

Laravel 5.2 CRUD Application

■ July 10, 2016 (http://www.itechempires.com/2016/07/laravel-5-crud-operations/) ■ Yogesh Koli (http://www.itechempires.com/author/yogeshkoli/) □
 Bootstrap (http://www.itechempires.com/category/bootstrap/), Laravel (http://www.itechempires.com/category/laravel/), PHP (http://www.itechempires.com/category/php/)

In this tutorial I am going to provide step by step guide to implement CREAT, READ, UPDATE and DELETE Operations using Laravel 5.2 PHP Framework.

Development Platform:

Laravel Provides Homestead development environment, it's my preferred option while working with laravel project, it has all required configuration ready to use for the framework, if you have't heard about homestead just visit Laravel official website for download and installation. however you can also continue with your existing environment it can be LAMP, MAPM or WAMP just make sure with the following softwares and extensions.

- PHP >= 5.5.9
- OpenSSL PHP Extension
- PDO PHP Extension
- Mbstring PHP Extension
- Tokenizer PHP Extension
- Composer

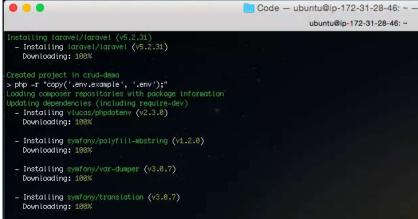
If you have your server configuration ready to use then let's get started with the first step to install Laravel framework.

Step 1: Install Laravel:

Open up the terminal and navigate cd to your server root directory and type in following command to install Laravel, application directory is depend on where your server root is located, for example LAMP is having it set to /var/www/.

let's see what happen next!

sudo composer create-project --prefer-dist laravel/laravel crud-demo



(https://i0.wp.com/www.itechempires.com/wp-content/uploads/2016/06/installing-laravel.png)

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After Installing laravel successfully you should see crud-demo folder with laravel application, change the file permissions to be able read, write and execute to do that use following command, make sure you have provided correct path.

```
sudo chmod -R 775 crud-demo/
```

You can try to run newly installed laravel project on browser, in my case the URL is: http://crud-demo.dev:8888. it should show up laravel welcome Sharesscreen.



(https://i2.wp.com/www.itechempires.com/wp-content/uploads/2016/07/Laravel-Welcome-Screen.jpg)

Step 2: Database Connection Settings:

Create a database and change settings from .env file showing below, make sure to mention password if database user is having password set.

```
DB_CONNECTION=mysql
DB_HOST=127.0.0.1
DB_PORT=3306
DB_DATABASE=crud_demo
DB_USERNAME=homestead
DB_PASSWORD=secret
```

Step 3: Database migration:

Basically we are going to setup database table with laravel migration, use following command to create migration file from terminal and open it up in the editor. (All migration files are located in database/migrations folder)

```
php artisan make:migration create_tasks_table --create=tasks
```

Update the Schema to specify table fields as showing below:

```
<?php
use Illuminate\Database\Schema\Blueprint;
use Illuminate\Database\Migrations\Migration;
class CreateTasksTable extends Migration
       * Run the migrations.
       * @return void
     public function up()
           Schema::create('tasks', function (Blueprint $table) {
    $table->increments('id');
    $table->string('name');
    $table->text('description');
    $table->timestamps();
}
           });
     }
          Reverse the migrations.
       * @return void
     public function down()
           Schema::drop('tasks');
     }
}
```

If you ready with the migration file use following to migrate the table.

```
php artisan migrate
```

You will get Migration table created successfully. message in your terminal.

 $43\,$ Let's go the next step to create Laravel Model for task table. Shares

Step 4: Create Eloquent Model:

```
php artisan make:model Task
```

17 Open the Task.php file, it should be located in app/Task.php directory and add \$fillable variable.

Step 5: Define Routes:

In Laravel we have to define routes to handle request and response, route can be define in app/Http/routes.php file. open up the routes file and add following code to define routes for our CRUD operations.

```
<?php
Route::get('/', 'TaskController@index');
Route::resource('tasks', 'TaskController');</pre>
```

Route::get('/', 'TaskController@index'); - To list task by default on home page.

Route::resource('tasks', 'TaskController'); - Resource route it will generate CRUD URI.

ex. http://crud-demo.dev:8888/ or we can use resource route that is http://crud-demo.dev:8888/tasks both will work same.

We need to add our resource controller for tasks routes, go ahead and create controller using following command:

```
php artisan make:controller TaskController --resource
```

Controller are located in app/Http/Controllers directory, you open up the TaskController to view file it should match with below controller file:

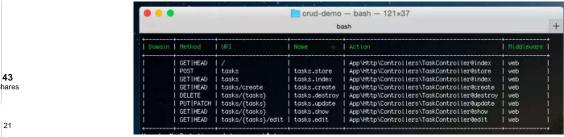
TaskController.php:

```
<?php
     namespace App\Http\Controllers;
     use Illuminate\Http\Request;
     use App\Http\Requests;
43
     class TaskController extends Controller
21
           * Display a listing of the resource.
           * @return \Illuminate\Http\Response
17
         public function index()
17
         }
           * Show the form for creating a new resource.
           * @return \Illuminate\Http\Response
         public function create()
         }
           * Store a newly created resource in storage.
           * @param \Illuminate\Http\Request $request
           * @return \Illuminate\Http\Response
         public function store(Request $request)
           * Display the specified resource.
           * @param int $id
* @return \Illuminate\Http\Response
         public function show($id)
         }
           * Show the form for editing the specified resource.
           * @param int $id
           * @return \Illuminate\Http\Response
         public function edit($id)
           * Update the specified resource in storage.
           * @param \Illuminate\Http\Request $request
           * @param int $id
* @return \Illuminate\Http\Response
         public function update(Request $request, $id)
         }
           * Remove the specified resource from storage.
           * @param int $id
* @return \Illuminate\Http\Response
         public function destroy($id)
     }
```

Use following command to list and make sure you have all required routes ready to use.

```
php artisan route:list
```

In this case if you run the above command it will list out following routes:



(https://i0.wp.com/www.itechempires.com/wp-content/uploads/2016/06/resource-routes-list.png)

Step 6: Install required HTML Package:

1 I am going to use FORM class in the our blade templates, laravel has removed HTML package from the default configuration, follow next steps to pull html package in using composer

Edit your composer.json file:

```
"require": {
    "laravelcollective/html": "5.2.*"
}
```

Next, use terminal to update composer:

```
composer update
```

You will see composer is going to pull the package from the repository to our project.

Add new provides in config/app.php file:

```
'providers' => [
   Collective\Html\HtmlServiceProvider::class,
],
```

Add following classes the aliases array of config/app.php file:

```
'aliases' => [
    'Form' => Collective\Html\FormFacade::class,
    'Html' => Collective\Html\HtmlFacade::class,
],
```

We are good to go the next step to do some designing and coding.

Step 7: Design Layout using Blade Template:

We are going to use layout for all crud pages, **Layout** is basically a master page for all child pages from the project, **Laravel layouts** help us to re-use same code within multiple pages.

Create layout page under resources/views/layouts/master.blade.php and add following code:

```
<!doctype html>
<html lang="en">
<head>
    <meta charset="UTF-8">
   <title>Task List</title>
    <!-- Bootstrap CSS File -->
   <link rel="stylesheet" type="text/css" href="{{ URL::asset('bootstrap/css/bootstrap.min.css') }}"/>
</head>
<body>
<div class="container">
   <nav class="navbar navbar-default">
        <div class="container-fluid">
           <div class="navbar-header">
               <a class="navbar-brand" href="#">Laravel CRUD Operations Demo</a>
           </div>
           </div>
   </nav>
   <head>
       <h1></h1>
   </head>
   @yield('content')
</div>
</body>
</html>
```

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We have our master page ready to use along with the basic bootstrap design now we will have to pull in bootstrap files from getbootstrap.com (http://getbootstrap.com) and add those files to public directory of the project.

Next you will see <code>@yield('content')</code> – this is section we are going implement in the child pages.

let's create folder named task under resources/views/, here we are going to store our views so it will good to organise our project folder structure. I Shares would prefer you to use this kind of file structure for every project it's good to have organised.

List view:

21 Create resources/views/task/list.blade.php file and following code:

```
@extends('layouts.master')
@section('content')
   {{ $message }}
        </div>
   @endif
   <div class="panel panel-default">
       <div class="panel-heading">
           Task List
       </div>
       <div class="panel-body">
           <div class="form-group">
               </div>
           </div>
           No
                   Title
                  Descriptionwidth="300">Action
               @if (count($tasks) > 0)
                  @foreach ($tasks as $key => $task)
                       {{ ++$i }}
                          {{ $task->name }}
                          {{ $task->description }}
                          <a class="btn btn-success" href="{{ route('tasks.show',$task->id) }}">Show</a>
<a class="btn btn-primary" href="{{ route('tasks.edit',$task->id) }}">Edit</a>
{{ Form::open(['method' => 'DELETE','route' => ['tasks.destroy', $task->id],'style'=> {{ Form::submit('Delete', ['class' => 'btn btn-danger']) }}
                              {{ Form::close() }}
                          @endforeach
               @else
                       Tasks not found!
                   @endif
           {{ $tasks->render() }}
       </div>
   </div>
@endsection
```

If you have a look on above code, you will see what I was talking about calling our layout page, so at the very top we are extending the layout page and implementing the content section which is going to render in the content variable of layout.

In content section first, we have bootstrap design I am using bootstrap panel here to get more better look, you can look the bootstrap css classes for panel for example panel-heading and panel-body.

Next there is html table to loop throughout the \$tasks variable which are going to see step by step, for now just keep in mind that whenever you need to call, you should pass \$tasks variable.

Don't forgot we are going to have pagination at the of the task list, rendor() is going to help to generate pagination.

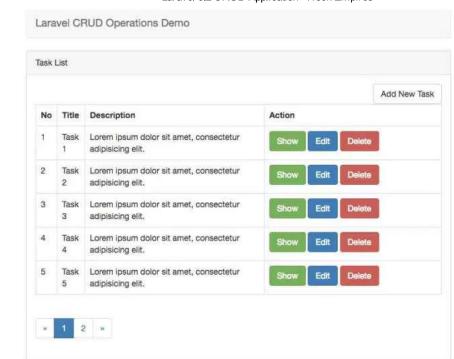
Let's have a look on our listing view:

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(https://i2.wp.com/www.itechempires.com/wp-content/uploads/2016/07/List-View-Screen.jpg)

Create View:

Create new file under resources/views/task/create.blade.php, we are going to use this view to have our create new task form, use following code and add to the create.blade.php page.

```
@extends('layouts.master')
@section('content')
   <div class="panel panel-default">
     <div class="panel-heading">Add New Task</div>
     <div class="panel-body">
         <strong>Errors:</strong>
                   @endforeach
                </div>
         @endif
         </div>
         <div class="form-group">
            <label for="description">Description</label>
<textarea name="description" class="form-control" rows="3">{{ old('description') }}</textarea>
         </div>
         </div>
         {{ Form::close() }}
      </div>
   </div>
@endsection
```

Here again we using same master page, so that's the reusability Okay next we have our create task form here along with the Error section.

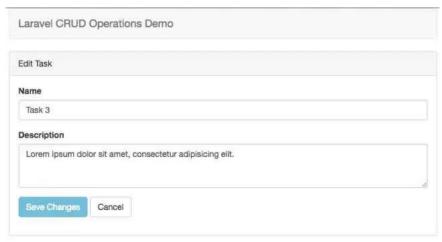
	Laravel CRUD Operations Demo	
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21	Description	
17		
17	Add Task Cancel	H.
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(https://i0.wp.com/www.itechempires.com/wp-content/uploads/2016/07/Add-New-Task-View.jpg)

Edit View:

Add resources/views/task/edit.blade.php and add following code:

```
@extends('layouts.master')
@section('content')
  <div class="panel panel-default">
     <div class="panel-heading">Edit Task</div>
     <div class="panel-body">
       <strong>Errors:</strong>
              @foreach ($errors->all() as $error)
     {{ $error }}
              @endforeach
           </div>
       @endif
       </div>
       {!! Form::close() !!}
    </div>
  </div>
@endsection
```



(https://i2.wp.com/www.itechempires.com/wp-content/uploads/2016/07/Edit-View-Screen.jpg)

Show View:

Add resources/views/task/show.blade.php to have task details page, go ahead and use following code:

```
@extends('layouts.master')
     @section('content')
         View Task
43
             </div>
Shares
             <div class="panel-body">
                 <div class="pull-right">
                     <a class="btn btn-default" href="{{ route('tasks.index') }}">Go Back</a>
21
                 </div>
                 <div class="form-group">
                     <strong>Name: </strong> {{ $task->name }}
                 </div>
 17
                 <div class="form-group">
                     <strong>Description: </strong> {{ $task->description }}
                 </div>
 17
             </div>
         </div>
     @endsection
```



(https://i2.wp.com/www.itechempires.com/wp-content/uploads/2016/07/Show-Task-View.jpg)

Step 8: Update TaskController file:

Finally we have to do focus on the import part of the tutorial, which our TaskController, go ahead and edit TaskController.php file, and try to math with the following functions. we needs to update our each function.

```
<?php
namespace App\Http\Controllers;
use App\Task;
use Illuminate\Http\Request;
use App\Http\Requests;
class TaskController extends Controller
      * Display a listing of the resource.
      * @return \Illuminate\Http\Response
    public function index(Request $request)
         $tasks = Task::orderBy('name', 'ASC')->paginate(5);
return view('task.list',compact('tasks'))->with('i', ($request->input('page', 1) - 1) * 5);
       Show the form for creating a new resource.
      * @return \Illuminate\Http\Response
    public function create()
         return view('task.create');
      * Store a newly created resource in storage.
      * @param \Illuminate\Http\Request $request
      * @return \Illuminate\Http\Response
    public function store(Request $request)
           / validated input request
         $this->validate($request, [
    'name' => 'required',
    'description' => 'required'
         ]);
          // create new task
         Task::create($request->all());
         return redirect()->route('tasks.index')->with('success', 'Your task added successfully!');
```

```
* Display the specified resource.
            * @param int $id
            * @return \Illuminate\Http\Response
43
          public function show($id)
               $task = Task::find($id);
               return view('task.show',compact('task'));
21
            * Show the form for editing the specified resource.
17
              @param int $id
             @return \Illuminate\Http\Response
17
          public function edit($id)
               $task = Task::find($id);
               return view('task.edit', compact('task'));
            * Update the specified resource in storage.
            * @param \Illuminate\Http\Request $request
            * @param int $id
             @return \Illuminate\Http\Response
          public function update(Request $request, $id)
               $this->validate($request, [
    'name' => 'required',
    'description' => 'required'
               ]);
Task::find($id)->update($request->all());
return redirect()->route('tasks.index')->with('success','Task updated successfully');
          }
            * Remove the specified resource from storage.
              @param int $id
              @return \Illuminate\Http\Response
          public function destroy($id)
               Task::find($id)->delete();
return redirect()->route('tasks.index')->with('success','Task removed successfully');
          }
     }
```

If you checkout the controller I have added all the operations that we going to needs to handle our resource route along with the blade templates:

Quick description RESTful functions:

index() - use to get task from the table and return with task.list view.

create() - returns task.create view.

store() - handle post request getting from create view, validated the request, create new task and redirect to tasks.index route along with the success message.

show() - find the task details according to the ID and returns task.show view.

edit() - find the task details with the specified ID and returns task.edit view.

update() – handle request coming from edit view, validate the request, update the record and redirect to the tasks.index route.

destroy() - handle Delete method, deletes the record from the table using eloquent modal and redirects back to the tasks.index route.

We are done, I think having read this tutorial you should be able to use laravel now with the it's important features like eloquent, middleware, routes and controller.

Go start building great laravel applications.

Feel free to comments if you get any issues using this tutorial or you have any question, I always do my best to respond.

Don't forgot to tell to your friend as well, sharing is caring.

Thanks keep learning....!

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