_name',
    'last_name','address','email','phone','company_id'];
    public function company()
    {
        return $this->belongsTo(Company::class);
    }
    public function scopeLatestFirst($query)
    {
        return $query->orderBy('id', 'desc');
    }
    protected static function booted()
    {
        static::addGlobalScope(new \App\Scopes\FilterScope);
    }
}
```

# 004 Adding more criteria on our Search global scope

Thursday, September 15, 2022 4:38 PM

SELECT \* from `contacts` WHERE `contact\_\_id` = ? AND (`first\_name`` LIKE ? OR `last\_name` LIKE ? OR `email` LIKE ?)

```
/app/Scopes/FilterScope.php
                                                                         /app/Scope/SearchScope.php
                                                                          <?php
<?php
namespace App\Scopes;
                                                                         namespace App\Scopes;
use Illuminate\Database\Eloquent\Scope;
                                                                         use Illuminate\Database\Eloquent\Scope;
use Illuminate\Database\Eloquent\Builder;
                                                                         use Illuminate\Database\Eloquent\Builder;
use Illuminate\Database\Eloquent\Model;
                                                                         use Illuminate\Database\Eloquent\Model;
class FilterScope implements Scope
                                                                         class SearchScope implements Scope
  public function apply(Builder $builder, Model $model)
                                                                            public function apply(Builder $builder, Model $model)
    if ($compony id = request('company id')) {
      $builder->where('company_id', $compony_id);
                                                                             if ($search = request('search')) {
                                                                                $builder->where('first_name', 'LIKE', "%{$search}%");
                                                                                $builder->orWhere('last_name', 'LIKE', "%{$search}%");
    return $builder;
                                                                                $builder->orWhere('email', 'LIKE', "%{$search}%");
                                                                              return $builder;
                           /app/Models/Contact.php
                           <?php
                           namespace App\Models;
                           use Illuminate\Database\Eloquent\Factories\HasFactory;
                           use Illuminate\Database\Eloquent\Model;
                           use App\Scopes\FilerScope;
                           class Contact extends Model
                           {
                             use HasFactory;
                             protected $fillable = ['first_name', 'last_name', 'address', 'email', 'phone', 'company_id'];
                             public function company()
                               return $this->belongsTo(Company::class);
                             public function scopeLatestFirst($query)
                               return $query->orderBy('id', 'desc');
                             protected static function booted()
                               static::addGlobalScope(new \App\Scopes\FilterScope);
                               static::addGlobalScope(new \App\Scopes\SearchScope);
```

#### **Bonus**

U can add search createria other models like company name

### U can add search createria other models like company name

```
<?php
namespace App\Scopes;
use Illuminate\Database\Eloquent\Scope;
use Illuminate\Database\Eloquent\Builder;
use Illuminate\Database\Eloquent\Model;
use PhpParser\Node\Expr\FuncCall;
class SearchScope implements Scope
  public function apply(Builder $builder, Model $model)
    if ($search = request('search')) {
      $builder->where('first name', 'LIKE', "%{$search}%");
      $builder->orWhere('last_name', 'LIKE', "%{$search}%");
      $builder->orWhere('email', 'LIKE', "%{$search}%");
      $builder->orWhere('company', 'LIKE', function($query) use ($search){
        $query->where('name','LIKE', "%{$search}%");
      });
    return $builder;
```

# 005 Removing Global Scopes

Thursday, September 15, 2022 4:46 PM

For specific query

Contact::withoutGlobalScope([FilterScope::Class])->get(); it get all contact without the filter or empty mean remove all scopes

### 006 Make our Global Scopes reusable

Thursday, September 15, 2022 5:20 PM

Reusable scopes meaning scopes that can be used in many models

```
/app/Scope/Search
<?php
namespace App\Scopes;
use Illuminate\Database\Eloquent\Scope;
use Illuminate\Database\Eloquent\Builder;
use Illuminate\Database\Eloquent\Model;
use PhpParser\Node\Expr\FuncCall;
class SearchScope implements Scope
  protected $searchColumns = [];
  public function apply(Builder $builder, Model $model)
   if ($search = request('search')) {
      foreach ($this->searchColumns as $column ) {
        $arr = explode('.', $column);
        if(count($arr) == 2)
          list($relationship, $col) = $arr;
          $builder->orWhereHas($relationship, function($query) use ($search,$col){
            $query->where($col,'LIKE', "%{$search}%");
          });
        else{
          $builder->orWhere($column, 'LIKE', "%{$search}%");
      //$builder->where('first name', 'LIKE', "%{$search}%");
      //$builder->orWhere('last name', 'LIKE', "%{$search}%");
      //$builder->orWhere('email', 'LIKE', "%{$search}%");
      //$builder->orWhere('company', 'LIKE', function($query) use ($search){
      // $query->where('name','LIKE', "%{$search}%");
      // });
    return $builder;
/app/Scopes/ContactSearchScope.php
namespace App\Scopes;
use App\Scopes\SearchScope;
class ContactSearchScope extends SearchScope
  protected $searchColumns = ['first name', 'last name', 'email', 'company.name'];
```

Add a variable that will be overloaded with the class

Crete a class that extends SearchScope that will overload the variable

```
/app/Models/Contact.php
<?php
namespace App\Models;
use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\Model;
use App\Scopes\FilerScope;
class Contact extends Model
                                                                                          Add the class in the model as a global scope
  use HasFactory;
  protected $fillable = ['first_name', 'last_name', 'address', 'email', 'phone', 'company_id'];
  public function company()
    return $this->belongsTo(Company::class);
  public function scopeLatestFirst($query)
    return $query->orderBy('id', 'desc');
  protected static function booted()
    static::addGlobalScope(new \App\Scopes\FilterScope);
    static:: add Global Scope (new \App \Scopes \Contact Search Scope); \\
```

### 007 Another approach to make our Global Scopes reusable

Thursday, September 15, 2022 7:23 PM

- 1. Assign the FilterScope in the model as a global scope
- 2. Define the filter columns in filterColumns property

```
Step 1
```

```
/app/Scopes/FilterScope.php
<?php
namespace App\Scopes;
use Illuminate\Database\Eloquent\Scope;
use Illuminate\Database\Eloquent\Builder;
use Illuminate\Database\Eloquent\Model;
class FilterScope implements Scope
  protected $filterColumns = [];
  public function apply(Builder $builder, Model $model)
    $columns = property exists($model, 'filterColumns') ? $model->filterColumns : $this->filterColumns;
    // dd($columns);
    foreach ($columns as $key => $column) {
      if ($value = request($column)) {
        $builder->where($column, $value);
    return $builder;
Step 2
/app/Models/Contact.php
<?php
namespace App\Models;
use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\Model;
use App\Scopes\FilerScope;
class Contact extends Model
  use HasFactory;
  protected $fillable = ['first_name', 'last_name', 'address', 'email', 'phone', 'company_id'];
  public $filterColumns = ['company_id'];
  public function company()
    return $this->belongsTo(Company::class);
  public function scopeLatestFirst($query)
    return $query->orderBy('id', 'desc');
  protected static function booted()
```

```
static::addGlobalScope(new \App\Scopes\FilterScope);
static::addGlobalScope(new \App\Scopes\ContactSearchScope);
```

### 001 Authentication Scaffolding in Laravel 6.x or above

Friday, September 16, 2022 8:17 PM

Laravel includes authentication, login, logout, email verification, registration ...

```
Above Laravel 7+ u need laravel/ui package
Composer require laravel/ui [--dev] --dev install for development environment
Php artisan ui:auth <type> creates views, controlers for login and home
     /app/Http/Controllers/Auth/ConfirmPasswordController.php
     /app/Http/Controllers/Auth/ForgetPasswordController.php
     /app/Http/Controllers/Auth/LoginController.php
     /app/Http/Controllers/Auth/RegisterController.php
     /app/Http/Controllers/Auth/ResetPasswordController.php
     /app/Http/Controllers/Auth/VerificationController.php
     /app/Http/Controllers/HomeController.php - Dashboard Controller
     /resources/views/auth/passwords/confirm.blade.php
     /resources/views/auth/passwords/email.blade.php
     /resources/views/auth/passwords/reset.blade.php
     /resources/views/auth/login.blade.php
     /resources/views/auth/register.blade.php
     /resources/views/auth/verify.blade.php
     /resources/views/layouts/app.blade.php
     /resources/views/home.blade.php - Dashboard view
     And
     /routes/web.php
           added
           Auth::routes();
           Route::get('/home', [App\Http\Controllers\HomeController::class, 'index'])->name('home');
```

# 002 Control visibility of Navbar links

Friday, September 16, 2022 8:48 PM

We can use Laravel Directives inside views to show and hide codes

@gust If user not authenticated

@else@endgust

{{ auth()->user()->name }}

### 003 Retrieving The Authenticated User

Saturday, September 17, 2022 2:47 PM

In the previous video you have seen how to retrieve the authenticated user by using auth global helper function. Beside this helper Laravel also provide some alternative ways like so:

- Using Auth Facade
- Using Request instance or request helper

#### **Using Auth Facade**

You can retrieve the current user's instance using this syntax:

```
use Illuminate\Support\Facades\Auth;
```

```
$user = Auth::user(); // this is equivalent with auth()->user()
If you want to get only the authenticated user's id you can use this syntax:
use Illuminate\Support\Facades\Auth;
$user = Auth::id(); // this is equivalent with auth()->id()
```

You can also determine if the user already logged in by using check() method. This method will return true if the user authenticated. Otherwise it will return false.

```
use Illuminate\Support\Facades\Auth;
if (Auth::check()) {
    // The user is logged in.
} else {
    // The user is not logged in.
}
```

#### **Using Request Instance**

```
You can retrieve the current user's instance via Request instance like this.
```

```
use Illuminate\Http\Request;
public function store(Request $request)
{
    $user = $request->user();
}
You can also retrieve the current user's instance via request global helper function like this.
public function store()
```

```
$user = request()->user();
```

### 004 Custom Authentication Redirection

```
Friday, September 16, 2022 9:55 PM
```

U can change /app/Http/Controllers/Auth/LoginController.php

But u can chage for both by changing the HOME HOME variable Which is found /app/Providers/RouteServiceProvider.php

```
*/
public const HOME = '/dashboard';
```

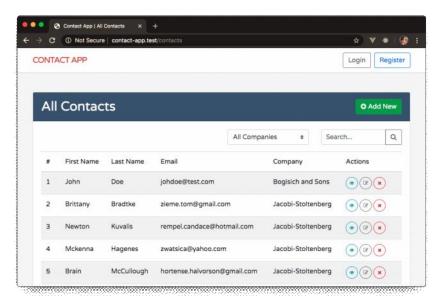
And override logout inside /app/Http/Controllers/Auth/LoginController.php

```
protected function loggedOut(Request $request)
{
   return redirect('/login');
}
```

## 005 Protecting Routes

Saturday, September 17, 2022 2:53 PM

In this lesson we will see how to protect our routes from being access by unauthenticated user. We have integrated Authentication in our application. But any user can still access the contacts page without login.



So, in order to protect that route we can use auth middleware which is defined at Illuminate\Auth\Middleware\Authenticate. This middleware is already registered in the Kernel.php file. You can find it routeMiddleware property inside app\Http\Kernel.php.



To protect your routes you can follow one of these two options:

- 1. Attach the auth middleware in your route definition.
- 2. Call the auth middleware from your controller's constructor.

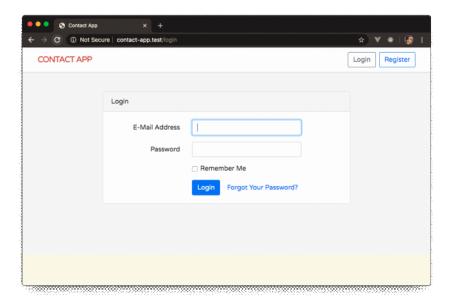
#### 1. Attaching the auth middleware in routes definition

To attach the auth middleware you can add in your route definition with middleware and pass the auth middleware. In web.php let's firstly protect the contacts.index with auth middleware like so:

Route::get('/contacts', [ContactController::class, 'index'])

- ->name('contacts.index')
- ->middleware('auth');

Now, if you're not signed in and try to access the All Contacts page. You'll be redirected to the login page.



You can do the similar thing to other contact routes to protect them from being accessed by unauthenticated user like so: Route::post('/contacts', [ContactController::class, 'store'])

```
->name('contacts.store')
  ->middleware('auth');
Route::get('/contacts/create', [ContactController::class, 'create'])
  ->name('contacts.create')
  ->middleware('auth');
Route::get('/contacts/{id}', [ContactController::class, 'show'])
  ->name('contacts.show')
  ->middleware('auth');
Route::put('/contacts/{id}', [ContactController::class, 'update'])
  ->name('contacts.update')
  ->middleware('auth');
Route::delete('/contacts/{id}', [ContactController::class, 'destroy'])
  ->name('contacts.destroy')
  ->middleware('auth');
Route::get('/contacts/{id}/edit', [ContactController::class, 'edit'])
  ->name('contacts.edit')
   ->middleware('auth');
```

Although this way is valid, but here we find repetitive middleware calling in our route definition. We can make these much simpler by assigning the auth middleware in route group, then move our existing routes inside.

```
Route::middleware('auth')->group(function(){
    Route::get('/contacts', [ContactController::class, 'index'])->name('contacts.index');
    Route::post('/contacts', [ContactController::class, 'store'])->name('contacts.store');
    Route::get('/contacts/create', [ContactController::class, 'create'])->name('contacts.create');
    Route::get('/contacts/{id}', [ContactController::class, 'show'])->name('contacts.show');
    Route::get('/contacts/{id}/edit', [ContactController::class, 'edit'])->name('contacts.edit');
    Route::put('/contacts/{id}', [ContactController::class, 'update'])->name('contacts.update');
    Route::delete('/contacts/{id}', [ContactController::class, 'destroy'])->name('contacts.destroy');
});
```

#### 2. Calling the auth middleware in controller's constructor

Before we call the auth middleware in our constructor's controller, make sure you're not call the middleware('auth') in your route definition.

Open the ContactController. Then define a constructor, add the middleware call, then pass in the auth middleware. class ContactController extends Controller

```
class ContactController extends Controller
{
    public function __construct()
    {
        $this->middleware('auth');
    }
    // other methods definition
    // ...
}
```

By doing this way the auth middleware will get applied to all methods that defined in the controller. This because constructor will automatically called when you instantiate an object.

But you can utilize except() or only() method to apply the middleware on a certain method explicitly.

#### 2.1. Using middleware only method

We can use middleware only method to *only* apply a certain middlware to the given methods. For example if you want to apply the auth middleware only on create, update and delete methods, you can do like this:

```
public function __construct()
{
    $this->middleware('auth')->only('create', 'update', 'destroy');
```

Now if you see your routes in your terminal:



The auth middleware only applied on contacts.create, contacts.update and contacts.destroy routes.

#### 2.2. Using middleware except method

We can use middleware except method to exclude the given methods from being applied by a certain middleware. If you want to exclude the auth middleware on let's say index and show methods you can do like so:

```
public function __construct()
{
    $this->middleware('auth')->except('index', 'show');
}
```

If you now see your routes in your terminal:



The auth middleware applied to all contacts.\*, except contacts.index and contacts.show route.

So that's how you could protect your routes using auth middleware. You can apply it on the route definition or on the controller's constructor.

### 006 Password Reset

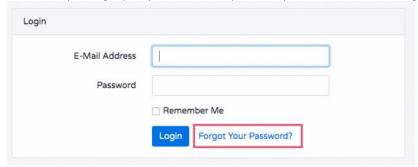
Saturday, September 17, 2022 3:45

#### 1. Introduction

In this lesson, we're going to learn the flow of password reset in Laravel authentication. There are a couple of actions that need to take place:

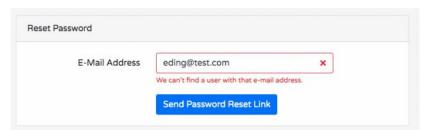
- You request a password reset
- You enter your email. If the email you entered is valid, a password reset link will be sent to your email.
- You Access the reset link
- If the link that you accessed is valid, you can enter your new password.

Just in case you forgot your password when you enter your credentials in the Login form, you can hit the Forgot Your Password link.



If you hit that link it'll take you to the **Reset Password** form. In that form, you can request a reset by entering the email that you entered when registering a new user.

Once you hit the **Send Password Reset Link** button, under the hood it will find in the Users table the email that you provided. If the email you've entered did not found in the database, you'll get a validation error message like this.



But, if the email that you entered was valid (found in the database), you'll get Swift\_TransportException error like this.



If you see the error more details, you'll realize that Laravel tried to send a message to your email. Since you didn't configure the email settings, that's why you got that error.

But If you see the password resets table, you'll find a new record inserted.



#### 2. Fixing Swift\_TransportException error

The simple way to fix that error is to use log instead of smtp. Let's open the .env file. Then change the MAIL\_MAILER from smtp to log. MAIL\_MAILER=log

Also you need to adjust the APP\_NAME to your project's url. This will make sure you that you'll get the proper password reset link on the sent email.

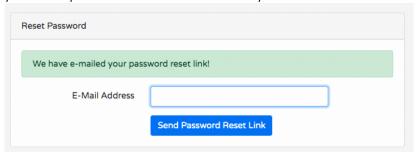
#### APP\_URL=http://contact-app.test

If you're using php built-in server you need to restart the server in order to laravel take effect of those changes. Or you can also clear the

config cache by using this command:

#### php artisan config:clear

Now if go back to **Reset Password** form, enter your valid email then hit the **Send Password Reset Link** you will get a success message telling you that the password reset link has been sent to your email.



Ideally you will go to your inbox, open the email, then hit the password reset link to actually reset your password. But since we used log, what we need to do is to navigate to storage/logs folder. Then open the last .log file. You can then simply find the reset password link, then copy to the clipboard.



If you take a look at the link it basically contains a token (original token) and an email.

.../15 ee 6f ba 300 f 929 e 8042 6 d 7 b 8 b d 7 8 d 10 e 858 d c c 26 a e a d f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e st. com f 18 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e 5 b 4 d a 0 c f f 14 e 6 b a e 6 b 4 d a 0 c f f 14 e 6 b a e 0 ? e mail=john doe %40 t e 6 b 4 d a 0 c f f 14 e 6 b a e 6 b 4 d a 0 c f f 1

This mechanism is almost similar when you login an account. You provided email and original password. Once submitted, Laravel will encrypt the original password into a hash. Then match the email and hashed password with database record.

This way will ensure that only the right users can reset their password. Also the reset link only valid for 60 minutes. If for some reasons you want to increase or decrease the expire time, you can open auth.php file inside config folder. Then set the expire in password section with any number you prefer.

| 'passwords' => [              |
|-------------------------------|
| 'users' => [                  |
| 'provider' => 'users',        |
| 'table' => 'password_resets', |
| 'expire' => 120,              |
| 'throttle' => 60,             |
| ],                            |
| 1                             |

Now if you enter the link in your browser you will get a **Confirm Reset Password** form like this.

| Reset Password   |                  |  |
|------------------|------------------|--|
| E-Mail Address   | johndoe@test.com |  |
| Password         |                  |  |
| Confirm Password |                  |  |
|                  | Reset Password   |  |

In this form the email input will populated automatically with email from the query string. You can then enter new password in the password and confirm password inputs, then hit **Reset Password** button to proceed. Once it done you'll be taken to dashboard page.



If you take a look at password\_resets table again, the record now gone.



Saturday, September 17, 2022

Since version 5.7 Laravel has introduced Email verification and Account activation out of the box. These features force registered users to activate their accounts before accessing certain routes by hitting the verification code that sent to their emails.

These feature is not active by default. To make it active you can follow these steps.

#### Step 1 - Implement mustVerifyEmail interface in the User model

8:08 PM

```
Open your User model and implement the mustVerifyEmail interface like this: class User extends Authenticatable implements MustVerifyEmail {
    use Notifiable;
    ...
```

#### Step 2 - Enable Verification Route

Open your routes/web.php and specify verify option in Auth::routes as follow: Auth::routes(['verify' => true]);

Now if you go to your terminal and type php artisan route: list --name=verification -c you'll see three routes listed.

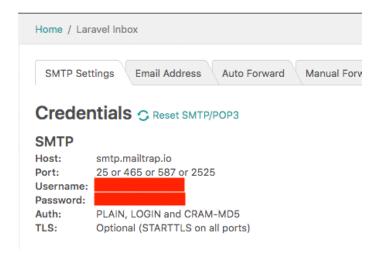
#### Step 3 - Protect your route

```
If you open app/Http/Kernel.php then go to routeMiddleware property, you will find
the verified middleware which is map to EnsureEmailIsVerified.
protected $routeMiddleware = [
// ...
 'verified' => \Illuminate\Auth\Middleware\EnsureEmailIsVerified::class,
You can protect particular route(s) by using the middleware in web.php file like so:
Route::middleware(['auth', 'verified'])->group(function () {
         Route::get('/contacts', 'ContactController@index')->name('contacts.index');
  Route::post('/contacts', 'ContactController@store')->name('contacts.store');
       // ...
});
Or you can do that in the controller's constructor like this:
class ContactController extends Controller
  public function construct()
    $this->middleware(['auth', 'verified']);
       // ...
```

#### **Step 4 - Setup Email Credentials**

In the previous lesson we've set the MAIL\_MAILER to the log to catch the email that is going to be sent inside the \*.log file. But for more realistic scenario you can set it back to smtp. By default Laravel use mailhog (formerly smtp.mailtrap.io) as the host address of the SMTP server. In order to make it work you need to install the <a href="mailhog">mailhog</a> in your machine. However in this guide we'll be using mailtrap.

During your development using **mailtrap** to capture your email is perfectly fine. Just go to mailtrap.io then register an account. Once you've registered you can choose your inbox, then go to **SMTP Settings**.



Copy username and password in the credentials section and paste to your .env file.

MAIL\_DRIVER=smtp

MAIL\_HOST=smtp.mailtrap.io

MAIL PORT=2525

MAIL USERNAME=your-user-email

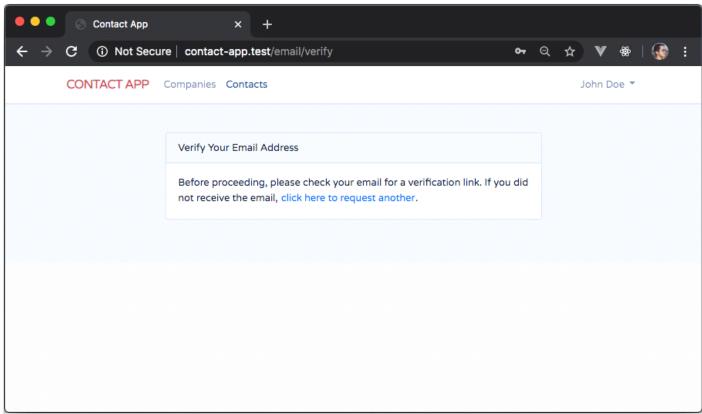
MAIL\_PASSWORD=your-password-email

MAIL\_ENCRYPTION=null

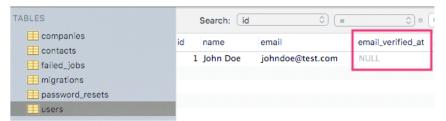
Save all changes and don't forget to restart your server if you're using php built-in server to apply the changes.

#### Step 5 - Test Email Verification functionality

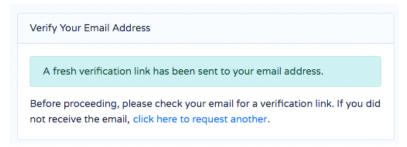
You can test the Email Verification functionality by accessing the **All Contacts** page. Since you applied the verified middleware you'll be redirected to **Verify Your Email Address** page.



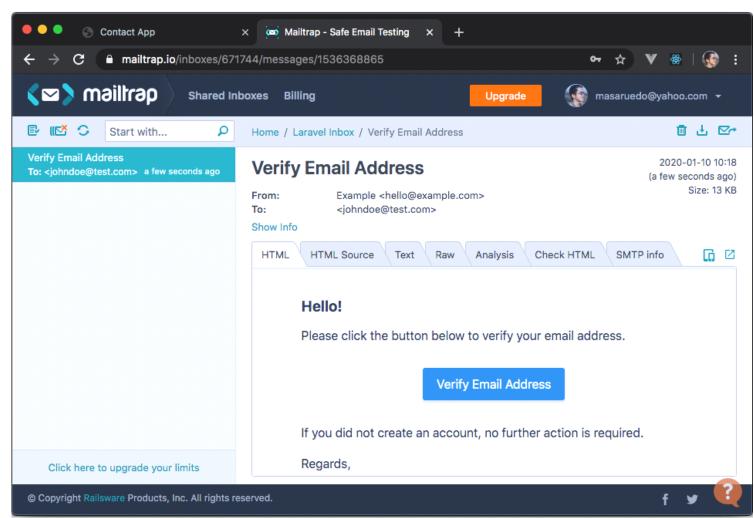
Under the hood Laravel authentication will check the email\_verified\_at of the current user in the users table. If it was empty it means you have not verified your email.



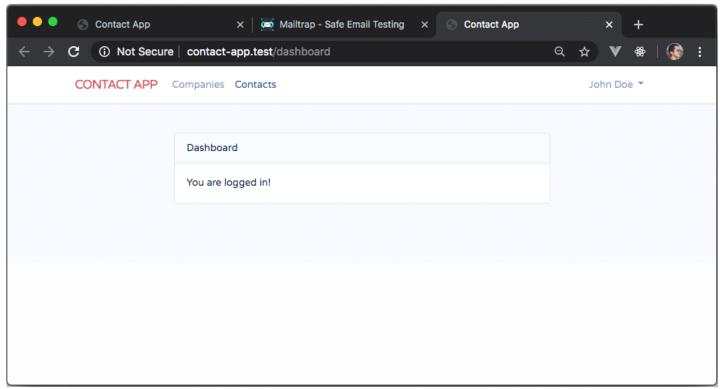
You can hit the click here to request another link to send a verification link to your email.



If you open your inbox in Mailtrap, you'll find verification email comes in. You can then hit the **Verify Email Address** button to verify your account.



Once you hit that link your account will be verified and you'll be taken to the dashboard page.



Also if you take a look at users table, the email\_verified\_at column now has been set with date and time where you verified your email.



## 008 Linking users table to companies and contacts table

Saturday, September 17, 2022 9:01 PM

### Create a migration file

→ php artisan make:migration add\_user\_id\_to\_contacts\_table

```
/database/migrations/2022_09_17_181126_add_user_id_to_contacts_table.php
use Illuminate\Database\Migrations\Migration;
use Illuminate\Database\Schema\Blueprint;
use Illuminate\Support\Facades\Schema;
class AddUserIdToContactsTable extends Migration
  * Run the migrations.
  * @return void
  public function up()
    Schema::table('contacts', function (Blueprint $table) {
      $table->unsignedBigInteger('user id')->nullable();
      $table->foreign('user_id')->references('id')->on('users')->onDelete('cascade');
    });
  * Reverse the migrations.
  * @return void
  public function down()
    Schema::table('contacts', function (Blueprint $table) {
      $table->dropColumn('user id');
    });
```

#### Make the migration

→ php artisan migrate -- safest way without lossing data If u need to reset all tables

→ php artisan migrate:refresh

# 009 User, Company and Contact relationship models

Tuesday, September 20, 2022 1:27 PM

### /app/Models/User.php

```
public function contacts()
{
    return $this->hasMany(Contact::class);
}
public function compaies()
{
    return $this->hasMany(Company::class);
}
```

\*\* add factory

User::factory() for both company and contact

```
/app/Models/Contact.php
/app/Models/Company.php
```

```
public function user()
{
   return $this->belongsTo(User::class);
}
```

## 010 Updating our factory relationships (Laravel 8

Tuesday, September 20, 2022 1:52 PM

#### For Laravel 9

### /database/seeders/DatabaseSeeder.php

```
$user = User::factory()
  ->count(5)
  ->has(Company::factory()->count(3))
  ->has(Contact::factory()->count(3))
  ->create();
```

# For Laravel 8 /database/Seeders/DatabaseSeeder.php

```
$users = factory(User::class, 5)->create();
$users->each(function ($user) {
    $companies = $user->companies()->saveMany(
        factory(Company::class, rand(2, 5))->make()
    );

$companies->each(function ($company) use ($user) {
    $company->contacts()->saveMany(
        factory(Contact::class, rand(5, 10))
        ->make()
        ->map(function ($contact) use ($user) {
          $contact->user_id = $user->id;
          return $contact;
        })
    );
});
});
```

### 011 Updating our factory relationships (Laravel 8+)

Tuesday, September 20, 2022 4:06 PM

#### 1. Introduction

If you open up DatabaseSeeder.php you'll see this line of code in run method:

Company::factory()->hasContacts(5)->count(50)->create();

If you remember, this code will create 50 companies, and for each generated company it will generate 5 contacts.

Now since we have added user\_id column in both companies and contacts tables to link them to users table, we need to make a bit change to our factory relationships.

In this lesson I'm going to show you two options on how to update factory relationships.

#### 2. 1st option: Simple option

*First*, before we generate companies and contacts table with Factory, we generate some users, let's say 5 users.

User::factory()->count(5)->create();

Company::factory()->hasContacts(5)->count(50)->create();

Second, let's open CompanyFactory. In definition method we add in the returned array a new item. The array key is user\_id, while the value is contain id of the user that taken from User model randomly. Don't forget to import the User model namespace.

#### database/factories/CompanyFactory.php

```
public function definition()
{
   return [
     // ...
     'user_id' => User::pluck('id')->random()
];
}
```

Last, let's open ContactFactory. And we do almost the same way with CompanyFactory. Except, the value of user\_id is not taken directly from User model. Why? Because if you remember contacts table also has relationship to companies table. We need to make both tables to have the same user id. To do that we can randomly choose a company id, using that id to find the model instance, and then get its user id.

```
Company::pluck('id')->random()
```

Company::find(Company::pluck('id')->random())

Company::find(Company::pluck('id')->random())->user\_id

Here how we implement that in ContactFactory.

#### database/factories/ContactFactory.php

```
public function definition()
{
  return [
    // ...
    'user_id' => Company::find(Company::pluck('id')->random())->user_id
];
}
```

An alternative way is to get all companies, take one item randomly, and get its user id. It's much simpler that the code before.

Company::all()->random()->user id

Go to terminal and run this command.

php artisan migrate:fresh --seed

If you now see your database, you'll have 5 users, 50 companies with random user id, and then 250

#### contacts.



#### 3. 2nd option: Advance

->count(10)->create([

*First*, like the first option, before we generate companies and contacts table with Factory, we generate some users, we'll create 5 users in this case. Then we loop through each user intance using each method, and pass a function.

User::factory()->count(5)->create(function (\$user) {

```
Second, we move the Compan::factory code into the function. We also change the number of companies
that will be generated from 50 to 10. However it will produce the same result: 5*10 =50.
User::factory()->count(5)->create(function ($user) {
Company::factory()->hasContacts(5)->count(10)->create();
});
Third, change has Contacts magic method to has method, and pass the Contact::factory in.
User::factory()->count(5)->create()->each(function ($user) {
 Company::factory()->has(
  Contact::factory()->count(5)
 ->count(10)->create();
});
Fourth, specify user_id in company model creation by specifying an array contains user_id. We can get
the value from $user instance.
User::factory()->count(5)->create()->each(function ($user) {
 Company::factory()->has(
  Contact::factory()->count(5)
)
 ->count(10)->create([
  'user_id' => $user->id
]);
});
Last, we need to pass user_id to contact model creation. Since we're not call create method we cannot
do the same way with the previous step. As alternative we can use factory state which return an array
contains user_id. It's value is taken from the company instance.
User::factory()->count(5)->create()->each(function ($user) {
 Company::factory()->has(
  Contact::factory()->count(5)->state(function ($attributes, Company $company) {
   return ['user_id' => $company->user_id];
  })
```

```
'user_id' => $user->id
]);
});
```

That's it, we don't need to touch CompanyFactory, ContactFactory or other files. Go to terminal and run this migrate & seed command.

php artisan migrate:fresh --seed

If you now see your database, you'll have 5 users, 50 companies with random user id, and then 250 contacts. You'll see in first 50 rows have user id 1, next 50 rows have user id 2, and so on.



# 012 Displaying Authenticated User's Data

Tuesday, September 20, 2022 4:19 PM

#### To filter user data

```
$user = Auth::user();
$companies = $user->companies()->orderBy('name')->pluck('name', 'id')->prepend('All Company', '');
```

### To attach user Id to queries

```
$request->user->contacts()->create($request->except('_token', '_method') + ['user_id' => Auth::id()]);
OR
```

Contact::create(\$request->except('\_token', '\_method') + ['user\_id' => Auth::id()]);

# 002 Route Model Binding - Implicit

Wednesday, September 21, 2022 12:05 PM

Route model binding - is an elegant way to map routes to models which helps DRY principle

```
Route::get('/contacts/{contact}', [ContactController::class, 'show'])->name('contacts.show');
Route::get('/contacts/{contact}/edit', [ContactController::class, 'edit'])->name('contacts.edit');
Route::put('/contacts/{contact}', [ContactController::class, 'update'])->name('contacts.update');
Route::delete('/contacts/{contact}', [ContactController::class, 'destroy'])->name('contacts.destroy');

Ad on controllers

public function update(Contact $contact, Request $request)
{
    //...

public function edit(Contact $contact)
{
    //...

public function destroy(Contact $contact)
{
    // Contact::destroy($id);
    $contact->delete();
    //...
```

# 003 Customizing the key on route model binding

Wednesday, September 21, 2022 12:19 PM

1. We can override the <a href="mailto:getRouteKeyName">getRouteKeyName</a>() inside the model

```
/app/Models/Contact.php
```

```
public function getRouteKeyName()
{
    return 'first_name';
}
```

We override the default id key to be queried when a route requests

2. From Laravel 7+

 $Route::get('/contacts/\{contact:first\_name\}', [ContactController::class, 'show']) -> name('contacts.show'); \\$ 

# 004 Route Model Binding - Explicit

Wednesday, September 21, 2022 12:29 PM

This way of binding is more optional it add the ablity to right more specific queries

/app/Providers/RouteServiceProvider.php

```
public function boot()
{
    Route::bind('contact', function($value){
        return Contact::where('first_name', $value)->firstOrFail();
    });
// OR
    Route::model('contacts', Contact::class);
}
```

### 005 Resource Routes

Wednesday, September 21, 2022 12:41 PM

### Defines rotes using nonconvention standard

```
Route::resource('/contacts', ContactController::class);
Route::resources([
    '/contacts' => ContactController::class,
    '/companies' => CompanyController::class
]);
```

### 006 Partial resource routes

Wednesday, September 21, 2022 1:03 PM

If you need a partial resourceful routes

Method 1: Use only()

Route::resource('/contacts',ContactController::class)->except(['delete','show']);

Method 2 : User except

Route::resource('/contacts',ContactController::class)->except('delete');

### 007 API Resourceful Route

Wednesday, September 21, 2022 1:50 PM

In API you don't need edit & create methods b/c the server don't provide any form u will only handle json data

Php artisan make:controller API/ContactController --api -m Contact

```
And add route to
/routes/api.php

use App\Http\Controllers\API\CompanyController;
use App\Http\Controllers\API\ContactController;

Route::apiResource('/contacts', ContactController::class);
Route::apiResources([
   '/contacts' => ContactController::class,
   '/companies' => CompanyController::class
]);
```

### 008 Nested Resources

Wednesday, September 21, 2022 2:47 PM

When we have one to many relationships Like one Copmany may have many contacts so

Route::resource('/companies.contacts', ContactController::class);

| POST      | companies/{company}/contacts                | App\Http\Controllers\ContactController@store   |
|-----------|---|--|
| GET HEAD  | companies/{company}/contacts                | App\Http\Controllers\ContactController@index   |
| GET HEAD  | companies/{company}/contacts/create         | App\Http\Controllers\ContactController@create  |
| GET HEAD  | companies/{company}/contacts/{contact}      | App\Http\Controllers\ContactController@show    |
| DELETE    | companies/{company}/contacts/{contact}      | App\Http\Controllers\ContactController@destroy |
| PUT PATCH | companies/{company}/contacts/{contact}      | App\Http\Controllers\ContactController@update  |
| GET HEAD  | companies/{company}/contacts/{contact}/edit | App\Http\Controllers\ContactController@edit    |

## 009 Naming resource routes

Wednesday, September 21, 2022 2:56 PM

For resourceful routes to change names or parameters

U can change route names

```
Route::resource('/contacts', ContactController::class)->names([
   'index'=>'all',
   'show'=>'contacts.view'
]);
```

Also u can change parameter names

```
Route::resource('/contacts', ContactController::class)->names([
    'index'=>'contacts.all',
    'show'=>'contacts.view'
])->parameters([
    'contacts'=>'kontak'
]);
```

### 010 Put Complex query on its model

```
Wednesday, September 21, 2022 3:05 PM
```

We can move Redundent queries to methods or models

We can move user companies

```
protected function userCompanies()
{
    $user = Auth::user();
    return $user->companies()->orderBy('name')->pluck('name', 'id')->prepend('All Company', '');
}
Call
$companies = $this->userCompanies();
```

#### Or move to company model

Call

Company::userCompanies();

```
<?php
namespace App\Models;
use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\Model;
class Company extends Model
{
    use HasFactory;
    public function contacts()
    {
        return $this->hasMany(Contact::class);
    }
    public function user()
    {
        return $this->belongsTo(User::class);
    }
    public static function userCompanies()
    {
        // $user = Auth::user();
        return self::wehere('user_id', auth()->id)->orderBy('name')->pluck('name', 'id')->prepend('All Company', '');
    }
}
```

### 011 Form Request Validation

Wednesday, September 21, 2022 3:27 PM

php make:request [Method][Model]Request

Will create /app/Http/Requests/ [Method] [Model] Request.php file

### /app/Http/Requests/ContactRequest.php

```
<?php
namespace App\Http\Requests;
use Illuminate\Foundation\Http\FormRequest;
class ContactRequest extends FormRequest
  * Determine if the user is authorized to make this request.
  * @return bool
  public function authorize()
    return true;
  * Get the validation rules that apply to the request.
  * @return array
  public function rules()
    return [
      'first_name' => 'required',
      'last_name' => 'required',
      'email' => 'required | email',
      'address' => 'required',
      'company_id' => 'required|exists:companies,id'
    ];
```

User authorization

## 012 Customize Validation error messages

Wednesday, September 21, 2022 4:34 PM

We can overide attribures() or messages()

/app/Http/Requests/ContactRequest.php

```
<?php
namespace App\Http\Requests;
use Illuminate\Foundation\Http\FormRequest;
class ContactRequest extends FormRequest
  * Determine if the user is authorized to make this request.
   * @return bool
  public function authorize()
    return true;
  * Get the validation rules that apply to the request.
   * @return array
  public function rules()
    return [
      'first name' => 'required',
      'last_name' => 'required',
      'email' => 'required | email',
      'address' => 'required',
      'company_id' => 'required|exists:companies,id'
    ];
  }
  public function attributes()
    return [
      'company id' => 'company',
      'email' => 'email address'
    ];
  public function messages()
    return [
      'email.email' => "The email is not right",
      '*.required' => "The :attribute is blaaaaaa",
    ];
```

# 013 Useful methods when working with Form Request

Thursday, September 22, 2022 11:27 AM

### To see routes and methods

dd(\$this->route('contact')); // see route contact model binding
dd(\$this->method()); // see method sent by form

For search functionality use scopes you need to override boot inside company Model and assing searchColumens varianle

```
/app/Models/Company.php
<?php
namespace App\Models;
use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\Model;
class Company extends Model
  use HasFactory;
  protected $fillable = ['name','address','website','email'];
  public $seartchColumns = ['name', 'email', 'address', 'website'];
  public static function booted()
    static::addGlobalScope(new \App\Scopes\SearchScope);
For header links
     U can use
     request()->is("companies*") == 1
      request()->segment(1) == "companies"
      request()->path() == "companies" -- this is not recommended only much exactly /companies don't match /companies/create ...
```

## 002 3 different ways debugging our queries

Thursday, September 29, 2022 3:45 PM

1. Replace get() method with toSql() See the actual sql but not see actual value bindings >>> Contact::latest()->take(3)->toSql() => "select \* from `contacts` order by `created at` desc limit 3" >>> Contact::latest()->whereCompanyId(2)->toSql() => "select \* from `contacts` where `company\_id` = ? order by `created\_at` desc" 2. DB::listen(function(\$query){ dump(\$query->sql, \$query->bindings, \$query->time);}) You can use in app / <?php namespace App\Providers; use Illuminate\Support\Facades\DB; use Illuminate\Support\Facades\Log; use Illuminate\Pagination\Paginator; use Illuminate\Support\ServiceProvider; class AppServiceProvider extends ServiceProvider public function boot() if(env('APP\_DEBUG')){ DB::listen(function(\$query){ log::info(\$query->sql, \$query->bindings, \$query->time); }); It will create log inside /storage/logs/laravel-[date].log 3. Using Laravel debugger 3rd party package

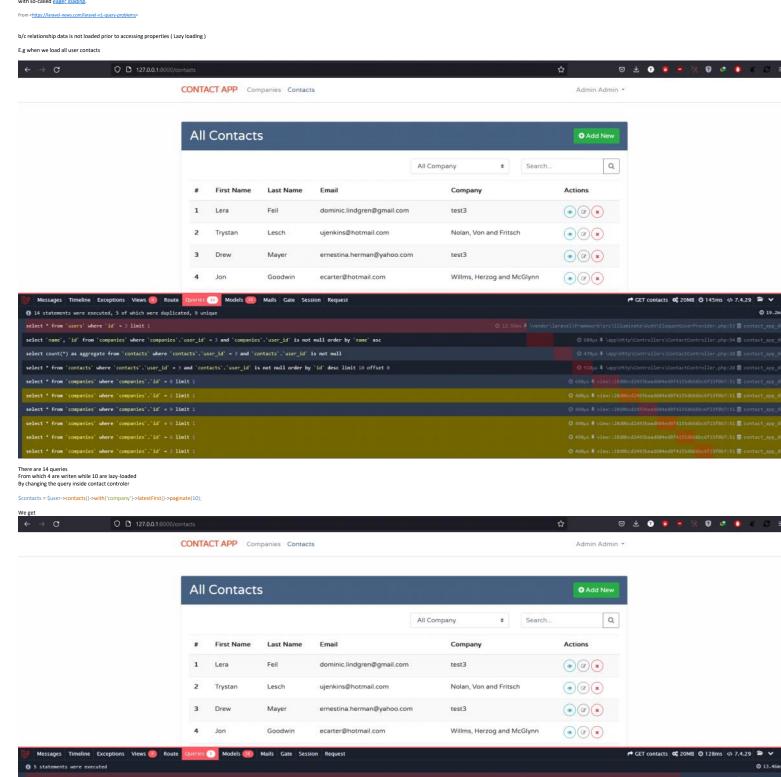
Composer require barryvdh/laravel-debuger --dev

#### 003 N+1 Query Problem & Eager LoadingUntitled page

Thursday, September 29, 2022 4:40 PM

In short, it's when Laravel code runs too many database queries. It happens because Eloquent allows developers to write a readable syntax with models, without digging deeper into what "magic" is happening under the hood.

This is not only an Eloquent, or even Laravel, problem: It's well-known in the dev industry. Why is it called "N+1"? Because, in the Eloquent case, it queries ONE row from the database, and then performs one more query for EACH related record. So, N queries, plus the record itself, total N+1. To solve it, we need to query the related records upfront, and Eloquent allows us to do that easily, with so-called eager loading.



select 'name', 'id' from 'companies' where 'companies'.'user\_id' = 3 and 'companies'.'user\_id' is not null order by 'name' asc select count(\*) as aggregate from 'contacts' where 'contacts', 'user\_id' = 3 and 'contacts', 'user\_id' is not null

### 004 Advanced Eager Loading

Thursday, September 29, 2022 6:01 PM

For eager user with('model')->for disengage without('model1','model2')

#### 1. U can eager load after retrieving queries

```
$users = User::take(2)->get();
$users->load('companies');
```

#### 2. Or when retrieving Models

E.g. when loading user model load user contacts and companies.

```
<?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\Sanctum\HasApiTokens;
class User extends Authenticatable
  use HasApiTokens, HasFactory, Notifiable;
  * The attributes that are mass assignable.
  * @var array<int, string>
  protected $fillable = [
    'name',
    'email',
    'password',
  ];
  * The attributes that should be hidden for serialization.
  * @var array<int, string>
  protected $hidden = [
    'password',
    'remember_token',
  protected $whith = ['contacts','companies'];
```

# 005 Detecting N+1 problem Automatically

Monday, October 3, 2022 4:59 PM

### **Laravel Query Detector**

From

<a href="https://beyondco.de/docs/laravel-query-detector/usage">https://github.com/beyondcode/laravel-query-detector</a>

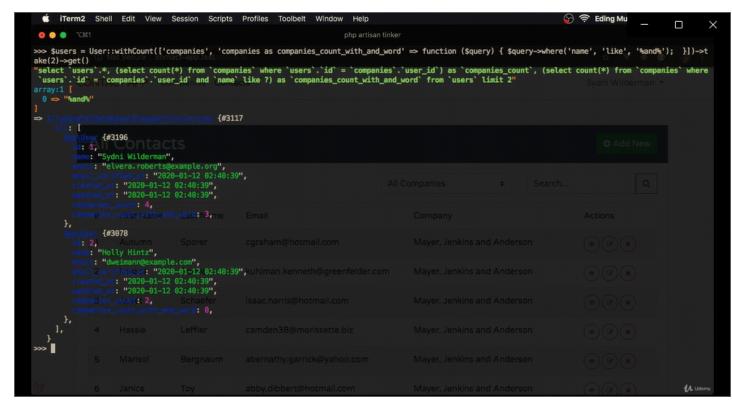
Automatically detects N+1 query problems

Monday, October 3, 2022 5:23 PM

1. Before fetching/loading

```
Using withCont() in the resulting models will have [relation]_count column
 >>> $user = User::withCount(['contacts','companies']) -> take(2) -> get()
"select `users`.*, (select count(*) from `contacts` where `users`.`id` = `contacts`.`user_id`) as `contacts_count', (select count(*) from `companies` where `users`.`id` = `companies`.`user_id`) as `companies_
 count' from 'users' limit 2"
 1.01
 "select `users`.*, (select count(*) from `contacts` where `users`.`id` = `contacts`.`user_id`) as `conta
 cts_count`, (select count(*) from `companies` where `users`.`id` = `companies`.`user_id`) as `companies
 count' from 'users' limit 2"
 ⇒ Illuminate\Database\Eloquent\Collection {#4593
          App\Models\User {#4592
            id: 1,
name: "Corrine Strosin",
             email: "schulist.telly@example.org",
             email_verified_at: "2022-09-20 13:16:38",
             #password: "$2y$10$92IXUNpkj00r0Q5byMi.Ye4oKoEa3Ro9llC/.og/at2.uheWG/igi",
            #remember_token: "s77RFfL6D7I1tf9LWDJCw1qpm4HCXgLYy5A7a7nyXNs9MM7jlmExSvQA7I2a",
created_at: "2022-09-20 13:16:38",
             updated_at: "2022-09-20 13:16:38",
          App\Models\User {#4596
            id: 2,
name: "Lew Boehm",
             email: "erik32@example.com",
            email_verified_at: "2022-09-20 13:16:38",
#password: "$2y$10$92IXUNpkj00r0Q5byMi.Ye4oKoEa3Ro9llC/.og/at2.uheWG/igi",
#remember_token: "PAv1mUVhUS",
            created_at: "2022-09-20 13:16:38",
            updated_at: "2022-09-20 13:16:38",
```

Users sub-query u can also have multiple counts



2. After fetching model

```
>>> $user = User::take(1)->get()
 "select * from `users` limit 1"
0.95
 "select * from `users` limit 1"
0.95
⇒ Illuminate\Database\Eloquent\Collection {#4671
         App\Models\User {#4670
            id: 1,
name: "Corrine Strosin",
            email: "schulist.telly@example.org",
            email_verified_at: "2022-09-20 13:16:38",
           #password: "$2y$10$92IXUNpkj00r0Q5byMi.Ye4oKoEa3Ro9llC/.og/at2.uheWG/igi",
#remember_token: "s77RFfL6D7I1tf9LWDJCw1qpm4HCXgLYy5A7a7nyXNs9MM7jlmExSvQA7I2a",
created_at: "2022-09-20 13:16:38",
            updated_at: "2022-09-20 13:16:38",
>>> $user->loadCount('companies')
"select `id`, (select count(*) from `companies` where `users`.`id` = `companies`.`user_id`) as `companie s_count` from `users` where `users`.`id` in (?)"
array:1 [
0 => 1
"select `id`, (select count(*) from `companies` where `users`.`id` = `companies`.`user_id`) as `companie s_count` from `users` where `users`.`id` in (?)" array:1 [
1.01
⇒ Illuminate\Database\Eloquent\Collection {#4671
       all: [
         App\Models\User {#4670
            id: 1,
name: "Corrine Strosin",
email: "schulist.telly@example.org",
email_verified_at: "2022-09-20 13:16:38",
            #password: "$2y$10$92IXUNpkj00r0Q5byMi.Ye4oKoEa3Ro9llC/.og/at2.uheWG/igi",
            #remember_token: "s77RFfL6D7I1tf9LWDJCw1qpm4HCXgLYy5A7a7nyXNs9MM7jlmExSvQA7I2a",
            created_at: "2022-09-20 13:16:38", updated_at: "2022-09-20 13:16:38",
         },
```

\*if there is a select method make sure it is called first

User::select(['name'])->withCount('contacts');

# 002 Setting up endpoints for edit profile

Monday, October 3, 2022 6:10 PM

#### Create route

Route::get('/setting/profile', [ProfileController::class, 'edit'])->name('setting.profile.edit');
Route::put('/setting/profile', [ProfileController::class, 'update'])->name('setting.profile.update');

### Create controller

php artisan make:controller Settings\ProfileController -r

### Notes

Thursday, August 11, 2022 9:39 PM

php artisan tinker | Laravel command line interpreter

\DB::enableQueryLog()
Dd(\DB::getQueryLog())

DRY (Don't Repeat Yourself)