Module Six

Swagger

Quick Intro

Build APIs with Confident Swagger

- Based on the OpenAPI specification
- Swagger is a set of tools based on OpenAPI
  - Design
  - Build
  - Document
  - Consume

PASS

Standard Documentation

Simple Inventory API 1.0.0

[Base URL: virtserver.swaggerhub.com/JeremyLikness6/Links/1.0.0]

This is a simple API

Contact the developer

Apache 2.0

Schemes

HTTPS ⌄

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Standard Documentation

Standard Documentation

Responses	Response content type `application/json` ⌄

Code	Description
200	search results matching criteria

Example Value | Model

```
[
  {
    "id": "d290f1ee-6c54-4b01-90e6-d701748f0851",
    "name": "Widget Adapter",
    "releaseDate": {},
    "manufacturer": {
      "name": "ACME Corporation",
      "homePage": "https://www.acme-corp.com",
      "phone": "408-867-5309"
    }
  }
]
```

| 400 | bad input parameter |

Standard Documentation

Models   ⌄

InventoryItem ⌄ { ↵
    id*   **string** *($uuid)
                    example: d290f1ee-6c54-4b01-90e6-d701748f0851
    name*   **string** *
                    example: Widget Adapter
    releaseDate* **string** *($int32)
                    example: OrderedMap {}
    manufacturer* **Manufacturer** > {...} ↵
}

Manufacturer ⌄ { ↵
    name*   **string** *
                    example: ACME Corporation
    homePage   **string** ($url)
                    example: https://www.acme-corp.com
    phone   **string**
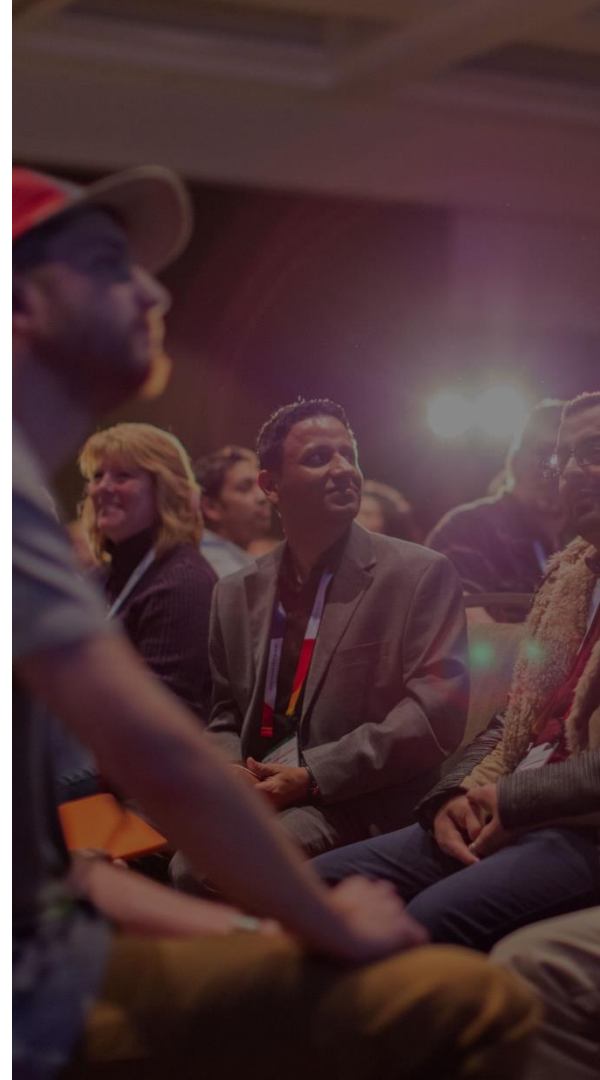   *example: 408-867-5309*
}

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Standard Documentation

Swagger encourages an API-first approach.

- Select your APIs
- Build your operations and resources
- Define parameters and return types
- Specify models
- Scaffold code

PASS
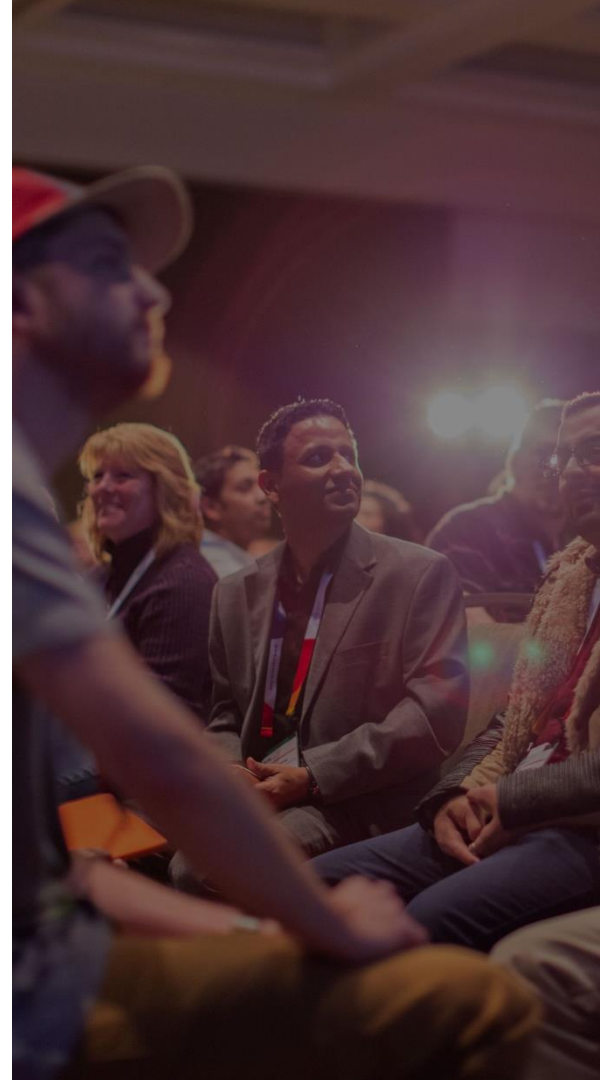
Swagger is...

REST for a minute

REST, meet Swagger

Swagger complements REST.

- **Define** APIs with Swagger
- **Consume** APIs with Swagger
- **Document** APIs with Swagger
- **Produce** API code with Swagger

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Inside
Swagger

"It's full of JSON."

Swagger UI

Simple Inventory API 1.0.0

[Base URL: virtserver.swaggerhub.com/JeremyLikness6/Links/1.0.0]

This is a simple API

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Schemes

HTTPS ⌄

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Swagger JSON

```json
"swagger": "2.0",
"info": {
    "description": "This is a simple API",
    "version": "1.0.0",
    "title": "Simple Inventory API",
    "contact": {
        "email": "you@your-company.com"
    },
    "license": {
        "name": "Apache 2.0",
        "url": "http://www.apache.org/licenses/LICENSE-2.0.html"
    }
},
```

Swagger UI

Swagger JSON

```
"post": {
    "tags": [ …
    ],
    "summary": "adds an inventory item",
    "operationId": "addInventory",
    "description": "Adds an item to the system",
    "consumes": [
        "application/json"
    ],
    "produces": [
        "application/json"
    ],
    "parameters": [
        {
            "in": "body",
            "name": "inventoryItem",
            "description": "Inventory item to add",
            "schema": {
                "$ref": "#/definitions/InventoryItem"
            }
        }
    ],
    "responses": {
        "201": {
            "description": "item created"
        },
        "400": {
            "description": "invalid input, object invalid"
        },
        "409": {
            "description": "an existing item already exists"
        }
    }
}
```
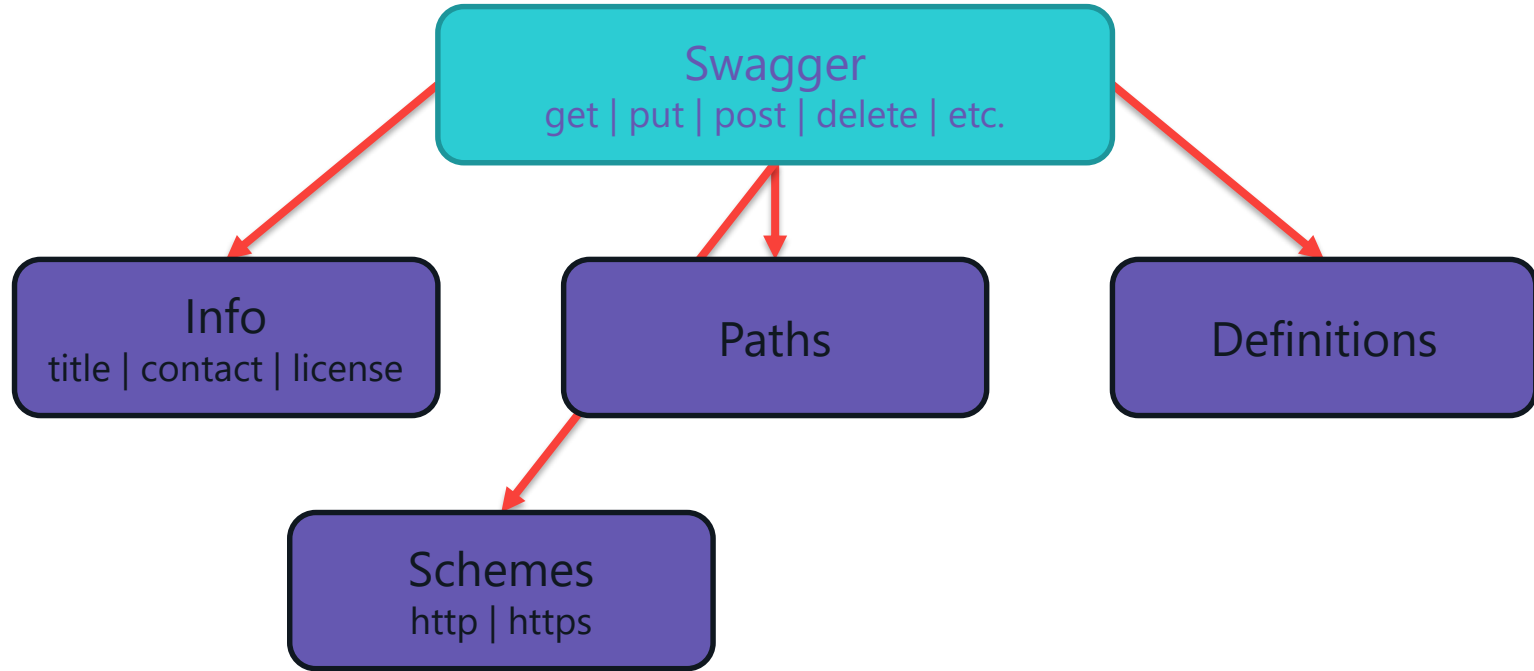
PASS

Swagger UI

Models   ⌄

InventoryItem ⌄ { ↩
    id*   string *($uuid)
                        example: d290f1ee-6c54-4b01-90e6-d701748f0851
    name*   string *
                        example: Widget Adapter
    releaseDate*   string *($int32)
                        example: OrderedMap {}
    manufacturer* Manufacturer > {...} ↩
}

Manufacturer ⌄ { ↩
    name*   string *
                        example: ACME Corporation
    homePage   string ($url)
                        example: https://www.acme-corp.com
    phone   string
                        example: 408-867-5309
}

PASS

Swagger JSON

```json
"definitions": {
    "InventoryItem": {
        "type": "object",
        "required": [
            "id",
            "name",
            "manufacturer",
            "releaseDate"
        ],
        "properties": {
            "id": {
                "type": "string",
                "format": "uuid",
                "example": "d290f1ee-6c54-4b01-90e6-d701748f0851"
            },
            "name": {
                "type": "string",
                "example": "Widget Adapter"
            },
            "releaseDate": {
                "type": "string",
                "format": "int32",
                "example": "2016-08-29T09:12:33.001Z"
            },
            "manufacturer": {
                "$ref": "#/definitions/Manufacturer"
            }
        }
    },
```
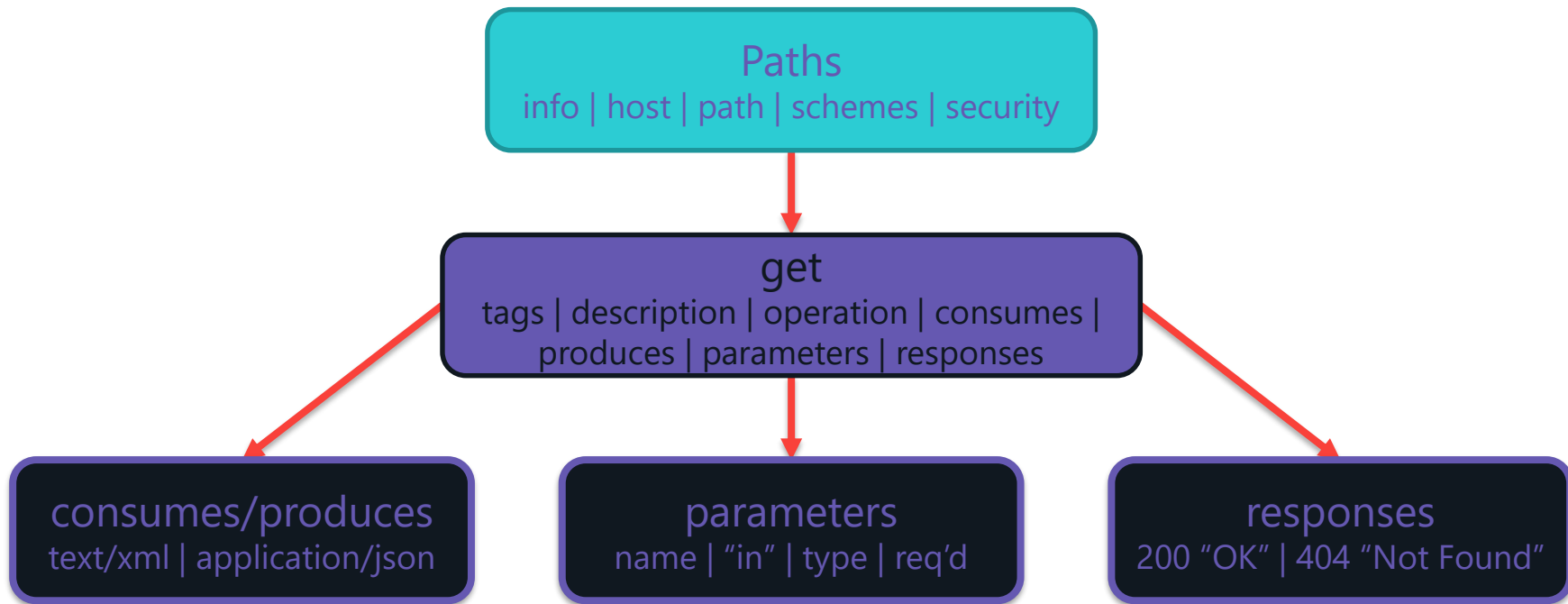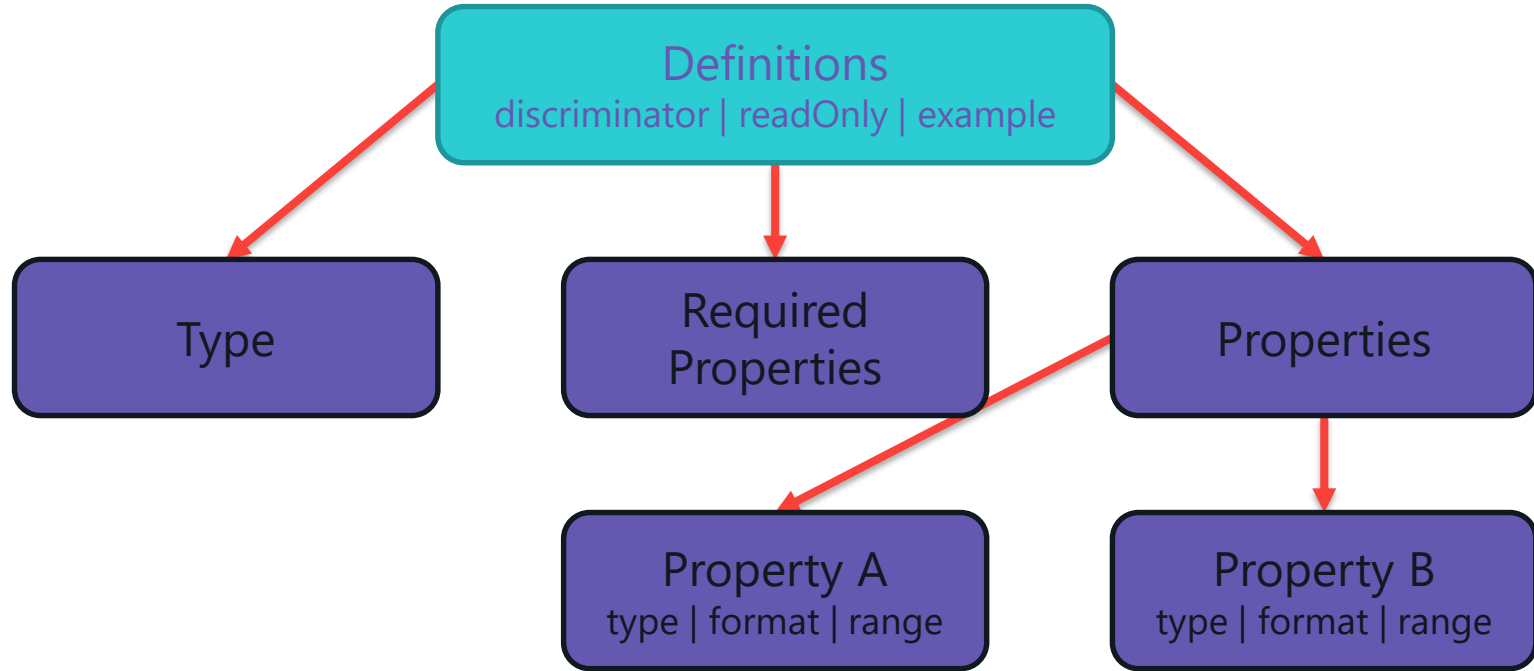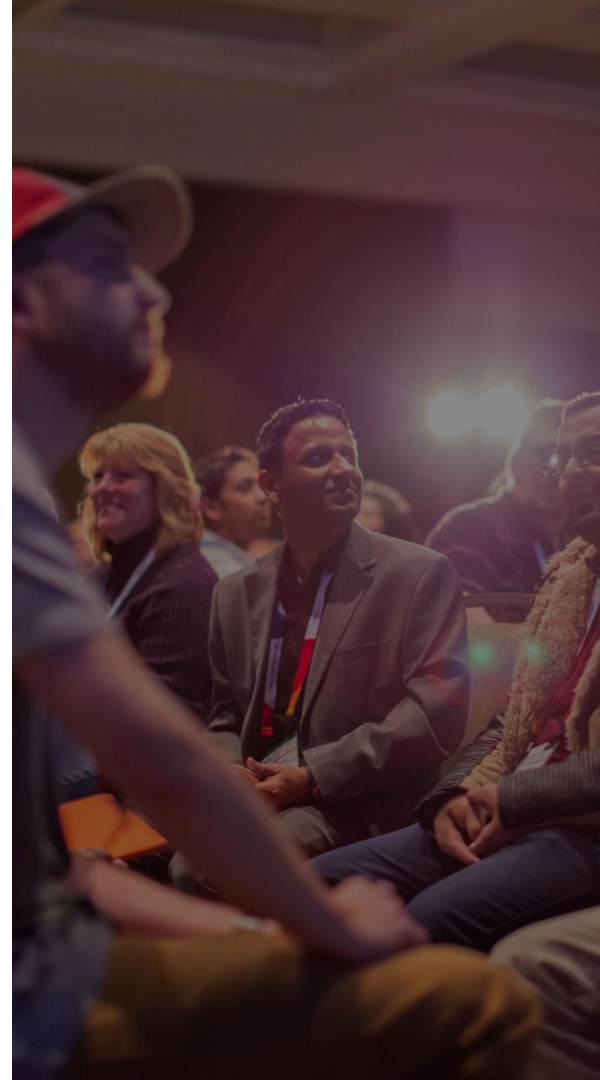
PASS

Swagger Definition

Swagger Definition

Swagger Definition

Demo
API-first Approach to Swagger

Demo

Swagger Last Approach

Thank You

Learn more from Jeremy Likness

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