Institute of Technology of Cambodia

Department of Information and Communication Engineering

Assignment TP15

TP15: PHP, Laravel

Group: I4 GIC(C)

Lecturers	Subjects
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GitHub's Repository: https://github.com/Dapravith/TP_Internet_Programming/tree/TP15

Installation:

- Install the Laravel framework using composer:

```
rothadapravith@MacBookPro-M1  /Applications/XAMPP/xamppfiles/htdocs/TP15_IP_Laravel  ▢ TP15  composer create-project laravel/laravel
TP15_IP_Laravel --prefer-dist
```

- Create database and configure the connection (MYSQL)

```
11    DB_CONNECTION=mysql
12    DB_HOST=127.0.0.1
13    DB_PORT=3306
14    DB_DATABASE=TP15_Laravel_TaskList
15    DB_USERNAME=root
16    DB_PASSWORD=
17
```

- Install its dependencies
  cd TP15_IP_Laravel
  composer install
  php artisan migrate

Database Migrations

- Build database table
  php artisan make:migration create_tasks_table –create=tasks

database > migrations > 🐘 2023_07_17_021820_create_tasks_table.php > ...

```php
<?php

use Illuminate\Database\Migrations\Migration;
use Illuminate\Database\Schema\Blueprint;
use Illuminate\Support\Facades\Schema;

return new class extends Migration
{
    /**
     * Run the migrations.
     *
     * @return void
     */
    public function up()
    {
        Schema::create('tasks', function (Blueprint $table) {
            $table->id();
            $table->string('name');
            $table->timestamps();
        });
    }

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

- Migrate a new table

  php artisan migrate

Eloquent Models

- Define a Task model corresponding to task table just created
  php artisan make:model Task

```
app > Models > php Task.php > PHP Symbols > Task
1    <?php
2
3    namespace App\Models;
4
5    use Illuminate\Database\Eloquent\Factories\HasFactory;
6    use Illuminate\Database\Eloquent\Model;
7
     4 references | 0 implementations
8    class Task extends Model
9    {
10       use HasFactory;
11   }
```

Routing

routes > 🐘 web.php > ...

```php
1   <?php
2
3   use App\Models\Task;
4   use Illuminate\Http\Request;
5   use Illuminate\Support\Facades\Route;
6   use Illuminate\Support\Facades\Validator;
7
8   /*
9   |--------------------------------------------------------------------------
10  | Web Routes
11  |--------------------------------------------------------------------------
12  |
13  | Here is where you can register web routes for your application. These
14  | routes are loaded by the RouteServiceProvider within a group which
15  | contains the "web" middleware group. Now create something great!
16  |
17  */
18
19  Route::get('/', function () {
20      $tasks = Task::orderBy('created_at', 'asc')->get();
21
22      return view('tasks', [
23          'tasks' => $tasks
24      ]);
25  });
26
27  Route::post('/task', function (Request $request) {
28      $validator = Validator::make($request->all(), [
29          'name' =>'required|max:255',
30      ]);
31
32      if ($validator->fails()) {
33          return redirect('/')
34          ->withInput()
35          ->withErrors($validator);
36      }
37
38      $task = new Task;
39      $task-> name = $request->name;
40      $task->save();
41
42      return redirect('/');
43  });
44
45
46  Route::get('/task/{task}/edit', 'TaskController@edit')->name('task.edit');
47  Route::put('/task/{task}', 'TaskController@update');
48
```

Displaying A view

- Build layouts & views

- Defining The layout

resources › views › layouts › 🍃 app.blade.php › …

```
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8">
5       <meta name="viewport" content="width=device-width, initial-scale=1.0">
6       <link href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.4.0/css/all.min.css" rel="stylesheet">
7       <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-9nd
8       <title>TP15 Laravel TaskList</title>
9   </head>
10  <body>
11
12      <div class="container">
13          <nav class="navbar navbar-default">
14
15              </nav>
16              @yield('content')
17      </div>
18  </body>
19  </html>
```

resources › views › 🍃 tasks.blade.php › 🔷 div.container › 🔷 div.panel-body › 🔷 form.form-horizontal

```
1   @extends('layouts.app')
2
3   @section('content')
4
5       <div class="container">
6           <div class="panel-body">
7               @include('common.errors')
8               <form action="/task" method="POST" class="form-horizontal">
9                   {{ csrf_field() }}
10
11                  <div class="form-group">
12                      <label for="task" class="col-sm-3 control-label"><strong>Task</strong></label>
13                      <div class="d-flex">
14                          <div class="col-sm-6">
15                              <input type="text" name="name" id="task-name" class="form-control">
16                          </div>
17                          <div class="col-sm-offset-3 col-sm-6">
18                              <button type="submit" class="btn btn-primary">
19                                  <i class="fa fa-plus"></i> Add Task
20                              </button>
21                          </div>
22                      </div>
23                  </div>
24              </form>
25              <hr>
26              <br>
27          </div>
28
```

resources > views > 🍃 tasks.blade.php > 🔷 div.container > 🔷 div.panel-body > 🔷 form.form-horizontal

```
26              <br>
27          </div>
28
29          @if (count($tasks) > 0)
30              <div class="panel panel-default">
31                  <div class="panel-heading"><strong>Laravel-Crud TaskList</strong></div>
32                  <div class="panel-body">
33                      <table class="table table-striped task-table">
34
35                          <thead>
36                              <th>Task</th>
37                              <th> </th>
38                              <th> </th>
39                          </thead>
40
41                          <tbody>
42                              @foreach ($tasks as $task)
43                                  <tr>
44
45                                      <td class="table-text">
46                                          <div>{{ $task->name }}</div>
47                                      </td>
48
49                                      <td>
50                                          <form action="/task/{{ $task->id }}" method="POST">
51                                              {{ csrf_field() }}
52                                              {{ method_field('DELETE') }}
53
54                                              <button class="btn btn-danger" onclick="return confirm('Are you sure you want t
55                                                  <i class="fa-solid fa-trash"></i> Delete
56                                              </button>
57                                          </form>
58                                      </td>
59                                  </tr>
60                              @endforeach
61                          </tbody>
62
63                      </table>
64                  </div>
65              </div>
66          @endif
67      </div>
68
69      <style>
70          /* Add custom CSS styles */
71          .panel-heading {
72              background-color: lightskyblue; /* Gray background color */
73              color: #ffff; /* White text color */
74              padding: 10px;
75              font-size: 30px;
76          }
77
78          td:last-child {
79              text-align: right;
80          }
81
82      </style>
83  @endsection
84
```

Adding Tasks

- Creating task with Validation

routes > 🐘 web.php > ...

```php
25    });
26
27    Route::post('/task', function (Request $request) {
28        $validator = Validator::make($request->all(), [
29            'name' =>'required|max:255',
30        ]);
31
32        if ($validator->fails()) {
33            return redirect('/')
34            ->withInput()
35            ->withErrors($validator);
36        }
37
38        $task = new Task;
39        $task-> name = $request->name;
40        $task->save();
41
42        return redirect('/');
43    });
44
45
46    Route::get('/task/{task}/edit', 'TaskController@edit')->name('task.edit');
47    Route::put('/task/{task}', 'TaskController@update');
48
49    Route::delete('/task/{id}', function ($id) {
50
51        Task::findOrFail($id)->delete();
52        return redirect('/');
53    });
54
```

- Error Handler

resources > views > common > 🦄 errors.blade.php > ...

```
1    @if (count($errors) > 0)
2        <div class="alert alert-danger">
3            <strong>Whoops! Something went wrong!</strong>
4            <br><br>
5
6            <ul>
7                @foreach ($errors->all() as $error)
8                    <li>{{ $error }}</li>
9                @endforeach
10           </ul>
11       </div>
12   @endif
```

- Include error handler file into task creation form

```
<div class="container">
    <div class="panel-body">
        @include('common.errors')
```

Displaying Existing tasks

- Displaying Task
Pass all the existing tasks from the database to the view

```
19   Route::get('/', function () {
20       $tasks = Task::orderBy('created_at', 'asc')->get();
21
22       return view('tasks', [
23           'tasks' => $tasks
24       ]);
25   });
```

Deleting Tasks

- Adding The Delete Button

```html
<td>
    <form action="/task/{{ $task->id }}" method="POST">
        {{ csrf_field() }}
        {{ method_field('DELETE') }}

        <button class="btn btn-danger" onclick="return confirm('Are you sure you want to delete {{ $task->name }}?')">
            <i class="fa-solid fa-trash"></i> Delete
        </button>
    </form>
</td>
```

Results from Laravel Projects