

Introduction to OpenAPI

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OpenAPI

<https://openapis.org>

Open standard for describing HTTP APIs.

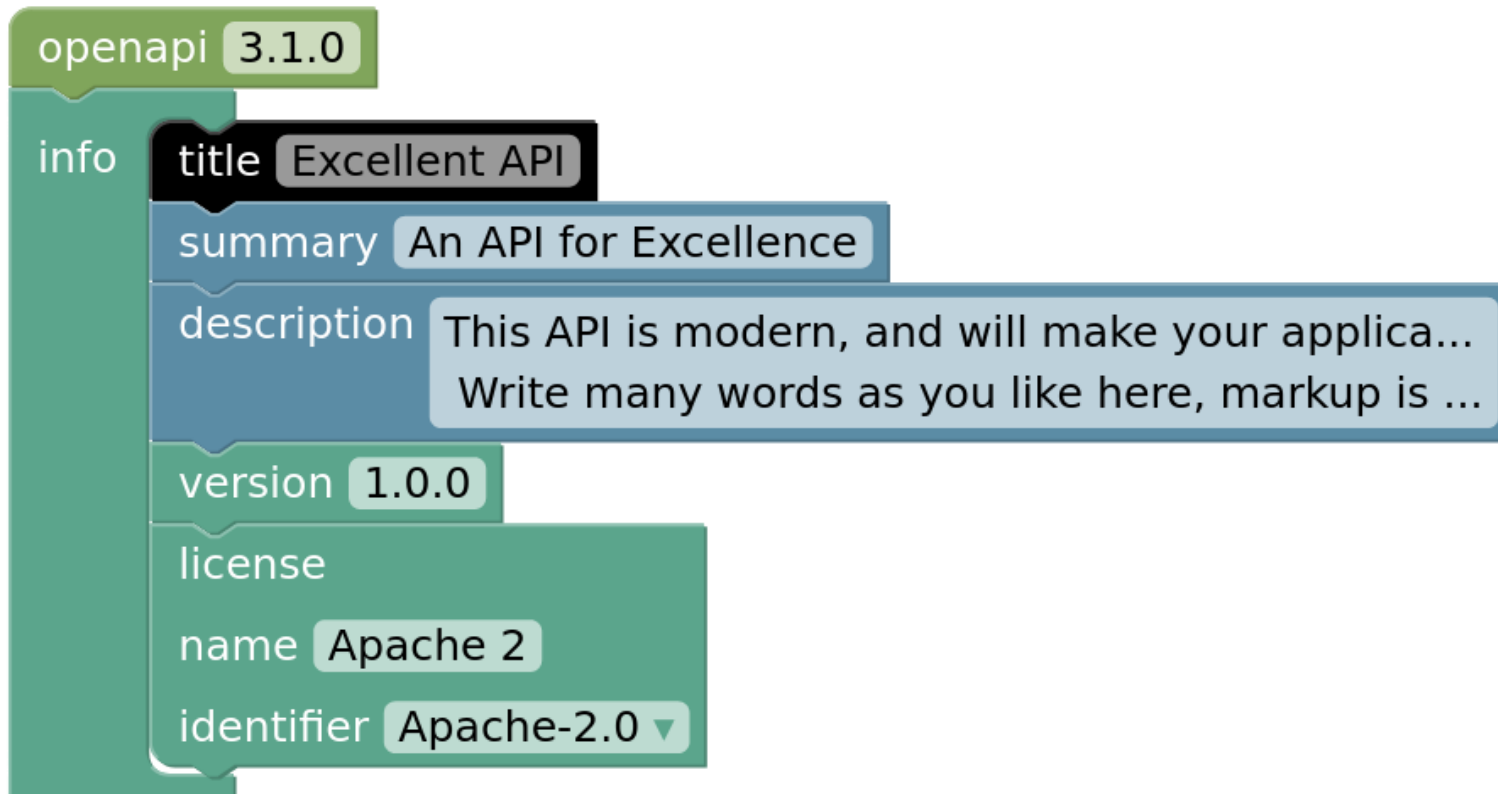
- machine- and human-readable
- JSON or YAML

OpenAPI structure



OpenAPI info

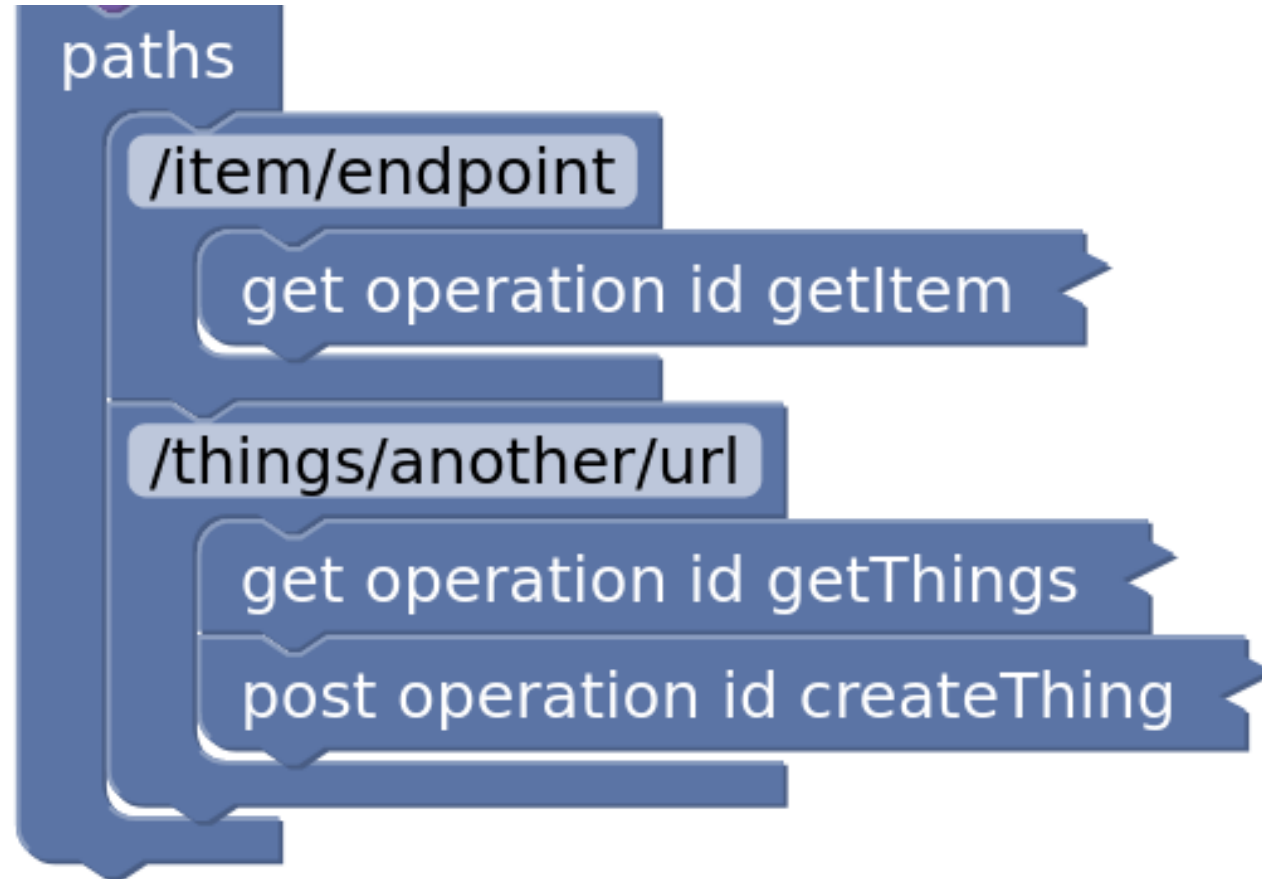
Overview and metadata section



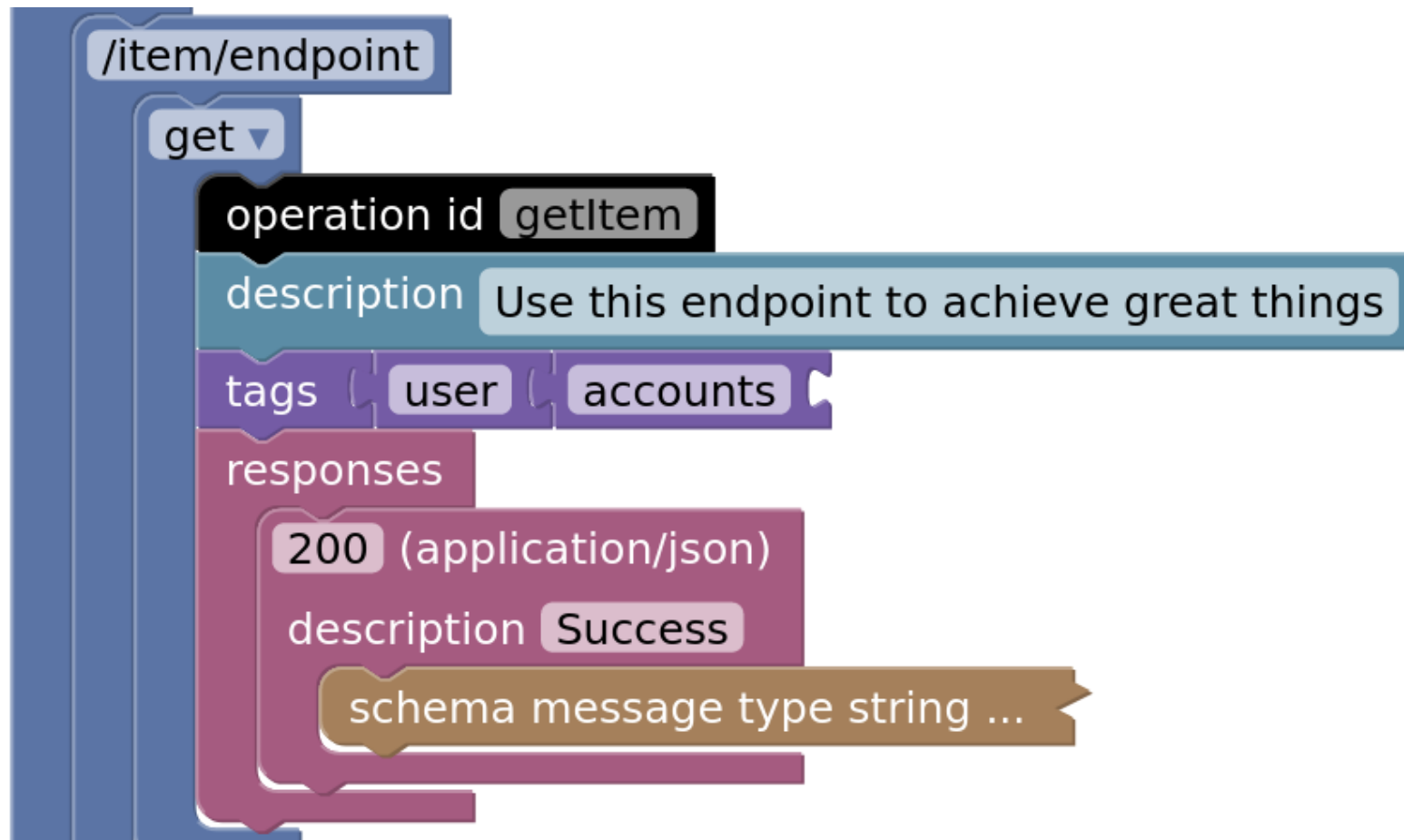
OpenAPI YAML

```
openapi: 3.1.0
info:
  title: Excellent API
  summary: An API for Excellence
  description: >
    This API is modern, and will make your applications 67% more
    excellent. Write as many words as you like here, markup
    is also supported.
  version: 1.0.0
  license:
    name: Apache 2
    identifier: Apache-2.0
externalDocs:
  url: https://example.com/docs
  description: Read more about this API, tutorials, and libraries
```

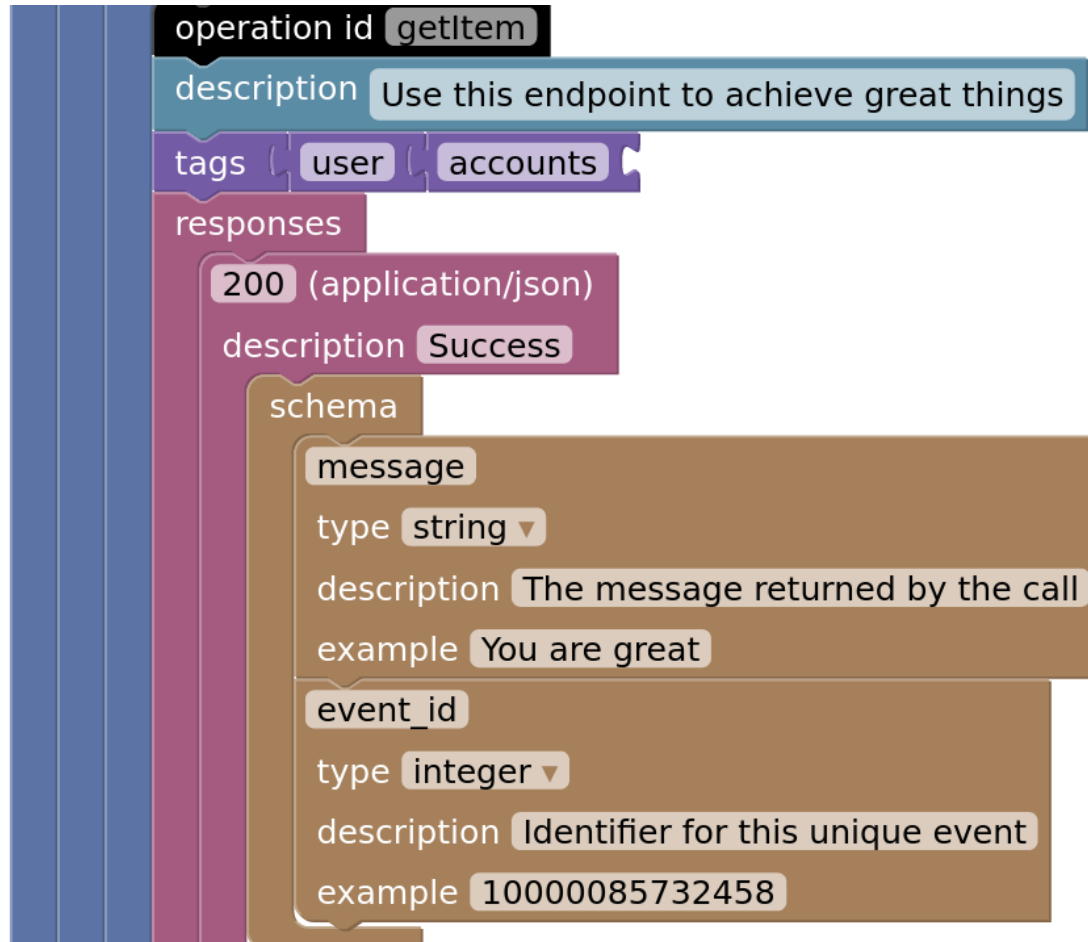
OpenAPI paths



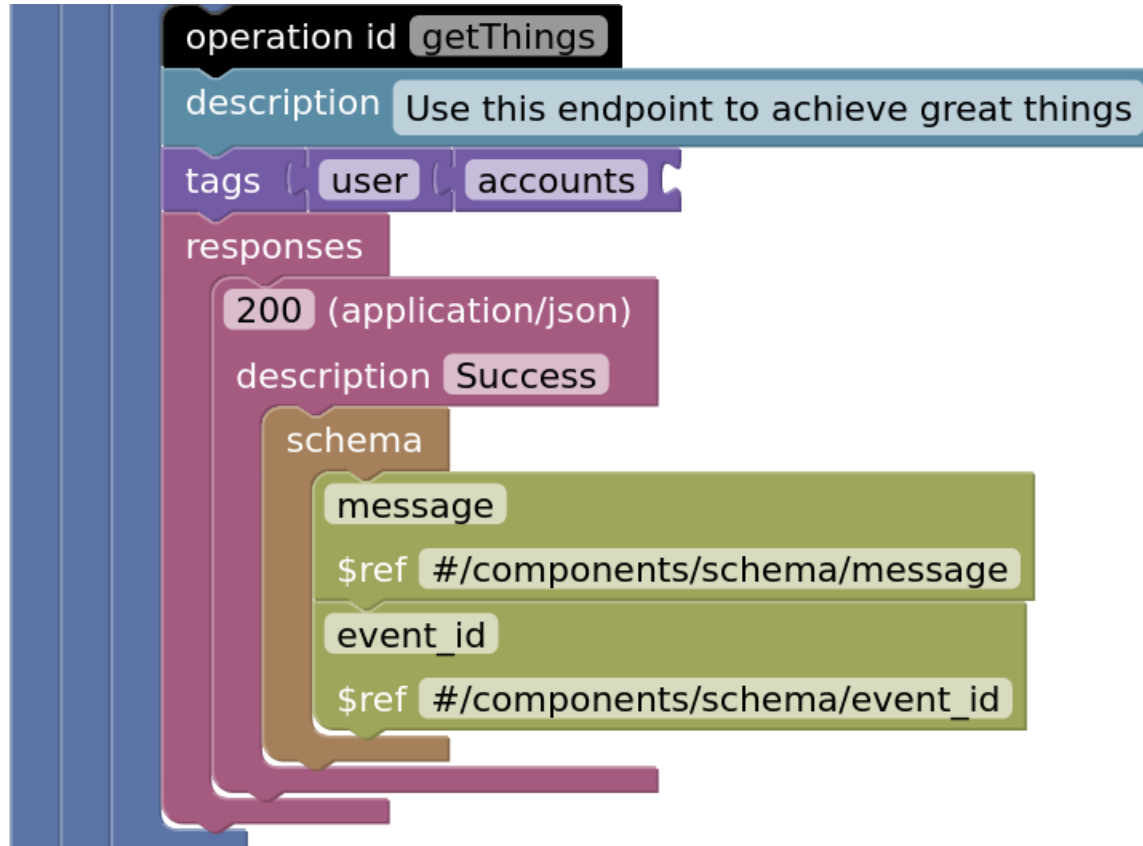
OpenAPI paths



OpenAPI schemas



OpenAPI references



OpenAPI components

```
components
  schemas
    message
      type string
      description The message returned by the call
      example You are great
    event_id
      type integer
      description Identifier for this unique event
      example 10000085732458
```

Power of OpenAPI

⇒ OpenAPI

Documentation
Previews
Local docs

⇒ OpenAPI

Validate
Lint
API standards

OperationID
Descriptions
Error responses
Naming

Documentation
Previews
Local docs

Transform
Reduce
Update
Translate

⇒ OpenAPI

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File management
Split + \$ref
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Combine
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Generate code
Client SDKs
Servers
Integrations

OperationID
Descriptions
Error responses
Naming

Test
Mock
Sequence

[@redocly](#) ~ [@lornajane](#) ~ [@lornajane@indieweb.social](mailto:lornajane@indieweb.social)

Tools for OpenAPI

<https://openapi.tools/>

OpenAPI editors

The best editor is the one you know

- Programmers' editor, with plugins
- Graphical editors

OpenAPI governance

Quality standards, consistently enforced

- Agree written standards
- Humans to check changes
- CI (continuous integration) for all changes
- Start small

OpenAPI linting

Let the machines do the work (within their skillset)

- Validate OpenAPI
- Enforce descriptions, examples
- Follow naming conventions
- Configure the rulesets for your needs

OpenAPI documentation

Read the docs for your docs!

- Pull request previews help early feedback
- Build/deploy should be fast and often
- Track your key metrics (e.g. views)

OpenAPI Community

OpenAPI Community

- Part of the Linux Foundation
- Standard is developed in the open
- <https://openapis.org>
- Public GitHub repository
- Active Slack groups
- Weekly technical meeting

OpenAPI SIGs

Special Interest Groups (SIGs) focus on adjacent/upcoming standards

- Workflows describe a sequence of API calls
- Overlays map repeatable amendments to an OpenAPI file
- OpenAPI 4.0 is under development (release due late 2024)

OpenAPI

Open standard for API descriptions

Resources

- <https://openapis.org>
- <https://lornajane.net>
- <https://redocly.com>
- <https://openapi.tools>