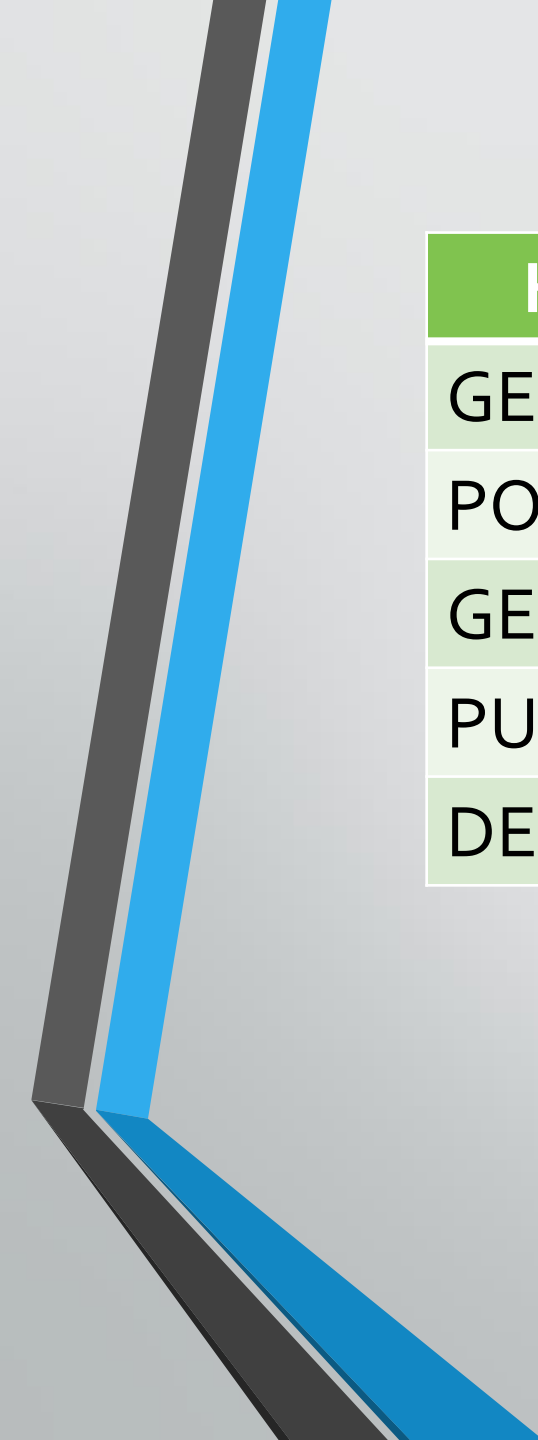


JSON API Document MangoDB

ดร.ชัยวัฒน์ ศิระวัฒนานนท์
01204271 วิศวกรรมคอมพิวเตอร์เบื้องต้น
มหาวิทยาลัยเกษตรศาสตร์ วิทยาเขตเฉลิมพระเกียรติ จังหวัดสกลนคร
คณะวิทยาศาสตร์และวิศวกรรมศาสตร์ สาขาวิศวกรรมคอมพิวเตอร์

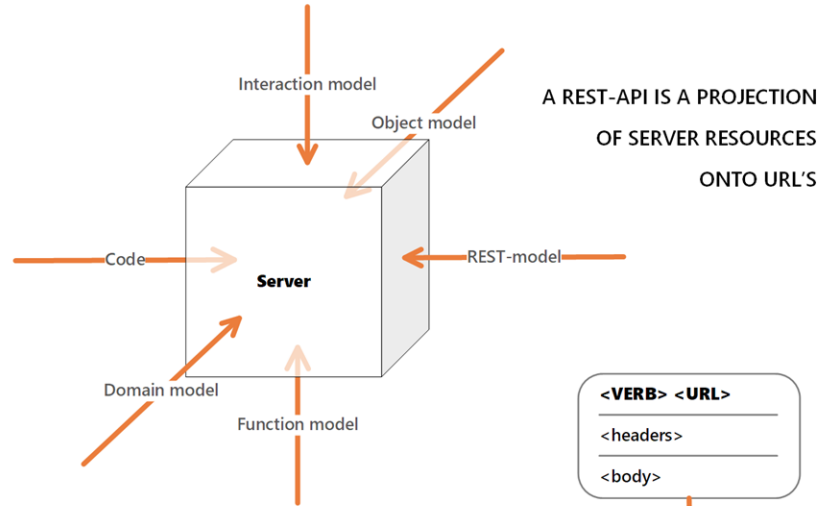
My code
works
I don't know
WHY!!!





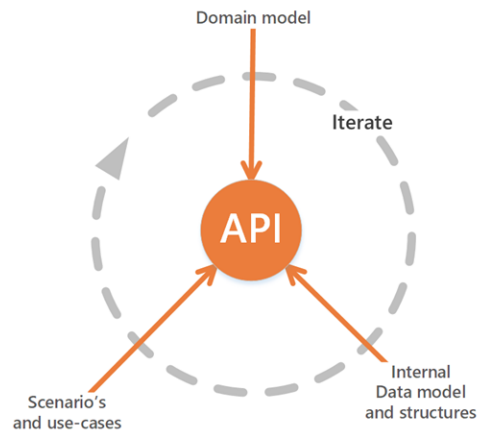
HTTP Verbs	API URL	Remark
GET	/api/users	get a list of users
POST	/api/users	post/add a new user
GET	/api/user/{id}	get a single user
PUT	/api/user/{id}	replace user
DELETE	/api/user/{id}	delete user

REST-API CONCEPTS



DIFFERENT MODELS OF SAME SERVER.

DESIGN DYNAMICS



```
<VERB> <URL>
<headers>
<body>
```

HTTP request



HTTP response

```
<RESPONSE CODE>
<headers>
<body>
```

Documentation
Developer dashboard
Language stubs
Homepage / product page
Business model
OpenAPI definition

ARTIFACTS

REST-API

```
DELETE /V1/<ENTITY>
GET /V1/<ENTITY>
POST /V1/<ENTITY>
PUT /V1/<ENTITY>
PATCH /V1/<ENTITY>
DELETE /V1/<ENTITY>
headers
body
```

SERVER IMPLEMENTATION

Computer program
Enterprise
Mechatronics
Biological
Technological

REST-API DEFINITION

- THE SET OF VALID HTTP-REQUESTS TO A SERVER
- PLUS THE CORRESPONDING RESPONSES
- PLUS THE PRE-CONDITIONS, INVARIANTS AND POST-CONDITIONS
- OFTEN DEFINED IN A SWAGGER / OPENAPI YAML FILE

REST-API PARADIGM

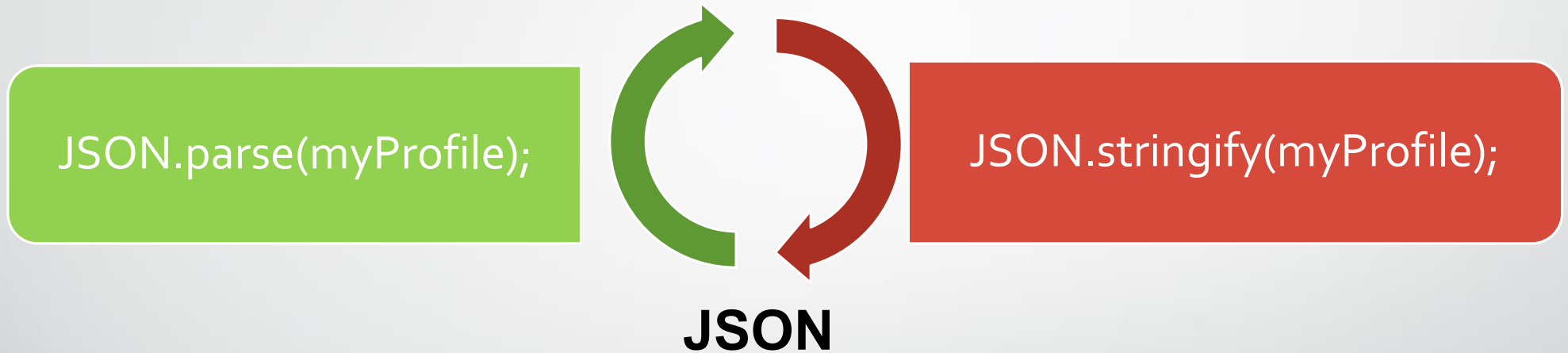
- MAPS INDIVIDUAL LOGICAL AND PHYSICAL SERVER RESOURCES ON URLS
- ALLOWS 'CRUD' OPERATIONS ON THOSE RESOURCES
- STATELESS, THE SERVER STORES NO CLIENT STATE OR SESSION

QUALITY

Minimal
Complete
Cohesive
Encapsulating
Self-explaining
Consistent
Documented

JavaScript Object

```
let myProfile = {id: 001, name: "John Smith", age: 27}
```



```
{"id": "001", "name": "John Smith", "age": "27"}
```



คือ ข้อความที่เป็นฟอร์แมตมาตรฐาน ใช้ในการส่งข้อมูลระหว่างแอปพลิเคชัน โดยฟอร์แมตจะมีรูปแบบเป็น คู่ Key-Value

ประเภทของ JSON

- Number
- String
- Boolean
- Array
- Object
- Null

ตัวอย่าง JSON

```
{
  "firstName": "John",
  "lastName": "Smith",
  "isAlive": true,
  "age": 27,
  "address": {
    "streetAddress": "21 2nd Street",
    "city": "New York",
    "state": "NY",
    "postalCode": "10021-3100"
  },
  "phoneNumbers": [
    {
      "type": "home",
      "number": "212 555-1234"
    },
    {
      "type": "office",
      "number": "646 555-4567"
    },
    {
      "type": "mobile",
      "number": "123 456-7890"
    }
  ],
  "children": [],
  "spouse": null
}
```

firstName = (String)

lastName = (String)

isAlive = (Boolean)

age = (Int)

address = (Object)

phoneNumbers = (Array)

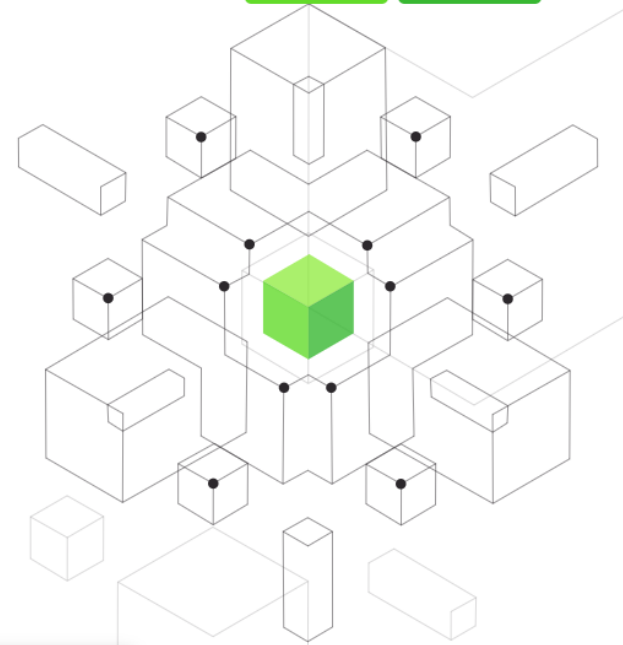
children = (Null Array)

spouse = (null)

API Development for Everyone

Simplify API development for users, teams, and enterprises with the Swagger open source and professional toolset. Find out how Swagger can help you.

Explore Swagger Tools



Scale Your API Design with Confidence



Design

Design and model APIs according to specification-based standards



{ Build }

Build stable, reusable code for your API in almost any language



Document

Improve developer experience with interactive API documentation



Test


Perform simple functional tests on your APIs without overhead



Standardize

Set and enforce API style guidelines across your API architecture

<https://swagger.io>

Swagger Editor

Supported by SMARTBEAR

File

Edit

Generate Server

Generate Client

```
1  swagger: '2.0'
2  info:
3    description: This is a simple Cat Information Center Api
4    version: 1.0.0
5    title: OpenAPI Cat Information Service
6  consumes:
7    - application/json
8  produces:
9    - application/json
10 tags:
11   - name: cat
12     description: Everything about your Cats
13 schemes:
14   - http
15 paths:
16   /cats:
17     post:
18       tags:
19         - cat
20       summary: Add a new cat to the store
21       description: Creates a new cat in the store
22       operationId: addCat
23       consumes:
24         - application/json
25       produces:
26         - application/json
27       parameters:
28         - in: body
29           name: body
30           description: Cat object that needs to be added to the store
31           required: true
32           schema:
33             $ref: '#/definitions/Cat'
34       responses:
35         '201':
36           description: Successfully created
37           schema:
38             $ref: '#/definitions/Cat'
39         '400':
```

OpenAPI Cat Information Service 1.0.0

This is a simple Cat Information Center Api

Schemes

HTTP

cat Everything about your Cats

POST /cats Add a new cat to the store

GET /cats Retrieves the list of all cats

GET /cats/{cat_id} Retrieve a single cat

PUT /cats/{cat_id} Update an existing cat

DELETE /cats/{cat_id} Delete a cat

Models

9



mongoDB

The database for modern applications

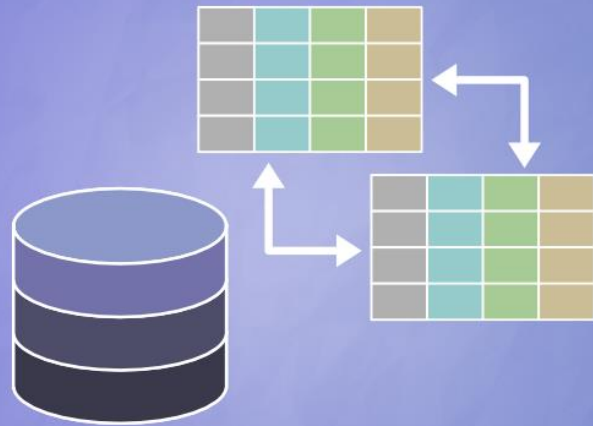
MongoDB is a general purpose, document-based, distributed database built for modern application developers and for the cloud era. No database makes you more productive.



Try MongoDB free in the cloud!

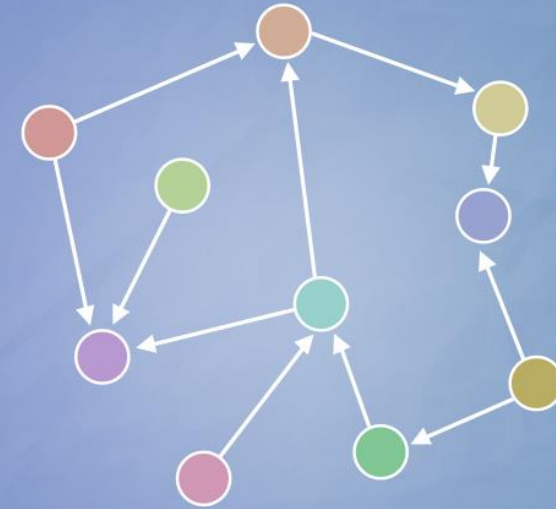
Start free

Start free



SQL

VS



NoSQL

Example of SQL

ORACLE®



PostgreSQL



Example of NoSQL

