



Project UAS pemrograman
berbasis platform

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Latar belakang dan overview



Figure 1 Character name: Haru Urara

Project UAS kami memiliki 2 tema, yaitu Simple Note App dan Pokémon Database. Data Pokémon akan diambil dari API eksternal, yaitu PokeAPI, dengan total 20 API endpoint yang terbagi menjadi 4 jenis, yaitu "/account", "/notes", "/pokemon", dan "/". Pengujian akan dilakukan menggunakan Postman, dan dokumentasi lengkap akan dibuat menggunakan Swagger untuk kemudahan penggunaan.

Tech stack, library, dan framework

kami menggunakan beberapa library maupun framework diantara lainnya:

- nodeJS
- expressJS
- Jsonwebtoken
- Bcrypt
- Pg dan mysql2 (database)
- Morgan (logging)
- Swagger (documentation)
- Uuid (uuid generator)
- Dotenv



Figure 2 Character name: Cheval Grand

Rancangan sistem



Figure 3 Character name: Oguri Cap

Tema project: simple note app dan pokemon database

Database: postgresql dan mysql

External API: [pokeapi](#)

Fitur: auth, clean architecture, standardize error handling and respond handling, swagger documentation

Entity Relational Database

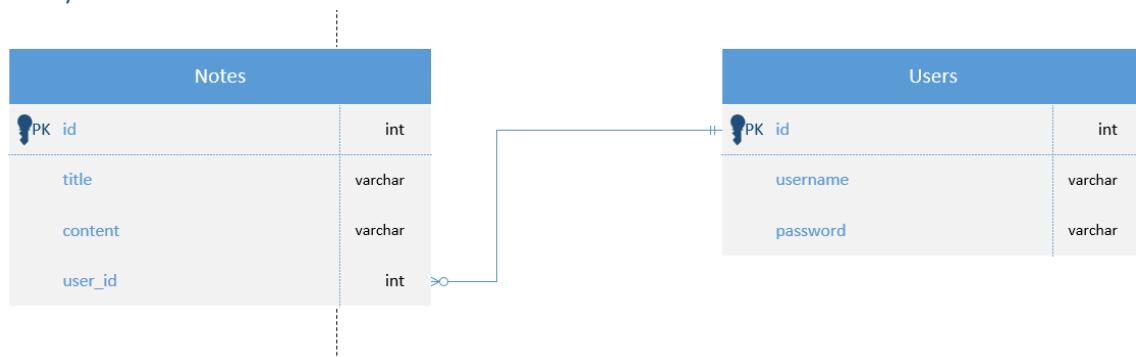


Table 1 ERD

1. Users

1.1.Id: primary key untuk users

1.2.Username

1.3.Password

2. Notes

2.1.Id: primary key untuk notes

2.2.Title: judul note

2.3.Content: isi note

2.4.User_id: menentukan note kepemilikan note(foreign key one to many)

Dokumentasi endpoint API



Menggunakan REST api dan http methods

Figure 4 Character name: Tamamo Cross

Daftar daftar endpoint API

/account:

- POST /signup
- POST /login
- POST /getAccounts
- GET /getAllAccounts

/notes:

- GET
- POST
- PUT
- DELETE

/:

- GET

/pokemon:

Daftar Tabel Endpoint API

No	Endpoint	Parameter or Body	Respond
1	POST /login	{ "username": "string", "password": "string" }	{ "status": "success", "statusCode": 200, "message": "Login successful", "data": { "token": "YOUR_TOKEN" }, "timeStamp": "TIME_STAMP", "requestId": "YOUR_REQID" }
2	POST /signup	{ "username": "string", "password": "string" }	{ "status": "success", "statusCode": 201, "message": "Signup completed successfully", "data": {}, "timeStamp": "TIME_STAMP", "requestId": "YOUR_REQID" }

			}
3	POST /getAccounts	{ "username": "string" }	{ "status": "success", "statusCode": 200, "message": "Login successful", "data": { "id": ID, "username": "USERNAME", "password": "PASSWORD" }, "timeStamp": "TIME_STAMP", "requestId": "YOUR_REQID" }
4	GET /getAllAccounts	-	{ "status": "success", "statusCode": 200, "message": "Login successful", "data": { "id": ID, "username": "USERNAME", } }

			<pre> "password": "PASSWORD" }, "timeStamp": "TIME_STAMP", "requestId": "YOUR_REQID" } </pre>
5	GET /notes	-	<pre> { "status": "success", "statusCode": 200, "message": "Login successful", "data": "timeStamp": "TIME_STAMP", "requestId": "YOUR_REQID" } </pre>
6	POST /notes	<pre> { "title": "string", "content": "string" } </pre>	<pre> { "status": "success", "statusCode": 200, "message": "Login successful", "data": "timeStamp": "TIME_STAMP", } </pre>

			<pre> "requestId": "YOUR_REQID" } </pre>
7	PUT /notes	Query.id: string <pre> { "title": "string", "content": "string" } </pre>	<pre> { "status": "success", "statusCode": 200, "message": "Login successful", "data": [{ "timeStamp": "TIME_STAMP", "requestId": "YOUR_REQID" }] } </pre>

8	DELETE /notes	Query.id: string	<pre>{ "status": "success", "statusCode": 200, "message": "Note has been deleted successfully", "data": "imestamp": "TIME_STAMP", "requestId": "YOUR_REQID" }</pre>
9	GET /	-	<pre>{ "status": "success", "statusCode": 200, "message": "Login successful", "data": "<html><h1>Selamat datang di page utama!</h1> <p>ini adalah project uas matkul pemprograman berbasis platform</p> <p>Anggota: <p></pre>

			<pre> Muhamad Ilham FauzyMohamad Ibnu Nizar HusainiExza Fauzan Sofyan </html>"} "timeStamp": "TIME_STAMP", "requestId": "YOUR_REQID" } </pre>
10	GET /pokemon	Query.pokemon: string	<pre> { "status": "success", "statusCode": 200, "message": "Login successful", "data": { "timeStamp": "TIME_STAMP", "requestId": "YOUR_REQID" } } </pre>

11	GET /pokemon/abilities	Query.ability: string	<pre>{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": [{ "name": "Ability 1" }, { "name": "Ability 2" }], "timeStamp": "2026-01-25T13:33:15.445Z", "requestId": "019bf55b-d735-7030-a6fc-f04c6bd1c680" }</pre>
12	GET /pokemon/types	Query.type: string	<pre>{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": [{ "name": "Type 1" }, { "name": "Type 2" }], "timeStamp": "2026-01-25T13:42:07.559Z", "requestId": "019bf563-f5c7-725d-9407-0c87a19e94bc" }</pre>

			}
13	GET /pokemon/genders	Query.gender: string	{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": { }, "timeStamp": "2026-01-25T13:43:06.433Z", "requestId": "019bf564-dbc1-726e-99ee-e14158c5fe4b" }

14	GET /pokemon/stats	Query.stat: string	<pre>{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": { "timeStamp": "2026-01-25T13:43:43.539Z", "requestId": "019bf565-6cb3-7689-b891-bff59b0367a1" } }</pre>
15	GET /pokemon/characteristics	Query.characteristic: string	<pre>{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": { "timeStamp": "2026-01-25T13:44:15.524Z", "requestId": "019bf565-e9a4-76fd-b602-f423035363df" } }</pre>

16	GET /pokemon/natures	Query.nature: string	{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": { "timeStamp": "2026-01-25T13:44:55.413Z", "requestId": "019bf566-8575-75d9-b58a-b3cc7b0263b0" } }

17	GET /pokemon/genetrations	Query.generation: string	<pre>{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": { "timeStamp": "2026-01-25T13:45:34.390Z", "requestId": "019bf567-1db6-77cc-83a4-73c5c4921629" } }</pre>
18	GET /pokemon/version	Query.version: string	<pre>{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": { "timeStamp": "2026-01-25T13:46:09.768Z", "requestId": "019bf567-a7e8-723d-9779-39f884732f4c" } }</pre>

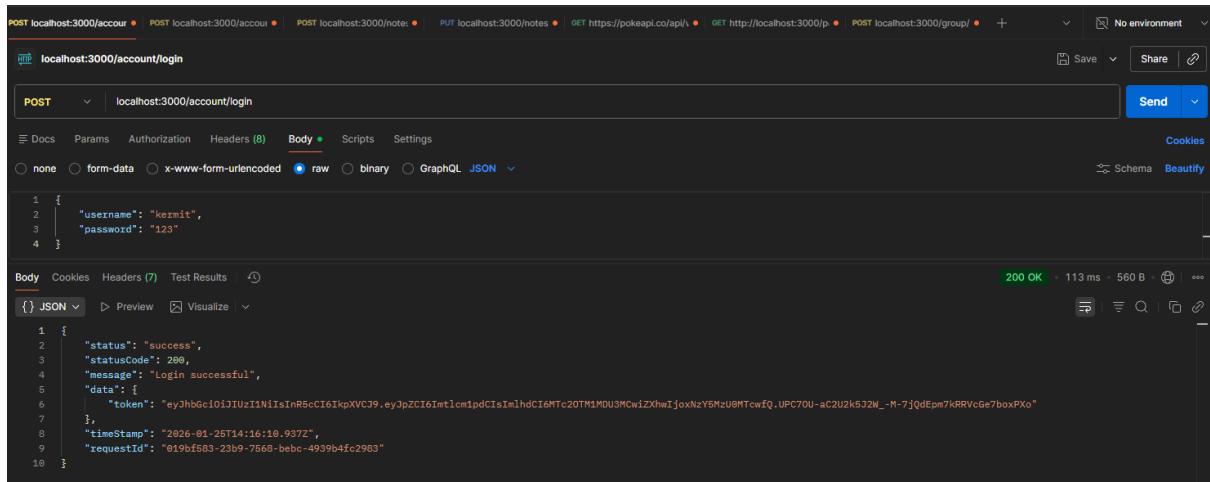
19	GET /pokemon/items	Query.item: string	{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": { "timeStamp": "2026-01-25T13:46:35.922Z", "requestId": "019bf568-0e12-7230-b93b-ce2e5dbd68cd" } }

20	GET /pokemon/location	Query.location: string	{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": { "timeStamp": "2026-01-25T13:48:05.895Z", "requestId": "019bf569-6d87-7633-afd7-cdf6fb1c9708" } }
----	-----------------------	------------------------	--

Pengujian endpoint API

Account

/Account/login



POST localhost:3000/account/login

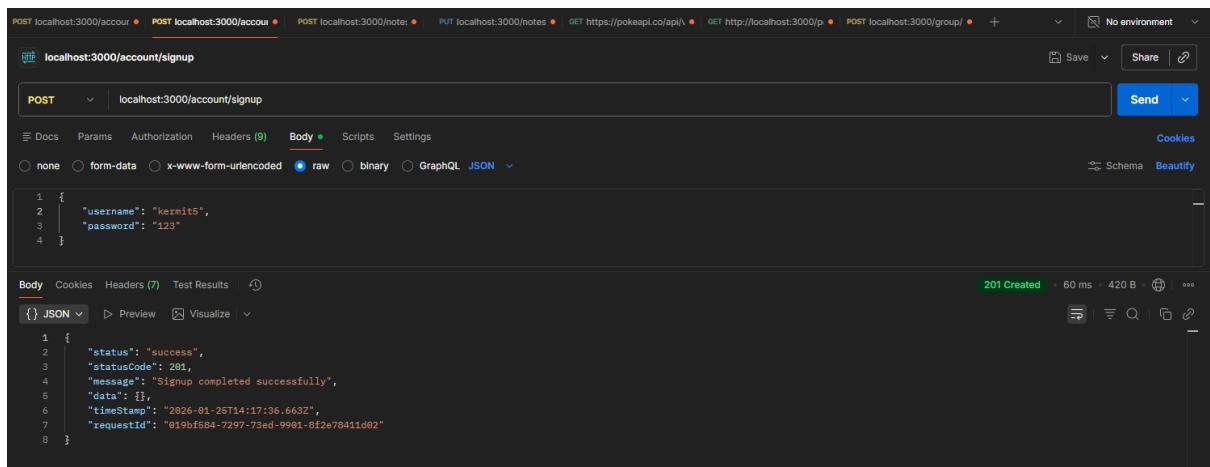
Body (raw) JSON

```
1 {
2     "username": "kermit",
3     "password": "123"
4 }
```

200 OK

```
1 {
2     "status": "success",
3     "statusCode": 200,
4     "message": "Login successful",
5     "data": {
6         "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpZCI6Imtlcm1pdCisImlhdCI6MTc2OTM1MDU3MCwiZXhwIjoxNzY5MzU0MTcwEQ.UPC7OU-aC2U2k6J2W_-M-7jQdEpw7kRRVg6e7boxPxo",
7     },
8     "timeStamp": "2026-01-25T14:16:10.937Z",
9     "requestId": "019bf583-23b9-7568-bebc-4939b4fc2963"
10 }
```

/account/signup



POST localhost:3000/account/signup

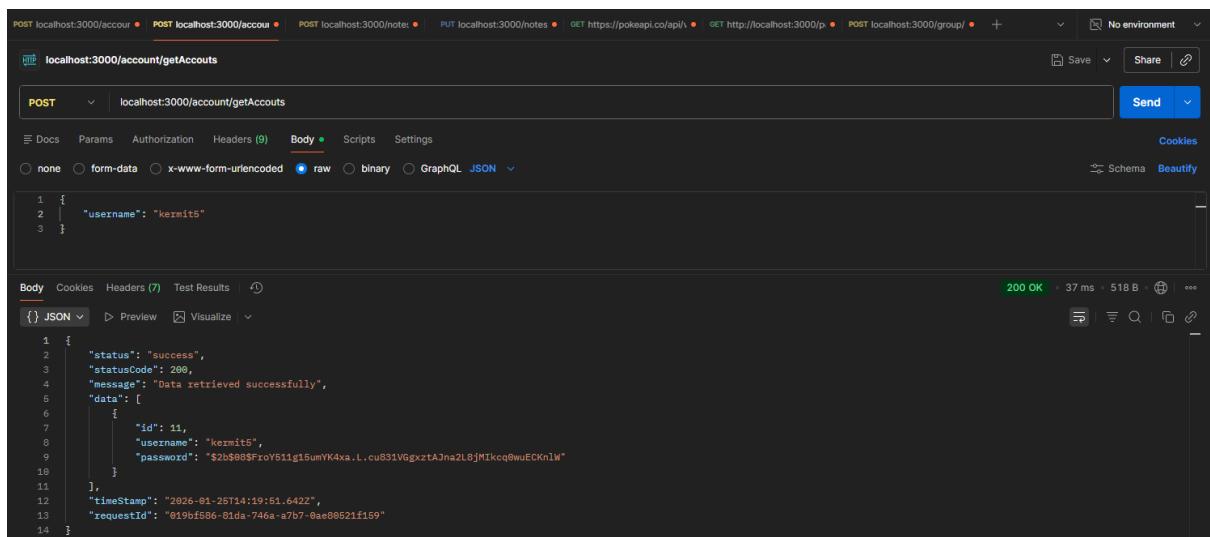
Body (raw) JSON

```
1 {
2     "username": "kermit5",
3     "password": "123"
4 }
```

201 Created

```
1 {
2     "status": "success",
3     "statusCode": 201,
4     "message": "Signup completed successfully",
5     "data": {},
6     "timeStamp": "2026-01-25T14:17:36.663Z",
7     "requestId": "019bf684-7297-73ed-9981-8f2e78411d62"
8 }
```

/account/getaccounts



POST localhost:3000/account/getAccounts

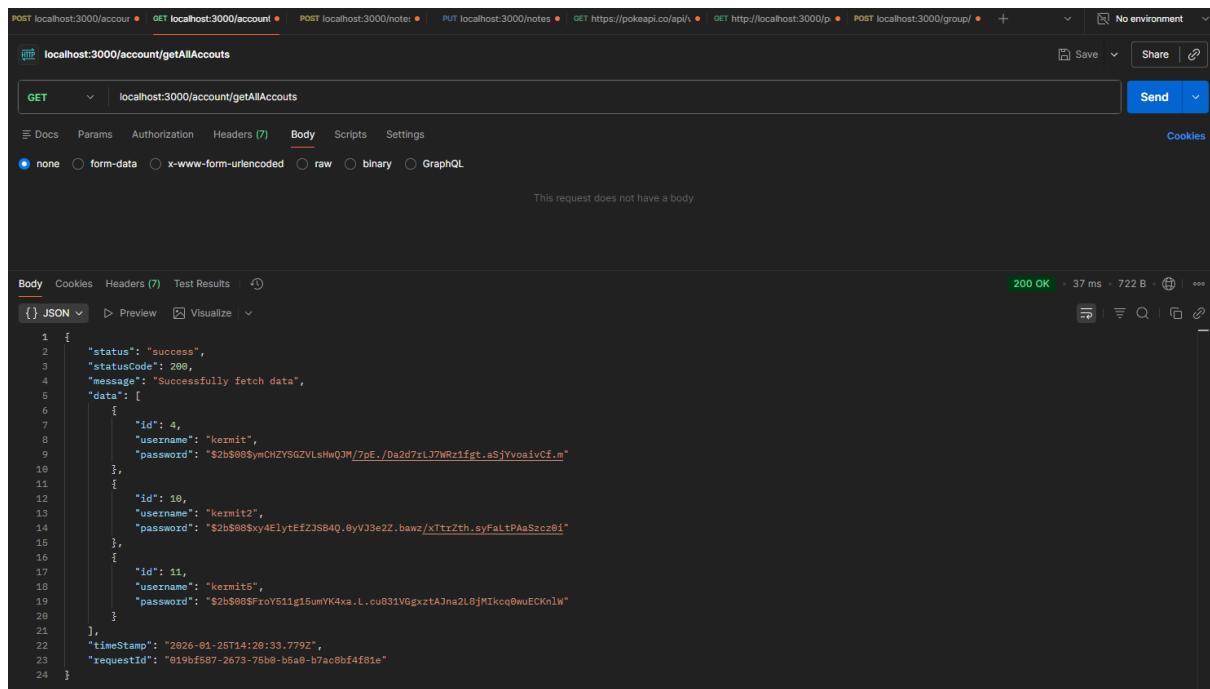
Body (raw) JSON

```
1 {
2     "username": "kermit5"
3 }
```

200 OK

```
1 {
2     "status": "success",
3     "statusCode": 200,
4     "message": "Data retrieved successfully",
5     "data": [
6         {
7             "id": 11,
8             "username": "kermit5",
9             "password": "$2b$08$FroY5i1gt6umYK4xa.l.cu831VggxztAJna2l8jMIkcq8wuECKn1W"
10         }
11     ],
12     "timeStamp": "2026-01-25T14:19:51.642Z",
13     "requestId": "019bf586-81da-746a-a7b7-0ae086521f159"
14 }
```

/account/getallaccounts



POST localhost:3000/account • GET localhost:3000/account • POST localhost:3000/note: • PUT localhost:3000/notes • GET https://pokeapi.co/api/v2/pokemon • GET http://localhost:3000/p • POST localhost:3000/group/ • + No environment

localhost:3000/account/getAllAccounts

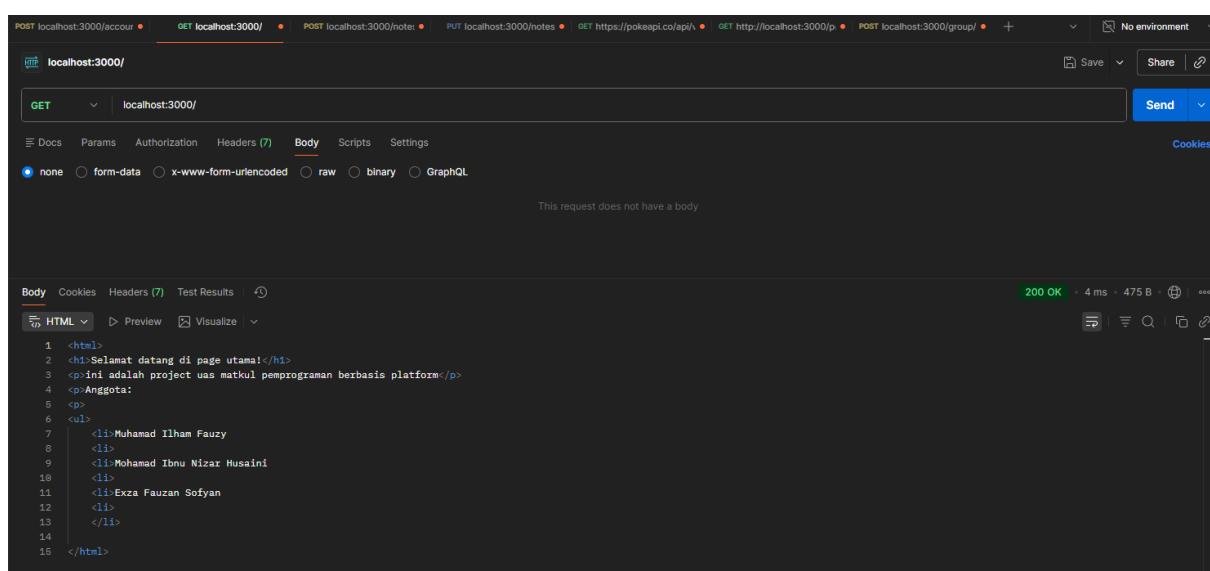
GET localhost:3000/account/getAllAccounts

Body Headers (7) Test Results

{} JSON Preview Visualize

```
1 {  
2     "status": "success",  
3     "statusCode": 200,  
4     "message": "Successfully fetch data",  
5     "data": [  
6         {  
7             "id": 4,  
8             "username": "kermit",  
9             "password": "$2b$08$ymCHZYSGZVLsHwQ3M/7pE./Da2d7rLJ7WRz1fgt.a5jYvosivCf.m"  
10        },  
11        {  
12            "id": 10,  
13            "username": "kermit2",  
14            "password": "$2b$08$xy4EljtEfZJSB4Q.8yVJ3e2Z.bawz/xTtrZth.syFaLtPAaSzcz0i"  
15        },  
16        {  
17            "id": 11,  
18            "username": "kermit5",  
19            "password": "$2b$08$FroY511g15umYK4xa.L.cu831VGgxztA3na2L8jMIkcg0WuECKn1W"  
20        }  
21    ],  
22    "timeStamp": "2026-01-25T14:28:33.779Z",  
23    "requestId": "019bf587-2673-7b08-b5a0-b7ac8bf4fb1e"  
24}
```

200 OK · 37 ms · 722 B



POST localhost:3000/account • GET localhost:3000/ • POST localhost:3000/note: • PUT localhost:3000/notes • GET https://pokeapi.co/api/v2/pokemon • GET http://localhost:3000/p • POST localhost:3000/group/ • + No environment

localhost:3000

GET localhost:3000

Body Headers (7) Test Results

{} HTML Preview Visualize

```
1 <html>  
2 <h1>Selamat datang di page utama!</h1>  
3 <p>ini adalah project uas matkul pemrograman berbasis platform</p>  
4 <p>Anggota:</p>  
5 <p>  
6 <ul>  
7     <li>Muhammad Ilham Fauzy  
8     <li>  
9     <li>Mohamad Ibnu Nizar Husaini  
10    <li>  
11    <li>Exza Fauzan Sofyan  
12    <li>  
13    </li>  
14 </ul>  
15 </html>
```

200 OK · 4 ms · 475 B

Notes

POST /note

The screenshot shows a Postman request to `localhost:3000/notes` using the `POST` method. The request body is a JSON object with `title` and `content` fields. The response status is `201 Created`, indicating success. The response body contains a JSON object with `status`, `statusCode`, `message`, `data`, `timeStamp`, and `requestId` fields.

```
1 {  
2   "title": "kermit note 1",  
3   "content": "test 1"  
4 }  
  
1 {  
2   "status": "success",  
3   "statusCode": 201,  
4   "message": "Note created successfully",  
5   "data": [  
6     {"title": "kermit note 1",  
7       "content": "test 1"  
8   ],  
9   "timeStamp": "2026-01-25T14:22:29.439Z",  
10  "requestId": "019bf588-ea3f-716b-a32c-0bfd6fb49932"  
11 }  
  
201 Created 66 ms 458 B
```

GET /notes

The screenshot shows a Postman request to `localhost:3000/notes` using the `GET` method. The response status is `200 OK`, and the response body is a JSON array containing two note objects, each with `id`, `title`, `content`, and `id_user` fields.

```
This request does not have a body  
  
1 {  
2   "status": "success",  
3   "statusCode": 200,  
4   "message": "Data received successfully",  
5   "data": [  
6     {  
7       "id": 9,  
8       "title": "kermit note 1",  
9       "content": "test 1",  
10      "id_user": 4  
11    },  
12    {  
13      "id": 7,  
14      "title": "Update Note",  
15      "content": "This is an update note."  
16    }  
17  ]  
18 }  
  
200 OK 54 ms 755 B
```

DELETE /notes

The screenshot shows a Postman request to `localhost:3000/notes` using the `DELETE` method with a query parameter `id=1`. The response status is `200 OK`, and the response body indicates that the note with ID 1 has been deleted successfully.

```
1 {  
2   "status": "success",  
3   "statusCode": 200,  
4   "message": "Note has been deleted successfully",  
5   "data": {},  
6   "timeStamp": "2026-01-25T14:24:43.086Z",  
7   "requestId": "019bf58a-f44d-706a-ac86-340af957ab0"  
8 }  
  
200 OK 5 ms 420 B
```

PUT /notes

POST localhost:3000/account • GET localhost:3000/ • PUT localhost:3000/notes • GET localhost:3000/notes • GET https://pokeapi.co/api/v2/pokemon • GET http://localhost:3000/p • POST localhost:3000/group/ • + • No environment

localhost:3000/notes

PUT localhost:3000/notes?id=8

Body

```
1 {  
2     "title": "kermit note 1",  
3     "content": "test 1"  
4 }
```

200 OK 47 ms 452 B

Body Cookies Headers (7) Test Results

{ } JSON Preview Visualize

```
1 {  
2     "status": "success",  
3     "statusCode": 200,  
4     "message": "Note successfully edited",  
5     "data": {  
6         "title": "kermit note 1",  
7         "content": "test 1"  
8     },  
9     "timeStamp": "2026-01-25T14:25:21.386Z",  
10    "requestId": "e19bf58b-899a-7449-9b15-24862daee8f5"  
11 }
```

Pokemon

Abilities pokemon contoh: pikachu with electro ball

GET http://localhost:3000/pokemon/abilities?ability=static

Headers (6)

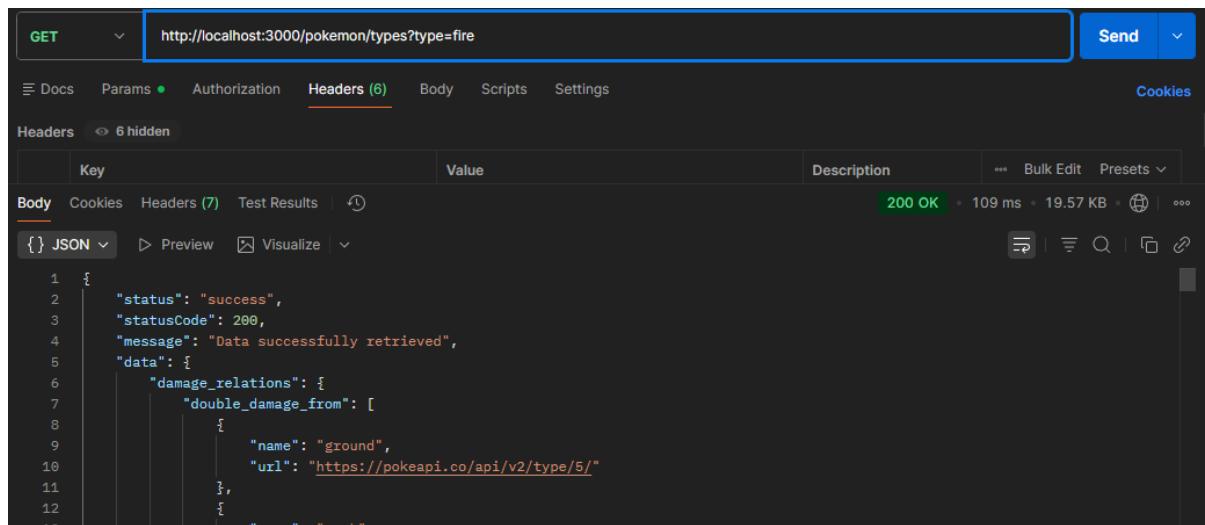
Headers

Key	Value	Description	Bulk Edit	Presets
Body	Cookies	Headers (7)	Test Results	

{ } JSON Preview Visualize

```
1 {  
2     "status": "success",  
3     "statusCode": 200,  
4     "message": "Data successfully retrieved",  
5     "data": {  
6         "effect_changes": [  
7             {  
8                 "effect_entries": [  
9                     {  
10                    "effect": "N'a pas d'effet en dehors du combat.",  
11                    "language": {  
12                        "name": "fr",  
13                    }  
14                }  
15            }  
16        }  
17    }  
18 }
```

Types pokemon contoh: Fire



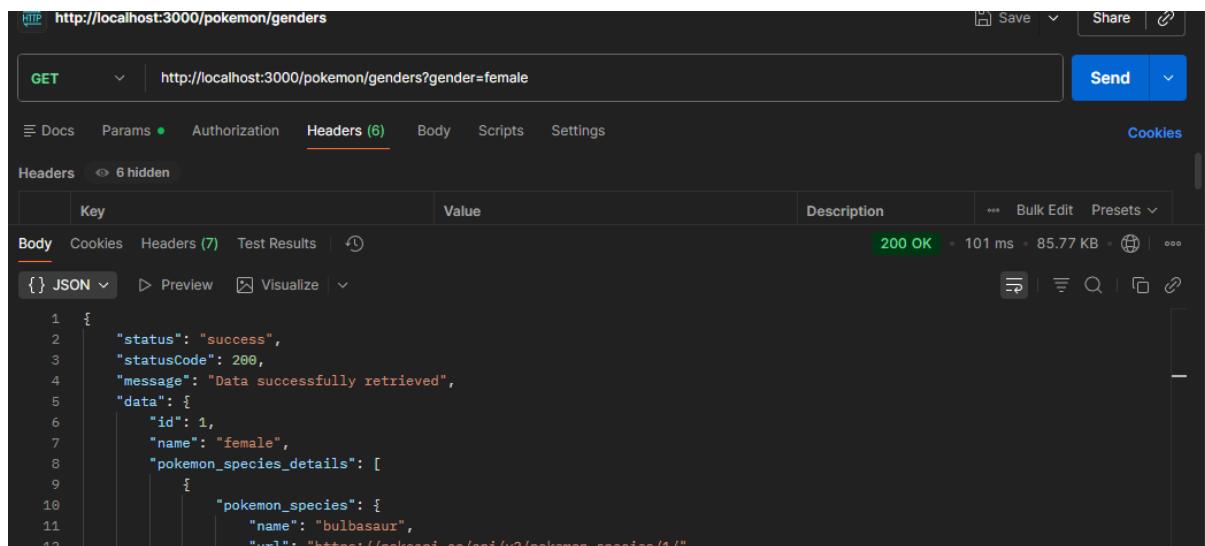
GET http://localhost:3000/pokemon/types?type=fire

Headers (6)

Key	Value	Description	Bulk Edit	Presets
Body	Cookies	Headers (7)	Test Results	Send

```
{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": { "damage_relations": { "double_damage_from": [ { "name": "ground", "url": "https://pokeapi.co/api/v2/type/5/" } ] } } }
```

Gender pokemon



HTTP http://localhost:3000/pokemon/genders

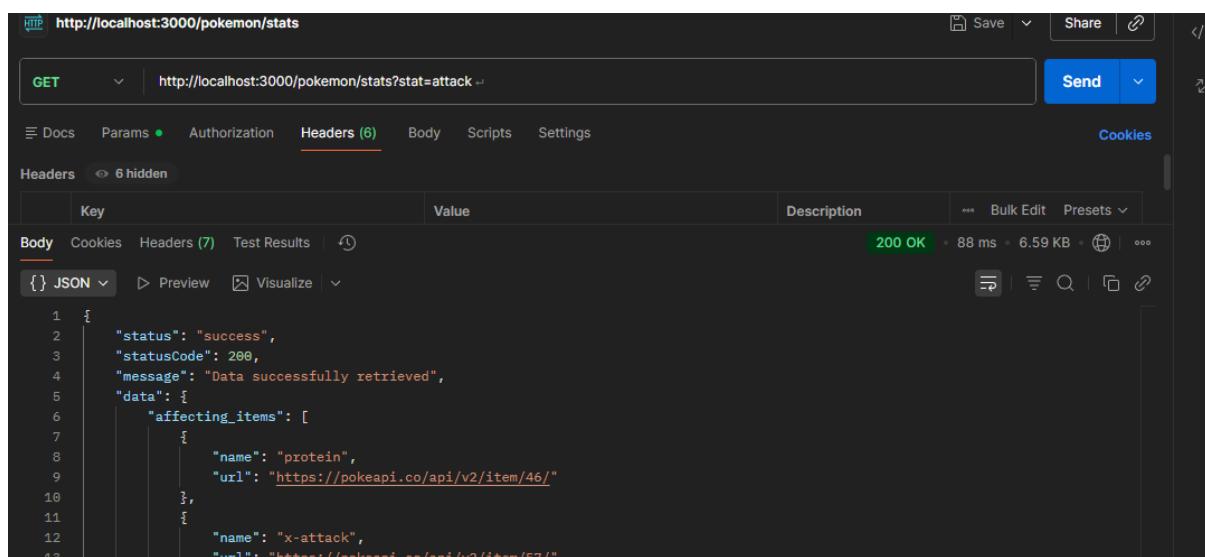
GET http://localhost:3000/pokemon/genders?gender=female

Headers (6)

Key	Value	Description	Bulk Edit	Presets
Body	Cookies	Headers (7)	Test Results	Send

```
{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": { "id": 1, "name": "female", "pokemon_species_details": [ { "pokemon_species": { "name": "bulbasaur", "url": "https://pokeapi.co/api/v2/pokemon-species/1/" } } ] } }
```

Stats pokemon



HTTP http://localhost:3000/pokemon/stats

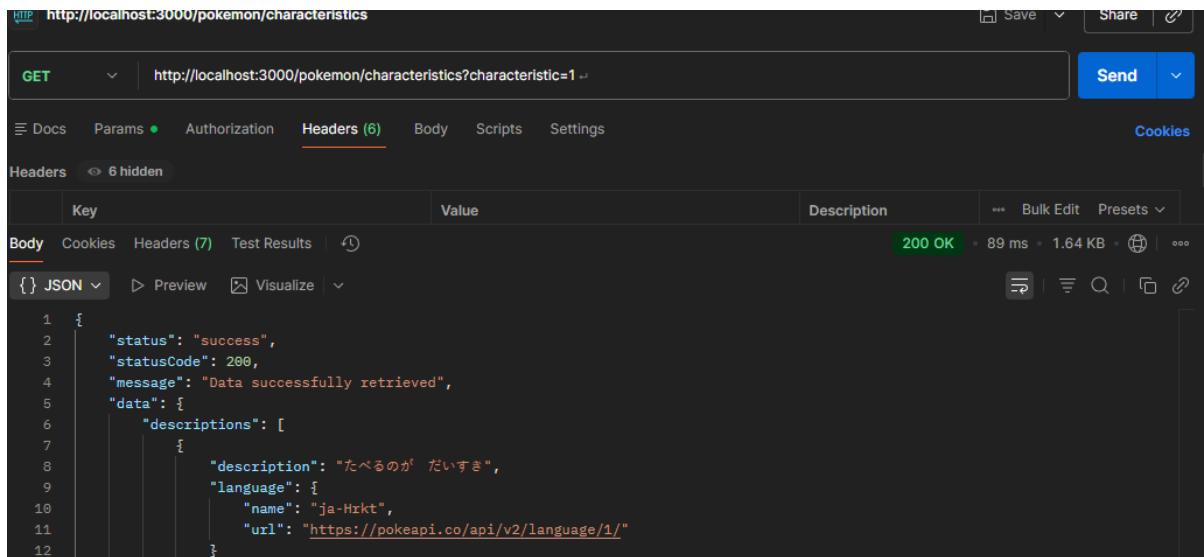
GET http://localhost:3000/pokemon/stats?stat=attack

Headers (6)

Key	Value	Description	Bulk Edit	Presets
Body	Cookies	Headers (7)	Test Results	Send

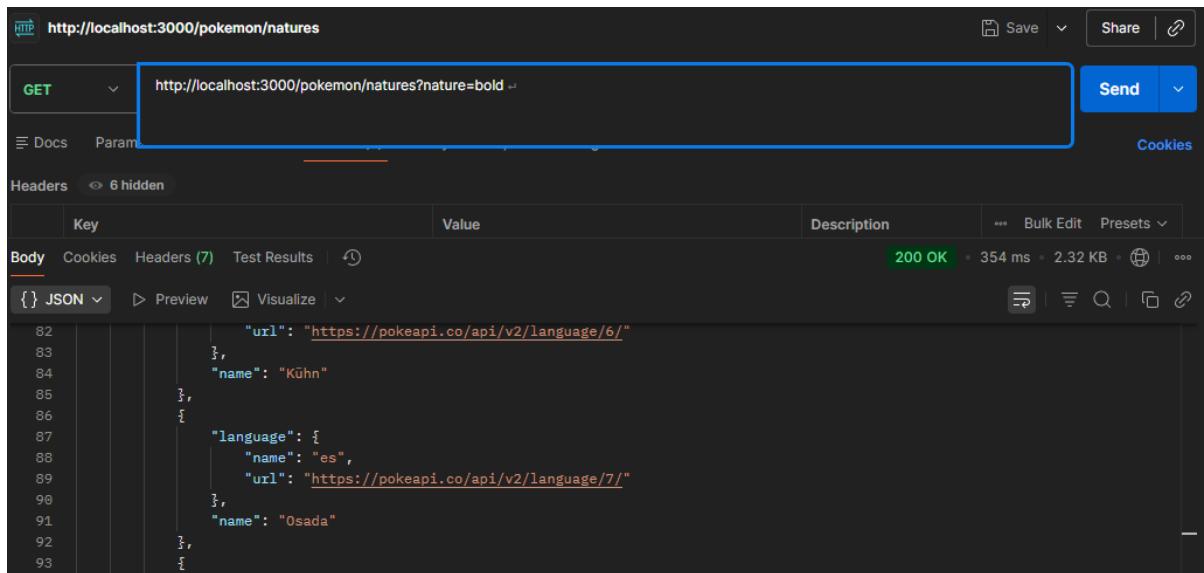
```
{ "status": "success", "statusCode": 200, "message": "Data successfully retrieved", "data": { "data": { "affecting_items": [ { "name": "protein", "url": "https://pokeapi.co/api/v2/item/46/" }, { "name": "x-attack", "url": "https://pokeapi.co/api/v2/item/57/" } ] } } }
```

Characteristic pokemon



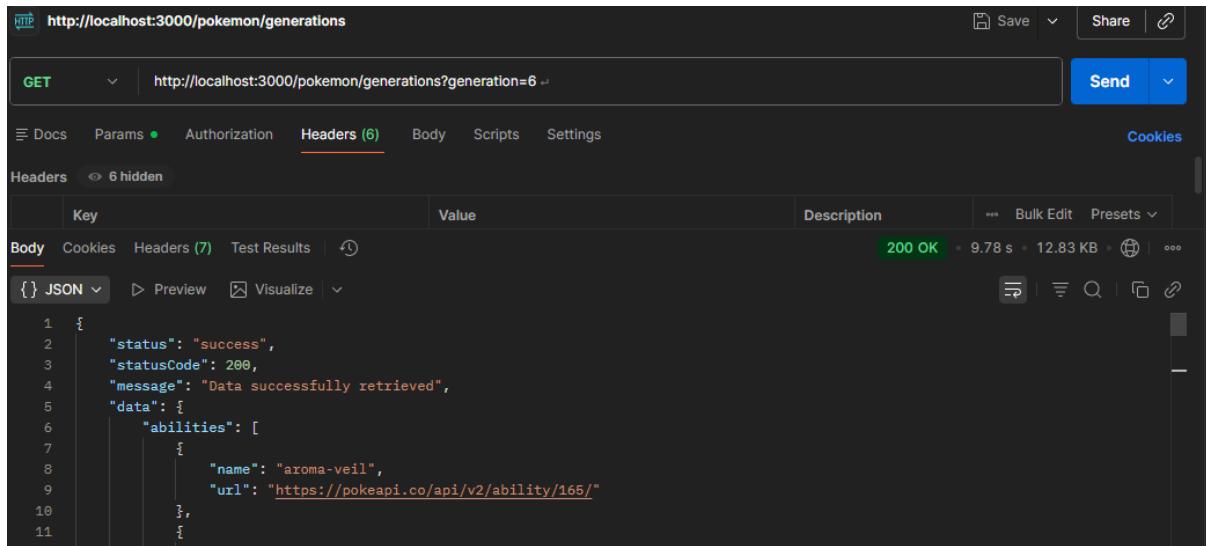
```
1 {  
2   "status": "success",  
3   "statusCode": 200,  
4   "message": "Data successfully retrieved",  
5   "data": [  
6     {  
7       "descriptions": [  
8         {  
9           "description": "たべるのが だいすき",  
10          "language": {  
11            "name": "ja-Hzkt",  
12            "url": "https://pokeapi.co/api/v2/language/1/"  
13          }  
14        }  
15      }  
16    ]  
17  }  
18 }
```

natures contoh: daerah tempat pokemon berasal



```
82   "url": "https://pokeapi.co/api/v2/language/6/",  
83 },  
84   "name": "K\u00fchn",  
85 },  
86   {  
87     "language": {  
88       "name": "es",  
89       "url": "https://pokeapi.co/api/v2/language/7/",  
90     },  
91     "name": "Osada",  
92   },  
93 }
```

generation contoh: pokemon generasi berapa



HTTP <http://localhost:3000/pokemon/generations>

GET <http://localhost:3000/pokemon/generations?generation=6>

Send

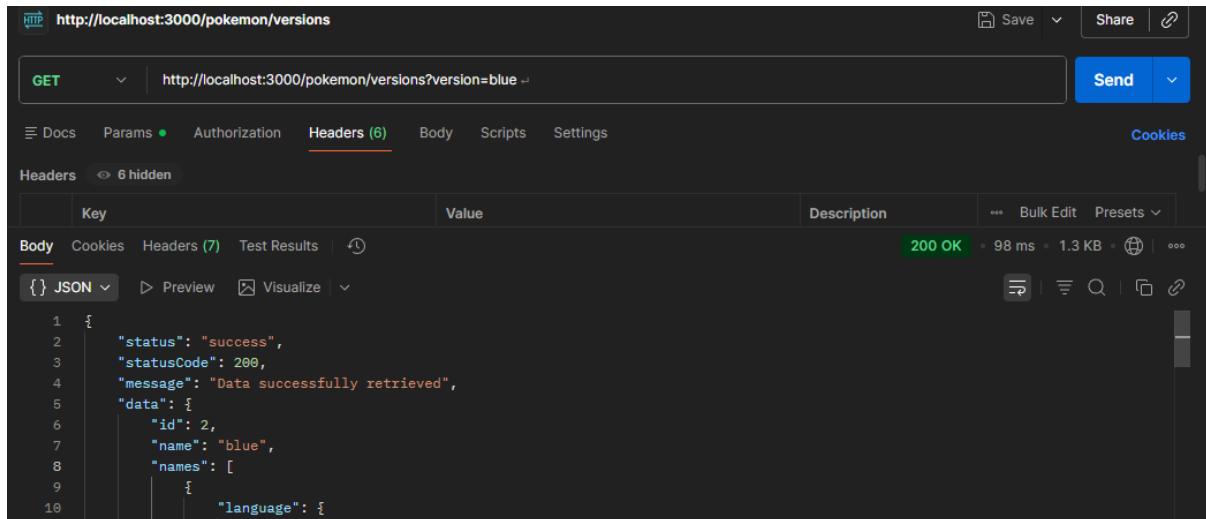
Headers (6) Body Scripts Settings Cookies

Headers 6 hidden

Key	Value	Description	Bulk Edit	Presets
Body	Cookies Headers (7) Test Results	200 OK 9.78 s 12.83 KB		
{ } JSON	Preview Visualize			

```
1 {  
2   "status": "success",  
3   "statusCode": 200,  
4   "message": "Data successfully retrieved",  
5   "data": {  
6     "abilities": [  
7       {  
8         "name": "aroma-veil",  
9         "url": "https://pokeapi.co/api/v2/ability/165"  
10      },  
11      {  
12        "name": "...  
13      }  
14    ]  
15  }  
16}
```

version contoh: versi berapa game pokemon ini



HTTP <http://localhost:3000/pokemon/versions>

GET <http://localhost:3000/pokemon/versions?version=blue>

Send

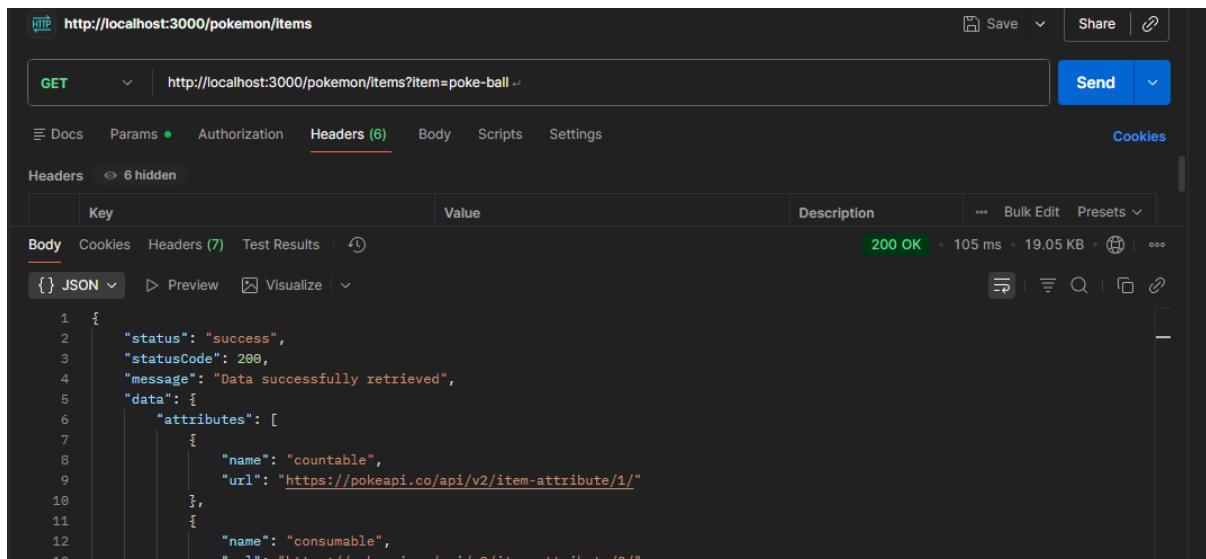
Headers (6) Body Scripts Settings Cookies

Headers 6 hidden

Key	Value	Description	Bulk Edit	Presets
Body	Cookies Headers (7) Test Results	200 OK 98 ms 1.3 KB		
{ } JSON	Preview Visualize			

```
1 {  
2   "status": "success",  
3   "statusCode": 200,  
4   "message": "Data successfully retrieved",  
5   "data": {  
6     "id": 2,  
7     "name": "blue",  
8     "names": [  
9       {  
10         "language": {  
11           "name": "...  
12         }  
13       }  
14     ]  
15   }  
16}
```

items contoh: pokeball



HTTP <http://localhost:3000/pokemon/items>

GET <http://localhost:3000/pokemon/items?item=poke-ball>

Send

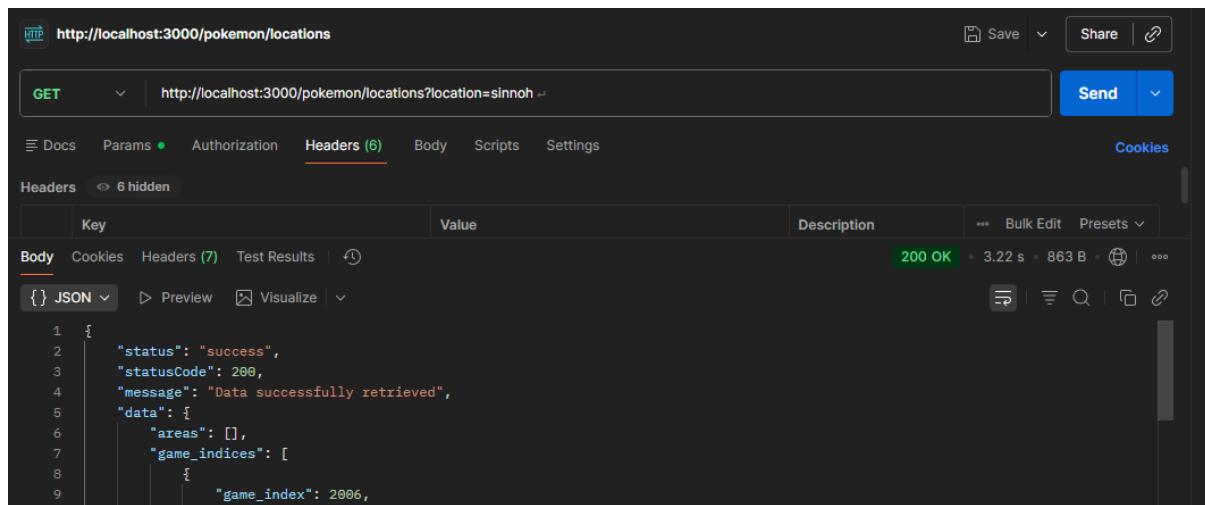
Headers (6) Body Scripts Settings Cookies

Headers 6 hidden

Key	Value	Description	Bulk Edit	Presets
Body	Cookies Headers (7) Test Results	200 OK 105 ms 19.05 KB		
{ } JSON	Preview Visualize			

```
1 {  
2   "status": "success",  
3   "statusCode": 200,  
4   "message": "Data successfully retrieved",  
5   "data": {  
6     "attributes": [  
7       {  
8         "name": "countable",  
9         "url": "https://pokeapi.co/api/v2/item-attribute/1"  
10      },  
11      {  
12        "name": "consumable",  
13        "url": "https://pokeapi.co/api/v2/item-attribute/2"  
14      }  
15    ]  
16  }  
17}
```

location contoh: daerah pokemon



HTTP <http://localhost:3000/pokemon/locations>

GET | <http://localhost:3000/pokemon/locations?location=sinnoh> | Send

Headers (6) | Body | Scripts | Settings | Cookies

Headers (6 hidden)

Key	Value	Description	Bulk Edit	Presets
Body	Cookies	Headers (7)	Test Results	200 OK • 3.22 s • 863 B
{ } JSON ▾ ▶ Preview ▶ Visualize ▾				
1	{			
2	"status": "success",			
3	"statusCode": 200,			
4	"message": "Data successfully retrieved",			
5	"data": {			
6	"areas": [],			
7	"game_indices": [
8	{			
9	"game_index": 2006,			