



Jurusan Teknologi Informasi Politeknik Negeri Malang  
**Jobsheet-10: RESTFUL API**  
Mata Kuliah : Pemrograman Web Lanjut

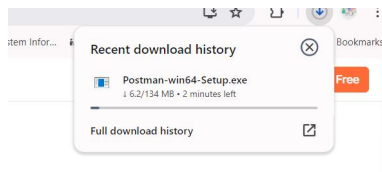
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## LEMBAR JAWABAN JOBSHEET 10

### Praktikum 1 - Membuat RESTful API Register

#### 1. Download aplikasi Postman



#### 2. Lakukan instalasi JWT dengan mengetikkan perintah berikut: composer require tymon/jwt-auth:2.1.1 Pastikan Anda terkoneksi dengan internet.

```
PS C:\laragon\www\PMW_POS> composer require tymon/jwt-auth:2.1.1
./composer.json has been updated
Running composer update tymon/jwt-auth
Loading composer repositories with package information
Updating dependencies
Lock file operations: 4 installs, 0 updates, 0 removals
  - Locking lcobucci/clock (2.2.0)
  - Locking lcobucci/jwt (4.0.4)
  - Locking stella-maris/clock (0.1.7)
  - Locking tymon/jwt-auth (2.1.1)
Writing lock file
Installing dependencies from lock file (including require-dev)
Package operations: 4 installs, 0 updates, 0 removals
  - Downloading stella-maris/clock (0.1.7)
  - Downloading lcobucci/clock (2.2.0)
  - Downloading lcobucci/jwt (4.0.4)
  - Downloading tymon/jwt-auth (2.1.1)
  - Installing stella-maris/clock (0.1.7): Extracting archive
  - Installing lcobucci/clock (2.2.0): Extracting archive
  - Installing lcobucci/jwt (4.0.4): Extracting archive
  - Installing tymon/jwt-auth (2.1.1): Extracting archive
Generating optimized autoload files
> Illuminate\Foundation\ComposerScripts::postAutoloadDump
> @php artisan package:discover --ansi

 INFO  Discovering packages.

jeroennoten/laravel-adminlte ..... DONE
laravel/sail ..... DONE
laravel/sanctum ..... DONE
laravel/tinker ..... DONE
laravel/ui ..... DONE
nesbot/carbon ..... DONE
nunomaduro/collision ..... DONE
nunomaduro/termwind ..... DONE
spatie/laravel-ignition ..... DONE
tymon/jwt-auth ..... DONE
yajra/laravel-datatables-buttons ..... DONE
yajra/laravel-datatables-editor ..... DONE
yajra/laravel-datatables-fractal ..... DONE
yajra/laravel-datatables-html ..... DONE
yajra/laravel-datatables-oracle ..... DONE

92 packages you are using are looking for funding.
Use the 'composer fund' command to find out more!
> @php artisan vendor:publish --tag=laravel-assets --ansi --force

 INFO  No publishable resources for tag [laravel-assets].

No security vulnerability advisories found.
```



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3. Setelah berhasil menginstall JWT, lanjutkan dengan publish konfigurasi file dengan perintah berikut:

```
PS C:\laragon\www\PWL_POS> php artisan vendor:publish --provider="Tymon\JWTAuth\Providers\LaravelServiceProvider"

INFO Publishing assets.

Copying file [C:\laragon\www\PWL_POS\vendor\tymon\jwt-auth\config\config.php] to [C:\laragon\www\PWL_POS\config\jwt.php] DONE
```

4. Jika perintah di atas berhasil, maka kita akan mendapatkan 1 file baru yaitu config/jwt.php. Pada file ini dapat dilakukan konfigurasi jika memang diperlukan.

```
jwt.php U X
config > jwt.php
1  <?php
2
3
4  /*
5   * This file is part of jwt-auth.
6   *
7   * (c) Sean Tymon <tymon148@gmail.com>
8   *
9   * For the full copyright and license information, please view the LICENSE
10  * file that was distributed with this source code.
11  */
12  return [
13
```

5. Setelah itu jalankan perintah berikut untuk membuat secret key JWT. `php artisan jwt:secret`

```
PS C:\laragon\www\PWL_POS> php artisan jwt:secret
jwt-auth secret [fTmgsaloBvqgcuzbYiEihPQqhKbQ1B7b1tzOLyknETbp9cqjEURPCLLZrLWiQcm1] set successfully.
```

Jika berhasil, maka pada file `.env` akan ditambahkan sebuah baris berisi nilai key `JWT_SECRET`.

```
.env
61  JWT_SECRET=fTmgsaloBvqgcuzbYiEihPQqhKbQ1B7b1tzOLyknETbp9cqjEURPCLLZrLWiQcm1
```

6. Selanjutnya lakukan konfigurasi guard API. Buka `config/auth.php`. Ubah bagian 'guards'

```
config > auth.php
3  return [
37
38  'guards' => [
39      'web' => [
40          'driver' => 'session',
41          'provider' => 'users',
42      ],
43      'api' => [
44          'driver' => 'jwt',
45          'provider' => 'users',
46      ],
47  ],
48  ],
```

7. Kita akan menambahkan kode di model UserModel



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```
app > Models > UserModel.php > UserModel
11 use Tymon\JWTAuth\Contracts\JWTSubject;
12 use Illuminate\Foundation\Auth\User as Authenticatable;
13
14 class UserModel extends Authenticatable implements JWTSubject
15 {
16
17     public function getJWTIdentifier(){
18         return $this->getKey();
19     }
20
21     public function getJWTCustomClaims(){
22         return [];
23     }
24 }
```

8. Berikutnya kita akan membuat controller untuk register dengan menjalankan perintah berikut. php artisan make:controller Api/RegisterController

```
PS C:\laragon\www\PWL_POS> php artisan make:controller Api/RegisterController
INFO Controller [C:\laragon\www\PWL_POS\app\Http\Controllers\Api\RegisterController.php] created successfully.
```

Jika berhasil maka akan ada tambahan controller pada folder Api dengan nama RegisterController

```
app > Http > Controllers > Api > RegisterController.php > ...
1 <?php
2
3 namespace App\Http\Controllers\Api;
4
5 use App\Http\Controllers\Controller;
6 use Illuminate\Http\Request;
7
8 class RegisterController extends Controller
9 {
10     //
11 }
```

9. Buka file tersebut, dan ubah kode menjadi seperti berikut.

```
class RegisterController extends Controller
{
    public function __invoke(Request $request)
    {
        //set validation
        $validator = Validator::make($request->all(), [
            'username' => 'required',
            'nama' => 'required',
            'password' => 'required|min:5|confirmed',
            'level_id' => 'required'
        ]);

        //if validations fails
        if ($validator->fails()) {
            return response()->json($validator->errors(), 422);
        }
    }
}
```



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```
// Create user
$user = UserModel::create([
    'username' => $request->username,
    'nama' => $request->nama,
    'password' => bcrypt($request->password),
    'level_id' => $request->level_id,
]);

// Return response JSON user is created
if ($user) {
    return response()->json([
        'success' => true,
        'user' => $user,
    ], 201);
}

// Return JSON process insert failed
return response()->json([
    'success' => false,
], 409);
}
```

10. Selanjutnya buka routes/api.php, ubah semua kode menjadi seperti berikut.

```
routes > api.php
1  <?php
2
3  use App\Http\Controllers\Api\RegisterController;
4  use Illuminate\Http\Request;
5  use Illuminate\Support\Facades\Route;
6
7  /*
8  |-----
9  | API Routes
10 |-----
11 |
12 | Here is where you can register API routes for your application. These
13 | routes are loaded by the RouteServiceProvider and all of them will
14 | be assigned to the "api" middleware group. Make something great!
15 |
16 |*/
17
18 Route::post('/register',App\Http\Controllers\Api\RegisterController::class)->name('register');
```

11. Jika sudah, kita akan melakukan uji coba REST API melalui aplikasi Postman. Buka aplikasi Postman, isi URL localhost/PWL\_POS/public/api/register serta method POST. Klik Send.



Jika berhasil akan muncul error validasi seperti gambar di atas.



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POST localhost/PWL\_POS/public/api/register Send

Params Authorization Headers (7) Body Pre-request Script Tests Settings Cookies

Query Params

Key	Value	Bulk Edit
Key	Value	

Body Cookies Headers (11) Test Results Status: 422 Unprocessable Content Time: 175 ms Size: 580 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "username": [
3     "The username field is required."
4   ],
5   "nama": [
6     "The nama field is required."
7   ],
8   "password": [
9     "The password field is required."
10  ],
11  "level_id": [
12    "The level id field is required."
13  ]
14 }
```

12. Sekarang kita coba masukkan data. Klik tab Body dan pilih form-data. Isikan key sesuai dengan kolom data, serta isikan data registrasi menggunakan nilai yang Anda inginkan. Setelah klik tombol Send, jika berhasil maka akan keluar pesan sukses seperti gambar di atas.

POST localhost/PWL\_POS/public/api/register Send

Params Auth Headers (8) Body Pre-req. Tests Settings Cookies

form-data

	Key	Value	...	Bulk Edit
<input checked="" type="checkbox"/>	username	penggunasatu		
<input checked="" type="checkbox"/>	nama	Pengguna 1		
<input checked="" type="checkbox"/>	password	12345		
<input checked="" type="checkbox"/>	password_confirmation	12345		
<input checked="" type="checkbox"/>	level_id	2		
	Key	Value		





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```
Body 201 Created 560 ms 646 B Save Response
Pretty Raw Preview Visualize JSON
1  {
2    "success": true,
3    "user": {
4      "username": "penggunasatu",
5      "nama": "Pengguna 1",
6      "password": "$2y$12$KILRI012Ee6ojKtm/HDdd09tp1wVNW.rI9ZHgXwUHu40IvY/ZDky",
7      "level_id": "2",
8      "updated_at": "2024-05-08T08:28:19.000000Z",
9      "created_at": "2024-05-08T08:28:19.000000Z",
10     "user_id": 19
11   }
12 }
```

### Praktikum 2 - Membuat RESTful API Login

1. Kita buat file controller dengan nama LoginController. php artisan make:controller Api/LoginController.

```
PS C:\laragon\www\PWL_POS> php artisan make:controller Api/LoginController
INFO Controller [C:\laragon\www\PWL_POS\app\Http\Controllers\Api>LoginController.php] created successfully
```

Jika berhasil maka akan ada tambahan controller pada folder Api dengan nama LoginController

```
app > Http > Controllers > Api > LoginController.php > ...
1  <?php
2
3  namespace App\Http\Controllers\Api;
4
5  use App\Http\Controllers\Controller;
6  use Illuminate\Http\Request;
7
8  class LoginController extends Controller
9  {
10     //
11 }
```

2. Buka file tersebut, dan ubah kode menjadi seperti berikut



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```
app > Http > Controllers > Api > LoginController.php > ...
1  <?php
2
3  namespace App\Http\Controllers\Api;
4
5  use App\Http\Controllers\Controller;
6  use Illuminate\Http\Request;
7  use Illuminate\Support\Facades\Validator;
8
9  class LoginController extends Controller
10 {
11     public function __invoke(Request $request)
12     {
13         //set validation
14         $validator = Validator::make($request->all(), [
15             'username' => 'required',
16             'password' => 'required'
17         ]);
18
19         //if validation fails
20         if ($validator->fails()){
21             return response()->json($validator->errors(), 422);
22         }
23
24         //get credentials from request
25         $credentials = $request->only('username', 'password');
26
27         //if auth failed
28         if (!$token = auth()->guard('api')->attempt($credentials)){
29             return response()->json([
30                 'success' => false,
31                 'message' => 'Username atau Password Salah'
32             ], 401);
33         }
34
35         //if auth success
36         return response()->json([
37             'success' => true,
38             'user' => auth()->guard('api')->user(),
39             'token' => $token
40         ], 200);
41     }
42 }
```

3. Berikutnya tambahkan route baru pada file api.php yaitu /login dan /user

```
routes > api.php > ...
19 Route::post('/register', App\Http\Controllers\Api\RegisterController::class)->name('register');
20 Route::post('/login', App\Http\Controllers\Api\LoginController::class)->name('login');
21 Route::middleware('auth:api')->get('/user', function (Request $request) {
22     return $request->user();
23 });
```



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4. Jika sudah, kita akan melakukan uji coba REST API melalui aplikasi Postman. Buka aplikasi Postman, isi URL localhost/PWL\_POS/public/api/login serta method POST. Klik Send.

POST localhost/PWL\_POS/public/api/login Send

Params Auth Headers (7) Body Pre-req. Tests Settings Cookies

Query Params

Key	Value	Bulk Edit
Key	Value	

Body 422 Unprocessable Content 203 ms 494 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "username": [
3     "The username field is required."
4   ],
5   "password": [
6     "The password field is required."
7   ]
8 }
```

5. Selanjutnya, isikan username dan password sesuai dengan data user yang ada pada database. Klik tab Body dan pilih form-data. Isikan key sesuai dengan kolom data, serta isikan data user. Klik tombol Send, jika berhasil maka akan keluar tampilan seperti berikut. Copy nilai token yang diperoleh pada saat login karena akan diperlukan pada saat logout

POST localhost/PWL\_POS/public/api/login Send

Params Auth Headers (8) Body Pre-req. Tests Settings Cookies

form-data

Key	Value	...	Bulk Edit
<input checked="" type="checkbox"/> username	penggunasatu		
<input checked="" type="checkbox"/> password	12345		





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```
Body 200 OK 518 ms 981 B Save Response
Pretty Raw Preview Visualize JSON
1  {
2    "success": true,
3    "user": {
4      "user_id": 19,
5      "level_id": 2,
6      "username": "penggunasatu",
7      "nama": "Pengguna 1",
8      "password": "$2y$12$KiLRi012Ee6oJkTm/HDdd09tp1wVNW.iI9ZHyGxwUHu40IvY/ZDky",
9      "created_at": "2024-05-08T08:28:19.000000Z",
10     "updated_at": "2024-05-08T08:28:19.000000Z"
11   },
12   "token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vbG9jYXRob3N0L1BXTF9QT1MvchVibGljL2FwaS9sb2dpbiIsIm1hdCI6MTcxNTI5OTI5NSwiZmxhZjoxNzE1MjY0ODk1LCJyYmYiOiJlZ3M0UyMTkyOTUsImp0aSI6ImRnV09jVDRLWNW12TTNGWwciLCJzdWIiOiIxOSIsInBydiI6IjQxZGY4ODM0ZjF1OThmNzBlZmE2MGFhZWRLZjQyMzQxMzcwMDY5MGMiLCJhdidzq7cEuBpLAZD25R4YKtSAGx8DBhXPlKdcYSXK8"
13 }
```

6. Lakukan percobaan yang untuk data yang salah dan berikan screenshot hasil percobaan Anda.

```
POST localhost/PWL_POS/public/api/login Send
Params Auth Headers (8) Body Pre-req. Tests Settings Cookies
form-data
Key Value Bulk Edit
[checked] username penggunajihan
[checked] password 12345
Body 401 Unauthorized 243 ms 448 B Save Response
Pretty Raw Preview Visualize JSON
1  {
2    "success": false,
3    "message": "Username atau Password Salah"
4  }
```

7. Coba kembali melakukan login dengan data yang benar. Sekarang mari kita coba menampilkan data user yang sedang login menggunakan URL localhost/PWL\_POS/public/api/user dan method GET. Jelaskan hasil dari percobaan tersebut.





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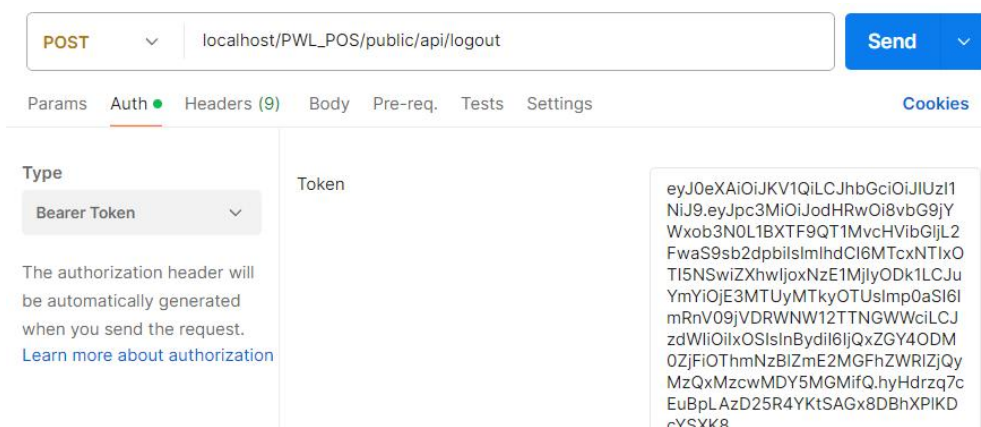
---

```
app > Http > Controllers > Api > LogoutController.php > ...
1  <?php
2
3  namespace App\Http\Controllers\Api;
4
5  use App\Http\Controllers\Controller;
6  use Illuminate\Http\Request;
7  use Tymon\JWTAuth\Facades\JWTAuth;
8  use Tymon\JWTAuth\Exceptions\JWTException;
9  use Tymon\JWTAuth\Exceptions\TokenExpiredException;
10 use Tymon\JWTAuth\Exceptions\TokenInvalidException;
11
12 class LogoutController extends Controller
13 {
14     public function __invoke(Request $request)
15     {
16         //remove token
17         $removeToken = JWTAuth::invalidate(JWTAuth::getToken());
18
19         if ($removeToken){
20             return response()->json([
21                 'success' => true,
22                 'message' => 'Logout Berhasil!'
23             ]);
24         }
25     }
26 }
```

4. Lalu kita tambahkan routes pada api.php

```
routes > api.php > ...
24 | Route::post('/logout', App\Http\Controllers\Api\LogoutController::class)->name('logout');
```

5. Jika sudah, kita akan melakukan uji coba REST API melalui aplikasi Postman. Buka aplikasi Postman, isi URL localhost/PWL\_POS/public/api/logout serta method POST.
6. Isi token pada tab Authorization, pilih Type yaitu Bearer Token. Isikan token yang didapat saat login. Jika sudah klik Send.





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#### Praktikum 4 - Implementasi CRUD dalam RESTful API

1. Pertama, buat controller untuk mengolah API pada data level.

```
PS C:\laragon\www\PWL_POS> php artisan make:controller Api/LevelController  
  
INFO Controller [C:\laragon\www\PWL_POS\app\Http\Controllers\Api\LevelController.php] created successfully.
```

2. Setelah berhasil, buka file tersebut dan tuliskan kode seperti berikut yang berisi fungsi CRUDnya

```
app > Http > Controllers > Api > LevelController.php > LevelController  
1 <?php  
2  
3 namespace App\Http\Controllers\Api;  
4  
5 use App\Http\Controllers\Controller;  
6 use Illuminate\Http\Request;  
7 use App\Models\LevelModel;  
8  
9 class LevelController extends Controller  
10 {  
11     public function index()  
12     {  
13         return LevelModel::all();  
14     }  
15  
16     public function store(Request $request)  
17     {  
18         $level = LevelModel::create($request->all());  
19         return response()->json($level, 201);  
20     }  
21  
22     public function show(LevelModel $level)  
23     {  
24         return LevelModel::find($level);  
25     }  
26 }
```





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```
27 public function update(Request $request, LevelModel $level)
28 {
29     $level->update($request->all());
30     return LevelModel::find($level);
31 }
32
33 public function destroy(LevelModel $user)
34 {
35     $user->delete();
36     return response()->json([
37         'success' => true,
38         'message' => 'Data Terhapus'
39     ]);
40 }
41 }
```

3. Kemudian kita lengkapi routes pada api.php

```
routes > api.php > ...
28 Route::get('levels', [LevelController::class, 'index']);
29 Route::post('levels', [LevelController::class, 'store']);
30 Route::get('levels/{level}', [LevelController::class, 'show']);
31 Route::put('levels/{level}', [LevelController::class, 'update']);
32 Route::delete('levels/{level}', [LevelController::class, 'destroy']);
```

4. Jika sudah. Lakukan uji coba API mulai dari fungsi untuk menampilkan data. Gunakan URL: localhost/PWL\_POS/public/api/levels dan method GET. Jelaskan dan berikan screenshoot hasil percobaan Anda.

GET localhost/PWL\_POS/public/api/levels

Params Auth Headers (7) Body Pre-req. Tests Settings Cookies

Query Params

Key	Value	Bulk Edit
Key	Value	

Body 200 OK 660 ms 791 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "level_id": 1,
3   "level_kode": "ADM",
4   "level_nama": "Administrator",
5   "created_at": null,
6   "updated_at": null
7 }
```





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```
8      },
9      {
10         "level_id": 2,
11         "level_kode": "MNG",
12         "level_nama": "Manager",
13         "created_at": null,
14         "updated_at": null
15      },
16   ]
17   {
18     "level_id": 3,
19     "level_kode": "STF",
20     "level_nama": "Staff/Kasir",
```

- Pada percobaan diatas, dilakukan uji coba API dengan menggunakan URL: localhost/PWL\_POS/public/api/levels dan method GET sehingga dapat menampilkan semua data level yang ada.

5. Kemudian, lakukan percobaan penambahan data dengan URL : localhost/PWL\_POSmain/public/api/levels dan method POST seperti di bawah ini.

POST localhost/PWL\_POS/public/api/levels Send

Params Auth Headers (9) Body Pre-req. Tests Settings Cookies

form-data

	Key	Value	...	Bulk Edit
<input checked="" type="checkbox"/>	level_kode	SPV		
<input checked="" type="checkbox"/>	level_nama	Supervisor		
	Key	Value		

Body 201 Created 235 ms 530 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "level_kode": "SPV",
3   "level_nama": "Supervisor",
4   "updated_at": "2024-05-09T02:37:59.000000Z",
5   "created_at": "2024-05-09T02:37:59.000000Z",
6   "level_id": 7
7 }
```

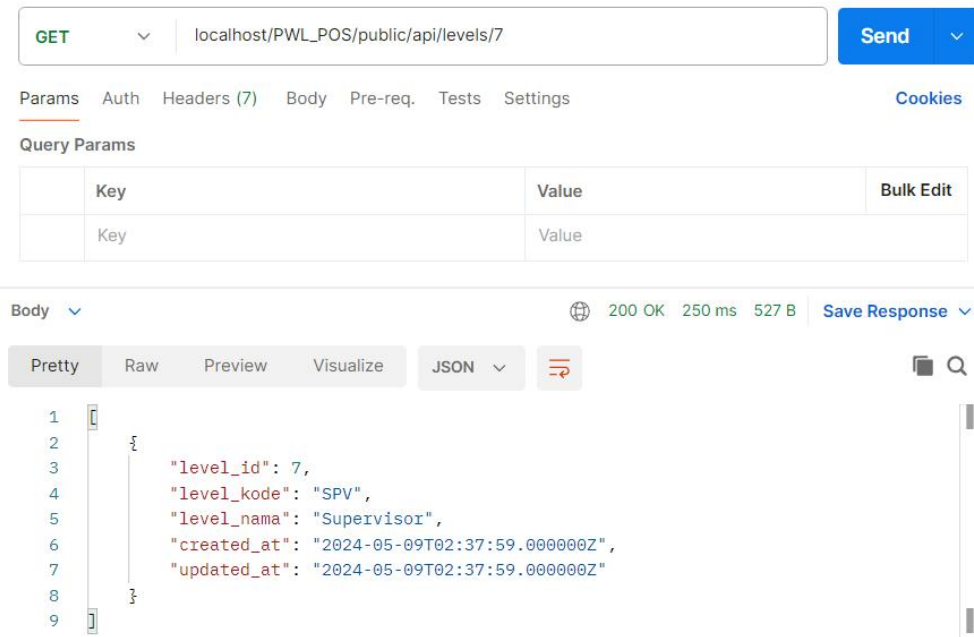
- Pada percobaan diatas, dilakukan uji coba API dengan menggunakan URL: localhost/PWL\_POS/public/api/levels dan method POST yang digunakan untuk menambahkan data level berisi level\_kode dan level\_nama. Untuk level\_id, updated\_at dan created\_at akan terisi secara otomatis



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6. Berikutnya lakukan percobaan menampilkan detail data. Jelaskan dan berikan screenshot hasil percobaan Anda



- Pada percobaan diatas, dilakukan uji coba API dengan menggunakan URL: localhost/PWL\_POS/public/api/levels/7 dan method GET yang digunakan untuk menampilkan detail dari data level dengan id '7'.
7. Jika sudah, kita coba untuk melakukan edit data menggunakan localhost/PWL\_POSmain/public/api/levels/{id} dan method PUT. Isikan data yang ingin diubah pada tab Param.



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---

PUT localhost/PWL\_POS/public/api/levels/7?level\_kode=SPR Send

Params Auth Headers (8) Body Pre-req. Tests Settings Cookies

Query Params

	Key	Value	Bulk Edit
<input checked="" type="checkbox"/>	level_kode	SPR	

Body 200 OK 266 ms 527 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "level_id": 7,
3   "level_kode": "SPR",
4   "level_nama": "Supervisor",
5   "created_at": "2024-05-09T02:37:59.000000Z",
6   "updated_at": "2024-05-09T02:47:07.000000Z"
7 }
8
9
```

- Pada percobaan diatas, dilakukan uji coba API untuk mengubah atau mengedit data level tertentu. Di atas dilakukan perubahan pada level\_kode yang yang sebelumnya bervalue “SPV” menjadi “SPR”.

8. Terakhir lakukan percobaan hapus data. Jelaskan dan berikan screenshoot hasil percobaan Anda.

DELETE localhost/PWL\_POS/public/api/levels/7 Send

Params Auth Headers (7) Body Pre-req. Tests Settings Cookies

Query Params

	Key	Value	Bulk Edit
	Key	Value	

Body 200 OK 204 ms 422 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "success": true,
3   "message": "Data Terhapus"
4 }
```



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---

- Pada percobaan diatas, dilakukan uji coba API untuk menghapus data level dengan level\_id 7. Pada percobaan terseut data yang dihapus berhasil.

## TUGAS

- Implementasikan CRUD API pada tabel lainnya yaitu tabel m\_user, m\_kategori, dan m\_barang

Jawaban :

### 1. Tabel m\_user

```
PS C:\laragon\www\PWL_POS> php artisan make:controller Api/UserController  
  
INFO Controller [C:\laragon\www\PWL_POS\app\Http\Controllers\Api\UserController.php] created successfully.
```

```
app > Http > Controllers > Api > UserController.php > ...  
1  <?php  
2  
3  namespace App\Http\Controllers\Api;  
4  
5  use App\Http\Controllers\Controller;  
6  use Illuminate\Http\Request;  
7  use App\Models\UserModel;  
8  
9  class UserController extends Controller  
10 {  
11     public function index()  
12     {  
13         return UserModel::all();  
14     }  
15  
16     public function store(Request $request)  
17     {  
18         $user = UserModel::create([  
19             'username' => $request->username,  
20             'nama' => $request->nama,  
21             'password' => bcrypt($request->password),  
22             'level_id' => $request->level_id  
23         ]);  
24         return response()->json($user, 201);  
25     }  
26  
27     public function show(UserModel $user)  
28     {  
29         return UserModel::find($user);  
30     }  
31 }
```



## Jurusan Teknologi Informasi Politeknik Negeri Malang

### Jobsheet-10: RESTFUL API

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---

```
32 public function update(Request $request, UserModel $user)
33 {
34     $user->update($request->all());
35     return UserModel::find($user->user_id);
36 }
37
38 public function destroy(UserModel $user)
39 {
40     $user->delete();
41     return response()->json([
42         'success' => true,
43         'message' => 'Data Berhasil Dihapus'
44     ]);
45 }
46 }
```

```
routes > api.php > ...
37 //USER
38 Route::get('users', [UserController::class, 'index']);
39 Route::get('users/{user}', [UserController::class, 'show']);
40 Route::post('users', [UserController::class, 'store']);
41 Route::put('users/{user}', [UserController::class, 'update']);
42 Route::delete('users/{user}', [UserController::class, 'destroy']);
```

- Menampilkan semua data user

GET localhost/PWL\_POS/public/api/users Send

Params Auth Headers (7) Body Pre-req. Tests Settings Cookies

Body 200 OK 247 ms 2.48 KB Save Response

Pretty Raw Preview Visualize JSON

```
67     "level_id": 2,
68     "username": "manager56",
69     "nama": "Manager56",
70     "password": "$2y$12$HhCKpHNSt1kFPegdNK9S..tKwJb5dMKJcdInVgVpw5kUF6FQ.e0KK",
71     "created_at": "2024-03-14T13:26:17.000000Z",
72     "updated_at": "2024-03-14T13:26:17.000000Z"
73 },
74 {
75     "user_id": 18,
76     "level_id": 1,
77     "username": "jihankina21",
78     "nama": "Jihan Karunia Putri",
79     "password": "$2y$12$KSm4Hx50kPe08ocEwKwLi.ERD4RwXnCtXyivJnM5E0Jz85b8GG6KC",
80     "created_at": "2024-04-11T01:49:07.000000Z",
81     "updated_at": "2024-04-11T01:50:24.000000Z"
82 },
83 {
84     "user_id": 19,
85     "level_id": 2,
```





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---

- Menambahkan data user

POST localhost/PWL\_POS/public/api/users Send

Params Auth Headers (9) Body Pre-req. Tests Settings Cookies

form-data

	Key	Value	...	Bulk Edit
<input checked="" type="checkbox"/>	username	jihan09		
<input checked="" type="checkbox"/>	nama	Jihan Karunia		
<input checked="" type="checkbox"/>	password	12345		
<input checked="" type="checkbox"/>	level_id	2		

Body 201 Created 546 ms 619 B Save Response

Pretty Raw Preview Visualize JSON

```
1  {
2    "username": "jihan09",
3    "nama": "Jihan Karunia",
4    "password": "$2y$12$ZUznpx8k7MZXWGVNAY4FA0PVfmi17VGtJ78zxDuax7yHq1wPkR/Xi",
5    "level_id": "2",
6    "updated_at": "2024-05-09T03:31:37.000000Z",
7    "created_at": "2024-05-09T03:31:37.000000Z",
8    "user_id": 20
9  }
```

- Menampilkan detail data user dengan id 20



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GET localhost/PWL\_POS/public/api/users/20 Send

Params Auth Headers (7) Body Pre-req. Tests Settings Cookies

Body 200 OK 170 ms 790 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "user_id": 2,
3   "level_id": 2,
4   "username": "manager",
5   "nama": "Manager",
6   "password": "$2y$12$6i4esZmzpXcQdUwSziA7z0J870d26laenhzFwpRL2Wde7MQdF.f/0",
7   "created_at": null,
8   "updated_at": null
9 }
10
11 {
12   "user_id": 20,
13   "level_id": 2,
14   "username": "jihan09",
15   "nama": "Jihan Karunia",
16   "password": "$2y$12$ZUznpx8k7MZXWGVNAY4FA0PVfmr17VGtJ78zxDuax7yHq1wPkR/Xi",
17   "created_at": "2024-05-09T03:31:37.000000Z",
18   "updated_at": "2024-05-09T03:31:37.000000Z"
19 }
20 }
```

- Mengubah atau mengedit data dengan id 20 yang awalnya nama=Jihan Karunia menjadi nama=Jihann

PUT localhost/PWL\_POS/public/api/users/20?nama=Jihann Send

Params Auth Headers (8) Body Pre-req. Tests Settings Cookies

Body 200 OK 248 ms 605 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "user_id": 20,
3   "level_id": 2,
4   "username": "jihan09",
5   "nama": "Jihann",
6   "password": "$2y$12$ZUznpx8k7MZXWGVNAY4FA0PVfmr17VGtJ78zxDuax7yHq1wPkR/Xi",
7   "created_at": "2024-05-09T03:31:37.000000Z",
8   "updated_at": "2024-05-09T03:36:47.000000Z"
9 }
```

- Menghapus data dengan id 20



## Jurusan Teknologi Informasi Politeknik Negeri Malang

### Jobsheet-10: RESTFUL API

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---



## 2. Tabel m\_kategori

```
PS C:\laragon\www\PWL_POS> php artisan make:controller Api/KategoriController
```

INFO Controller [C:\laragon\www\PWL\_POS\app\Http\Controllers\Api\KategoriController.php] created successfully.

```
app > Http > Controllers > Api > KategoriController.php > ...
1  <?php
2
3  namespace App\Http\Controllers\Api;
4
5  use App\Http\Controllers\Controller;
6  use Illuminate\Http\Request;
7  use App\Models\KategoriModel;
8
9  class KategoriController extends Controller
10 {
11     public function index()
12     {
13         return KategoriModel::all();
14     }
15
16     public function store(Request $request)
17     {
18         $kategori = KategoriModel::create($request->all());
19         return response()->json($kategori, 201);
20     }
21
22     public function show(KategoriModel $kategori)
23     {
24         return KategoriModel::find($kategori);
25     }
26
27     public function update(Request $request, KategoriModel $kategori)
28     {
29         $kategori->update($request->all());
30         return KategoriModel::find($kategori->kategori_id);
31     }
32
33     public function destroy(KategoriModel $kategori)
34     {
35     }
```



## Jurusan Teknologi Informasi Politeknik Negeri Malang

### Jobsheet-10: RESTFUL API

Mata Kuliah : Pemrograman Web Lanjut

---

```
35     $kategori->delete();
36     return response()->json([
37         'success' => true,
38         'message' => 'Data Kategori Berhasil Dihapus!'
39     ]);
40 }
41 }
```

```
routes > api.php > ...
44 //KATEGORI
45 Route::get('kategoris', [KategoriController::class, 'index']);
46 Route::get('kategoris/{kategori}', [KategoriController::class, 'show']);
47 Route::post('kategoris', [KategoriController::class, 'store']);
48 Route::put('kategoris/{kategori}', [KategoriController::class, 'update']);
49 Route::delete('kategoris/{kategori}', [KategoriController::class, 'destroy']);
```

- Menampilkan semua data kategori

GET localhost/PWL\_POS/public/api/kategoris Send

Params Auth Headers (6) Body Pre-req. Tests Settings Cookies

Body 200 OK 258 ms 1.02 KB Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   {
3     "kategori_id": 1,
4     "kategori_kode": "K1",
5     "kategori_nama": "Tekstil",
6     "created_at": null,
7     "updated_at": null
8   },
9   {
10    "kategori_id": 2,
11    "kategori_kode": "K2",
12    "kategori_nama": "Perabotan",
13    "created_at": null,
14    "updated_at": null
15  },
16  {
17    "kategori_id": 3,
18    "kategori_kode": "K3",
19    "kategori_nama": "Dekorasi Rumah",
20    "created_at": null,
21    "updated_at": null
22  },
23  {
24    "kategori_id": 4,
25    "kategori_kode": "K4",
26    "kategori_nama": "Makanan",
```

- Menambahkan data kategori



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---

POST localhost/PWL\_POS/public/api/kategoris Send

Params Auth Headers (8) Body Pre-req. Tests Settings Cookies

form-data

	Key	Value	...	Bulk Edit
<input checked="" type="checkbox"/>	kategori_kode	K7		
<input checked="" type="checkbox"/>	kategori_nama	Pakaian		
	Key	Value		

Body 201 Created 235 ms 536 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "kategori_kode": "K7",
3   "kategori_nama": "Pakaian",
4   "updated_at": "2024-05-09T04:06:55.000000Z",
5   "created_at": "2024-05-09T04:06:55.000000Z",
6   "kategori_id": 10
7 }
```

- Menampilkan detail dari data kategori dengan id 10

GET localhost/PWL\_POS/public/api/kategoris/10 Send

Params Auth Headers (6) Body Pre-req. Tests Settings Cookies

Body 200 OK 242 ms 533 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "kategori_id": 10,
3   "kategori_kode": "K7",
4   "kategori_nama": "Pakaian",
5   "created_at": "2024-05-09T04:06:55.000000Z",
6   "updated_at": "2024-05-09T04:06:55.000000Z"
7 }
```

- Mengubah atau mengedit data dengan id 10 yang awalnya kategori\_nama=Pakaian menjadi kategori\_nama=Pakaian Wanita





## Jurusan Teknologi Informasi Politeknik Negeri Malang

### Jobsheet-10: RESTFUL API

Mata Kuliah : Pemrograman Web Lanjut

---

PUT localhost/PWL\_POS/public/api/kategoris/10?kategori\_nama=Pakaian Wanita Send

Params Auth Headers (7) Body Pre-req. Tests Settings Cookies

Body 200 OK 255 ms 538 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "kategori_id": 10,
3   "kategori_kode": "K7",
4   "kategori_nama": "Pakaian Wanita",
5   "created_at": "2024-05-09T04:06:55.000000Z",
6   "updated_at": "2024-05-09T04:09:56.000000Z"
7 }
```

- Menghapus data dengan id 10

DELETE localhost/PWL\_POS/public/api/kategoris/10 Send

Params Auth Headers (6) Body Pre-req. Tests Settings Cookies

Body 200 OK 247 ms 440 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "success": true,
3   "message": "Data Kategori Berhasil Dihapus!"
4 }
```

### 3. Tabel m\_barang

```
PS C:\laragon\www\PWL_POS> php artisan make:controller Api/BarangController
INFO Controller [C:\laragon\www\PWL_POS\app\Http\Controllers\Api\BarangController.php] created successfully.
```

```
app > Http > Controllers > Api > BarangController.php > ...
1 <?php
2
3 namespace App\Http\Controllers\Api;
4
5 use App\Http\Controllers\Controller;
6 use Illuminate\Http\Request;
7 use App\Models\BarangModel;
8
9 class BarangController extends Controller
10 {
11     public function index()
12     {
13         return BarangModel::all();
14     }
15 }
```



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---

```
13     return BarangModel::all();
14 }
15
16 public function store(Request $request)
17 {
18     $barang = BarangModel::create($request->all());
19     return response()->json($barang, 201);
20 }
21
22 public function show(BarangModel $barang)
23 {
24     return BarangModel::find($barang->barang_id);
25 }
26
27 public function update(Request $request, BarangModel $barang)
28 {
29     $barang->update($request->all());
30     return BarangModel::find($barang->barang_id);
31 }
32
33 public function destroy(BarangModel $barang)
34 {
35     $barang->delete();
36     return response()->json([
37         'success' => true,
38         'message' => 'Data Barang Berhasil Dihapus!'
39     ]);
40 }
41 }
```

```
routes > api.php > ...
51 //BARANG
52 Route::get('barangs', [BarangController::class, 'index']);
53 Route::get('barangs/{barang}', [BarangController::class, 'show']);
54 Route::post('barangs', [BarangController::class, 'store']);
55 Route::put('barangs/{barang}', [BarangController::class, 'update']);
56 Route::delete('barangs/{barang}', [BarangController::class, 'destroy']);
```



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**Jobsheet-10: RESTFUL API**  
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---

- Menampilkan semua data barang

```
GET localhost/PWL_POS/public/api/barangs Send

Params Auth Headers (6) Body Pre-req. Tests Settings Cookies

Body 200 OK 228 ms 2.31 KB Save Response

Pretty Raw Preview Visualize JSON

1 {
2   {
3     "barang_id": 1,
4     "kategori_id": 1,
5     "barang_kode": "B1",
6     "barang_nama": "Tirai Gulung",
7     "harga_beli": 700000,
8     "harga_jual": 850000,
9     "created_at": null,
10    "updated_at": null
11  },
12  {
13    "barang_id": 2,
14    "kategori_id": 1,
15    "barang_kode": "B2",
16    "barang_nama": "Tirai Lipat",
17    "harga_beli": 40000,
18    "harga_jual": 50000,
19    "created_at": null,
20    "updated_at": null
21  },
22  {
23    "barang_id": 3,
24    "kategori_id": 2,
25    "barang_kode": "B3",
26    "barang_nama": "Meja TV",
```

- Menambahkan data barang



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POST localhost/PWL\_POS/public/api/barangs Send

Params Auth Headers (8) Body Pre-req. Tests Settings Cookies

form-data

	Key	Value	...	Bulk Edit
<input checked="" type="checkbox"/>	kategori_id	4		
<input checked="" type="checkbox"/>	barang_kode	B13		
<input checked="" type="checkbox"/>	barang_nama	Mie Goreng		
<input checked="" type="checkbox"/>	harga_beli	10000		
<input checked="" type="checkbox"/>	harga_jual	15000		

Body 201 Created 253 ms 594 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "kategori_id": "4",
3   "barang_kode": "B13",
4   "barang_nama": "Mie Goreng",
5   "harga_beli": "10000",
6   "harga_jual": "15000",
7   "updated_at": "2024-05-09T04:16:03.000000Z",
8   "created_at": "2024-05-09T04:16:03.000000Z",
9   "barang_id": 14
10 }
```

- Menampilkan detail dari data barang dengan id 14

GET localhost/PWL\_POS/public/api/barangs/14 Send

Params Auth Headers (8) Body Pre-req. Tests Settings Cookies

Body 200 OK 247 ms 583 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "barang_id": 14,
3   "kategori_id": 4,
4   "barang_kode": "B13",
5   "barang_nama": "Mie Goreng",
6   "harga_beli": 10000,
7   "harga_jual": 15000,
8   "created_at": "2024-05-09T04:16:03.000000Z",
9   "updated_at": "2024-05-09T04:16:03.000000Z"
10 }
```



## Jurusan Teknologi Informasi Politeknik Negeri Malang

### Jobsheet-10: RESTFUL API

#### Mata Kuliah : Pemrograman Web Lanjut

---

- Mengubah atau mengedit data dengan id 14 yang awalnya barang\_nama=Mie Goreng menjadi barang\_nama=Mie Goreng Jawa

PUT localhost/PWL\_POS/public/api/barangs/14?barang\_nama=Mie Goreng Jawa Send

Params Auth Headers (8) Body Pre-req. Tests Settings Cookies

Query Params

	Key	Value	Bulk Edit
<input checked="" type="checkbox"/>	barang_nama	Mie Goreng Jawa	

Body 200 OK 252 ms 588 B Save Response

Pretty Raw Preview Visualize JSON

```
1  {
2    "barang_id": 14,
3    "kategori_id": 4,
4    "barang_kode": "B13",
5    "barang_nama": "Mie Goreng Jawa",
6    "harga_beli": 10000,
7    "harga_jual": 15000,
8    "created_at": "2024-05-09T04:16:03.000000Z",
9    "updated_at": "2024-05-09T04:19:20.000000Z"
10 }
```

- Menghapus data dengan id 14

DELETE localhost/PWL\_POS/public/api/barangs/14 Send

Params Auth Headers (8) Body Pre-req. Tests Settings Cookies

Body 200 OK 246 ms 438 B Save Response

Pretty Raw Preview Visualize JSON

```
1  {
2    "success": true,
3    "message": "Data Barang Berhasil Dihapus!"
4  }
```