

Model–View–Controller (MVC) Laravel API

Lab 08 - Solutions

- 1- Create a Laravel app named Lab 8
- 2- Change the .env file

```
DB_CONNECTION=mysql
DB_HOST=127.0.0.1
DB_PORT=3306
DB_DATABASE=lab8
DB_USERNAME=root
DB_PASSWORD=
```

Create an api for file upload:

- 3- ***php artisan make:request UploadRequest***
- 4- Change the Rules function in UploadRequest.php file in app/Http/Requests

```
public function rules()
{
    return [
        "file" => "required",
    ];
}
```

- 5- ***php artisan make:controller UploadController***
- 6- Add this function to the class:

```
public function __invoke(Request $request)
{
    $result=$request->file('file')->store('uploads');
    return ["Result:"=>$result];
}
```

- 7- Add this route to api.php

```
Route::post("upload", \App\Http\Controllers\UploadController::class);
```

To create a database for menu items and apis for CRUD operations:

8- ***php artisan make:model Menu --migration***

9- Go to app\Models\Menu.php and specify the columns for the table:

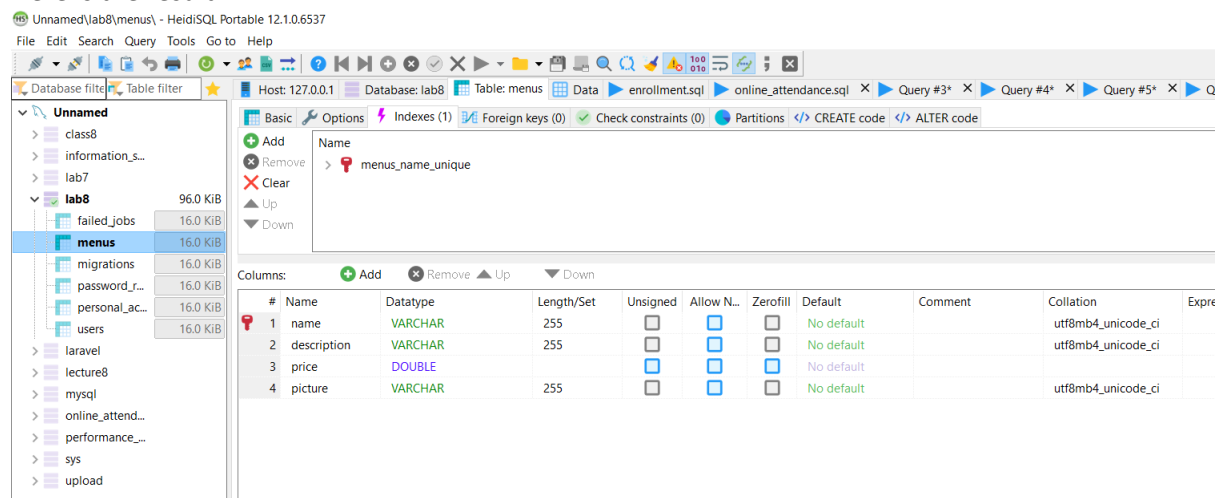
```
protected $fillable = ['name','description', 'price', 'picture'];
```

10- Then, go to database\migration and change the up function with this:

```
public function up(): void
{
    Schema::create('menus', function (Blueprint $table) {
        $table->string('name');
        $table->string('description');
        $table->double('price');
        $table->string('picture');
        $table->unique('name');
    });
}
```

11- ***php artisan migrate***

12- Here is the result:



13- ***php artisan make:controller MenuController --api***

14- Change the Menu Controller:

```
namespace App\Http\Controllers;

use Illuminate\Http\Request;
use App\Models\Menu;
use Illuminate\Support\Facades\DB;

class MenuController extends Controller
{
    /**
     * Display a listing of the resource.
     */
}
```

```

    */
    public function index()
    {
        return Menu::all();
    }

    /**
     * Store a newly created resource in storage.
     */
    public function store(Request $request)
    {
        return Menu::create($request->all());
    }

    /**
     * Display the specified resource.
     */
    public function find(Request $request)
    {
        $name = $request->query('name');
        $result = DB::table('menus')->where('name', $name)->get();

        return $result;
    }

    /**
     * Update the specified resource in storage.
     */
    public function update(Request $request)
    {
        $name = $request->input('name');
        $description = $request->input('description');
        $price = $request->input('price');
        $picture = $request->input('picture');
        $item = DB::update('update menus set name =
?,description=?,price=?,picture=? where name = ?',
        [$name,$description,$price,$picture,$name]);
        return $item;
    }

    /**
     * Remove the specified resource from storage.
     */
    public function delete(Request $request)
    {

```

```

        $name = $request->query('name');
        $item = DB::delete('delete from menus where name = ?',[$name]);
        return $item;
    }
}

```

15- Change the api.php in routes:

```

<?php

<?php

use Illuminate\Http\Request;
use Illuminate\Support\Facades\Route;
use App\Http\Controllers\MenuController;

/*
|-----
| API Routes
|-----
|
| Here is where you can register API routes for your application. These
| routes are loaded by the RouteServiceProvider and all of them will
| be assigned to the "api" middleware group. Make something great!
|
*/

Route::post("upload", \App\Http\Controllers\UploadController::class);
Route::group(['prefix' => 'menu'], function () {
    Route::get('/', [MenuController::class, 'index']);
    Route::get('find', [MenuController::class, 'find']);
    Route::post('/', [MenuController::class, 'store']);
    Route::put('/', [MenuController::class, 'update']);
    Route::delete('/', [MenuController::class, 'delete']);
});

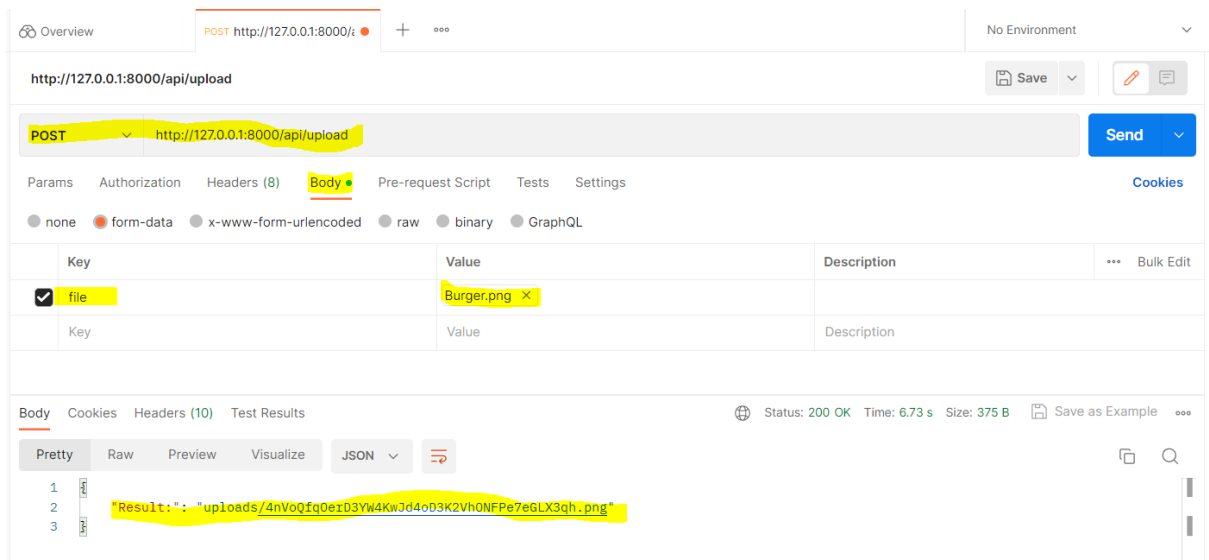
```

Test APIs:

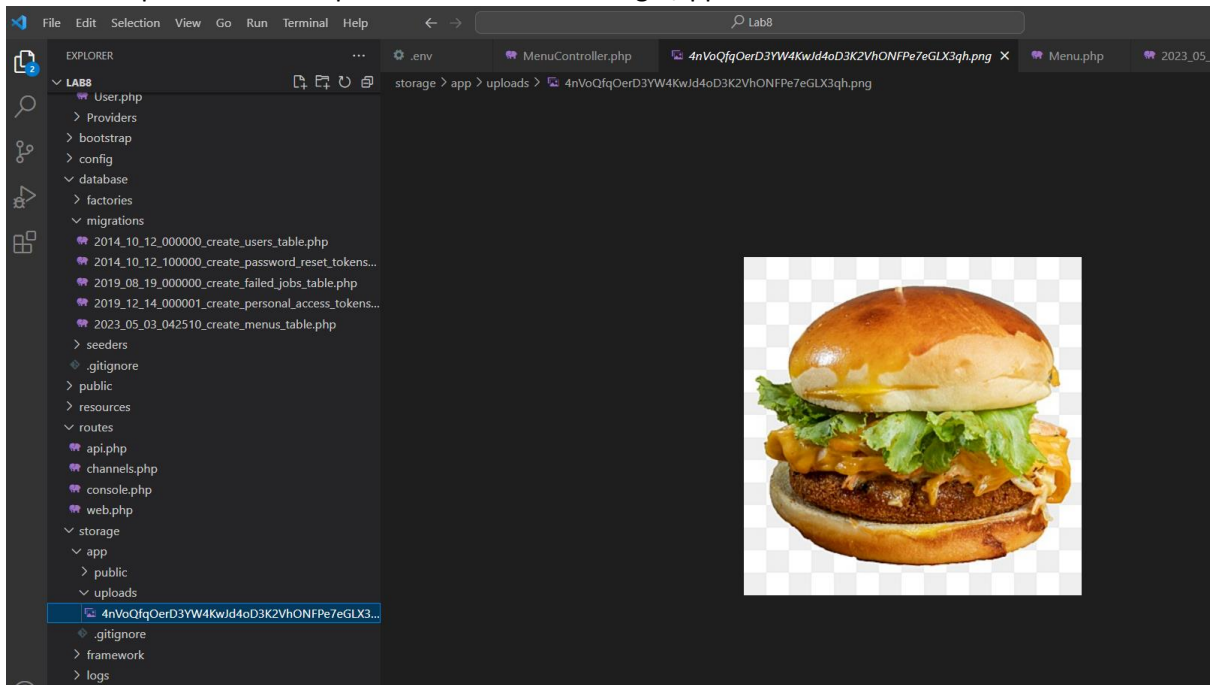
File Upload:

16- Run Postman and test the file upload:

In the form-data, you need to choose a file type and name the key as file. The pick the file and send. You must be able to see the result:



17- The file is uploaded in the uploads folder under storage\app



18- Copy the file path and use it for creating a new menu item:

http://127.0.0.1:8000/api/menu

POST http://127.0.0.1:8000/api/menu

Params Authorization Headers (8) Body Pre-request Script Tests Settings Cookies

none form-data x-www-form-urlencoded raw binary GraphQL

Key	Value	Description
name	Burger	
description	Beef, Tomato, Sauce	
price	11.99	
picture	uploads/4nVoQfqOerD3YW4KwJd4oD3K2VhONFPe7eGL...	

Body Cookies Headers (10) Test Results Status: 201 Created Time: 1092 ms Size: 541 B Save as Example

Pretty Raw Preview Visualize

```
{
  "name": "Burger",
  "description": "Beef, Tomato, Sauce",
  "price": "11.99",
  "picture": "uploads/4nVoQfqOerD3YW4KwJd4oD3K2VhONFPe7eGLX3qh.png",
  "updated_at": "2023-05-03T04:54:38.000000Z",
  "created_at": "2023-05-03T04:54:38.000000Z",
  "id": 0
}
```

19- Check the new record in the table:

Unnamed\lab8\menus\ - HeidiSQL Portable 12.1.0.6537

File Edit Search Query Tools Go to Help

Database filter Table filter Host: 127.0.0.1 Database: lab8 Table: menus Data enrollment.sql online_attendance.sql Query #3* Query #

lab8.menus: 1 rows total (approximately)

name	description	price	picture	created_at	updated_at
Burger	Beef, Tomato, Sauce	11.99	uploads/4nVoQfqOerD3YW4KwJd4oD3K2VhON...	2023-05-03 04:54:38	2023-05-03 04:54:38

lab8

- failed_jobs 16.0 KiB
- menus 16.0 KiB
- migrations 16.0 KiB
- password_r... 16.0 KiB
- personal_ac... 16.0 KiB

20- Test index method:

http://127.0.0.1:8000/api/menu

GET http://127.0.0.1:8000/api/menu

Params Authorization Headers (8) Body Pre-request Script Tests Settings Cookies

Query Params

Key	Value	Description
Key	Value	Description

Body Cookies Headers (10) Test Results Status: 200 OK Time: 3.34 s Size: 529 B Save as Example

Pretty Raw Preview Visualize

```
{
  "name": "Burger",
  "description": "Beef, Tomato, Sauce",
  "price": "11.99",
  "picture": "uploads/4nVoQfqOerD3YW4KwJd4oD3K2VhONFPe7eGLX3qh.png",
  "created_at": "2023-05-03T04:54:38.000000Z",
  "updated_at": "2023-05-03T04:54:38.000000Z"
}
```

21- Test find method:

Overview **GET** http://127.0.0.1:8000/api/ + ... No Environment

http://127.0.0.1:8000/api/menu/find?name=Burger Save Edit

GET http://127.0.0.1:8000/api/menu/find?name=Burger Send

Params • Authorization Headers (8) Body • Pre-request Script Tests Settings Cookies

Query Params

	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	name	Burger			
	Key	Value	Description		

Body Cookies Headers (10) Test Results Status: 200 OK Time: 249 ms Size: 513 B Save as Example

Pretty Raw Preview Visualize Copy Search

```
[{"name": "Burger", "description": "Beef, Tomato, Sauce", "price": 11.99, "picture": "uploads/4nVoQfqOerD3YW4KwJd4oD3K2VhONFPe7eGLX3qh.png", "created_at": "2023-05-03 04:54:38", "updated_at": "2023-05-03 04:54:38"}]
```

22- Test update method:

Overview **PUT** http://127.0.0.1:8000/api/ + ... No Environment

http://127.0.0.1:8000/api/menu/?name=Burger&price=8.99&description=Beef, Tomato, Sauce&picture=uploads/4nVoQfqOerD3YW4KwJd4oD3K... Save Edit

PUT http://127.0.0.1:8000/api/menu/?name=Burger&price=8.99&description=Beef, Tomato, Sauce&picture=uploads/4nVoQfqOerD3YW4KwJd4oD3K2VhON... Send

Params • Authorization Headers (8) Body • Pre-request Script Tests Settings Cookies

Query Params

	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	name	Burger			
<input checked="" type="checkbox"/>	price	8.99			
<input checked="" type="checkbox"/>	description	Beef, Tomato, Sauce			
<input checked="" type="checkbox"/>	picture	uploads/4nVoQfqOerD3YW4KwJd4oD3K2VhONFPe7eGL...			
	Key	Value	Description		

Body Cookies Headers (10) Test Results Status: 200 OK Time: 633 ms Size: 317 B Save as Example

Pretty Raw Preview Visualize Copy Search

0

Host: 127.0.0.1 Database: lab8 Table: menus Data enrollment.sql online_attendance.sql Query #3* Query #4*

lab8.menus: 1 rows total (approximately)

name	description	price	picture	created_at	updated_at
Burger	Beef, Tomato, Sauce	8.99	uploads/4nVoQfqOerD3YW4KwJd4oD3K2VhON...	2023-05-03 04:54:38	2023-05-03 04:54:38

KiB

23- Test delete method:

Overview

DEL http://127.0.0.1:8000/api/

+ ...

No Environment

http://127.0.0.1:8000/api/menu/?name=Burger

Save

DELETE

http://127.0.0.1:8000/api/menu/?name=Burger

Send

Params

Authorization

Headers (8)

Body

Pre-request Script

Tests

Settings

Cookies

Query Params

	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	name	Burger			
<input type="checkbox"/>	price	8.99			
<input type="checkbox"/>	description	Beef, Tomato, Sauce			
<input type="checkbox"/>	picture	uploads/4nVoQfqOerD3YW4KwJd4oD3K2VhONFPe7eGL...			
	Key	Value	Description		

Body

Cookies

Headers (10)

Test Results

Status: 200 OK Time: 4.95 s Size: 317 B Save as Example

Pretty

Raw

Preview

Visualize

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