API SHAPE EXPLORER DOKUMENTASI

📘 Shape Explorer API Documentation

🔰 Introduction

Selamat datang di dokumentasi Shape Explorer API. API ini merupakan bagian dari proyek Shape Explorer yang berfungsi sebagai backend service untuk aplikasi Frontend dan CMS (Admin Panel). Anda dapat menggunakan API ini untuk mengelola data bentuk geometri, autentikasi pengguna, dan operasi lainnya yang digunakan oleh aplikasi klien.

Dokumentasi ini disiapkan untuk memudahkan pengujian dan eksplorasi API melalui Postman.

🌐 Base URL (LIVE)

`https://backend-shape-explorer.vercel.app/api`

> Semua endpoint diawali dengan `/api`, misalnya:> - `POST /api/login` > - `GET /api/shapes` > - `POST /api/shapes`

🧰 Tools yang Digunakan

- **Next.js API Routes- Prisma ORM- PostgreSQL- JWT Authentication- Zod for validation**

🧪 Cara Menggunakan di Postman

1. **Import Collection:** - Gunakan file koleksi Postman (`.json`) yang disediakan. - Atau buat manual endpoint sesuai dokumentasi ini.
2. **Set Environment Variable (Opsional):** - `{{base_url}}` = `https://backend-shape-explorer.vercel.app/api` - `{{token}}` = `Bearer`
3. **Login Terlebih Dahulu:** Gunakan endpoint `POST /login` untuk mendapatkan token JWT.
4. **Gunakan Token untuk Akses Endpoint Lain:** Masukkan token JWT ke dalam header: `Authorization: Bearer`

📂 Endpoint Categories

- 🔐 **Authentication-** 📐 **Shape Management-** 👤 **User Management (Admin only)**

Untuk detail endpoint, lihat dokumentasi selanjutnya atau gunakan koleksi Postman yang telah disediakan.EndFragment

AUTH LOGIN AND REGISTER

1. 📌 Informasi Umum

- **URL LOGIN**: `https://backend-shape-explorer.vercel.app/api/auth/login`
- **URL REGISTER**: `https://backend-shape-explorer.vercel.app/api/auth/login`
- **Method**: `POST`
- **Content-Type**: `application/json`

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2. 📥 Request Body (JSON)

Field	Type	Constraints	Example
`nama`	string	Min 3 huruf, max 20 huruf/angka/spasi	`budi_123`
`password`	string	Min 4 karakter, max 20 karakter huruf/angka	`pass123`

Contoh Request

```json
{
  "nama": "budi_123",
  "password": "pass123"
}
```

---

3. 📤 Responses

a. ✅ Success (200 OK)

Admin Role:

```json
{
  "metadata": {
    "error": 0,
    "message": "Login berhasil",
    "status": 200
  },
  "data": {
    "token": "eyJhbGciOiJIUzI1Ni...",
    "role": "admin"
```

```json
        }
    }
```

User Role:

```json
{
  "metadata": {
    "error": 0,
    "message": "Login berhasil",
    "status": 200
  },
  "data": {
    "token": "eyJhbGciOiJIUzI1Ni..."
  }
}
```

b. ❗ Validation Error (409 Conflict)

```json
{
  "metadata": {
    "error": 1,
    "message": "Nama hanya boleh huruf dan angka",
    "status": 409
  }
}
```

c. 🔒 Authentication Error (401 Unauthorized)

```json
{
  "metadata": {
    "error": 1,
    "message": "Nama atau kata sandi salah",
    "status": 401
  }
}
```

d. 💥 Server Error (500 Internal Server Error)

```json
{
  "metadata": {
    "error": 1,
    "message": "Terjadi kesalahan di server",
    "status": 500
  }
}
```

```
      }
   }
}
```

---

5. ❗ Dokumentasi Parameter Error

Status Code	Penyebab
401	Nama tidak ditemukan atau password salah
409	Validasi input gagal (cek constraints nama/password)
500	Kesalahan server (cek log backend)

POST LOGIN

https://backend-shape-explorer.vercel.app/api/auth/login

- **URL LOGIN**: `https://backend-shape-explorer.vercel.app/api/auth/login`
- **Method**: `POST`
- **Content-Type**: `application/json`

Body raw (json)

```json
{
    "nama": "user1",
    "password": "user123"
}
```

POST REGISTER

https://backend-shape-explorer.vercel.app/api/auth/register

- **REGISTER**: `https://backend-shape-explorer.vercel.app/api/auth/register`
- **Method**: `POST`
- **Content-Type**: `application/json`

Body raw (json)

```json
{
    "nama": "user4",
    "password": "user123"
}
```

USERS

[ID]

User Detail, Update & Delete

URL:

`https://backend-shape-explorer.vercel.app/api/users/:id`

- **Authentication:** Bearer Token (Admin)

GET **GET BY ID**

GET User Detail

Request:

```
Plain Text

GET {{base_url}}/api/users/clxyz123
Authorization: Bearer {{admin_token}}
```

Success Response (200):

```json
json

{
  "metadata": {
    "error": 0,
    "status": 200,
    "message": "Data user berhasil diambil."
  },
  "data": {
    "id": "clxyz...",
    "nama": "budi_123",
    "role": "user",
    "createdAt": "2023-07-15T10:30:00.000Z",
```

PUT New Request

https://backend-shape-explorer.vercel.app/api/users/asdfsfaerert34weefsd

Body raw

```
{
    "nama": "user4",
    "password": "user123"
}
```

DELETE New Request

https://backend-shape-explorer.vercel.app/api/users/asdfsfaerert34weefsd

GET GET ALL

1. GET All Users

- **Endpoint:** `/api/user`
- **URL:** `https://backend-shape-explorer.vercel.app/api/user`
- **Method:** GET
- **Authentication:** Bearer Token (Admin)

Request:

```
Plain Text

GET {{base_url}}/api/user
Authorization: Bearer {{admin_token}}
```

Success Response (200):

```json
json

{
  "metadata": {
    "error": 0,
    "status": 200,
    "message": "Data user berhasil diambil."
  },
  "data": [
    {
      "id": "clxyz...",
      "nama": "budi_123",
      "createdAt": "2023-07-15T10:30:00.000Z"
```

BANGUN-DATAR

[ID]

🖌 Otomasi DELETE

```http
http

DELETE {{base_url}}/api/bangun-datar/{{last_shape_id}}
```

🧭 Diagram Alir Operasi

```
Plain Text
```

```
[POST]          [GET]          [PUT]              [DELETE]
   |               |              |                   |
   ├─ Upload File  ├─ Fetch Data  ├─ Update File      ├─ Hapus File
   ├─ Simpan DB    |              ├─ Update DB        ├─ Hapus DB
   └─ Return 201   └─ Return 200  └─ Return 200       └─ Return 200
```

❗ Error Handling Matrix

Status	GET	POST	PUT	DELETE
200	✅ Data	-	✅ Updated	✅ Deleted
400	-	❌ Field	-	-
404	-	-	❌ Not Found	❌ Not Found
500	❌ Server	❌ Upload	❌ Server	❌ Server

PUT UPDATE DATA

https://backend-shape-explorer.vercel.app/api/bagun-datar/123FSVSDVSDF

🔁 Endpoint `/api/bangun-datar/:id`

- **URL**: `https://backend-shape-explorer.vercel.app/api/bangun-datar/:id`
- **Authentication**: Bearer Token (wajib untuk PUT dan DELETE)

✏️ PUT – Update Bangun Datar

- **Request**:
  `PUT {{base_url}}/api/bangun-datar/clxyz123`
  Content-Type: `multipart/form-data`
  Authorization: `Bearer {{token}}`

📝 Body (form-data) Opsional

Key	Value Type	Contoh	Keterangan
`shape`	text	"persegi"	Opsional
`title`	text	"Persegi Baru"	Opsional
`color`	text	"blue"	Opsional
`formulaArea`	text	"s^2"	Opsional
`formulaPerimeter`	text	"4s"	Opsional
`content`	file	gambar-baru.png	Opsional, max 1MB

| audio | file | audio-baru.mp3 | Opsional, max 1MB |

✅ Response Sukses (200)

```json
{
  "metadata": {
    "error": 0,
    "status": 200,
    "message": "Berhasil memperbarui shape."
  },
  "data": {
    "id": "clxyz...",
    "title": "Persegi Baru",
    "color": "#0000FF"
  }
}
```

❌ Error (404 Not Found)

```json
{
  "metadata": {
    "error": 1,
    "status": 404,
    "message": "Shape tidak ditemukan."
  }
}
```

DELETE DELETE DATA

https://backend-shape-explorer.vercel.app/api/bagun-datar/123FSVSDVSDF

🗑️ DELETE – Hapus Bangun Datar

- **Request**:
  `DELETE {{base_url}}/api/bangun-datar/clxyz123`
  Authorization: `Bearer {{token}}`

✅ Response Sukses (200)

```json
{
  "metadata": {
    "error": 0,
    "status": 200,
    "message": "Shape berhasil dihapus."
  }
}
```

GET All DATA

https://backend-shape-explorer.vercel.app/api/bagun-datar/

Endpoint `/api/bagun-datar`

- **URL**: `https://backend-shape-explorer.vercel.app/api/bagun-datar`
- **Authentication**: Bearer Token (wajib untuk POST)

📥 GET – Mendapatkan Semua Bangun Datar

- **Request**:
  `GET {{base_url}}/api/bagun-datar`

✅ Response Sukses (200)

```json
{
  "metadata": {
    "error": 0,
    "status": 200,
    "message": "Data shape berhasil diambil."
  },
  "data": [
    {
      "id": "clxyz...",
      "shape": "persegi",
      "title": "Persegi",
```

❌ Response Error (500)

```json
{
  "metadata": {
    "error": 1,
    "status": 500,
    "message": "Gagal mengambil data shape."
  }
}
```

POST UPLOUD DATA

https://backend-shape-explorer.vercel.app/api/bagun-datar/

➕ POST – Membuat Bangun Datar Baru

- **Request**:
  `POST {{base_url}}/api/bangun-datar`
  Content-Type: `multipart/form-data`
  Authorization: `Bearer {{token}}`

📋 Body (form-data)

Key	Value Type	Contoh	Keterangan
`shape`	text	"persegi"	Nama bentuk
`title`	text	"Persegi"	Judul
`color`	text	"#FF5733"	Kode warna
`formulaArea`	text	"s * s"	Rumus luas
`formulaPerimeter`	text	"4 * s"	Rumus keliling
`content`	file	gambar.png	Gambar (max 1MB)
`audio`	file	penjelasan.mp3	Audio (max 1MB)

✅ Response Sukses (201)

```json
{
  "metadata": {
    "error": 0,
    "status": 201,
    "message": "Berhasil menyimpan data shape."
  },
  "data": {
    "id": "clxyz...",
    "shape": "persegi",
    "title": "Persegi",
    "color": "#FF5733",
```

❌ Error 400 – Field Kosong

```json
{
  "metadata": {
    "error": 1,
    "status": 400,
    "message": "Semua field harus diisi."
  }
}
```

❌ Error 409 – File Terlalu Besar

json

```
{
  "metadata": {
    "error": 1,
    "status": 409,
    "message": "Ukuran file terlalu besar. Maksimal 1MB."
  }
}
```

QR-AR

Endpoint: `/api/qr-ar`

URL: `https://backend-shape-explorer.vercel.app/api/qr-ar`
Authentication: Bearer Token (Admin diperlukan untuk `POST`)

[ID]

PUT   UPDATE DATA

https://backend-shape-explorer.vercel.app/api/qr-ar/123FSVSDVSDF

DELETE   DELETE DATA

https://backend-shape-explorer.vercel.app/api/qr-ar/123FSVSDVSDF

GET   GET ALL DATA

https://backend-shape-explorer.vercel.app/api/qr-ar

🔷 GET: Mendapatkan Semua QR AR Code

Request:

http

```
GET {{base_url}}/api/qr-ar
```

Response Sukses (200):

```json
json

{
  "metadata": {
    "error": 0,
    "status": 200,
    "message": "Berhasil mengambil data QR AR Code."
  },
  "data": [
    {
      "id": "clxyz...",
      "shape": "square",
      "image": "https://.../square.png"
```

📌 **Fitur Khusus:**

- Jika tidak ada data, sistem akan otomatis membuat data default:
  - `square`, `triangle`, `circle`, `rectangle`

Body raw

```
{
    "nama": "user1",
    "password": "user123"
}
```

POST   UPLOUD DATA

https://backend-shape-explorer.vercel.app/api/qr-ar

🔶 POST: Membuat QR AR Code Baru

Request:

```http
http

POST {{base_url}}/api/qr-ar
Content-Type: multipart/form-data
Authorization: Bearer {{admin_token}}
```

Body (form-data):

Key	Value Type	Contoh Value	Keterangan
shape	text	"star"	Nama bentuk (unik)
image	file	`qr-star.png`	Gambar QR (max 500KB, format gambar)

Response Sukses (201):

```json
{
  "metadata": {
    "error": 0,
    "status": 201,
    "message": "Berhasil upload dan simpan QR AR Code."
  },
  "data": {
    "id": "clnew...",
    "shape": "star",
    "image": "https://.../qr-star.png"
  }
```

Response Error:

```
- {"metadata": { "error": 1, "status": 400, "message": "Field 'shape' dan 'image' wajib dii
- {"metadata": { "error": 1, "status": 409, "message": "Ukuran file terlalu besar. Maksimal
```