Discussing options for API documentation

How to document our code across our different projects in Coformatique

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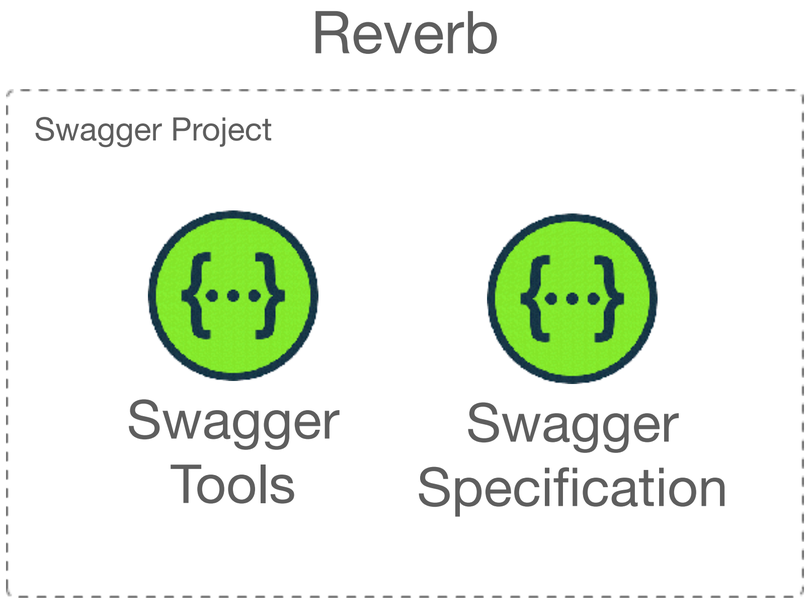
Topics

- What is OpenAPI/Swagger?
- Why is using OpenAPI useful?
- Specs generation
- Docs Generation

What is OpenAPI/Swagger?

“**OpenAPI Specification** (formerly Swagger Specification) is an API description format for REST APIs. An OpenAPI file allows you to describe your entire API”


Reverb
Swagger Project
Swagger
Tools
Swagger
Specification

SmartBear

Swagger Project

Swagger Tools

Swagger Specification

SmartBear

Swagger Project

Swagger
Tools

OpenAPI Initiative

Swagger
Specification

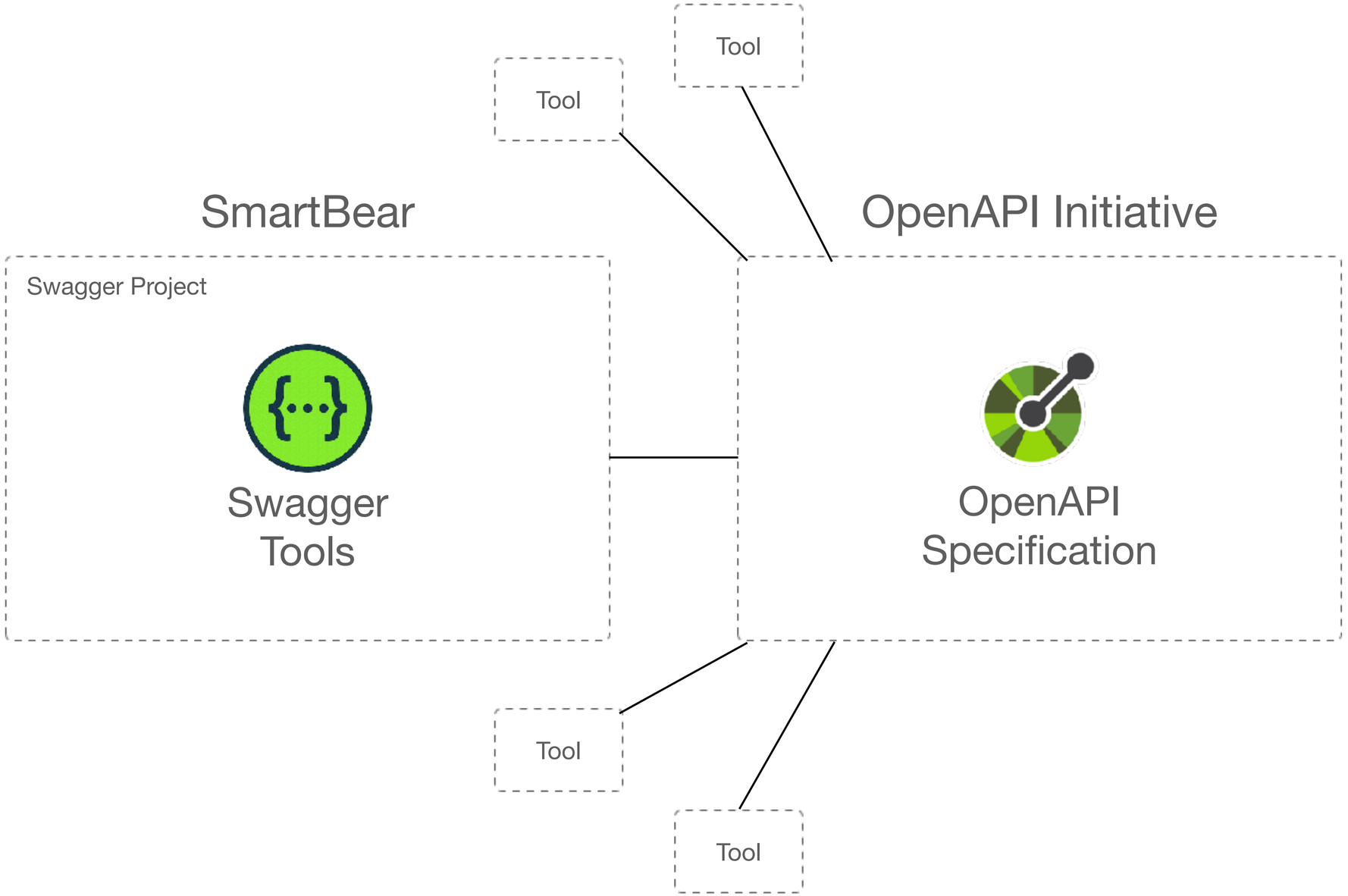
SmartBear

Swagger Project

Swagger
Tools

OpenAPI Initiative

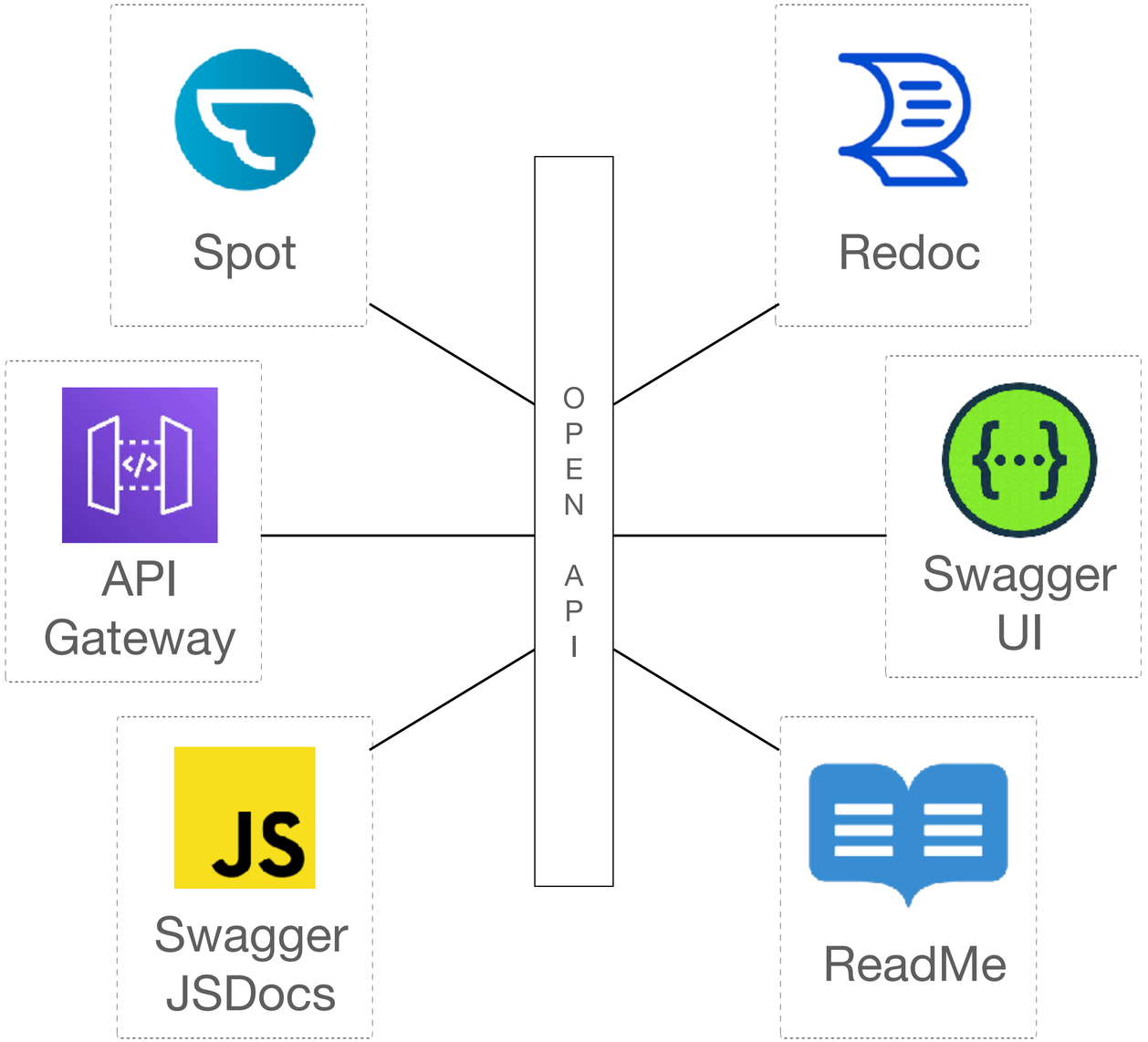
OpenAPI
Specification


Tool
Tool
SmartBear
OpenAPI Initiative
Swagger Project
Swagger
Tools
OpenAPI
Specification
Tool
Tool

In Short

- OpenAPI = The specification itself, formerly known as Swagger specification
- Swagger = Tools used in the implementation of OpenAPI

Why is using OpenAPI useful?


Spot
Redoc
OPEN API
API Gateway
Swagger UI
JS
Swagger JSDocs
ReadMe

JSON

```json
{
  "openapi": "3.0.2",
  "info": {
    "title": "My API",
    "description": "This API is a POC for using SPOT in our projects in Coformatique",
    "version": "1.0.0"
  },
  "paths": {
    "/users": {
      "post": {
        "description": "Endpoint for creating new users",
        "operationId": "CreateUser",
        "parameters": [],
        "requestBody": {
          "content": {
            "application/json": {
              "schema": {
                "$ref": "#/components/schemas/CreateUserRequest"
              }
            }
          },
          "required": true
        },
        "responses": {
          "201": {
            "description": "User created successfully",
            "content": {
              "application/json": {
                "schema": {
                  "$ref": "#/components/schemas/CreateUserResponse"
                }
              }
            }
          }
        }
      }
    }
  },
```

YAML

```yaml
openapi: 3.0.2
info:
  title: My API
  description: This API is a POC for using SPOT in our projects in Coformatique
  version: 1.0.0
paths:
  /users:
    post:
      description: Endpoint for creating new users
      operationId: CreateUser
      parameters: []
      requestBody:
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/CreateUserRequest'
        required: true
      responses:
        '201':
          description: User created successfully
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/CreateUserResponse'
```

Specs Generation

Swagger JSDocs

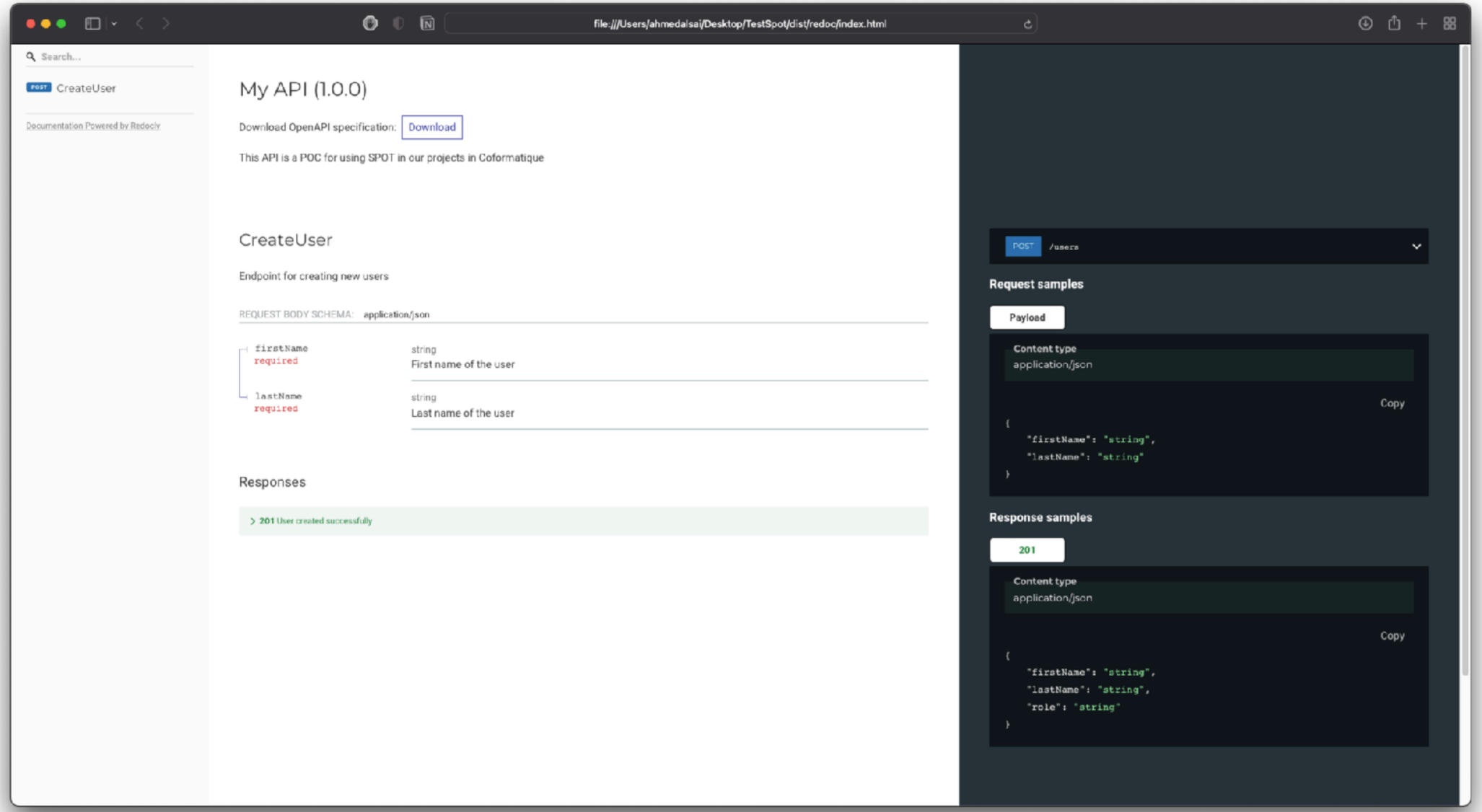
```
/**
 * @openapi
 * /:
 *   get:
 *     description: Welcome to swagger-jsdoc!
 *     responses:
 *       200:
 *         description: Returns a mysterious string.
 */
app.get('/', (req, res) => {
  res.send('Hello World!');
});
```

Spot

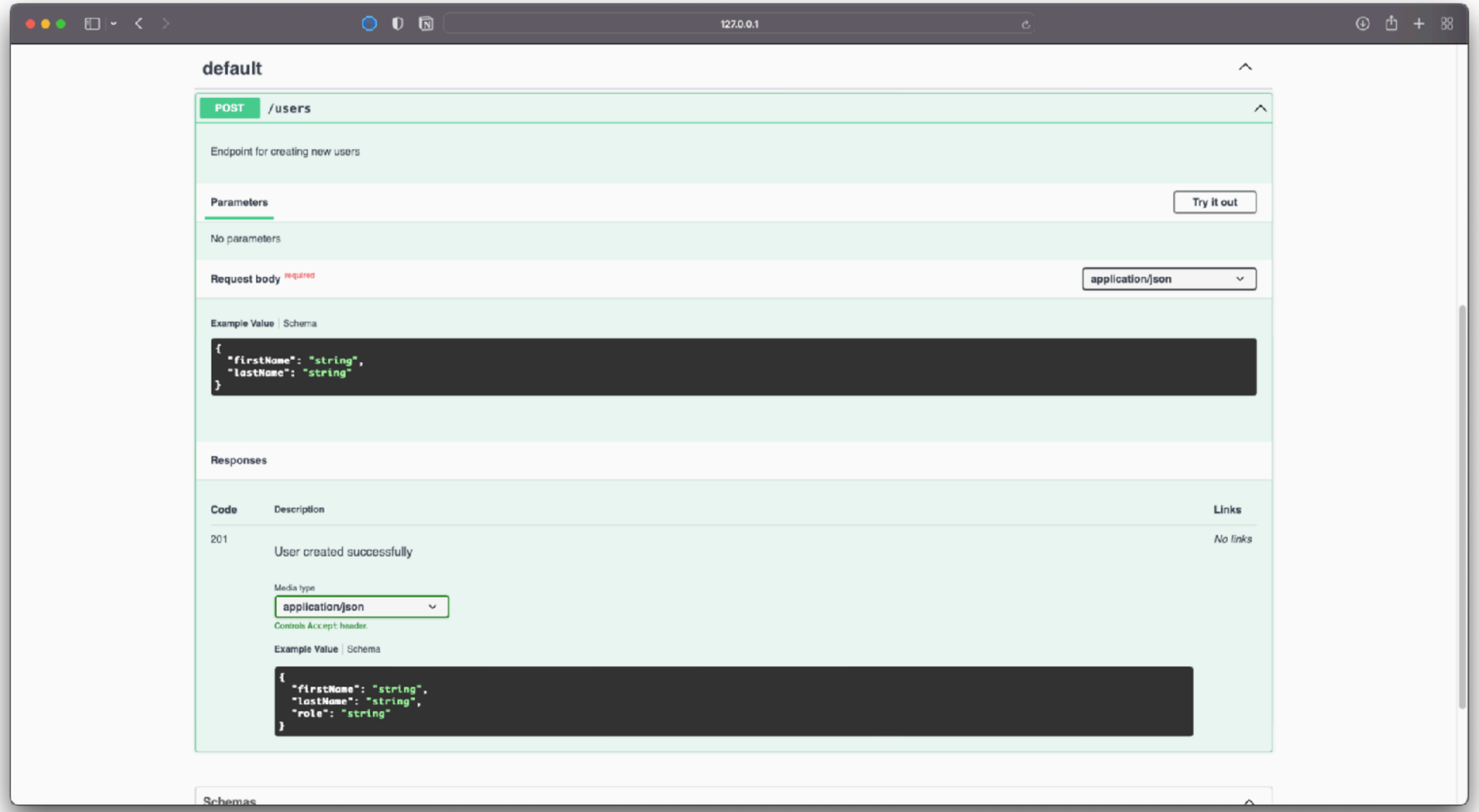
```
import { body, endpoint, request, response, String } from "@airtasker/spot";

/**
 * Endpoint for creating new users
 */
@endpoint({
  method: "POST",
  path: "/users",
})
export class CreateUser {
  @request
  request(@body body: CreateUserRequest) {}

  /**
   * User created successfully
   */
  @response({ status: 201 })
  successfulResponse(@body body: CreateUserResponse) {}
}

interface CreateUserRequest {
  /** First name of the user */
  firstName: String;
  /** Last name of the user */
  lastName: String;
}

interface CreateUserResponse {
  /** First name of the user */
  firstName: String;
  /** Last name of the user */
  lastName: String;
  /** User role that defines its permissions */
  role: String;
}

```

Docs Generation

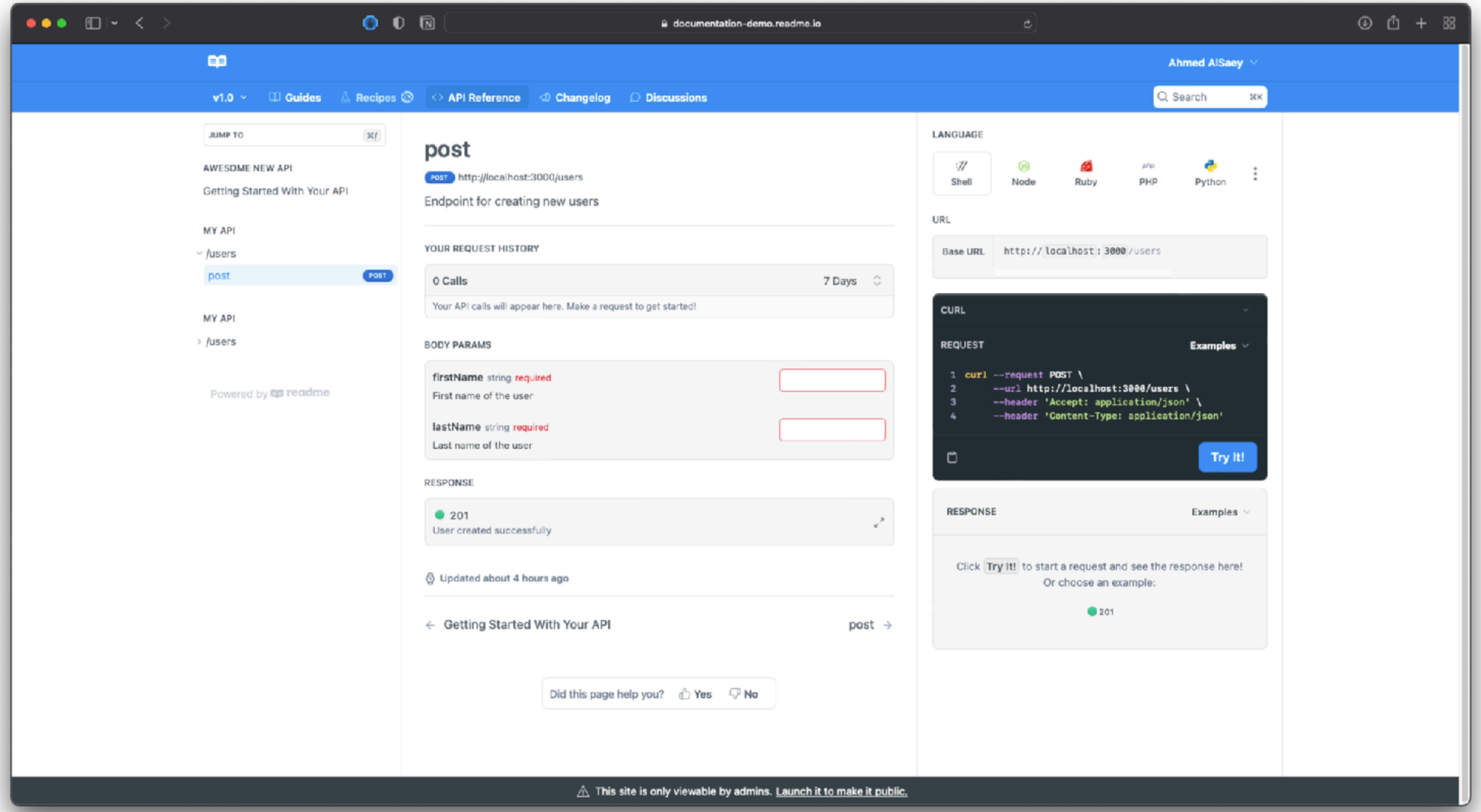
Redoc


file:///Users/ahmedalsai/Desktop/TestSpot/dist/redoc/index.html
Search...
POST CreateUser
Documentation Powered by Redocly
My API (1.0.0)
Download OpenAPI specification: Download
This API is a POC for using SPOT in our projects in Coformatique
CreateUser
Endpoint for creating new users
REQUEST BODY SCHEMA: application/json
firstName
required
string
First name of the user
lastName
required
string
Last name of the user
Responses
> 201 User created successfully
POST /users
Request samples
Payload
Content type
application/json
Copy
{
"firstName": "string",
"lastName": "string"
}
Response samples
201
Content type
application/json
Copy
{
"firstName": "string",
"lastName": "string",
"role": "string"
}

Swagger UI


127.0.0.1
default
POST
/users
Endpoint for creating new users
Parameters
Try it out
No parameters
Request body
required
application/json
Example Value | Schema
{
"firstName": "string",
"lastName": "string"
}
Responses
Code
Description
Links
201
User created successfully
No links
Media type
application/json
Controls Accept header.
Example Value | Schema
{
"firstName": "string",
"lastName": "string",
"role": "string"
}
Schemas

ReadMe


documentation-demo.readme.io
Ahmed AlSaey
v1.0
Guides
Recipes
API Reference
Changelog
Discussions
Search
JUMP TO
AWESOME NEW API
Getting Started With Your API
MY API
/users
post
POST
MY API
/users
Powered by readme
post
POST http://localhost:3000/users
Endpoint for creating new users
YOUR REQUEST HISTORY
0 Calls
7 Days
Your API calls will appear here. Make a request to get started!
BODY PARAMS
firstName string required
First name of the user
lastName string required
Last name of the user
RESPONSE
201
User created successfully
Updated about 4 hours ago
Getting Started With Your API
post
Did this page help you?
Yes
No
LANGUAGE
Shell
Node
Ruby
PHP
Python
URL
Base URL
http://localhost:3000/users
CURL
REQUEST
Examples
1 curl --request POST \
2 --url http://localhost:3000/users \
3 --header 'Accept: application/json' \
4 --header 'Content-Type: application/json'
Try It!
RESPONSE
Examples
Click Try It! to start a request and see the response here!
Or choose an example:
201
This site is only viewable by admins. Launch it to make it public.

Conclusion

- Relying on OpenAPI specification is viable and important
- Spot seems like a great tool for specs generation
- ReadMe seems like a great tool for docs generation

Worth Investigating

- API Gateway (Specs generation)
- Postman (Docs generation)

Thank You