

LAPORAN TUGAS PEMROGRAMAN WEB LANJUT

Jobsheet 14



Disusun Oleh :

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**PROGRAM STUDI TEKNIK INFORMATIKA
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POLITEKNIK NEGERI MALANG
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2020**

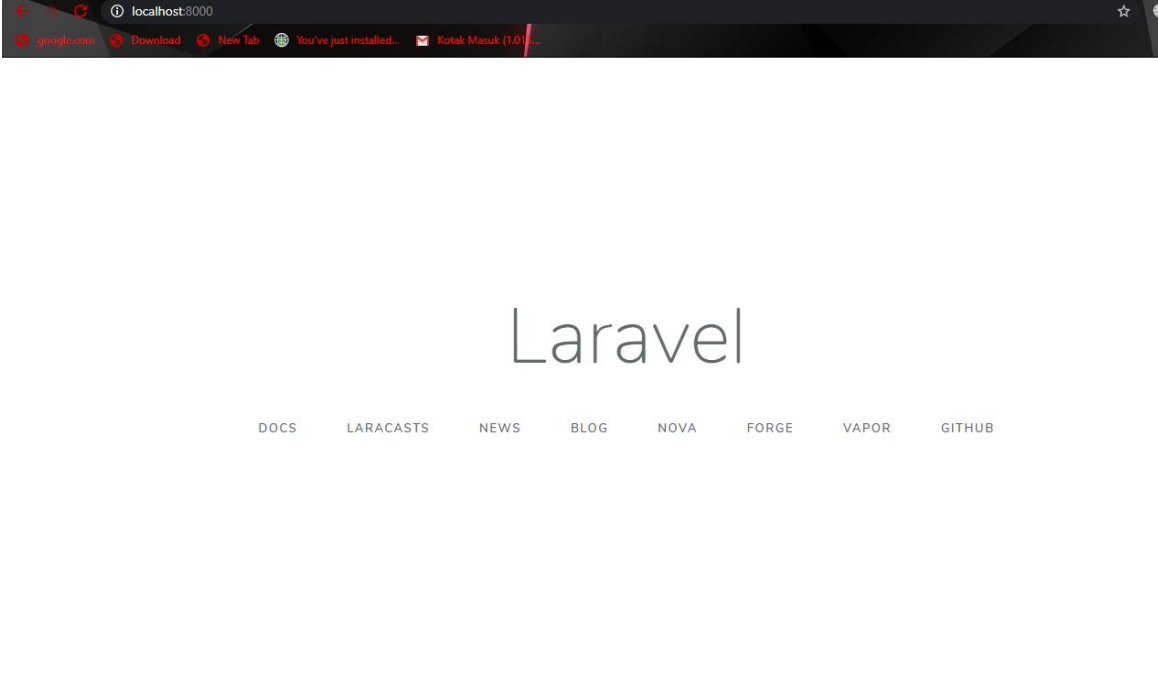
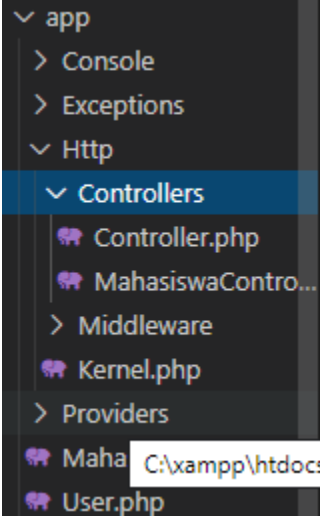
Membuat RESTful API di Laravel

1

```
C:\xampp\htdocs>laravel new laravel-restapi
Crafting application...
Loading composer repositories with package information
Installing dependencies (including require-dev) from lock file
Package operations: 92 installs, 0 updates, 0 removals
  - Installing doctrine/inflector (1.3.1): Loading from cache
  - Installing doctrine/lexer (1.2.0): Loading from cache
  - Installing dragonmantank/cron-expression (v2.3.0): Loading from cache
  - Installing voku/portable-ascii (1.4.10): Loading from cache
  - Installing symfony/polyfill-ctype (v1.15.0): Loading from cache
  - Installing phpoption/phpooption (1.7.3): Loading from cache
  - Installing vlucas/phpdotenv (v4.1.5): Downloading (100%)
  - Installing symfony/css-selector (v5.0.8): Loading from cache
  - Installing tijsverkoyen/css-to-inline-styles (2.2.2): Loading from c
  - Installing symfony/polyfill-mbstring (v1.15.0): Loading from cache
  - Installing symfony/var-dumper (v5.0.8): Downloading (100%)
  - Installing symfony/routing (v5.0.8): Downloading (100%)
  - Installing symfony/process (v5.0.8): Downloading (100%)

Application key set successfully.
> Illuminate\Foundation\ComposerScripts::postAutoloadDump
> @php artisan package:discover --ansi
Discovered Package: facade/ignition
Discovered Package: fideloper/proxy
Discovered Package: fruitcake/laravel-cors
Discovered Package: laravel/tinker
Discovered Package: nesbot/carbon
Discovered Package: nunomaduro/collision
Package manifest generated successfully.
Application ready! Build something amazing.

C:\xampp\htdocs>_
```

2	<pre>C:\xampp\htdocs>cd laravel-restapi</pre> 
3	<pre> 9 DB_CONNECTION=mysql 10 DB_HOST=127.0.0.1 11 DB_PORT=3306 12 DB_DATABASE=latihan_laravel 13 DB_USERNAME=root 14 DB_PASSWORD= </pre>
4	<pre> C:\xampp\htdocs\laravel-restapi>php artisan make:model Mahasiswa -c Model created successfully. Controller created successfully. C:\xampp\htdocs\laravel-restapi> </pre> 

5

```
app > Mahasiswa.php
1  <?php
2
3  namespace App;
4
5  use Illuminate\Database\Eloquent\Model;
6
7  class Mahasiswa extends Model
8  {
9      protected $table = 'mahasiswa';
10 }
11
```

6

```
app > Http > Controllers > MahasiswaController.php
1  <?php
2
3  namespace App\Http\Controllers;
4
5  use Illuminate\Http\Request;
6  use App\Mahasiswa;
7
8  class MahasiswaController extends Controller
9  {
10     //fungsi index digunakan untuk menampilkan
11     public function index(){
12         $data = Mahasiswa::all();
13
14         //cek data tidak kosong
15         if(count($data) > 0){
16             $res['message'] = "Success!";
17             $res['values'] = $data;
18             return response($res);
19         }
20         //jika data kosong
21         else{
22             $res['message'] = "Kosong!";
23             return response($res);
24         }
25     }
26 }
27
```

7

```
routes > api.php
1  <?php
2
3  use Illuminate\Http\Request;
4  use Illuminate\Support\Facades\Route;
5
6  /*
7  |-----
8  | API Routes
9  |-----
10 |
11 | Here is where you can register API routes for your application
12 | routes are loaded by the RouteServiceProvider within a group which
13 | is assigned the "api" middleware group. Enjoy building your API!
14 |
15 */
16
17 Route::middleware('auth:api')->get('/user', function (Request $request) {
18     return $request->user();
19 });
20
21 Route::get('mahasiswa', 'MahasiswaController@index');
```

8

The screenshot shows a REST client interface with a sidebar on the left and a main panel on the right. The sidebar has tabs for 'History', 'Collections', and 'APIs'. The 'APIs' tab is active, showing 'No APIs yet' and a 'Create an API' button. The main panel shows a 'GET' request to 'localhost:8000/api/mahasiswa' with a status of '200 OK', time of '1606ms', and size of '745 B'. The response body is a JSON array of two student objects.

Launchpad: GET localhost:8000/api/mahasiswa

Untitled Request

GET localhost:8000/api/mahasiswa

Params Authorization Headers (6) Body Pre-request Script Tests Settings

Query Params

KEY	VALUE	DESCRIPTION
Key	Value	Description

Body Cookies Headers (9) Test Results

Status: 200 OK Time: 1606ms Size: 745 B

Pretty Raw Preview Visualize JSON

```
1 {
2   "message": "Success!",
3   "values": [
4     {
5       "id": 1,
6       "nama": "Achmad Rheria",
7       "nim": "1841720115",
8       "email": "achmadreza57@gmail.com",
9       "jurusan": "TI",
10      "created_at": null,
11      "updated_at": null
12    },
13    {
14      "id": 4,
15      "nama": "Rahmat men",
16      "nim": "1841720093"
```

9

```
app > Http > Controllers > 🐞 MahasiswaController.php
1  <?php
2
3  namespace App\Http\Controllers;
4
5  use Illuminate\Http\Request;
6  use App\Mahasiswa;
7
8  class MahasiswaController extends Controller
9  {
10     //fungsi index digunakan untuk menampilkan semua data mahasiswa
11     public function getId($id){
12         $data = Mahasiswa::where('id',$id)->get();
13
14         //cek data tidak kosong
15         if(count($data) > 0){
16             $res['message'] = "Success!";
17             $res['values'] = $data;
18             return response($res);
19         }
20         //jika data kosong
21         else{
22             $res['message'] = "Kosong!";
23             return response($res);
24         }
25     }
26 }
```

10

```
routes > 🐞 api.php
1  <?php
2
3  use Illuminate\Http\Request;
4  use Illuminate\Support\Facades\Route;
5
6  /*
7  |-----
8  | API Routes
9  |-----
10 |
11 | Here is where you can register API routes for your application
12 | routes are loaded by the RouteServiceProvider within a group w
13 | is assigned the "api" middleware group. Enjoy building your AP
14 |
15 */
16
17 Route::middleware('auth:api')->get('/user', function (Request $r
18 |     return $request->user();
19 |});
20
21 Route::get('mahasiswa', 'MahasiswaController@index');
22 Route::get('/mahasiswa/{id}', 'MahasiswaController@getId');
```

11

Success

The screenshot shows the Postman interface with a successful GET request to `localhost:8000/api/mahasiswa/1`. The response status is 200 OK, and the body contains a JSON object with a success message and user details.

Request: GET `localhost:8000/api/mahasiswa/1`

Response: Status: 200 OK, Time: 5.29s, Size: 444 B

```
1 {
2   "message": "Success!",
3   "values": [
4     {
5       "id": 1,
6       "name": "Achmad Rheza",
7       "nim": "1841720115",
8       "email": "achmadreza57@gmail.com",
9       "jurusan": "TI",
10      "created_at": null,
11      "updated_at": null
12    }
13  ]
14 }
```

Gagal

The screenshot shows the Postman interface with a failed GET request to `localhost:8000/api/mahasiswa/10`. The response status is 200 OK, but the body contains a message indicating that the data is empty.

Request: GET `localhost:8000/api/mahasiswa/10`

Response: Status: 200 OK, Time: 2.61s, Size: 298 B

```
1 {
2   "message": "Kosong!"
3 }
```

12

```

26 //fungsi tambah data
27 public function create(Request $request){
28     $mhs = new Mahasiswa();
29     $mhs->nama = $request->nama;
30     $mhs->nim = $request->nim;
31     $mhs->email = $request->email;
32     $mhs->jurusan = $request->jurusan;
33
34     //jika data berhasil tersimpan
35     if($mhs->save()){
36         $res['message'] = "Data berhasil ditambah!";
37         $res['value'] = "$mhs";
38         return response($res);
39     }
40 }

```

13

```

23 Route::get('/mahasiswa', 'MahasiswaController@create');

```

14

POST localhost:8000/api/mahasiswa Send Save

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

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

	KEY	VALUE	DESCRIPTION	...	Bulk Edit
<input checked="" type="checkbox"/>	nama	eka			
<input checked="" type="checkbox"/>	nim	1841720115			
<input checked="" type="checkbox"/>	email	eka@gmail.com			
<input checked="" type="checkbox"/>	jurusan	TI			
	Key	Value	Description		

Body Cookies Headers (9) Test Results Status: 200 OK Time: 2.06 s Size: 519 B Save Response

Pretty Raw Preview Visualize **JSON** 🔍

```

1 {
2   "message": "Data berhasil ditambahkan!",
3   "value": "{\n  \"nama\": \"eka\", \"nim\": \"1841720115\", \"email\": \"eka@gmail.com\", \"jurusan\": \"TI\",
4     \"updated_at\": \"2020-05-05T12:48:45.000000Z\", \"created_at\": \"2020-05-05T12:48:45.000000Z\", \"id\": 6}"

```

Bootcamp Build Browse 🔍 ?


```

22     {
23         "id": 5,
24         "nama": "Rheza",
25         "nim": "1999",
26         "email": "yoikireza57@gmail.com",
27         "jurusan": "TI",
28         "created_at": null,
29         "updated_at": null
30     },
31     {
32         "id": 6,
33         "nama": "eka",
34         "nim": "1841720115",
35         "email": "eka@gmail.com",
36         "jurusan": "TI",
37         "created_at": "2020-05-05T12:48:45.000000Z",
38         "updated_at": "2020-05-05T12:48:45.000000Z"
39     }
40 ]
41 }

```

15

```

public function update(Request $request, $id){
    $nama = $request->nama;
    $nim = $request->nim;
    $email = $request->email;
    $jurusan = $request->jurusan;

    $mhs = Mahasiswa::find($id);
    $mhs->nama = $nama;
    $mhs->nim = $nim;
    $mhs->email = $email;
    $mhs->jurusan = $jurusan;

    //jika data berhasil tersimpan
    if($mhs->save()){
        $res['message'] = "Data berhasil diubah!";
        $res['value'] = "$mhs";
        return response($res);
    }else{
        $res['message'] = "Gagal!";
        return response($res);
    }
}

```

16

```
23 Route::put('/mahasiswa/update/{id}', 'MahasiswaController@update');
```

17

PUT localhost:8000/api/mahasiswa/update/5 Send Save

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

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

	KEY	VALUE	DESCRIPTION	...	Bulk Edit
<input checked="" type="checkbox"/>	nama	wahyu			
<input checked="" type="checkbox"/>	nim	1841720115			
<input checked="" type="checkbox"/>	email	wahyua@gmail.com			
<input checked="" type="checkbox"/>	jurusan	TI			
	Key	Value	Description		

Body Cookies Headers (9) Test Results Status: 200 OK Time: 1040 ms Size: 492 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "message": "Data berhasil diubah!",
3   "value": "{\n  \"id\": 5, \"nama\": \"wahyu\", \"nim\": \"1841720115\", \"email\": \"wahyua@gmail.com\", \"jurusan\": \"TI\",
4     \"created_at\": null, \"updated_at\": \"2020-05-05T13:04:13.000000Z\"}"
}
```

GET localhost:8000/api/mahasiswa/5 Send Save

Params Authorization Headers (6) Body Pre-request Script Tests Settings Cookies Code

Query Params

	KEY	VALUE	DESCRIPTION	...	Bulk Edit
	Key	Value	Description		

Body Cookies Headers (9) Test Results Status: 200 OK Time: 1185 ms Size: 455 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "message": "Success!",
3   "value": [
4     {
5       "id": 5,
6       "nama": "wahyu",
7       "nim": "1841720115",
8       "email": "wahyua@gmail.com",
9       "jurusan": "TI",
10      "created_at": null,
11      "updated_at": "2020-05-05T13:04:13.000000Z"
12    }
13  ]
14 }
```

Bootcamp Build Browse

18	<pre>public function delete(\$id){ \$mhs = Mahasiswa::where('id', \$id); if(\$mhs->delete()){ \$res['message'] = "Data berhasil dihapus!"; return response(\$res); }else{ \$res['message'] = "Gagal!"; return response(\$res); } }</pre>										
19	<pre>24 Route::delete('/mahasiswa/{id}','MahasiswaController@delete');</pre>										
20	<div><div>DELETElocalhost:8000/api/mahasiswa/6SendSave</div><div><div>ParamsAuthorizationHeaders (6)BodyPre-request ScriptTestsSettingsCookiesCode</div><div>Query Params</div><table><tr><th>KEY</th><th>VALUE</th><th>DESCRIPTION</th><th>...</th><th>Bulk Edit</th></tr><tr><td>Key</td><td>Value</td><td>Description</td><td></td><td></td></tr></table><div>BodyCookiesHeaders (9)Test ResultsStatus: 200 OKTime: 1184 msSize: 313 BSave Response</div><div>PrettyRawPreviewVisualizeJSON</div><pre>1 { 2 "message": "Data berhasil dihapus!" 3 }</pre></div></div>	KEY	VALUE	DESCRIPTION	...	Bulk Edit	Key	Value	Description		
KEY	VALUE	DESCRIPTION	...	Bulk Edit							
Key	Value	Description									