Laravel Framework

10/02/2024

LET PANEL
https://www.mykoenig.com/
Email : Registered Email id
Password : 183539

Short break : 11.00 am - 15 mints
Lunch break : 1.30pm - 45 mints
Short break : 4.00 pm - 15mints

DAY 1

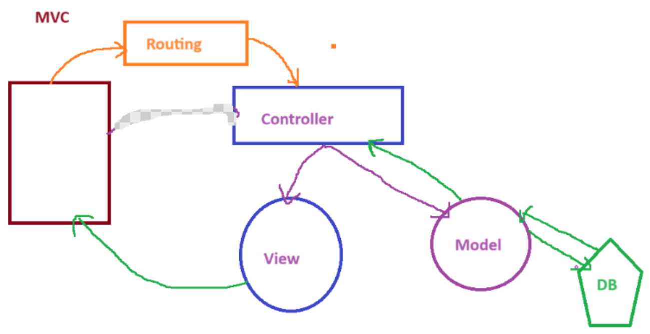
Attendance url
https://rms.koenig-solutions.com/MarkAssignmentAttendance.aspx?AId=183539&Opid=732318

Please share your feedback using below link for your experience so far
https://rms.koenig-solutions.com/InterimFeedback.aspx?id=±¹µ¸·¾&frm=5

Core PHP
Sql Injection -prepare statement
XSS attack
CSRF attack

Laravel

by default



Artisan CLI Interface
- set of commands

```
php artisan make:controller TestController
```

`<?php echo $name;?>` core php

`{{ $name }}`

Official Docs
https://laravel.com/docs/10.x/readme

SETUP

1) XAMPP
   https://www.apachefriends.org/

2) COMPOSER
   https://getcomposer.org/

3) Install Laravel Application
```
Composer create-project laravel/laravel  projectname
```

4) Run the Application
   cd projectname
   Open project in visual studio code
   Open Terminal in vscode

```
php artisan serve
```

5) Open browser : localhost:8000

Route and Route Parameter

Basic Routing

- navigating one page to page
- routes/web.php

Framework
- DRY principle
  - Don't Repeat Yourself

```
# localhost:8000 => Default Url
Route::get('/', function () {
    return 'Welcome TO Laravel';
});

#localhost:8000/login
Route::get('/login',function(){
     return 'Welcome To Login Panel';
});

// Example
    // Route::get('/books',function(){
    //       return 'Book Index Page';
    // });
    // Route::get('/books/action',function(){
```

```
    //     return 'Book Action Page';
    // });
    // Route::get('/books/drama',function(){
    //     return 'Book drama Page';
    // });
    // Route::get('/books/comedy',function(){
    //     return 'Book comedy Page';
    // });

    // Route::get('/magzine',function(){
    //     return 'magzine Index Page';
    // });
    // Route::get('/magzine/technology',function(){
    //     return 'magzine technology Page';
    // });
    // Route::get('/magzine/celebrity',function(){
    //     return 'magzine celebrity Page';
    // });

# Problem with above code :  repetation
# solution :  Route Parameter
                  # Required Parameter
                  # optional Parameter

# Required Parameter
    // Route::get('/books',function(){
    //    return 'Book Index Page';
    // });
    // Route::get('/books/{bookType}',function($bookType){
    //     return "Book $bookType Page";
    // });

    // Route::get('/magzine',function(){
    //     return 'magzine Index Page';
    // });
    // Route::get('/magzine/{magzineType}',function($magzineType){
    //     return "magzine $magzineType Page";
    // });

#Optional Parameter
```

```
// Route::get('/books/{bookType?}',function($bookType=null){
//      if($bookType=== null){
//         return 'Book Index Page';
//      }
//      return "Book $bookType Page";
//   });

// Route::get('/magzine/{magzineType?}',function($magzineType=null){
//      if($magzineType===null){
//         return "magzine Index Page";
//      }
//      return "magzine $magzineType Page";
// });


// -----------------Route Parameter Constraint---------------------

// Route::get('/login/{username}/{age}', function($username, $age){
//     return "Given Username = $username and age = $age";

// })->where(['age'=>'[0-9]+']);

# Set Constraint GLobally in RouteServiceProvider file
Route::get('/login/{username}/{age}', function($username, $age){
    return "Given Username = $username and age = $age";

});
```

RouteServiceProvider.php

```
 public function boot(): void
    {

        # Set Constraint Globally
        Route::pattern('age','[0-9]+');
}
```

Response

View() and redirect()

Web.php

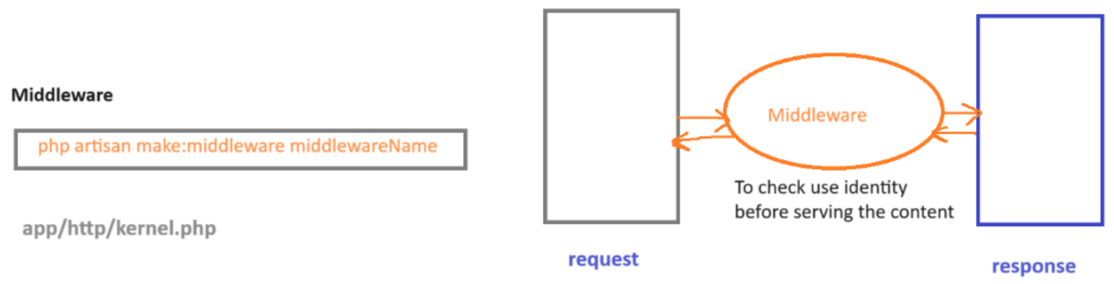
```
# localhost:8000 => Default Url
    Route::get('/', function () {
        return view('sample');
    });

#pass data to view
    // Route::get('/sample', function(){

    //     return view('sample',['user'=>'Peter']);
    //     # key will use as php variable in view file
    // });

#another way of passing data
    // Route::get('/sample', function(){
    //     return view('sample')->with('user','Rose');
    // });


# Pass Route Parameter to View
    // Route::get('/login/{user}/{pass}',function($user,$pass){
    //       return view('sample',['username'=>$user,'pass'=>$pass]);
    // });


// -------------redirect()--------------------------

// Route::get('/login/{username}/{password}',
function($username,$password){

//          if($username === 'admin'  && $password === 'admin'){
//                 return redirect('/success');
//          }
//          else{
//                  return redirect('/failure');
//          }
// });
// Route::get('/success', function(){
//       return 'Login Successfully';
// });
// Route::get('/failure',function(){
//       return 'Login Failed...';
// });


#------------------Passing data with redirect()---------------------
Route::get('/login/{username}/{password}', function($username,$password){

    if($username === 'admin'  && $password === 'admin'){
          return redirect('/dashboard')->with('status','Login
Successfully..');
    }
    else{
           return redirect('/dashboard')->with('status','Login Failed..');
    }
});

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

view/Sample.php

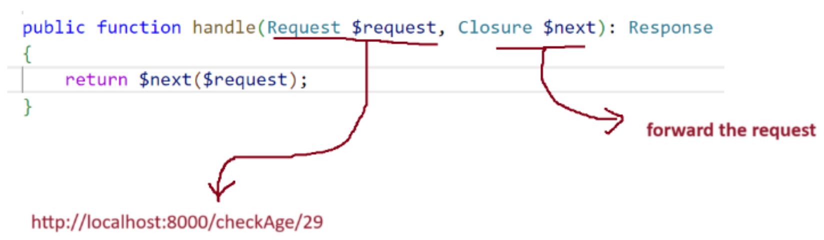
```
<h1>Welcome TO Sample page</h1>
<h2>This is Day 1</h2>

<?php if(isset($user)):?>
     <h4>
       Username =  <?php echo $user;?>
     </h4>

<?php endif;?>

<?php if(isset($username)):?>
  <h3>
```

```
    User = <?php echo $username;?>

</h3>
<h3>
    Password = <?php echo $pass;?>

</h3>

<?php endif;?>

<!-- display data coming through the redirect() -->
<?php if(session('status')):?>

   <h3><?php echo session('status');?></h3>

<?php endif;?>
```

Middleware



```
php artisan make:middleware middlewareName
```



```
public function handle(Request $request, Closure $next): Response
{
    return $next($request);
}
```

Create middleware using below cmd

```
php artisan make:middleware AgeMiddleware
```

AgeMiddleware.php

```php
 public function handle(Request $request, Closure $next): Response
    {
        if($request->age < 18){
              return redirect('/invalidAge');
        }
        return $next($request);
    }
```

Web.php

```php
#Middleware
#localhost:8000/checkAge/23
#localhost:8000/checkAge/11

// Route::get('/checkAge/{age}', function($age){
//    return "Given Age is $age  and can Vote";
// })->middleware(AgeMiddleware::class);

Route::get('/checkAge/{age}', function($age){
    return "Given Age is $age  and can Vote";
 })->middleware('age');

Route::get('/invalidAge',function(){
    return "can not Vote";
});
```

app/http/kernal.php

```php
protected $middlewareAliases = [

        'age'=> \App\Http\Middleware\AgeMiddleware::class,
    ];
```

Task

After failure from middleware , display below output
Ex: - localhost:8000/checkAge/11
Output : **11 = can not vote**

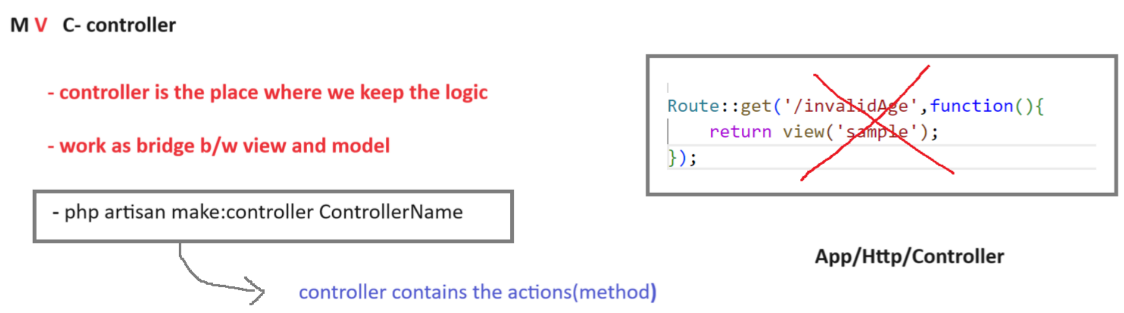
Solution:

```
public function handle(Request $request, Closure $next): Response
    {
        if($request->age < 18){
              return redirect('/invalidAge')->with('age',$request->age);
        }
        return $next($request);
    }
```

Sample.php

```
<?php if(session('age')):?>

<h3><?php echo "Given Age is". session('age') ."and can not Vote";?></h3>

<?php endif;?>
```

Controller



M V C- controller

- controller is the place where we keep the logic

- work as bridge b/w view and model

- php artisan make:controller ControllerName

controller contains the actions(method)

~~Route::get('/invalidAge',function(){~~
~~return view('sample');~~
~~});~~

App/Http/Controller

php artisan make:controller TestController

TestController.php

```
class TestController extends Controller
{
    //

    public function showTestInfo(){
        return view('sample');
    }

    public function PrintTest($testName){
        return view('sample')->with('testName',$testName);
    }


}
```

Web.php

```
Route::get('/test',[TestController::class,'showTestInfo']);
Route::get('/test/{testName}',[TestController::class,'PrintTest']);
```

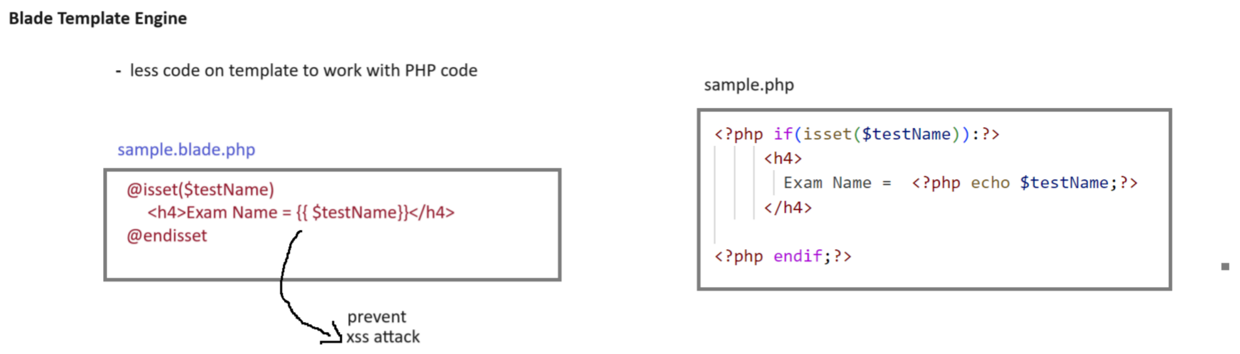
Resource Controller

php artisan make:controller PhotoController –resource

Web.php

```
Route::resource('/photo',PhotoController::class);
```

Blade Template Engine


Blade Template Engine

- less code on template to work with PHP code

sample.blade.php

```
@isset($testName)
   <h4>Exam Name = {{ $testName}}</h4>
@endisset
```

sample.php

```
<?php if(isset($testName)):?>
    <h4>
      Exam Name =  <?php echo $testName;?>
    </h4>

<?php endif;?>
```

php artisan make:controller BladeController

Web.php

```
# Blade Controller
```

```
Route::get('/login/{username}/{password}',[BladeController::class,'showLog
inIngo']);
Route::get('/user/{role}',[BladeController::class,'showUserRole']);
Route::get('/user/score/{score}',[BladeController::class, 'showGrade']);
Route::get('/employee', [BladeController::class, 'showEmployeeList']);
```

BladeController.php

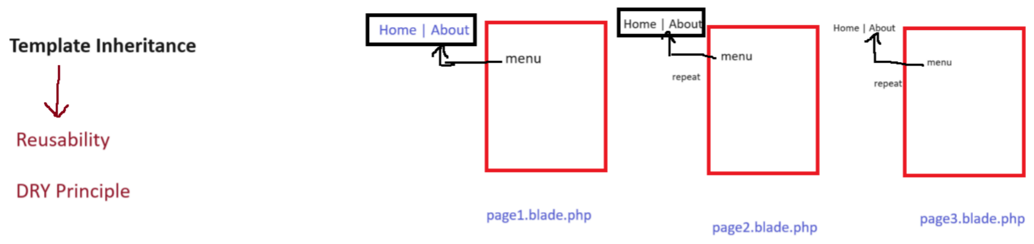
```
class BladeController extends Controller
{
    //
    public function showLoginIngo($username,$password){
          return view('bladeDemo')
                ->with(['user'=>$username,'pass'=>$password]);
    }

    public function showUserRole($role){
       return view('bladeDemo')->with('role',$role);
    }

    public function showGrade($score){
        return view('bladeDemo')->with('score',$score);
    }

    public function showEmployeeList(){
        $users = ['Mike','Peter','Rose','Kerry'];
        return view('bladeDemo')->with('empRecords',$users);
    }
}
```

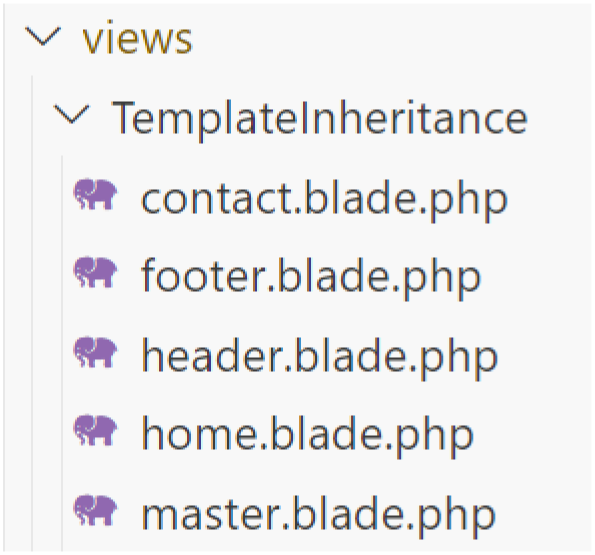
bladeDemo.blade.php

```
@isset($user)
 <h3>Username = {{$user}}</h3>
 <h4>Password = {{$pass}}</h4>
@endisset

@isset($role)
   @if($role==='admin')
     <h2>Admin Dashboard</h2>
   @elseif($role==='guest')
      <h2>Guest Dashboard</h2>

   @endif


@endisset

@isset($score)

  @switch($score)
     @case($score >=90)
       <strong>Grade A</strong>
       @break
     @case($score>=80)
       <strong>Grade B</strong>
       @break
     @default
         <strong>Fail</strong>
  @endswitch

@endisset


@isset($empRecords)
  <ul>
     @foreach($empRecords as $r)
      <li>{{$r}}</li>
```

```
    @endforeach

  </ul>

@endisset
```

Template Inheritance





```
views
  TemplateInheritance
    contact.blade.php
    footer.blade.php
    header.blade.php
    home.blade.php
    master.blade.php
```

```
# Template Inheritance
```

web.php

```
Route::view('/dashboard','TemplateInheritance.master');

// Route::get('/home',[BladeController::class,'showHomePage']);
// Route::get('/contact',[BladeController::class,'showContactPage']);
```

Master.blade.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>@yield('title')</title>
</head>
<body>
        @include('TemplateInheritance.header')

        @yield('content')

        @include('TemplateInheritance.footer')
</body>
```

```
</html>
```

Header.blade.php

```
<a href="{{route('home')}}">Home</a>
<!-- {{route('home')}} ==
http://localhost:8000//home/myhome/firstpage/application/dashboard' -->

<a href="http://localhost:8000/contact">Contact</a>
<a href="{{url('login/user')}}">Login</a>

Footer.blade.php
<p>copyright@2024</p>
```

Home.blade.php

```
@extends('TemplateInheritance.master')

@section('title','Home Page')

@section('content')

<p>You are at <strong>HomePage</strong></p>

<img width="100" height="100" src="{{asset('images/camera.jpg')}}" alt="">


@endsection
```

Contact.blade.php

```
@extends('TemplateInheritance.master')
```

```
@section('title','Contact Page')

@section('content')

<p>You are at <strong>ContactPage</strong></p>


@endsection
```

Advance Routing

```
# Advance Routing
  # Named Route

Route::get('/home/myhome/firstpage/application/dashboard/w/e/r/t/t/w/r',[B
ladeController::class,'showHomePage'])->name('home');
  Route::get('/contact',[BladeController::class,'showContactPage']);


 # Route Group with Middleware
 Route::middleware(AgeMiddleware::class)->group(function(){
    Route::get('/api/route1',[BladeController::class,
'showEmployeeList']);
    Route::get('/api/route2',[BladeController::class,
'showEmployeeList']);
    Route::get('/api/route3',[BladeController::class,
'showEmployeeList']);
    Route::get('/api/route4',[BladeController::class,
'showEmployeeList']);
 });
 # Route Group with Controller

Route::controller(BladeController::class)->middleware(AgeMiddleware::class
)->group(function(){
    Route::get('/api/route1','showEmployeeList');
    Route::get('/api/route2','showEmployeeList');
    Route::get('/api/route3','showEmployeeList');
    Route::get('/api/route4','showEmployeeList');
 });

 # Route Group with prefix

Route::prefix('/api')->controller(BladeController::class)->middleware(AgeM
iddleware::class)->group(function(){
    Route::get('/route1','showEmployeeList');
    Route::get('/route2','showEmployeeList');
    Route::get('/route3','showEmployeeList');
    Route::get('/route4','showEmployeeList');
 });
```

URL GENERATION

```
 # URL GENERATION

 Route::view('/login/user', 'TemplateInheritance.login');

<a href="{{route('home')}}">Home</a>
<!-- {{route('home')}} ==
http://localhost:8000//home/myhome/firstpage/application/dashboard' -->

<a href="http://localhost:8000/contact">Contact</a>
<a href="{{url('login/user')}}">Login</a>
```

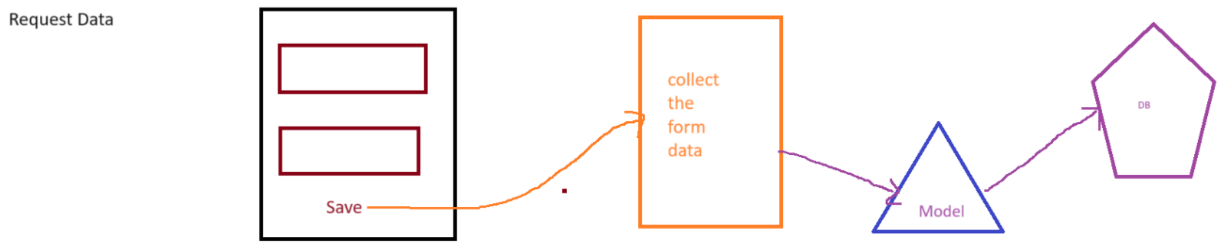
Create a folder called images inside public folder

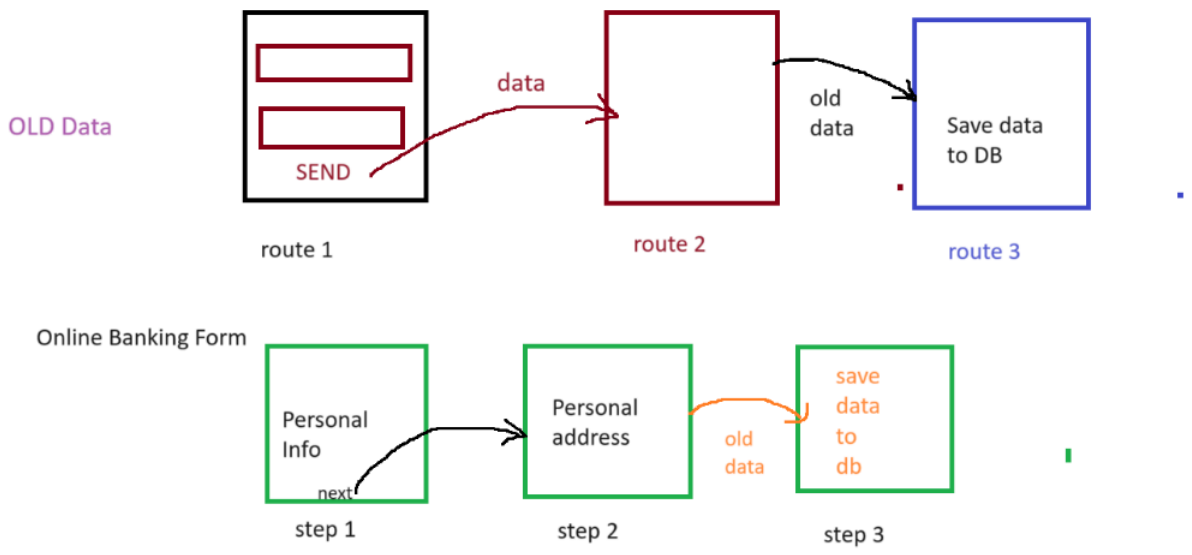
Put an image inside images folder

Home.blade.php

```
@extends('TemplateInheritance.master')

@section('title','Home Page')

@section('content')

<p>You are at <strong>HomePage</strong></p>

<img width="100" height="100" src="{{asset('images/camera.jpg')}}" alt="">


@endsection
```

REQUEST DATA





Web.php

```
Route::view('/form', 'Form.form');

Route::post('/handleSubmit',[FormController::class,'processFormData']);

Route::get('/oldData',[FormController::class,'workWithOldData']);
```

Default.blade.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
       @yield('content')
</body>
```

```
</html>
```

form.blade.php

```
@extends('Form.default')

@section('content')

   <form
         action="{{url('handleSubmit')}}"
         method="POST"
         enctype="multipart/form-data"
         >
      @csrf
      <p>
         <label for="user">Username</label>
         <input type="text" name="username" id="user">
      </p>
      <p>
         <label for="pass">Password</label>
         <input type="password" name="password" id="pass">
      </p>
      <p>

         <input type="file" name="book">
      </p>
      <p>
        <input type="submit" value="Login">
      </p>


   </form>

@endsection
```

FormController.php

```php
class FormController extends Controller
{
    //
    public function processFormData(Request $request){
         # Collect all Input Data
        //    $userInput = $request->all();
        //    echo '<pre>';
        //    var_dump($userInput);

        # Collect Individual Form Field
            // $userInput = $request->input('username');
            // echo '<pre>';
            // var_dump($userInput);


        # Collect only few fields
            // $userInput = $request->only(['username','password']);
            // echo '<pre>';
            // var_dump($userInput);

            // $userInput = $request->except(['_token']);
            // echo '<pre>';
            // var_dump($userInput);

        # Check the existence of Field

        // if($request->has('username')){
        //     $userInput = $request->all();
        //     echo '<pre>';
        //     var_dump($userInput);
        // }

        # Working with Old Data
        // $request->flash();
        // // $request->flashExcept('_token');
        // // $request->flashOnly('username','password');
        // return redirect('/oldData');

        #Working with File Upload

        $userInput = $request->file('book');
        echo '<pre>';
        var_dump($userInput->path());
        var_dump($userInput->extension());


    }

    public function workWithOldData(Request $request){
            # Collect old Data
                // $userInput = $request->old();
                // echo '<pre>';
                // var_dump($userInput);
    }
}
```

Form Builder

Install below package

Composer require laravelcollective/html

form.blade.php

```
@extends('Form.default')


@section('content')
  {{Form::open(['url'=>'handleSubmit','files'=>true])}}

     {{Form::label('user','Username')}}
     {{Form::text('username',null,['placeholder'=>'Enter Username'])}}
     <br><br>
     {{Form::label('password','Password')}}
     {{Form::password('password',null,['placeholder'=>'Enter Password'])}}

     <br><br>
     <!-- Radio Button -->
     {{Form::label('gender','Gender')}}
     {{Form::radio('gender','male')}} Male
     {{Form::radio('gender','female')}} Female

     <br><br>
     <!-- Checkbox -->
     {{Form::label('lang','Language')}}
     {{Form::checkbox('lang[]','English')}} English
     {{Form::checkbox('lang[]','Hindi')}} Hindi
     {{Form::checkbox('lang[]','Spanish')}} Spanish

     <br><br>
     <!-- TextArea -->
     {{Form::label('Comment','Comment')}}
     {{Form::textarea('comment','Please share your experience')}}

     <br><br>
     <!-- Dropdown list -->
     {{Form::label('Location','Location')}}
     {{Form::select('location',[
              'USA'=>'USA',
              'INDIA'=>'INDIA',
              'UK' => 'UK'
      ])}}

      <br><br>
     <!-- Dropdown list -->
     {{Form::label('Document','Upload Docs')}}
     {{Form::file('document')}}

     <br><br>
     {{Form::submit('Send')}}


   {{Form::close()}}
@endsection
```

Validation Message

Web.php

```
Route::post('/handleFormBuilderSubmit',[FormController::class,'workWithFor
mBuilder']);
```

```
FormController.php
 public function workWithFormBuilder(Request $request){
          #----Add Validation-----------
                $request->validate([
                           'username'=>'required | min:4',
                           'password'=>'required | min:6'
                ]);

                $userInput = $request->all();
                echo '<pre>';
                var_dump($userInput);
    }
```

form.blade.php

```
@extends('Form.default')


@section('content')
   {{Form::open(['url'=>'handleFormBuilderSubmit','files'=>true])}}

     {{Form::label('user','Username')}}
     {{Form::text('username',null,['placeholder'=>'Enter Username'])}}
     <!-- Another way of printing validation message -->
     @error('username')
           <span style="color:red">{{$message}}</span>
     @enderror
     <br><br>
     {{Form::label('password','Password')}}
     {{Form::password('password',['placeholder'=>'*********'])}}
    <!-- Another way of printing validation message -->
     @error('password')
           <span style="color:red">{{$message}}</span>
     @enderror
     <br><br>
     {{Form::submit('Send')}}


   {{Form::close()}}
```

```
@endsection

<!-- Display Validation Error Message -->
<!-- @if($errors->any())
    <ul>
        @foreach($errors->all() as $err)
              <li style="color:red">{{$err}}</li>
        @endforeach
    </ul>

@endif -->
```

Day 2

Attendance Url
https://rms.koenig-solutions.com/MarkAssignmentAttendance.aspx?AId=183539&Opid=732319

Custom Validation Message/ Rule

php artisan make:request CustomFormRequest

CustomFormRequest.php

```
class CustomFormRequest extends FormRequest
{
    /**
     * Determine if the user is authorized to make this request.
     */
    public function authorize(): bool
    {
        return true;
    }

    /**
```

```php
     * Get the validation rules that apply to the request.
     *
     * @return array<string,
\Illuminate\Contracts\Validation\ValidationRule|array<mixed>|string>
     */
    public function rules(): array
    {
        return [
            //
            //  'username'=>'required | min:4 | Uppercase',
             'username'=>['required','min:4', new Uppercase],
             'password'=>'required | min:6'
        ];
    }

    public function messages()
    {
        //  return[
        //      'username.required'=>'username can not be left blank',
        //      'password.required'=>'password can not be left blank',
        //      'username.min'=>'minimum 4 characters',
        //      'password.min'=>'minimum 6 characters'
        //  ];

        return[
            'required'=>':attribute can not be left blank',
            'username.min'=>'minimum 4 characters',
            'password.min'=>'minimum 6 characters'
        ];
    }
}
```

php artisan make:rule Uppercase

Uppercase.php

```
public function validate(string $attribute, mixed $value, Closure $fail):
void
    {
        // user is given : JOHN
        if(strtoupper($value) !== $value){
            $fail('The :attribute must be uppercase');
        }

    }
```

FormController.php

```
 public function workWithFormBuilder(CustomFormRequest $request){

               $userInput = $request->all();
               echo '<pre>';
               var_dump($userInput);
    }
```

Practice: Create a custom validation Rule

Scenario:
I want to validate the inputted birth year and only accept from 1990 to the current year.

If the user provides less than 1990 or more than the current year it will throw a validation error.

DATABASE

Use Mysql Service from below cloud
https://console.clever-cloud.com/

.env

```
DB_CONNECTION=mysql
DB_HOST=bgl7re7uxl5b2366ybpk-mysql.services.clever-cloud.com
DB_PORT=3306
DB_DATABASE=bgl7re7uxl5b2366ybpk
DB_USERNAME=unrggbhay4hn6ozv
DB_PASSWORD=kz5McpZG3Zu5lu7PKW02
```

Multiple connection

```
DB_CONNECTION=mysql
DB_HOST_SECOND=br4rjq6touvjkomi3m5k-mysql.services.clever-cloud.com
DB_PORT_SECOND=3306
DB_DATABASE_SECOND=br4rjq6touvjkomi3m5k
DB_USERNAME_SECOND=ucdhtod0g4wcbe4m
DB_PASSWORD_SECOND=Mds826ZUxSZDeFcvcm9K
```

config/database.php , just add below code

```
 'mysql2' => [
            'driver' => 'mysql',
            'url' => env('DATABASE_URL'),
            'host' => env('DB_HOST_SECOND', '127.0.0.1'),
            'port' => env('DB_PORT_SECOND', '3306'),
            'database' => env('DB_DATABASE_SECOND', 'forge'),
            'username' => env('DB_USERNAME_SECOND', 'forge'),
            'password' => env('DB_PASSWORD_SECOND', ''),
            'unix_socket' => env('DB_SOCKET', ''),
            'charset' => 'utf8mb4',
            'collation' => 'utf8mb4_unicode_ci',
            'prefix' => '',
            'prefix_indexes' => true,
            'strict' => true,
            'engine' => null,
            'options' => extension_loaded('pdo_mysql') ? array_filter([
                PDO::MYSQL_ATTR_SSL_CA => env('MYSQL_ATTR_SSL_CA'),
            ]) : [],
        ],
```

php artisan make:controller DBController

DBController.php

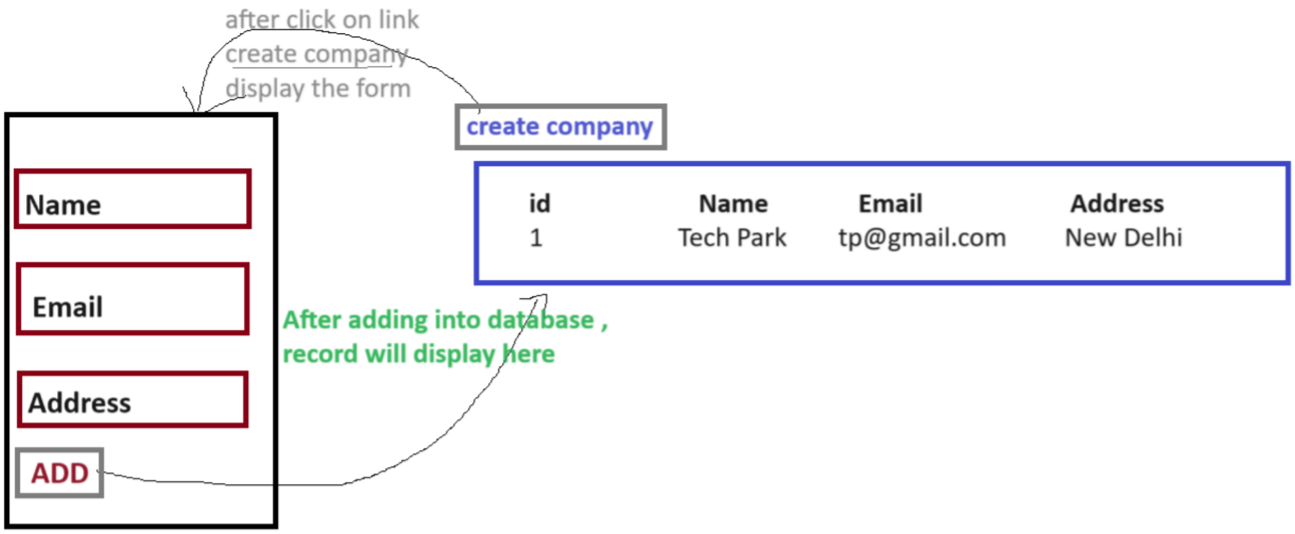
```
class DBController extends Controller
{
    //

    public function insert(){
         $result = DB::insert('INSERT INTO products(name,image,price)
VALUES(:name,:image,:price)',[
               'image'=>'https://via.placeholder.com/160',
                'name'=>'Product 2',
                'price'=>94
           ]);

         var_dump($result);
    }

    public function read(){
        //   $productData =   DB::select('SELECT * FROM products');
        //   return view('database.read',['products'=>$productData]);

        $productData =   DB::select('SELECT * FROM products WHERE
id=:id',['id'=>2]);
        echo '<pre>';
        var_dump($productData);

    }
    public function update(){
          $result = DB::update('UPDATE products SET price=100 WHERE id =
:id',['id'=>2]);
          echo '<pre>';
          print_r($result);
    }

    public function delete(){
           $result = DB::delete('DELETE FROM products WHERE
id=:id',['id'=>2]);
           echo '<pre>';
           print_r($result);

    }

    public function execute_multiple_query(){
           DB::transaction(function(){
                DB::update('UPDATE products SET price =33 WHERE
id=:id',['id'=>1]);
                DB::insert('INSERT INTO products(name,image,price)
VALUES(:name,:image,:price)',[
                 'image'=>'https://via.placeholder.com/160',
                  'name'=>'Product 3',
                  'price'=>44
            ]);

           });
    }

    public function muliple_connection_database(){
          $result1=  DB::connection('mysql')->select('SELECT * FROM
products');
          $result =  DB::connection('mysql2')->select('SELECT * FROM
courses');
          echo '<pre>';
           print_r($result);
           print_r($result1);
    }
```

```
}
```

Web.php

```
Route::get('/insert',[DBController::class,'insert']);
Route::get('/read',[DBController::class,'read']);
Route::get('/update',[DBController::class,'update']);
Route::get('/delete',[DBController::class,'delete']);
Route::get('/execute_multiple_query',[DBController::class,'execute_multipl
e_query']);
Route::get('/muliple_connection',[DBController::class,'muliple_connection_
database']);
```

Practice



id	Name	Email	Address
1	Tech Park	tp@gmail.com	New Delhi

Solution:

Web.php

```
Route::get('/dashboard', [DBController::class,'showDashboard']);
Route::view('/create','Form.addNew');
Route::post('/handleSubmit',[DBController::class,'saveRecord']);
```

DBController.php

```
 public function showDashboard(){
          $productData =   DB::select('SELECT * FROM products');
          return view('database.read',['products'=>$productData]);
    }

    public function saveRecord(Request $request){
          DB::insert('INSERT INTO products(name,image,price)
VALUES(:name,:image,:price)',[
               'image'=>$request->image,
               'name'=>$request->name,
               'price'=>$request->price
          ]);

          return redirect('/dashboard')->with('status','data added
successfully');

    }
```

addNew.blade.php

```
{{Form::open(['url'=>'handleSubmit'])}}
<br><br>
     {{Form::label('name','Name')}}
     {{Form::text('name')}}

     <br><br>
     {{Form::label('image','Image')}}
     {{Form::text('image')}}
     <br><br>
     {{Form::label('price','Price')}}
     {{Form::text('price')}}
     <br><br>
     {{Form::submit('Save')}}

{{Form::close()}}
```

read.blade.php

```

<a href="{{url('/create')}}">Create New Record</a>
<br><br>
@if(session('status'))
  <span style="color:green"><strong>{{session('status')}}</strong></span>
@endif
<br>
<table border="1">
     <thead>
          <tr>
             <th>ID</th>
              <th>NAME</th>
              <th>IMAGE</th>
               <th>PRICE</th>
          </tr>
     </thead>
     <tbody>
            @foreach($products as $p)
                <tr>
                    <td>{{$p->id}}</td>
                    <td>{{$p->name}}</td>
                    <td>{{$p->image}}</td>
                    <td>{{$p->price}}</td>
                </tr>

            @endforeach
     </tbody>
</table>
```

Query Builder

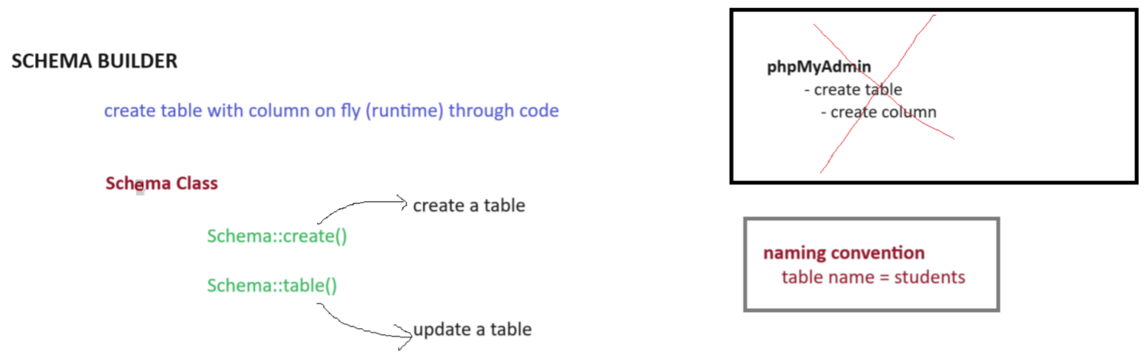
web.php

```
// ----Query Builder---------------

// Route::get('/queryBuilder', [DBController::class,
'workWithQueryBuilder']);
// Route::get('/queryBuilder', [DBController::class,
'workWithQueryBuilderReading']);
// Route::get('/queryBuilder', [DBController::class,
'workWithQueryBuilderUpdate']);
Route::get('/queryBuilder', [DBController::class,
'workWithQueryBuilderDelete']);
```

DBController.php

```

    public function workWithQueryBuilder(){
      # Insertion
            DB::table('products')->insert(
                 [
                        [
                              'image'=>'https://via.placeholder.com/160',
                              'name'=>'Product 11',
                              'price'=>98
                        ],
                        [
                              'image'=>'https://via.placeholder.com/160',
                              'name'=>'Product 12',
                              'price'=>23
                        ]
                 ]
         );
            echo '<h4>Record added successfully';

    }

    public function workWithQueryBuilderReading(){
           # Retrieve all Records
            //       $products =  DB::table('products')->get();
            //       echo  '<pre>';
            //       print_r($products);

            # Retrieve the first record
                  // $products =  DB::table('products')->first();
                  // echo  '<pre>';
                  // print_r($products);

            # Retrieve the 3rd record
                  // $products =  DB::table('products')->find(3);
                  // echo  '<pre>';
                  // print_r($products);

            # Retrieve the image of product based on the name
                  // $products =
DB::table('products')->where('name','Product 5')->value('image');
                  // echo  '<pre>';
                  // print_r($products);
    }

    public function workWithQueryBuilderUpdate(){
       DB::table('products')->where('id','=',1)->update(['name'=>'shoe']);
       $products =  DB::table('products')->get();
       echo  '<pre>';
       print_r($products);
    }

    public function workWithQueryBuilderDelete(){
      DB::table('products')->where('id','=',1)->delete();
      $products =  DB::table('products')->get();
      echo  '<pre>';
      print_r($products);
   }
```

SCHEMA BUILDER



SCHEMA BUILDER

create table with column on fly (runtime) through code

Schema Class

Schema::create() → create a table

Schema::table() → update a table

phpMyAdmin
- create table
- create column

naming convention
table name = students

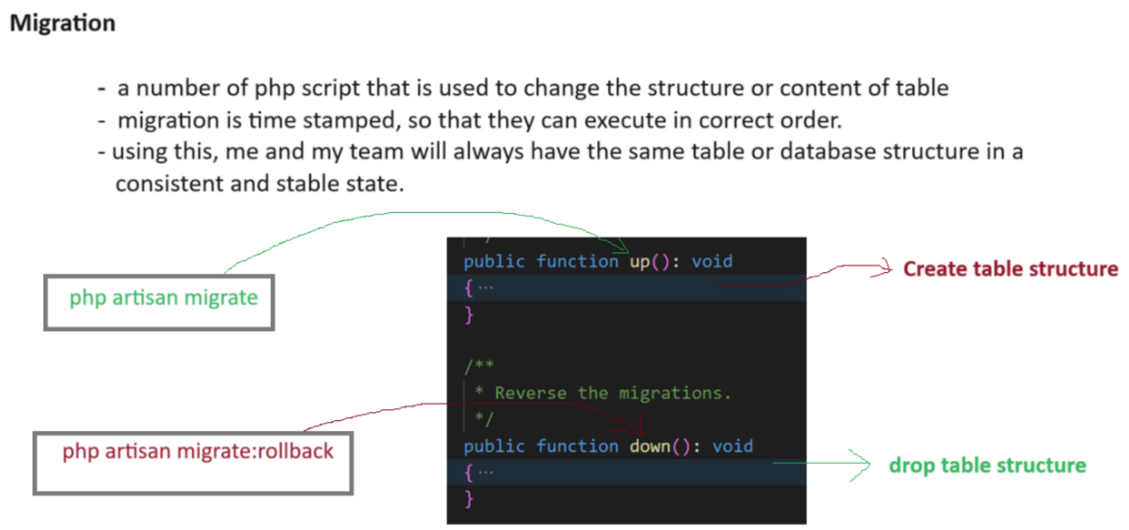
DBController.php

```
 public function workWithSchemaBuilder(){
            # Creating Table with Column
                  //    Schema::create('students',function(Blueprint
$table){
                  //       $table->increments('id');
                  //       $table->string('Name',60);
                  //       $table->string('Email');
                  //       $table->string('Password');

                  //    });

            # Updating Table
                  //     Schema::table('students', function(Blueprint
$table){
                  //                $table->text('comment');
                  //                $table->boolean('isAdmin');
                  //                $table->date('dob');
                  //     });

            # Rename Table
                  // Schema::rename('students','persons');

            # Drop Table column
                  // Schema::table('persons', function(Blueprint $table){
                  //       $table->dropColumn('isAdmin');
                  // });

            # Drop Table
                  //       Schema::drop('persons');

            # Create or Modify table with the context of Database
connection
             Schema::connection('mysql')->create('students',
function(Blueprint $table){

             });
             Schema::connection('mysql2')->table('students',
function(Blueprint $table){

             });



      }
```

Web.php

```
// ----------------SCHEMA BUILDER------------------------
Route::get('/schema', [DBController::class, 'workWithSchemaBuilder']);
```

Migration



Migration

- a number of php script that is used to change the structure or content of table
- migration is time stamped, so that they can execute in correct order.
- using this, me and my team will always have the same table or database structure in a consistent and stable state.

```
public function up(): void
{…
}

/**
 * Reverse the migrations.
 */
public function down(): void
{…
}
```

Command

# Run Migration File

php artisan migrate

# Rollback Migration file

Php artisan migrate:rollback

# Rollback specific migration file

php artisan migrate:rollback -- step=1

php artisan migrate:rollback -- path= migration file path name

Create New Migration file

php artisan make:migration create_contacts_table

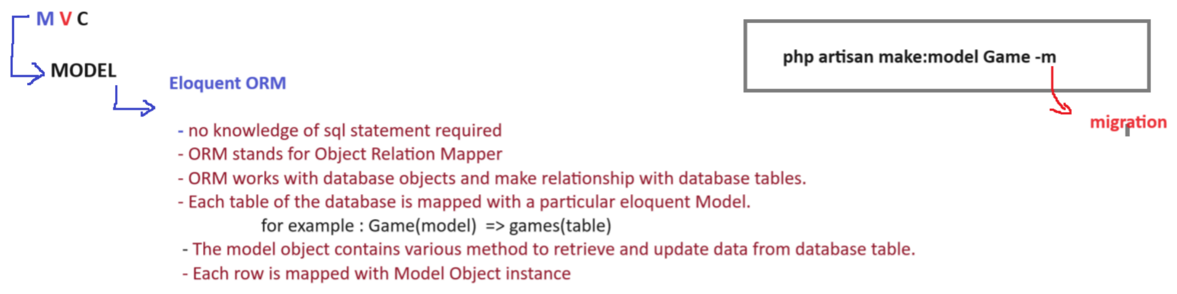
```
public function up(): void
    {
        Schema::create('contacts', function (Blueprint $table) {
            $table->id();
            $table->string('Mobile_Number');
            $table->timestamps();
        });
    }

    /**
     * Reverse the migrations.
     */
    public function down(): void
    {
        Schema::dropIfExists('contacts');
    }
```

Add new Column in Existing table

php artisan make:migration add_email_column_in_contacts_table

```
 public function up(): void
    {
        Schema::table('contacts', function (Blueprint $table) {
            //
             $table->after('Mobile_Number', function($table){
                  $table->string('email')->unique();
             });
        });
    }

    /**
     * Reverse the migrations.
     */
    public function down(): void
    {
        Schema::table('contacts', function (Blueprint $table) {
            //
            $table->dropColumn('email');
        });
    }
```

Eloquent ORM


M V C
MODEL
Eloquent ORM
migration

php artisan make:model Game -m

- no knowledge of sql statement required
- ORM stands for Object Relation Mapper
- ORM works with database objects and make relationship with database tables.
- Each table of the database is mapped with a particular eloquent Model.
  for example : Game(model) => games(table)
- The model object contains various method to retrieve and update data from database table.
- Each row is mapped with Model Object instance

MODEL

php artisan make:model Game -m

Game migration file

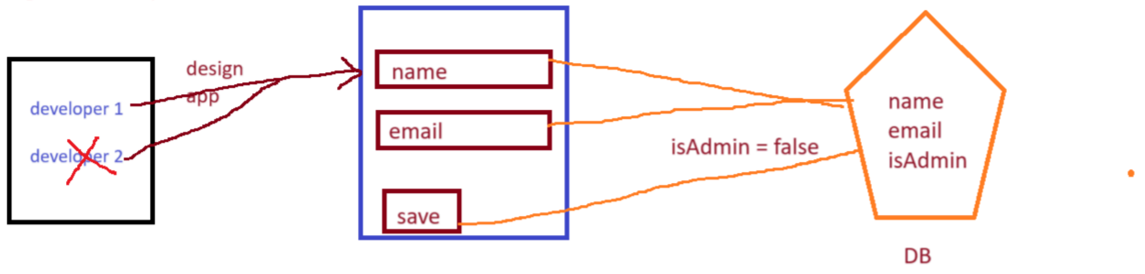
```
  public function up(): void
    {
        Schema::create('games', function (Blueprint $table) {
            $table->id();
            $table->string('name');
            $table->text('Description');
            $table->timestamps();
        });
    }
```

php artisan migrate

php artisan make:controller GameController

```
class GameController extends Controller
{
    //
    public function insert(){
          $game = new Game();
          $game->name = 'Baseball';
          $game->description = 'Baseball is the best game';
          $game->save();

    }

    public function read(){
          $game =  Game::all();
          return view('Eloquent.display',['allGames'=>$game]);
    }

    public function update(){
          $foundRecord = Game::find(2);
          $foundRecord->name='F1 Race';
          $foundRecord->Description = 'F1 Race is one of the favorite
game';
          $foundRecord->save();
    }

    public function delete(){
        $foundRecord = Game::find(3);
        $foundRecord->delete();
        $game =  Game::all();
        return view('Eloquent.display',['allGames'=>$game]);
    }

    # Another way of inserting Record
    public function saveGameData(Request $request){
         Game::create($request->all());
    }
}
```

Mass Assignment Exception



Solutions
- we can specify , what field got inserted or not
  $fillable or $guarded

Game.php

```
class Game extends Model
{
    use HasFactory;

    // protected $fillable=['name','Description'];

      protected $guarded = ['_token'];
}
```

Web.php

```
# Eloquent ORM
Route::view('/showGameForm','Eloquent.game');
// Route::get('/modelInsert', [GameController::class, 'insert']);
Route::post('/handleGameFormData', [GameController::class,
'saveGameData']);

Route::get('/modelRead', [GameController::class, 'read']);
Route::get('/modelUpdate', [GameController::class, 'update']);
Route::get('/modelDelete', [GameController::class, 'delete']);
```

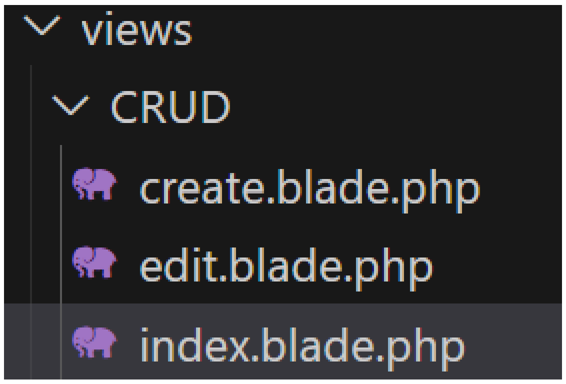
game.blade.php

```
{{Form::open(['url'=>'handleGameFormData'])}}
<br><br>
     {{Form::label('name','Name')}}
     {{Form::text('name')}}

     <br><br>
     {{Form::label('description','Description')}}
     {{Form::text('Description')}}

     <br><br>
     {{Form::submit('Save')}}

{{Form::close()}}
```

display.blade.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>

  <h3>List of All Games</h3>
  <table border="1">
    <thead>
        <tr>
            <th>ID</th>
            <th>Name</th>
            <th>Description</th>
        </tr>
    </thead>
    <tbody>
          @foreach($allGames as $game)
            <tr>
                <td>{{$game->id}}</td>
                <td>{{$game->name}}</td>
                <td>{{$game->Description}}</td>
            </tr>
          @endforeach
    </tbody>
  </table>
</body>
</html>
```

CRUD PROJECT with Resource Controller



php artisan make:model Company -m

Company migration file

```
public function up(): void
    {
        Schema::create('companies', function (Blueprint $table) {
            $table->id();
            $table->string('name');
            $table->string('email');
            $table->string('address');
            $table->timestamps();
        });
    }
```

php artisan migrate

Php artisan make:controller CompanyController –-resource

```
class CompanyController extends Controller
{
    /**
     * Display a listing of the resource.
     */
    public function index()
    {
        //
         $companies = Company::all();
         return view('CRUD.index',['companies'=>$companies]);

    }

    /**
     * Show the form for creating a new resource.
     */
    public function create()
    {
        //
         return view('CRUD.create');
    }

    /**
     * Store a newly created resource in storage.
     */
    public function store(Request $request)
    {
        //
          $request->validate([
               'name'=>'required',
               'email'=>'required',
               'address'=>'required',
          ]);
          Company::create($request->all());
          return
redirect()->route('company.index')->with('success','company has created
successfully');
    }

    /**
     * Display the specified resource.
     */
    public function show(string $id)
    {
        //
    }

    /**
     * Show the form for editing the specified resource.
     */
    public function edit(string $id)
    {
        //
         $companyRecord = Company::find($id);
         return view('CRUD.edit',['companyRecord'=>$companyRecord]);

    }

    /**
     * Update the specified resource in storage.
     */
    public function update(Request $request, string $id)
    {
        //
        $request->validate([
            'name'=>'required',
            'email'=>'required',
            'address'=>'required',
       ]);
        $companyRecord = Company::find($id);
        $companyRecord->fill($request->all())->save();
        return redirect()->route('company.index')->with('success','company
has updated successfully');
```

```
    }

    /**
     * Remove the specified resource from storage.
     */
    public function destroy(string $id)
    {
        //
        $foundRecord = Company::find($id);
        $foundRecord->delete();
        return redirect()->route('company.index')->with('success','company
has deleted successfully');


    }
}
```

web.php

```

# CRUD Application------------
Route::resource('/company',CompanyController::class);
```

Index.blade.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
      <br>
       <a href="{{route('company.create')}}">Create Company</a>
      <br>
       @if(session('success'))
        <p style="color:green">{{session('success')}}</p>
       @endif
      <br>
     <table border="1">
        <thead>
            <tr>
                <th>Sr.No</th>
                <th>Company Name</th>
                <th>Company Email</th>
                <th>Company Address</th>
                <th>Action(s)</th>
            </tr>
        </thead>
        <tbody>
            @foreach($companies as $c)
                <tr>
                    <td>{{$c->id}}</td>
                    <td>{{$c->name}}</td>
                    <td>{{$c->email}}</td>
                    <td>{{$c->address}}</td>
                    <td>

{{Form::open(['route'=>['company.destroy',$c->id],'method'=>'DELETE'])}}
                       <a href="{{route('company.edit',$c->id)}}">Edit</a>
                        &nbsp;&nbsp;
                        <button type="submit">Delete</button>
                    {{Form::close()}}

                    </td>
                </tr>
            @endforeach
            @if(!count($companies))
                <tr>
                    <td colspan="4">No Records Available</td>
                </tr>
            @endif
        </tbody>
     </table>
</body>
</html>
```

create.blade.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
        <h2> Enter the Company Details below :- </h2>

        {{Form::open(['route'=>'company.store'])}}
        <br>
            {{Form::label('name','Company Name')}}
            {{Form::text('name')}}

            <br><br>
            {{Form::label('email','Company Email')}}
            {{Form::text('email')}}
            <br><br>
            {{Form::label('address','Company Address')}}
            {{Form::text('address')}}
            <br><br>
            {{Form::submit('Save')}}

        {{Form::close()}}
</body>
</html>
```

edit.blade.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
        <h2> Update the Company Details below :- </h2>
```

```
{{Form::open(['route'=>['company.update',$companyRecord->id],'method'=>'PU
T'])}}
        <br>
            {{Form::label('name','Company Name')}}
            {{Form::text('name',$companyRecord->name)}}

            <br><br>
            {{Form::label('email','Company Email')}}
            {{Form::text('email',$companyRecord->email)}}
            <br><br>
            {{Form::label('address','Company Address')}}
            {{Form::text('address',$companyRecord->address)}}
            <br><br>
            {{Form::submit('Update')}}

        {{Form::close()}}
</body>
</html>
```

Day 3

Attendance url
https://rms.koenig-solutions.com/MarkAssignmentAttendance.aspx?AId=183539&Opid=732320

Eloquent Queries

php artisan make:model Album -m

Album migration file

```
public function up(): void
    {
        Schema::create('albums', function (Blueprint $table) {
            $table->id();
            $table->string('title');
            $table->string('artist');
            $table->string('genre');
            $table->integer('year');
            $table->timestamps();
        });
    }
```

php artisan migrate

Album.php

```
    protected $guarded = ['_token'];
```

php artisan make:controller AlbumController

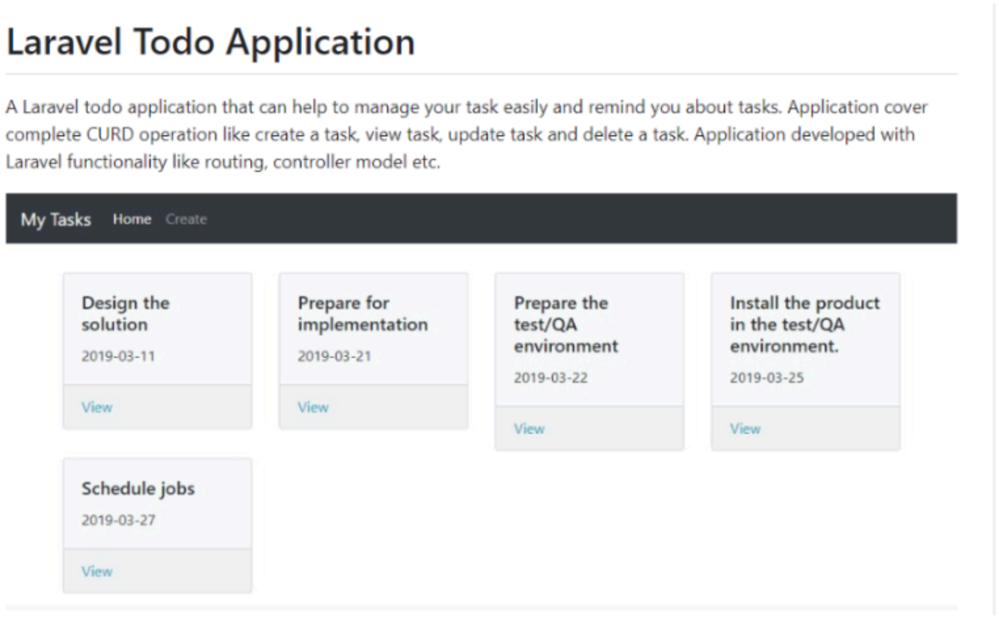
AlbumController.php

```
class AlbumController extends Controller
{
    //
    public function insert(){
         Album::create([
               'title'=>'Leaving through the window',
               'artist'=>'Matt Nathanson',
               'genre' => 'Piano Rock',
               'year'=>2002
         ]);
    }

    public function showQueries(){
            # Fetch method
            // return Album::find(1);
            // return Album::find([1,2]);
            // return Album::all();
            // return Album::first();
            // Album::where('artist','=','Matt
Nathanson')->update(['artist'=>'John Doe']);
            // return Album::all();
            // Album::where('artist','=','John Doe')->delete();
            // return Album::all();
            // return Album::where('title','=','North')->get();
            // return Album::where('artist','=','Something
corporate')->get(['id','title']);
            // return Album::where('artist','=','Something
corporate')->toSql();
            // return Album::where('artist','=','Something
corporate')->where('year','=',2001)->get();
            // return Album::where('artist','=','Something
corporate')->orWhere('year','=',2001)->get();
            // return Album::whereRaw('artist=? AND year=?',['Something
corporate',2001])->get();
            // return Album::whereBetween('year',[2000,2010])->get();
            // return Album::where('artist','=','Something
corporate')->orderBy('year')->get();
            // return Album::where('artist','=','Something
corporate')->orderBy('year','desc')->get();




    }
}
```

web.php

```
Route::get('/insert',[AlbumController::class,'insert']);
Route::get('/query',[AlbumController::class,'showQueries']);
```

Practice on Resource Controller


Laravel Todo Application

A Laravel todo application that can help to manage your task easily and remind you about tasks. Application cover complete CURD operation like create a task, view task, update task and delete a task. Application developed with Laravel functionality like routing, controller model etc.

Design the solution
2019-03-11
View

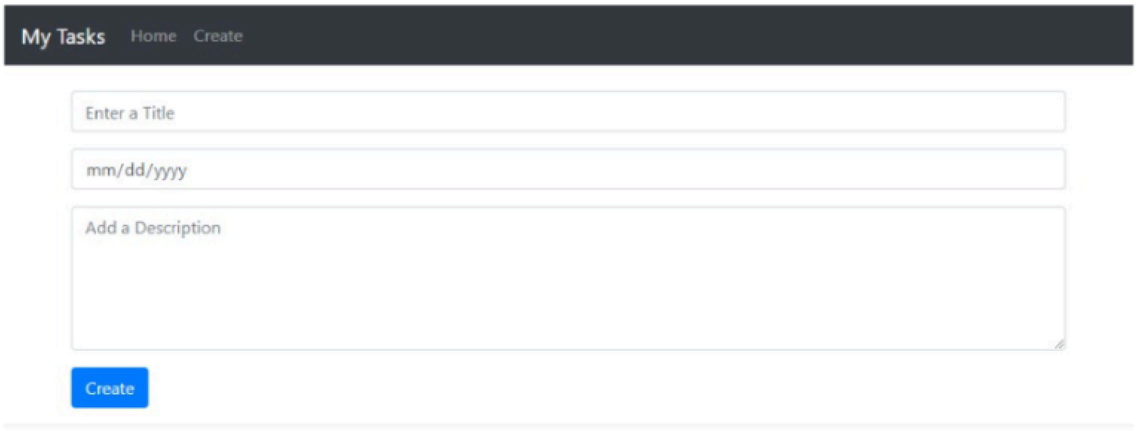
Prepare for implementation
2019-03-21
View

Prepare the test/QA environment
2019-03-22
View

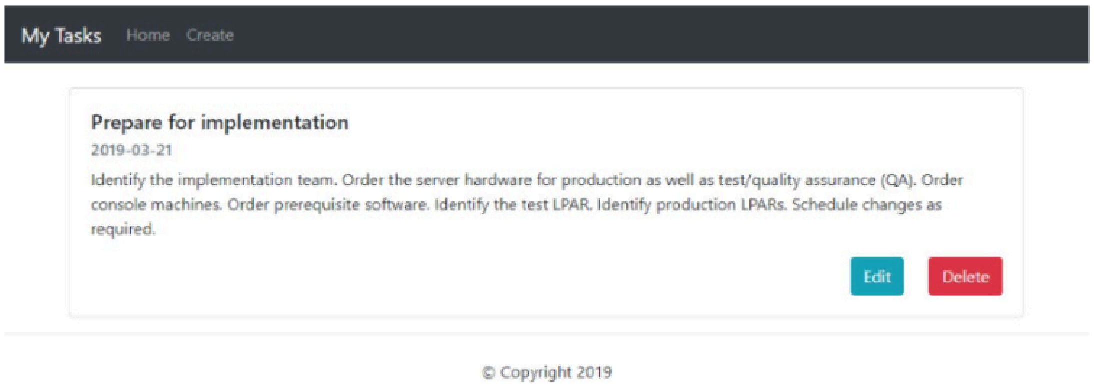
Install the product in the test/QA environment.
2019-03-25
View

Schedule jobs
2019-03-27
View

After click on Create link



After click on view link



Prepare for implementation

2019-03-21

Identify the implementation team. Order the server hardware for production as well as test/quality assurance (QA). Order console machines. Order prerequisite software. Identify the test LPAR. Identify production LPARs. Schedule changes as required.

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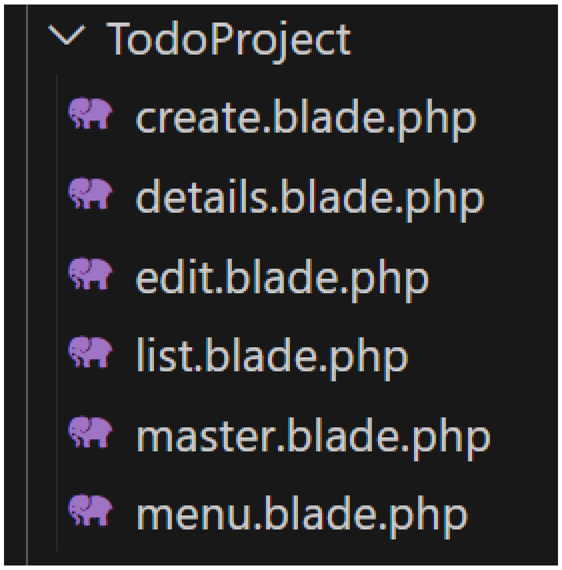
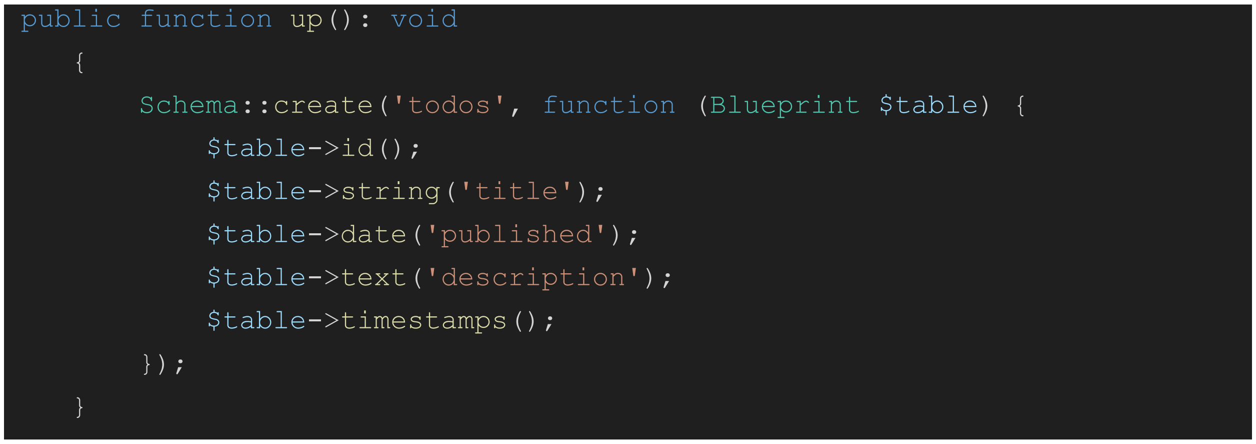
Solution



```
TodoProject
  create.blade.php
  details.blade.php
  edit.blade.php
  list.blade.php
  master.blade.php
  menu.blade.php
```

php artisan make:controller TodoController --resource
php artisan make:model Todo -m

Todo migration file



```
public function up(): void
    {
        Schema::create('todos', function (Blueprint $table) {
            $table->id();
            $table->string('title');
            $table->date('published');
            $table->text('description');
            $table->timestamps();
        });
    }
```

Todo.php

```
class Todo extends Model
{
    use HasFactory;

    protected $guarded = ['_token'];
}
```

TodoController.php

```
class TodoController extends Controller
{
    /**
     * Display a listing of the resource.
     */
    public function index()
    {
        //
        $todos = Todo::all();
        return view('TodoProject.list',['todos'=>$todos]);
    }

    /**
     * Show the form for creating a new resource.
     */
    public function create()
    {
        //
        return view('TodoProject.create');
    }

    /**
     * Store a newly created resource in storage.
     */
    public function store(Request $request)
    {
        //
         Todo::create($request->all());
        return redirect()->route('todo.index')->with('status','Todo has
created successfully');

    }

    /**
     * Display the specified resource.
     */
    public function show(string $id)
    {
        //
        $todo = Todo::find($id);
        return view('TodoProject.details',['todo'=>$todo]);

    }

    /**
     * Show the form for editing the specified resource.
     */
    public function edit(string $id)
    {
        //
        $todo = Todo::find($id);
        return view('TodoProject.edit',['todo'=>$todo]);
    }

    /**
     * Update the specified resource in storage.
     */
    public function update(Request $request, string $id)
    {
        //
        $todo = Todo::find($id);
        $todo->fill($request->all())->save();
        return redirect()->route('todo.index');

    }

    /**
     * Remove the specified resource from storage.
     */
    public function destroy(string $id)
    {
        //
        $todo = Todo::find($id);
        $todo->delete();
        return redirect()->route('todo.index');
    }
}
```

master.blade.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.
css" rel="stylesheet"
integrity="sha384-T3c6CoIi6uLrA9TneNEoa7RxnatzjcDSCmG1MXxSR1GAsXEV/Dwwykc2
MPK8M2HN" crossorigin="anonymous">

</head>
<body>

        @include('TodoProject.menu')

        @yield('content')

</body>
</html>
```

Menu.blade.php

```
<nav class="navbar navbar-expand-lg bg-info">
  <div class="container-fluid">
    <a class="navbar-brand" href="#">My Tasks</a>
    <button class="navbar-toggler" type="button" data-bs-toggle="collapse"
data-bs-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup"
aria-expanded="false" aria-label="Toggle navigation">
      <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="navbarNavAltMarkup">
      <div class="navbar-nav">
        <a class="nav-link active" aria-current="page" href="#">Home</a>
        <a class="nav-link" href="{{route('todo.create')}}">Create</a>


      </div>
    </div>
  </div>
</nav>
```

List.blade.php

```
@extends('TodoProject.master')



@section('content')
   <div class="container">

     <div class="row mt-3">
          @foreach($todos as $todo)
              <div class="card" style="width:15rem;margin-right:8px">
                      <div class="card-body">
                              <h5>{{$todo->title}}</h5>
                              <p class="card-text">
                                 {{$todo->published}}
                              </p>
                              <a href="{{route('todo.show',$todo->id)}}"
class="card-link mt-4 btn btn-warning">view</a>
```

```
                      </div>
              </div>
          @endforeach
     </div>
   </div>

@endsection
```

Edit.blade.php

```
@extends('TodoProject.master')

@section('content')
<div class="container">


  {{Form::open(['route'=>['todo.update', $todo->id],'method'=>'PUT'])}}

    <div class="row mb-4 mt-4 ">
        <div class="col-md-12">
             {{Form::text('title',$todo->title,['placeholder'=>'Enter
Title','class'=>'form-control'])}}
        </div>
    </div>
    <div class="row mb-4">
        <div class="col-md-12">

{{Form::date('published',$todo->published,['placeholder'=>'mm/dd/yyyy','cl
ass'=>'form-control'])}}
        </div>
    </div>
    <div class="row mb-4">
        <div class="col-md-12">

{{Form::textarea('description',$todo->description,['placeholder'=>'Add a
Description','class'=>'form-control'])}}
        </div>
    </div>

    <div class="row mb-4">
```

```
        <div class="col-md-12">
             {{Form::submit('update',['class'=>'btn btn-sm
btn-success'])}}
        </div>
    </div>

  {{Form::close()}}
  </div>
@endsection
```

Details.blade.php

```
@extends('TodoProject.master')

@section('content')
    <div class="container">
          <div class="row mt-4 border">
              <div class="col-md-12">
                   <h5 class="mt-2">{{$todo->title}}</h5>
                   <small>{{$todo->published}}</small>
                   <p class="mt-4">
                     {{$todo->description}}
                   </p>

{{Form::open(['route'=>['todo.destroy',$todo->id],'method'=>'DELETE'])}}
                       <a class="btn btn-info  btn-sm"
href="{{route('todo.edit',$todo->id)}}">Edit</a>
                        &nbsp;&nbsp;
                        <button type="submit" class="btn btn-danger
btn-sm">Delete</button>
                    {{Form::close()}}
                    <br>
              </div>
          </div>
    </div>
@endsection
```

Create.blade.php

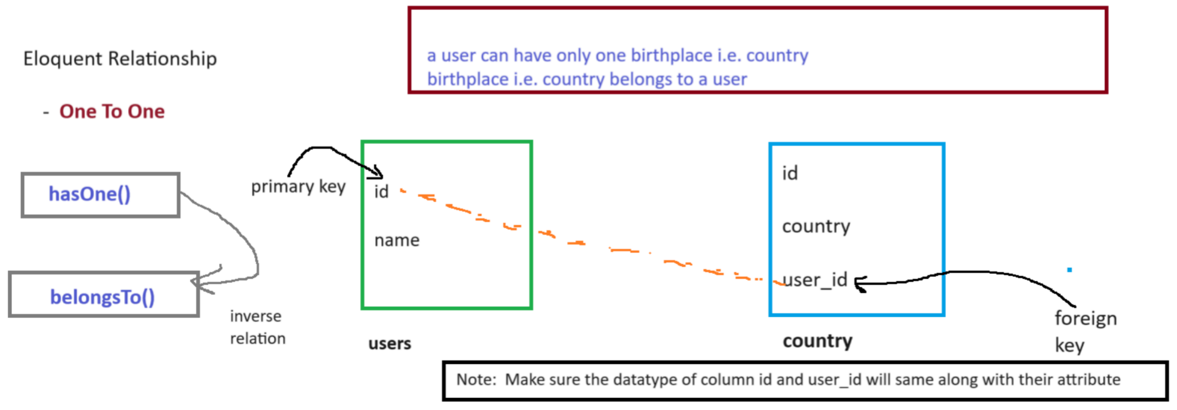
```
@extends('TodoProject.master')

@section('content')
<div class="container">


  {{Form::open(['route'=>'todo.store'])}}

    <div class="row mb-4 mt-4 ">
        <div class="col-md-12">
             {{Form::text('title',null,['placeholder'=>'Enter
Title','class'=>'form-control'])}}
        </div>
    </div>
    <div class="row mb-4">
        <div class="col-md-12">

{{Form::date('published',null,['placeholder'=>'mm/dd/yyyy','class'=>'form-
control'])}}
        </div>
    </div>
    <div class="row mb-4">
        <div class="col-md-12">
             {{Form::textarea('description',null,['placeholder'=>'Add a
Description','class'=>'form-control'])}}
        </div>
    </div>

    <div class="row mb-4">
        <div class="col-md-12">
             {{Form::submit('create',['class'=>'btn btn-sm
btn-primary'])}}
        </div>
    </div>

  {{Form::close()}}
  </div>
```

```
@endsection
```

Web.php

```
# CRUD Application------------
Route::resource('/todo',TodoController::class);
```

Eloquent Relationship


Eloquent Relationship
- One To One
hasOne()
belongsTo()
inverse relation
primary key
id
name
users
a user can have only one birthplace i.e. country
birthplace i.e. country belongs to a user
id
country
user_id
country
foreign key
Note: Make sure the datatype of column id and user_id will same along with their attribute

php artisan make:model Country -m

Country migration file

```
    public function up(): void
    {
        Schema::create('countries', function (Blueprint $table) {
            $table->id();
            $table->string('country_name');

            #creating foreign key
            $table->foreignId('user_id')->references('id')->on('users');

            $table->timestamps();
        });
    }
```

php artisan migrate

Add Dummy Data using Factory and seeder

php artisan make:factory CountryFactor –-model = Country

CountryFactory.php

```
 public function definition(): array
    {
        return [
            //
              'user_id'=>\App\Models\User::factory()->create()->id,
              'country_name'=>fake()->country()
        ];
    }
```

DatabaseSeeder.php

```
public function run(): void
    {
        \App\Models\Country::factory(3)->create();

        // \App\Models\User::factory()->create([
        //     'name' => 'Test User',
        //     'email' => 'test@example.com',
        // ]);
    }
```

Add function to connect with Country Table in User Model

User.php

```
public function country(){
         return $this->hasOne(Country::class);
    }
```

php artisan make:controller RelationalController

RelationalController.php

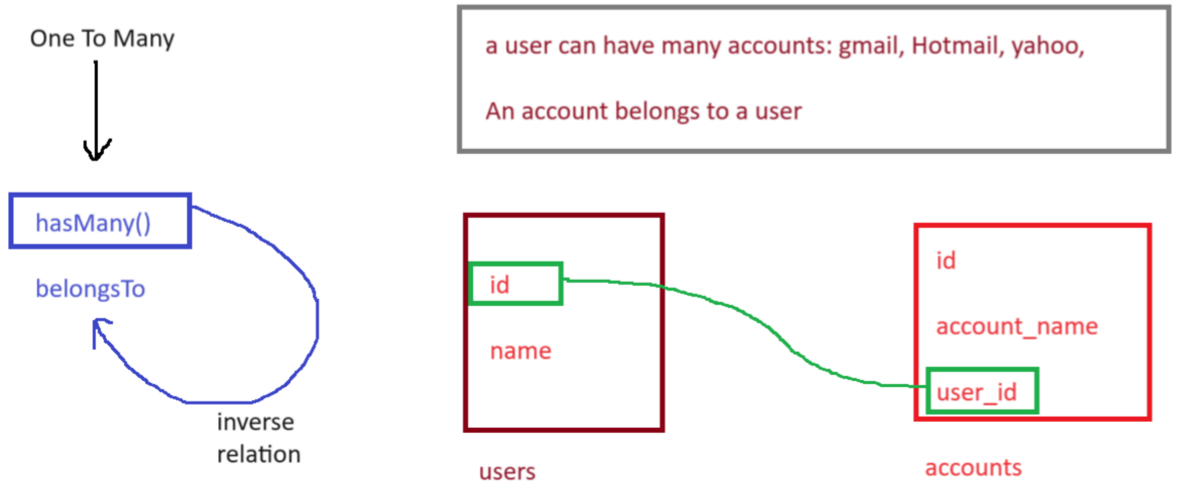
```
public function showOneToOneRelation(){
          $users = User::all();
          foreach($users as $u){
              echo "<p>
                      <strong>".$u->name."</strong>
                       <span>has birthplace country name</span>
                       <strong>".$u->country->country_name."</strong>
                    </p>";
          }

    }
```

web.php

```
Route::get('/oneToOneRelation',[RelationalController::class,'showOneToOneRelation']);
```

Day 4

Attendance url
https://rms.koenig-solutions.com/MarkAssignmentAttendance.aspx?AId=183539&Opid=732321



php artisan make:model Account -m

Account Migration file

```
public function up(): void
    {
        Schema::create('accounts', function (Blueprint $table) {
            $table->id();
            $table->string('account_name');
            $table->foreignId('user_id')->references('id')->on('users');
            $table->timestamps();
        });
    }
```

php artisan migrate

Add Dummy Data using Factory and seeder

php artisan make:factory AccountFactory --model=Account

AccountFactory.php

```
public function definition(): array
    {
        return [
            //
              'user_id'=>\App\Models\User::factory()->create()->id,
              'account_name'=>fake()->domainName()
        ];
    }
```

DatabaseSeeder.php

```
 public function run(): void
    {
        // \App\Models\Country::factory(3)->create();
        \App\Models\Account::factory(6)->create();

        // \App\Models\User::factory()->create([
        //     'name' => 'Test User',
        //     'email' => 'test@example.com',
        // ]);
    }
```

php artisan db:seed

Add function to connect with AccountTable in User Model

User.php

```
public function account(){
         return $this->hasMany(Account::class);
    }
```

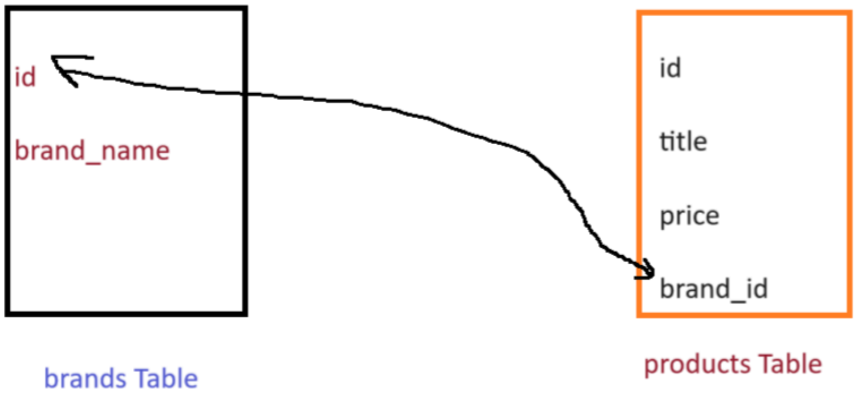
RelationalController.php

```
public function showOneToMany(){
          $users =  User::all();

          foreach($users as $u){
              echo '<p><strong>'. $u->name.'</strong> is using following
email accounts</p>';

              foreach($u->account as $acc){
                 echo '<li>'.$acc->account_name.'</li>';
              }
          }
    }
```

web.php

```
Route::get('/oneToManyRelation',[RelationalController::class,'showOneToMan
y']);
```

Practice on One To Many



No	Brand	Product	Product Count
1	Adidas	shoe, cloth,	2
2	Nike	shoe , slipper	2
3	Puma	Puma Shoe	1

Solution:

php artisan make:model Brand -m
php artisan make:model product -m

Brand Migration file

```
public function up(): void
    {
        Schema::create('brands', function (Blueprint $table) {
            $table->id();
            $table->string('brand_name');
            $table->timestamps();
        });
    }
```

Product migration file

```
  public function up(): void
    {
        Schema::create('products', function (Blueprint $table) {
            $table->id();
            $table->string('title');
            $table->string('price');
            $table->foreignId('brand_id')->references('id')->on('brands');
            $table->timestamps();
        });
    }
```

php artisan migrate

DatabaseSeeder.php

```
 public function run(): void
    {
        // \App\Models\Country::factory(3)->create();
        // \App\Models\Account::factory(6)->create();
        // \App\Models\User::factory()->create([
        //     'name' => 'Test User',
        //     'email' => 'test@example.com',
        // ]);
        Brand::create([
            'brand_name'=>'Adidas'
       ]);
       Brand::create([
           'brand_name'=>'Nike'
      ]);
       Brand::create([
       'brand_name'=>'Specs'
        ]);
       Brand::create([
           'brand_name'=>'Puma'
       ]);

       Product::create([
        'brand_id'=>1,
        'title'=>'Adidas shoes',
        'price'=>'90'
   ]);
   Product::create([
      'brand_id'=>1,
      'title'=>'Adidas shoes 2',
      'price'=>'94'
 ]);
 Product::create([
  'brand_id'=>2,
  'title'=>'Nike shoes',
  'price'=>'90'
]);
Product::create([
'brand_id'=>2,
'title'=>'Nike shoes 2',
'price'=>'90'
]);
Product::create([
  'brand_id'=>3,
  'title'=>'Specs shoes',
  'price'=>'100'
]);
Product::create([
  'brand_id'=>4,
  'title'=>'Puma shoes',
  'price'=>'200'
]);

    }
}
```

php artisan db:seed

Brand.php

```
protected $guarded = [];

    public function products(){
        return $this->hasMany(Product::class);
    }
```

Product.php

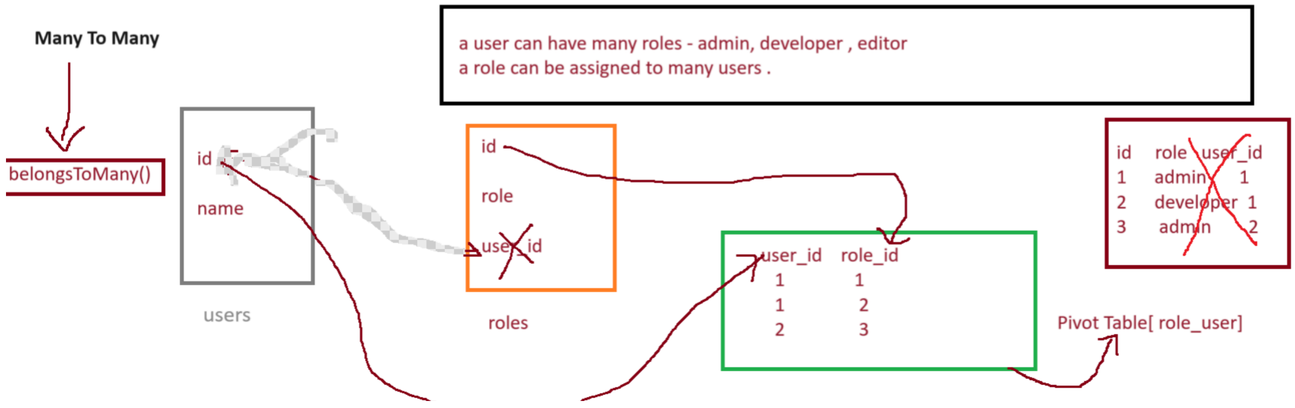
```
 protected $guarded = [];
```

RelationalController.php

```
public function showOneToManyPractice(){
             $brands =  Brand::all();
             echo '<table border="1">
                    <thead>
                            <tr>
                                    <th>No</th>
                                    <th>Brand</th>
                                    <th>Product</th>
                                    <th>Product Count</th>
                            </tr>
                    </thead>



                  ';
              $no = 1;
              foreach($brands as $brand){
                     echo '<tr>
                            <td>'.$no++.'</td>
                            <td>'.$brand->brand_name.'</td>
                            <td>

                            ';
                         foreach($brand->products as $p){
                              echo $p->title;
                         }

                      echo '</td>
                            <td>'.$brand->products->count().'</td>
                       </tr>';
              }
              echo '</table>';


    }
```

Web.php

```
Route::get('/oneToManyRelation',[RelationalController::class,'showOneToMan
yPractice']);
```



Note : - Pivot table name will be in alphabetical order
Example : user and role => role_user

php artisan make:model Role -m

Role migration file

```
 public function up(): void
    {
        Schema::create('roles', function (Blueprint $table) {
            $table->id();
            $table->string('role');
            $table->timestamps();
        });
    }
```

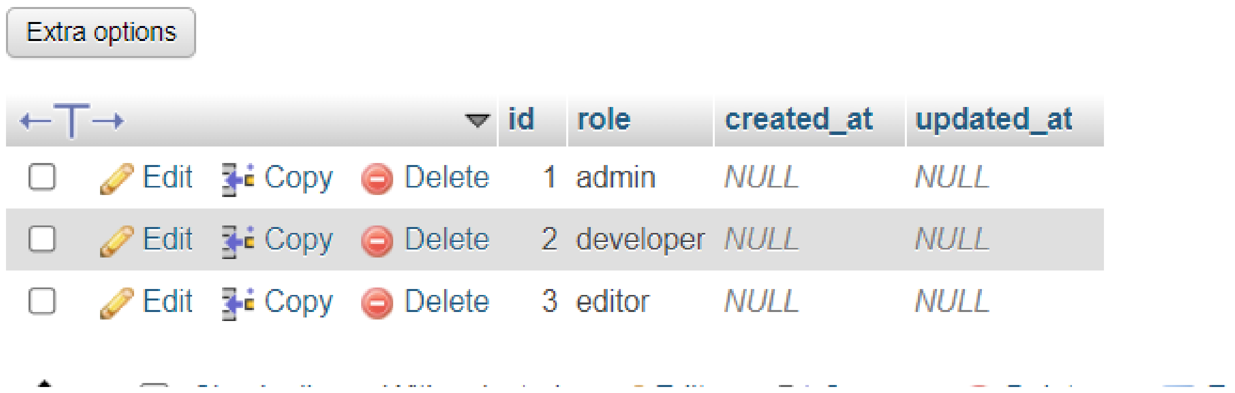
php artisan make:migration create_role_user

```
public function up(): void
    {
        Schema::create('role_user', function (Blueprint $table) {
            $table->id();
            $table->foreignId('user_id')->references('id')->on('users');
            $table->foreignId('role_id')->references('id')->on('roles');

            $table->timestamps();
        });
    }
```

php artisan migrate

Add the data

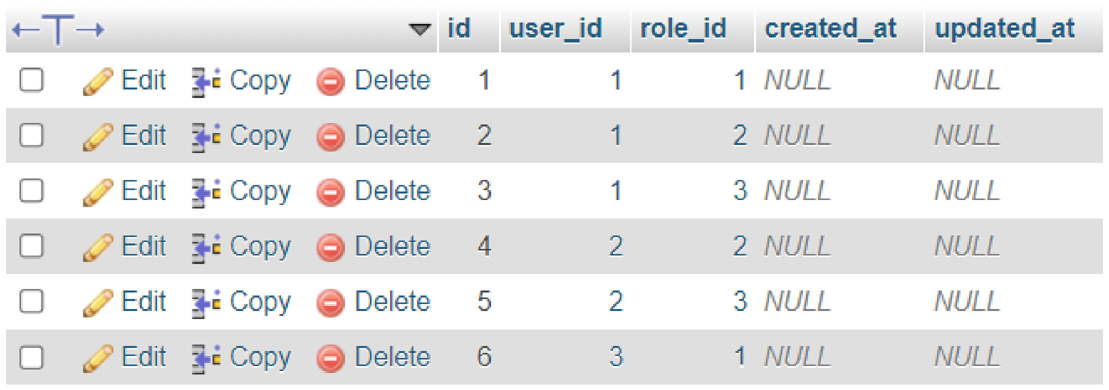
roles table



Extra options

←T→				id	role	created_at	updated_at
☐	Edit	Copy	Delete	1	admin	NULL	NULL
☐	Edit	Copy	Delete	2	developer	NULL	NULL
☐	Edit	Copy	Delete	3	editor	NULL	NULL

role_user table



←T→				id	user_id	role_id	created_at	updated_at
☐	Edit	Copy	Delete	1	1	1	NULL	NULL
☐	Edit	Copy	Delete	2	1	2	NULL	NULL
☐	Edit	Copy	Delete	3	1	3	NULL	NULL
☐	Edit	Copy	Delete	4	2	2	NULL	NULL
☐	Edit	Copy	Delete	5	2	3	NULL	NULL
☐	Edit	Copy	Delete	6	3	1	NULL	NULL

Model
User.php

```
public function role(){
        return $this->belongsToMany(Role::class);
```

```
    }
```

Role.php

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

RelationalController.php

```
  public function ManyToMany(){
            // $users = User::all();

            // foreach($users as $u){
            //       echo '<p><strong>'.$u->name.'</strong> has following
roles: -</p>';
            //       foreach($u->role as $r){
            //          echo  '<li>'.$r->role.'</li>';
            //       }
            // }
            echo '<hr>';
            $roles = Role::all();
            foreach($roles as $r){
                  echo '<p><strong>'.$r->role.'</strong> is assigned to';
                  foreach($r->user as $u){
                     echo  '<li>'.$u->name.'</li>';
                  }
                  echo '</p>';
            }



    }
```

web.php

```
Route::get('/manyToManyRelation',[RelationalController::class,'ManyToMany'
]);
```

Practice:- Many To Many

Movie and Actor

Any movie could have many actors and vice versa.

Laravel API Authentication with JWT

Install Package

```
composer require php-open-source-saver/jwt-auth
```

Publish the config file

```
php artisan vendor:publish --provider="PHPOpenSourceSaver\JWTAuth\Providers\LaravelServiceProvider"
```

Generate Secret Key

```
php artisan jwt:secret
```

config/auth.php

```
 'defaults' => [
        'guard' => 'api',
        'passwords' => 'users',
    ],
```

```
 'guards' => [
        'web' => [
            'driver' => 'session',
            'provider' => 'users',
        ],
        'api' =>[
             'driver' =>'jwt',
             'provider' => 'users'
        ]
    ],
```

Add Blacklist Exception

```
JWT_SHOW_BLACKLIST_EXCEPTION = true
```

Prepare USER Model with JWT

```
use PHPOpenSourceSaver\JWTAuth\Contracts\JWTSubject;
```

```
class User extends Authenticatable implements JWTSubject
```

```
public function getJWTIdentifier(){
          return $this->getKey();
    }
    public function getJWTCustomClaims(){
          return [];
    }
```

Preparing Controller

php artisan make:controller Api/AuthController

```
class AuthController extends Controller
{
    //
      public function register(Request $request){

           $request->validate([
               'name'=>'required',
               'email'=>'required',
               'password'=>'required'
           ]);

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

           # login the user immediately and generate the token
           $token = Auth::login($user);

           # return response as json
           return response()->json([
                 'meta' =>[
                      'code'=>200,
                      'status'=>'success',
                      'message'=> 'User created successfully'
                 ],
                 'data'=>[
                       'user'=>$user,
                       'authorization'=>[
                           'token'=>$token,
                           'type'=> 'Bearer'
                       ]
```

```
                ]
            ]);

    }

    public function login(Request $request){

            $request->validate([
                 'email'=>'required',
                 'password'=>'required'
             ]);

            # attempt a login
           $token= Auth::attempt([
               'email'=>$request->email,
               'password'=>$request->password
            ]);

          if($token){
             return response()->json([
                 'meta' =>[
                      'code'=>200,
                      'status'=>'success',
                      'message'=> 'Quote fetched successfully'
                 ],
                 'data'=>[
                       'user'=>Auth::user(),
                       'authorization'=>[
                           'token'=>$token,
                           'type'=> 'Bearer'
                       ]
                 ]
           ]);
          }
    }

    public function logout(){
         Auth::logout();
         return response()->json([
             'status'=>'success',
                'message'=>'Successfully logged out'
            ]);
        }
}
```

Create UserController

php artisan make:controller Api/UserController

```
class UserController extends Controller
{
    //
    public function userDetails(){

        return response()->json([
            'meta' =>[
                 'code'=>200,
                 'status'=>'success',
                 'message'=> 'User fetched successfully'
            ],
            'data'=>[
                  'user'=>Auth::user(),

            ]
      ]);
    }
}
```

Configure route

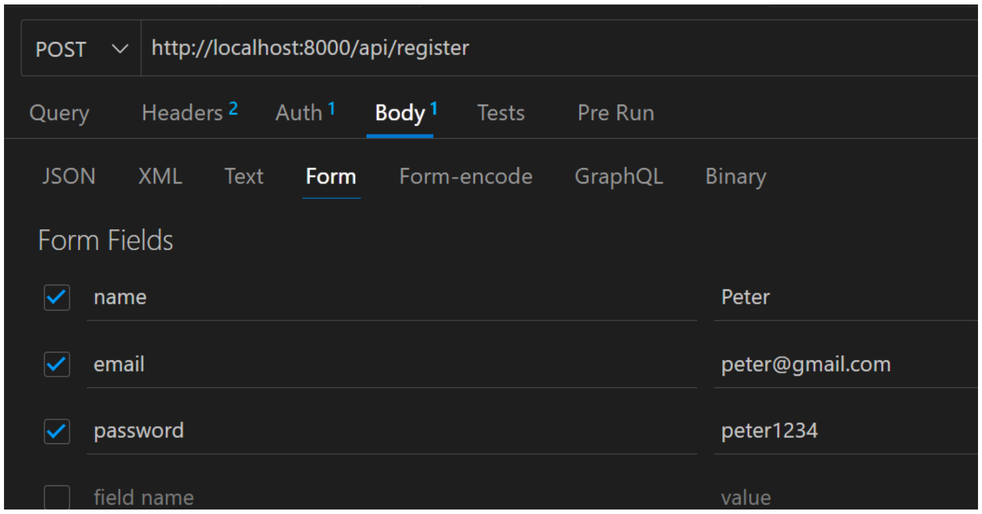
routes/api.php

```
Route::post('/register',[AuthController::class,'register']);
#api/register
Route::post('/login',[AuthController::class,'login']);        #api/login

Route::middleware('auth:api')->group(function(){
    Route::get('/userInfo',[UserController::class,'userDetails']);
    Route::post('/logout',[AuthController::class,'logout']);
});
```

php artisan serve

In VsCode, Add extension **Thunder client** for test api

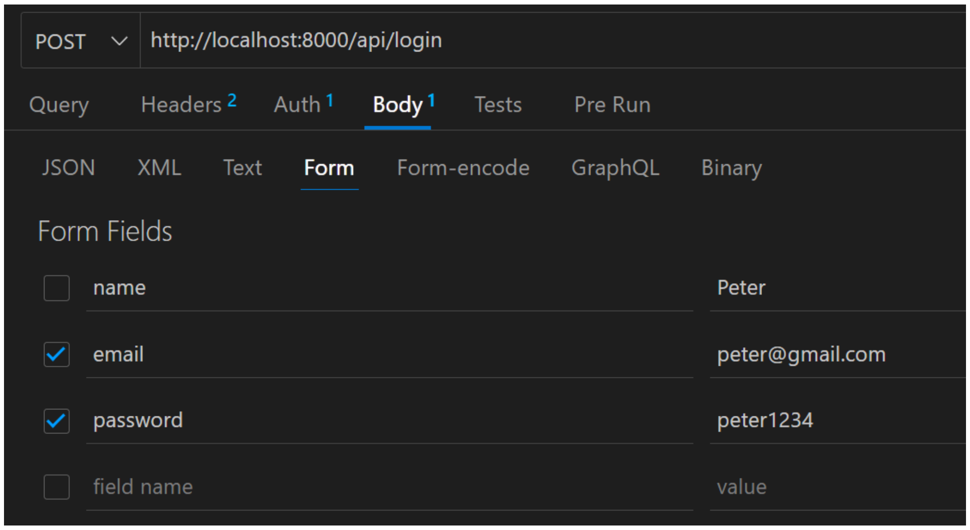
Click on New Request



POST http://localhost:8000/api/register

Form Fields

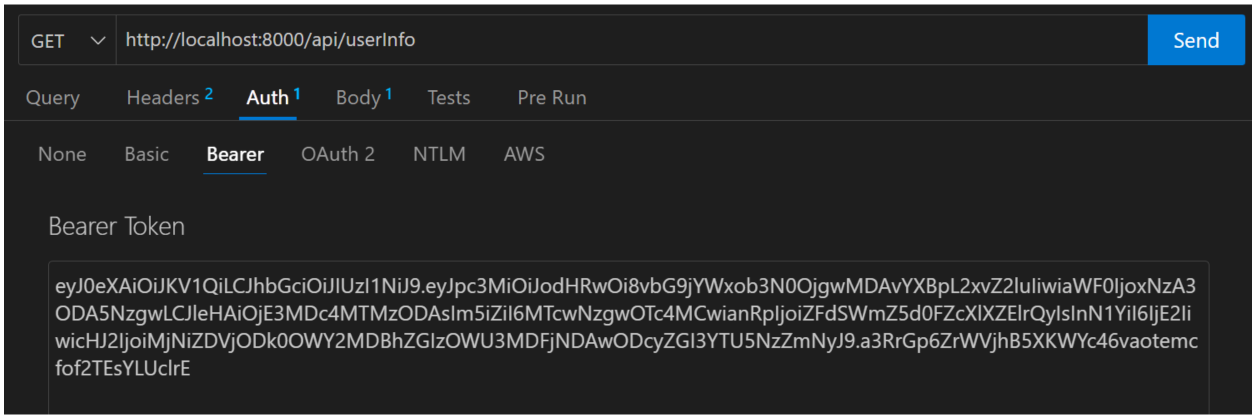
✓	name	Peter
✓	email	peter@gmail.com
✓	password	peter1234
	field name	value



POST http://localhost:8000/api/login

Form Fields

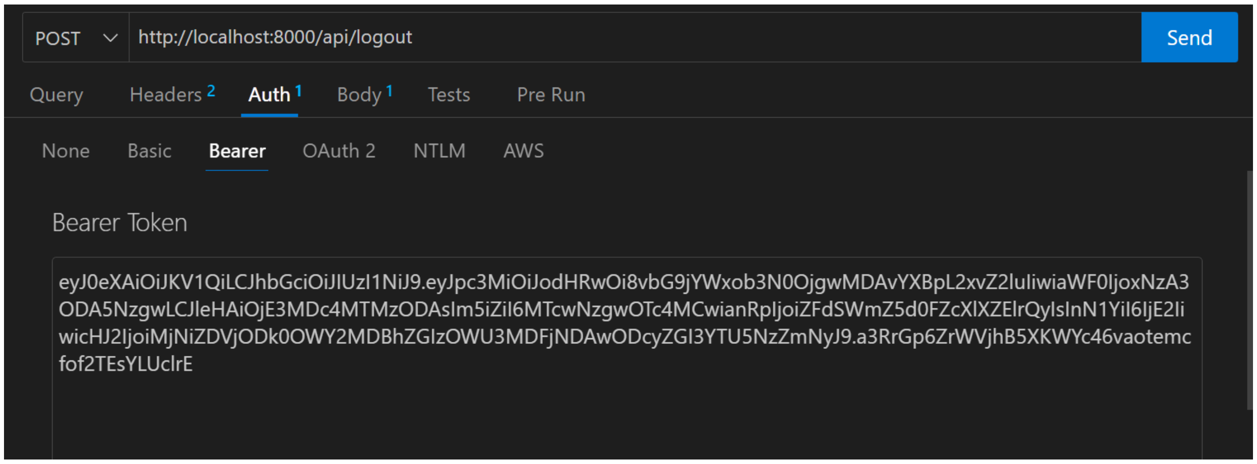
	name	Peter
✓	email	peter@gmail.com
✓	password	peter1234
	field name	value



http://localhost:8000/api/userInfo

Bearer Token

```
eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vbG9jYWxob3N0OjgwMDAvYXBpL2xvZ2luIiwiaWF0IjoxNzA3
ODA5NzgwLCJleHAiOjE3MDc4MTMzODAsIm5iZiI6MTcwNzgwOTc4MCwianRpIjoiZFdSWmZ5d0FZcXlXZElrQyIsInN1YiI6IjE2Ii
wicHJ2IjoiMjNiZDVjODk0OWY2MDBhZGIzOWU3MDFjNDAwODcyZGI3YTU5NzZmNyJ9.a3RrGp6ZrWVjhB5XKWYc46vaotemc
fof2TEsYLUclrE
```



http://localhost:8000/api/logout

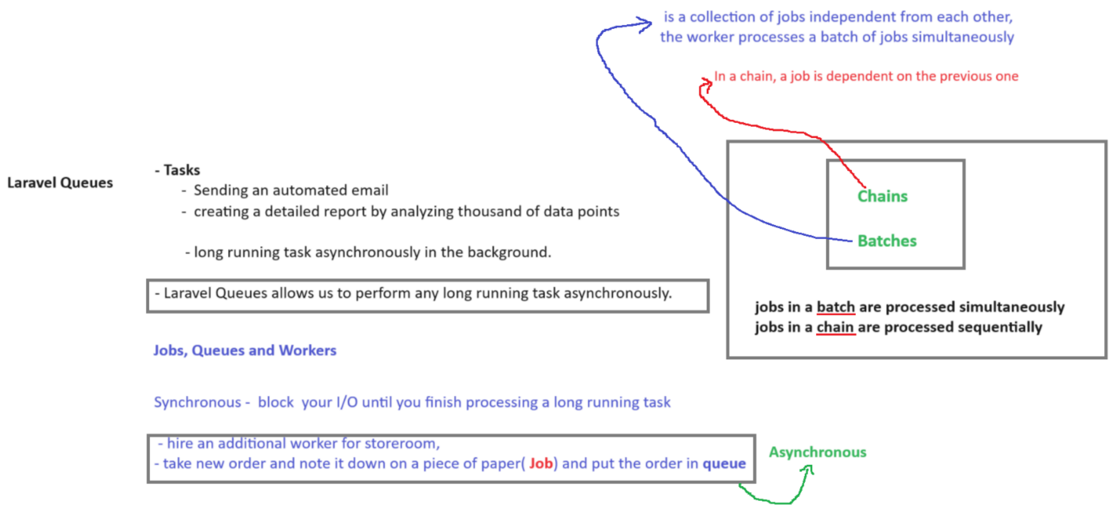
Bearer Token

```
eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vbG9jYWxob3N0OjgwMDAvYXBpL2xvZ2luIiwiaWF0IjoxNzA3
ODA5NzgwLCJleHAiOjE3MDc4MTMzODAsIm5iZiI6MTcwNzgwOTc4MCwianRpIjoiZFdSWmZ5d0FZcXlXZElrQyIsInN1YiI6IjE2Ii
wicHJ2IjoiMjNiZDVjODk0OWY2MDBhZGIzOWU3MDFjNDAwODcyZGI3YTU5NzZmNyJ9.a3RrGp6ZrWVjhB5XKWYc46vaotemc
fof2TEsYLUclrE
```

Day 5

Attendance url
https://rms.koenig-solutions.com/MarkAssignmentAttendance.aspx?AId=183539&Opid=732322

Queues



Laravel Queues

- Tasks
  - Sending an automated email
  - creating a detailed report by analyzing thousand of data points

  - long running task asynchronously in the background.

- Laravel Queues allows us to perform any long running task asynchronously.

Jobs, Queues and Workers

Synchronous - block your I/O until you finish processing a long running task

- hire an additional worker for storeroom,
- take new order and note it down on a piece of paper(**Job**) and put the order in **queue**

Asynchronous

is a collection of jobs independent from each other,
the worker processes a batch of jobs simultaneously

In a chain, a job is dependent on the previous one

Chains

Batches

jobs in a batch are processed simultaneously
jobs in a chain are processed sequentially

Example

Web.php

```
Route::get('/',function(){

    //  # dispatch() helper function that sends a new job to a queue
    //  dispatch(function(){
    //      sleep(5);
    //      logger('job done..!');
    //  });

    //  return view('welcome');

```

php artisan serve
Check on browser - delay will be observed

.env

```
QUEUE_CONNECTION=database
```

# generate the migration script for creating jobs table
php artisan queue:table
php artisan migrate

# **storage/logs/laravel.log** - check the logs

# check you jobs table to see the jobs

# **process the jobs start worker**
   php artisan queue:work

# **Work with Job Classes**
   php artisan make:job SendVerificationEmail

```
public function handle(): void
    {
             sleep(5);
        logger('email sent');
    }
```

#Web.php , put below code inside Route

```
 #------Using Job Class-----------
    # php artisan make:job SendVerifcationEmail

     //dispatch(new SendVerificationEmail());
    //  SendVerificationEmail::dispatch();
    //  return view('welcome');
```

#work with multiple connections
web.php

```
    #--------Work with multiple connection
   //  SendVerificationEmail::dispatch()->onConnection('redis');
   //  return view('welcome');
```

# Working with multiple Queues
Web.php

```
 #-------Work with Multiple Queues--------------
      #- you have jobs that must be processed before any of the others,
regardless of which one comes first

        // SendVerificationEmail::dispatch();
        // SendVerificationEmail::dispatch()->onQueue('high-priority');
        // return view('welcome');
```

# Jobs Failure and Retries
SendVerificationEmail.php

```
public function handle(): void
    {
        //
        # intentionally making job fail
        throw new Exception();

        sleep(5);
        logger('email sent');
    }
```

php artisan queue:work

# **check failed jobs table**
    php artisan queue:failed

# **retry : release failed job back to jobs table**
   php artisan queue:retry jobid

# **Automatic Retries**
   SendVerificationEmail.php

```
public $tries = 5;
```

php artisan queue:work

CHAINS and BATCHES

- Description is given in the picture above

  # **Chains**
      php artisan make:job EncodeVideoClip
      php artisan make:job GenerateSubtitles
      php artisan make:job PublishedVideoClip

     Web.php

```
#---------Working with Chain-------------


    // Bus::chain([
    //     new EncodeVideoClip,
    //     new GenerateSubtitles,
    //     new PublishVideoClip
    // ])->dispatch();
    // return view('welcome');
```

php artisan queue:work

# Add code to failed jobs in chains

GenerateSubtitles.php

```
     */
    public function handle(): void
    {
        //
        throw new Exception();
    }
```

php artisan queue:work

# Batches

Web.php

```
#-------Working with Batches---------

    Bus::batch([
        new EncodeVideoClip,
        new GenerateSubtitles,
        new PublishVideoClip,
    ])->dispatch();

    # need to create jobs_batches table

    return view('welcome');
```

# **below table stores information about the job batches**

php artisan queue:batches-table

php artisan migrate

Implement Batchable trait to each job class

EncodingVideoClip.php

```
class EncodeVideoClip implements ShouldQueue
{
    use Batchable, Dispatchable, InteractsWithQueue, Queueable,
SerializesModels;
```

Same step for another Job class

Run Application through browser

php artisan queue:work

Example : Create jobs and Sending mail via queue

.env

```
MAIL_MAILER=smtp
MAIL_HOST=smtp.gmail.com
MAIL_PORT=465
MAIL_USERNAME=YOUR EMAIL ID
MAIL_PASSWORD=YOUR APP PASSWORD
MAIL_ENCRYPTION=null
MAIL_FROM_ADDRESS="YOUR EMAIL ID"
MAIL_FROM_NAME="${APP_NAME}"
```

# To generate **App Password** use below link

https://myaccount.google.com/

Security -> 2 step-verifications-> App Passwords -> Generate App Password

Create Mail

php artisan make:mail MyTestMail

```
use Illuminate\Mail\Mailables\Address;
```

```
class MyTestmail extends Mailable
{
    use Queueable, SerializesModels;
    public $data;
    /**
     * Create a new message instance.
     */
    public function __construct($data)
    {
        //
        $this->data = $data;
    }

    /**
     * Get the message envelope.
     */
    public function envelope(): Envelope
    {
        return new Envelope(
            from: new Address('gtrainerforttt@gmail.com','Nishant'),
            subject: 'My First Mail Thorugh laravel',
        );
    }

    /**
     * Get the message content definition.
     */
    public function content(): Content
    {
        return new Content(
            view: 'email.test',
            with:[
                 'data'=>$this->data
            ]
        );
    }

    /**
     * Get the attachments for the message.
     *
     * @return array<int, \Illuminate\Mail\Mailables\Attachment>
     */
    public function attachments(): array
    {
        return [];
    }
}
```

test.blade.php

```
<h2>Message notification</h2>

<div>

     Message : {{$data['text']}}

</div>
```

Configure Queue

.env

QUEUE_CONNECTION = database

php artisan queue:table

php artisan migrate

Create Job

php artisan make:job MyQueueMailJob

```php
class MyQueueMailJob implements ShouldQueue
{
    use Dispatchable, InteractsWithQueue, Queueable, SerializesModels;
    public $data;
    /**
     * Create a new job instance.
     */
    public function __construct($data)
    {
        //
        $this->data = $data;
    }

    /**
     * Execute the job.
     */
    public function handle(): void
    {
        //
        Mail::to($this->data['email'])->send(new MyTestmail($this->data));
    }
}
```

web.php

```
Route::get('/laravel_test_mail_with_queue',function(){

    $data['text'] = 'We are sending email via queue';
    $data['email'] = 'nishantharshwardhan@gmail.com';
    dispatch(new MyQueueMailJob($data));
    dd('Mail Send Successfully');
});
```

# put job into jobs table
http://localhost:8000/laravel_test_mail_with_queue

# start worker to process job
php artisan queue:work

Check you Email

Example : import Large CSV File using Queue

php artisan make:model Item -m

Item_migration_file

```
 public function up(): void
    {
        Schema::create('items', function (Blueprint $table) {
            $table->id();
            $table->string('name');
            $table->string('amount');
            $table->text('description');
            $table->timestamps();
        });
    }
```

php artisan migrate

Item.php (Model)

```
 protected $guarded = ['_token'];
```

Queue Configuration

.env
 QUEUE_CONNECTION = database

php artisan queue:table
php artisan queue:batches-table

php artisan migrate

Create Queue Job
php artisan make:job ItemCSVData
https://laravel.com/docs/10.x/queues#supervisor-configuration

```
class ItemCSVData implements ShouldQueue
{
    use Batchable, Dispatchable, InteractsWithQueue, Queueable,
SerializesModels;
    public $header;
    public $data;
    /**
     * Create a new job instance.
     */
    public function __construct($data,$header)
    {
        //
        $this->data = $data;
        $this->header = $header;
    }

    /**
```

```
     * Execute the job.
     */
    public function handle(): void
    {
        //
          foreach($this->data as $item){
               $itemInput = array_combine($this->header, $item);
               Item::create($itemInput);
          }
    }
}
```

Create Controller
php artisan make:controller ItemImportController

```
use Illuminate\Contracts\View\View;
```

```
class ItemImportController extends Controller
{
    //
    public function index(): View{
         return view('itemimport');
    }

    public function store(Request $request){
          if($request->has('csv')){
              $csv = file($request->csv);
              $chunks = array_chunk($csv,1000);
              $header = [];
              $batch = Bus::batch([])->dispatch();

              foreach($chunks as $key =>$chunk){
                  $data = array_map('str_getcsv',$chunk);
                  if($key == 0){
                      $header = $data[0];
                      unset($data[0]);
                  }
                  $batch->add(new ItemCSVData($data,$header));
              }
              return redirect('/items_import')->with('status','CSV import
added on queue');
          }
    }
}
```

Web.php

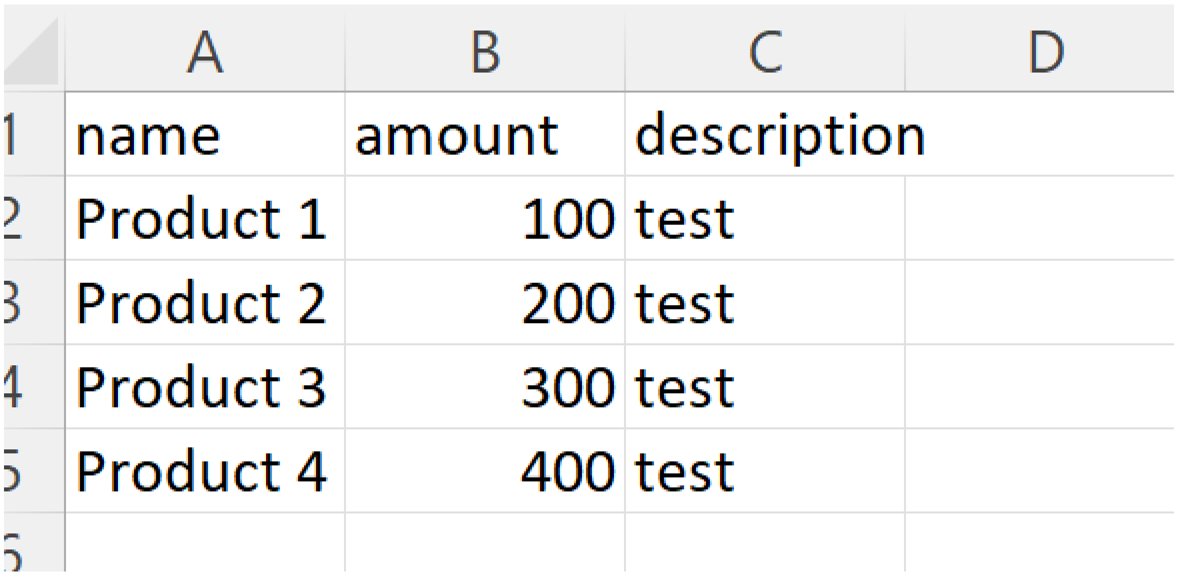
```
Route::get('/items_import',[ItemImportController::class,'index']);
Route::post('/items_import',[ItemImportController::class,'store']);
```

Itemimport.blade.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
       <h1>Import Large CSV File using Queue</h1>

       @if(session('status'))
            <strong>{{session('status')}}</strong>
       @endif

       {{Form::open(['url'=>'items_import', 'files'=>true])}}

       {{Form::file('csv')}}

       {{Form::submit('Import')}}

       {{Form::close()}}

</body>
</html>
```

Check
http://localhost:8000/items_import

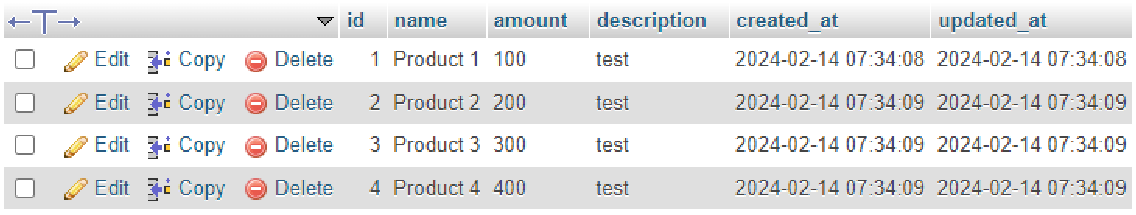
Create csv file



	A	B	C	D
1	name	amount	description	
2	Product 1	100	test	
3	Product 2	200	test	
4	Product 3	300	test	
5	Product 4	400	test	
6				

php artisan queue:work

check table items

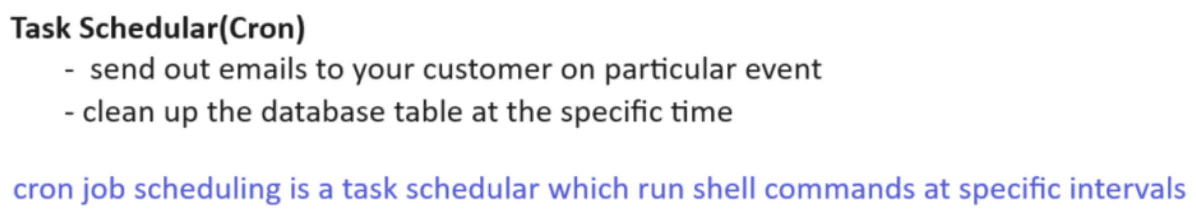


	id	name	amount	description	created_at	updated_at
Edit Copy Delete	1	Product 1	100	test	2024-02-14 07:34:08	2024-02-14 07:34:08
Edit Copy Delete	2	Product 2	200	test	2024-02-14 07:34:09	2024-02-14 07:34:09
Edit Copy Delete	3	Product 3	300	test	2024-02-14 07:34:09	2024-02-14 07:34:09
Edit Copy Delete	4	Product 4	400	test	2024-02-14 07:34:09	2024-02-14 07:34:09

Day 6

Attendance url
https://rms.koenig-solutions.com/MarkAssignmentAttendance.aspx?AId=183539&Opid=732328

Task Scheduling



Task Schedular(Cron)

- send out emails to your customer on particular event
- clean up the database table at the specific time

cron job scheduling is a task schedular which run shell commands at specific intervals

# Create Laravel Artisan Command

php artisan make:command DailyQuote

# DailyQuote.php

```
class DailyQuote extends Command
{
    /**
     * The name and signature of the console command.
     *
     * @var string
     */
    protected $signature = 'quote:daily';

    /**
     * The console command description.
     *
     * @var string
     */
    protected $description = 'Respectively send an exclusive quote to
everyone daily via email';
```

```
    /**
     * Execute the console command.
     */
    public function handle()
    {
        //
        $quotes = [
            'Mother Teresa'=> "Spread love everywhere you go. Let no one
ever come to you without leaving happier.",
            'Franklin D. Roosevelt'=>'The only thing we have to fear is
fear itself',
            'Martin Luther King Jr.'=>'Darkness cannot drive out darkness:
only light can do that. Hate cannot drive out hate: only love can do
that',
            'Do one thing every day that scares you.'=>'Eleanor Roosevelt'
        ];

        # setting up a random word
         $key =  array_rand($quotes);
         $data = $quotes[$key];
         $users = User::all();
         foreach($users as $user){
             Mail::raw("{$key} -> {$data}", function($mail) use ($user){
                       $mail->from('gtrainerforttt@gmail.com');
                       $mail->to($user->email)->subject('Daily New
Quote');
             });
         };
         $this->info('Successfully sent daily quote to everyone');

    }
}
```

#Register Task Scheduler Command

app/console/kernal.php

```
class Kernel extends ConsoleKernel
{
     protected $commands = [
           Commands\DailyQuote::class
     ];

    /**
     * Define the application's command schedule.
     */
    protected function schedule(Schedule $schedule): void
    {
        // $schedule->command('inspire')->hourly();
        $schedule->command('quote:daily')->everyMinute();
    }

    /**
     * Register the commands for the application.
     */
    protected function commands(): void
    {
        $this->load(__DIR__.'/Commands');

        require base_path('routes/console.php');
    }
}
```

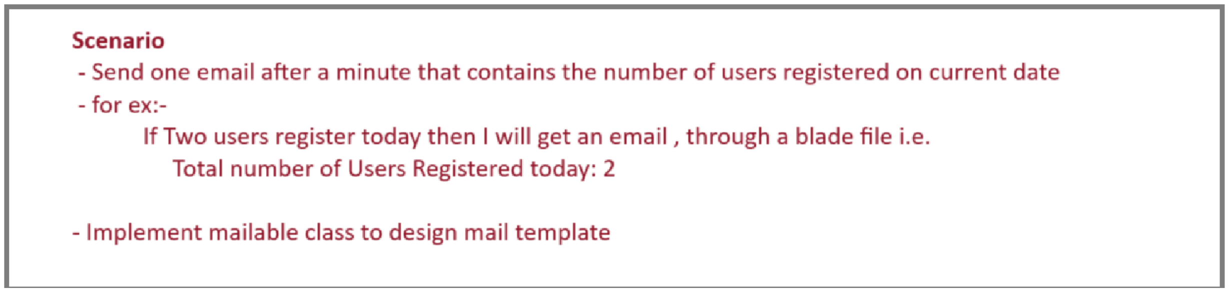
# To Check the custom artisan command in list

php artisan list

# Schedule task

php artisan quote:daily

php artisan schedule:work



Scenario

- Send one email after a minute that contains the number of users registered on current date
- for ex:-

    If Two users register today then I will get an email , through a blade file i.e.

    Total number of Users Registered today: 2

- Implement mailable class to design mail template

Solutions:

php artisan make:command RegisteredUsers

```
class RegisteredUsers extends Command
{
    /**
     * The name and signature of the console command.
     *
     * @var string
     */
    protected $signature = 'app:registered-users';

    /**
     * The console command description.
     *
     * @var string
     */
    protected $description = 'Send an email of registered users';

    /**
     * Execute the console command.
     */
    public function handle()
    {
        //
```

```
         $totalUsers =  DB::table('users')->whereRaw('Date(created_at)=
CURDATE()')->count();
         Mail::to('nishantharshwardhan@gmail.com')->send(new
SendMailable($totalUsers));

    }
}
```

php artisan make:mail SendMailable

```
class SendMailable extends Mailable
{
    use Queueable, SerializesModels;
    public $count;
    /**
     * Create a new message instance.
     */
    public function __construct($count)
    {
        //
        $this->count = $count;
    }

    /**
     * Get the message envelope.
     */
    public function envelope(): Envelope
    {
        return new Envelope(
            subject: 'User Registration Report',
        );
    }

    /**
     * Get the message content definition.
     */
    public function content(): Content
    {
        return new Content(
            view: 'email.registercount',
        );
    }

    /**
     * Get the attachments for the message.
     *
     * @return array<int, \Illuminate\Mail\Mailables\Attachment>
     */
    public function attachments(): array
    {
        return [];
    }
}
```

email/registercount.blade.php

```
<h3>Total number of User Registered today : {{$count}} </h3>
```

app/console/kernal.php

```
class Kernel extends ConsoleKernel
{
     protected $commands = [
        //    Commands\DailyQuote::class
         Commands\RegisteredUsers::class
     ];

    /**
     * Define the application's command schedule.
     */
    protected function schedule(Schedule $schedule): void
    {
        // $schedule->command('inspire')->hourly();
        // $schedule->command('quote:daily')->everyMinute();
        $schedule->command('app:registered-users')->everyMinute();
    }

    /**
```

```
     * Register the commands for the application.
     */
    protected function commands(): void
    {
        $this->load(__DIR__.'/Commands');

        require base_path('routes/console.php');
    }
}
```

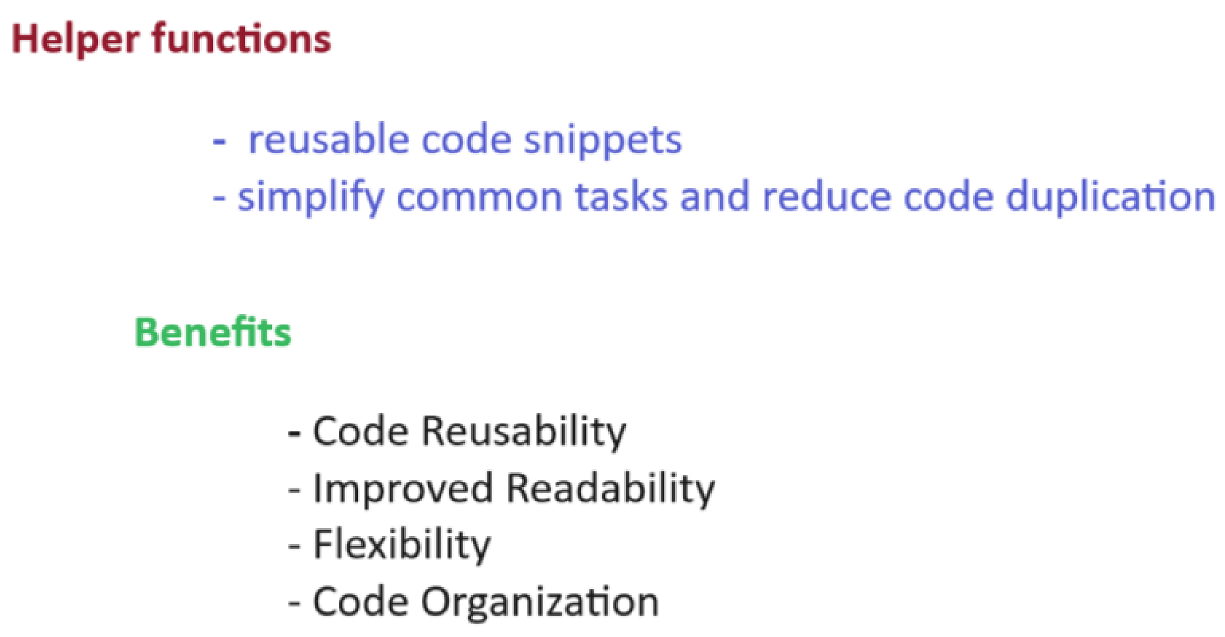
DatabaseSeeder.php

```
  public function run(): void
    {
        \App\Models\User::factory(3)->create();
```

Run

```
 php artisan app:registered-users
 php artisan schedule:work
```

Helper Functions


Helper functions

- reusable code snippets
- simplify common tasks and reduce code duplication

Benefits

- Code Reusability
- Improved Readability
- Flexibility
- Code Organization

# Creating Custom helper Function

# Create folder : App\Helpers\helpers.php

```php
<?php
use Illuminate\Support\Str;
use Illuminate\Http\UploadedFile;

  if(!function_exists('UploadFiled')){


    function UploadMyFile(UploadedFile $file, $folder=null,
$filename=null,$disk='s3'){
        $name= is_null($filename)? $filename: Str::random(10);
        return $file->storeAs(
              $folder,
              $name.".".$file->getClientOriginalExtension(),
              $disk
        );
    }
  }


?>
```

# Create Service Provider

php artisan make:provider HelperServiceProvider

```
class HelperServiceProvider extends ServiceProvider
{
    /**
     * Register services.
     */
    public function register(): void
    {
        //
         $files =  glob(app_path('Helpers')."/*.php");
         foreach($files as $key =>$file){
              require_once $file;
         }

    }

    /**
     * Bootstrap services.
     */
    public function boot(): void
    {
        //
    }
}
```

# Register Service Provider

config/app.php

```
 'providers' => ServiceProvider::defaultProviders()->merge([
        /*
         * Package Service Providers...
         */

        /*
         * Application Service Providers...
         */
        App\Providers\HelperServiceProvider::class,
```

# Using the function

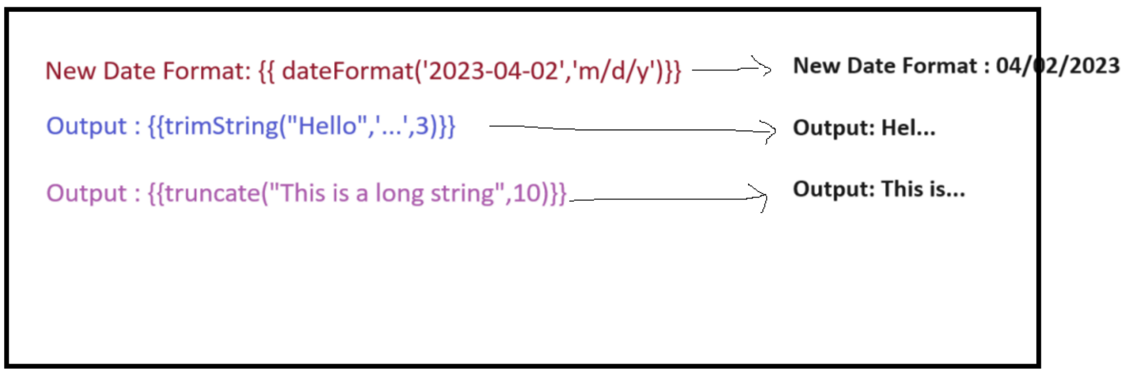
TestController.php

```
  public function upload(Request $request){
        $file_path =  UploadMyFile($request->file('csv'),'Products');
        dd($file_path);
    }
```

Web.php

```
Route::get('/items_import',[ItemImportController::class,'index']);
Route::post('/items_import',[TestController::class,'upload']);
```

Practice



New Date Format: {{ dateFormat('2023-04-02','m/d/y')}} → New Date Format : 04/02/2023

Output : {{trimString("Hello",'...',3)}} → Output: Hel...

Output : {{truncate("This is a long string",10)}} → Output: This is...

Solution
helpers.php

```
  function dateFormat($date,$format){
        return
\Carbon\Carbon::createFromFormat('Y-m-d',$date)->format($format);
  }

  function trimString($string,$repl,$limit){
        if(strlen($string)> $limit){
          return substr($string,0,$limit).$repl;
        }
        else{
            return $string;
        }
  }

  function truncate($string,$length){
       if(strlen($string)> $length){
           return substr($string,0,$length-3).'...';
       }
       return $string;
  }
```

Blade file

```

       <h4>New Date Format: {{dateFormat('2023-04-02','m/d/Y')}}</h4>
       <p>Output : {{trimString("Hello","...",3)}}</p>
       <p>Output : {{truncate("This is a long string",10)}}</p>
```

Error Handling

web.php

```
Route::get('/search',[TestController::class, 'index']);
Route::get('/search/result',[TestController::class, 'result']);
```

TestController.php

```
 public function index(){
          return view('search');
    }

    public function result(Request $request){
        # give us an error
        // $user =   User::find($request->user_id);
        // return view('result',compact('user'));

        # handle Error
         try{
              $user =  User::findOrFail($request->user_id);
              return view('result',compact('user'));
         }
         catch(Exception $e){
                  $message = $e->getMessage();
                  if($e instanceof ModelNotFoundException){
                       $message = 'User with Id: '.$request->user_id.' not
found';
                  }
         }
         return back()->withError($message)->withInput();

    }
```

.env

```
APP_DEBUG=false
```

Search.blade.php

```
{{Form::open(['url'=>'/search/result','method'=>'GET'])}}

    <h2>Get Users By ID</h2>

    @if(session('error'))
           {{session('error')}}
    @endif
    <br><br>
    {{Form::text('user_id',null,['placeholder'=>'Enter user Id'])}}

    {{Form::submit('Search')}}

{{Form::close()}}
```

Result.blade.php

```
 <h1>Result Found</h1>
<ul>
    <li>{{$user->name}}</li>
    <li>{{$user->email}}</li>
</ul>
```