Path Operation Configuration

There are several parameters that you can pass to your *path operation decorator* to configure it.

Warning

Notice that these parameters are passed directly to the *path operation decorator*, not to your *path operation function*.

Response Status Code

You can define the (HTTP) `status_code` to be used in the response of your *path operation*.

You can pass directly the `int` code, like `404`.

But if you don't remember what each number code is for, you can use the shortcut constants in `status`:

Python 3.10+

```
from fastapi import FastAPI, status
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: str | None = None
    price: float
    tax: float | None = None
    tags: set[str] = set()


@app.post("/items/", response_model=Item, status_code=status.HTTP_201_CREATED)
async def create_item(item: Item):
    return item
```

▸ 🤓 Other versions and variants

Python 3.9+

```
from typing import Union

from fastapi import FastAPI, status
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: Union[str, None] = None
    price: float
    tax: Union[float, None] = None
    tags: set[str] = set()


@app.post("/items/", response_model=Item, status_code=status.HTTP_201_CREATED)
async def create_item(item: Item):
    return item
```

Python 3.8+

```
from typing import Set, Union

from fastapi import FastAPI, status
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: Union[str, None] = None
    price: float
    tax: Union[float, None] = None
    tags: Set[str] = set()


@app.post("/items/", response_model=Item, status_code=status.HTTP_201_CREATED)
async def create_item(item: Item):
    return item
```

That status code will be used in the response and will be added to the OpenAPI schema.

Technical Details

You could also use `from starlette import status`.

FastAPI provides the same `starlette.status` as `fastapi.status` just as a convenience for you, the developer. But it comes directly from Starlette.

Tags

You can add tags to your *path operation*, pass the parameter `tags` with a `list` of `str` (commonly just one `str`):

Python 3.10+

```
from fastapi import FastAPI
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: str | None = None
    price: float
    tax: float | None = None
    tags: set[str] = set()


@app.post("/items/", response_model=Item, tags=["items"])
async def create_item(item: Item):
    return item


@app.get("/items/", tags=["items"])
async def read_items():
    return [{"name": "Foo", "price": 42}]


@app.get("/users/", tags=["users"])
async def read_users():
    return [{"username": "johndoe"}]
```

▸ 🤓 Other versions and variants

Python 3.9+

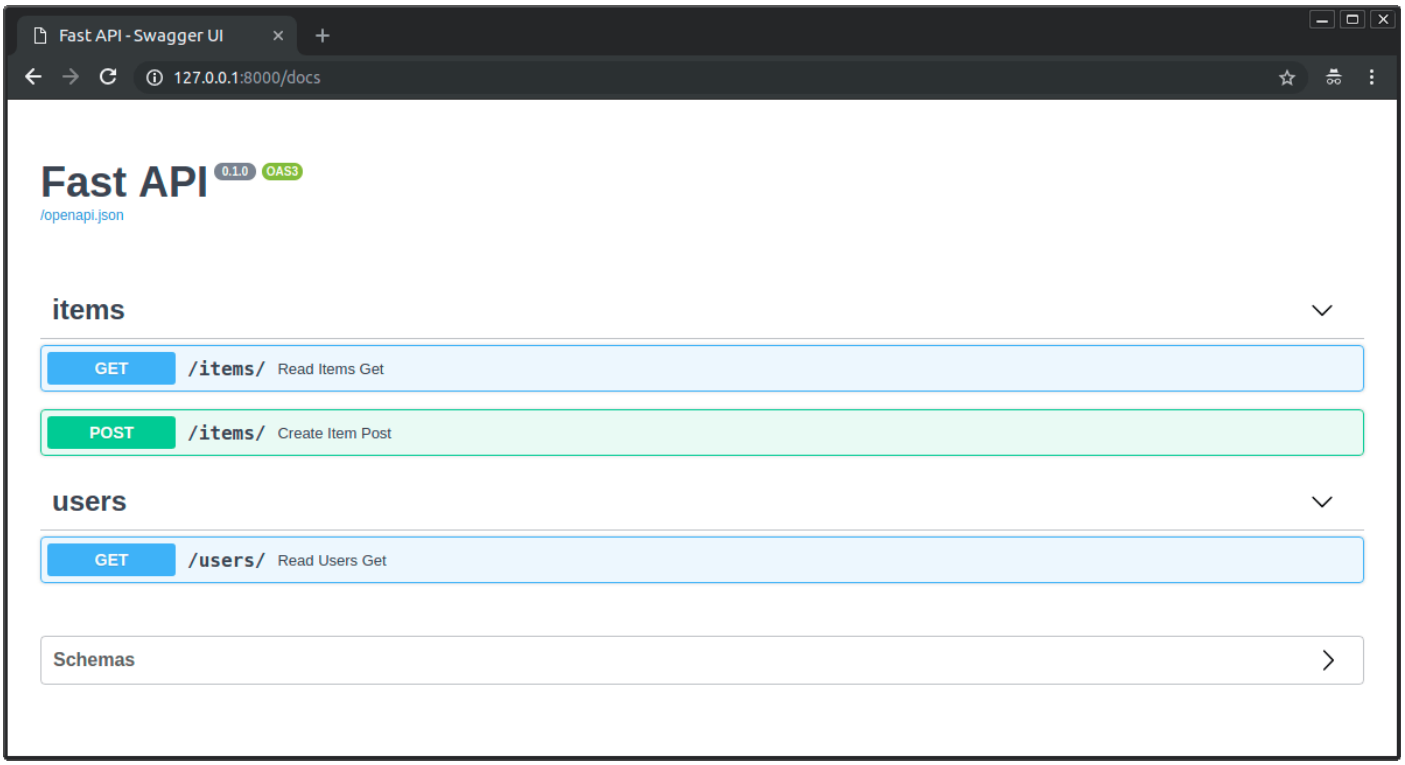
```
from typing import Union

from fastapi import FastAPI
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: Union[str, None] = None
    price: float
    tax: Union[float, None] = None
    tags: set[str] = set()


@app.post("/items/", response_model=Item, tags=["items"])
async def create_item(item: Item):
    return item


@app.get("/items/", tags=["items"])
async def read_items():
    return [{"name": "Foo", "price": 42}]


@app.get("/users/", tags=["users"])
async def read_users():
    return [{"username": "johndoe"}]
```

Python 3.8+

```
from typing import Set, Union

from fastapi import FastAPI
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: Union[str, None] = None
    price: float
    tax: Union[float, None] = None
    tags: Set[str] = set()
```

```python
@app.post("/items/", response_model=Item, tags=["items"])
async def create_item(item: Item):
    return item


@app.get("/items/", tags=["items"])
async def read_items():
    return [{"name": "Foo", "price": 42}]


@app.get("/users/", tags=["users"])
async def read_users():
    return [{"username": "johndoe"}]
```

They will be added to the OpenAPI schema and used by the automatic documentation interfaces:



Tags with Enums

If you have a big application, you might end up accumulating **several tags**, and you would want to make sure you always use the **same tag** for related *path operations*.

In these cases, it could make sense to store the tags in an `Enum`.

FastAPI supports that the same way as with plain strings:

Python 3.8+

```python
from enum import Enum

from fastapi import FastAPI

app = FastAPI()


class Tags(Enum):
    items = "items"
    users = "users"


@app.get("/items/", tags=[Tags.items])
async def get_items():
    return ["Portal gun", "Plumbus"]


@app.get("/users/", tags=[Tags.users])
async def read_users():
    return ["Rick", "Morty"]
```

Summary and description

You can add a `summary` and `description`:

Python 3.10+

```python
from fastapi import FastAPI
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: str | None = None
    price: float
    tax: float | None = None
    tags: set[str] = set()


@app.post(
    "/items/",
    response_model=Item,
    summary="Create an item",
    description="Create an item with all the information, name, description, price, tax and a set of unique tags",
)
async def create_item(item: Item):
    return item
```

▸ 🤓 Other versions and variants

Python 3.9+

```python
from typing import Union

from fastapi import FastAPI
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: Union[str, None] = None
    price: float
    tax: Union[float, None] = None
    tags: set[str] = set()


@app.post(
    "/items/",
    response_model=Item,
    summary="Create an item",
    description="Create an item with all the information, name, description, price, tax and a set of unique tags",
)
async def create_item(item: Item):
    return item
```

Python 3.8+

```python
from typing import Set, Union

from fastapi import FastAPI
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: Union[str, None] = None
    price: float
    tax: Union[float, None] = None
    tags: Set[str] = set()


@app.post(
    "/items/",
    response_model=Item,
    summary="Create an item",
    description="Create an item with all the information, name, description, price, tax and a set of unique tags",
)
async def create_item(item: Item):
    return item
```

Description from docstring

As descriptions tend to be long and cover multiple lines, you can declare the *path operation* description in the function docstring and **FastAPI** will read it from there.

You can write Markdown in the docstring, it will be interpreted and displayed correctly (taking into account docstring indentation).

Python 3.10+

```python
from fastapi import FastAPI
```

```python
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: str | None = None
    price: float
    tax: float | None = None
    tags: set[str] = set()


@app.post("/items/", response_model=Item, summary="Create an item")
async def create_item(item: Item):
    """
    Create an item with all the information:

    - **name**: each item must have a name
    - **description**: a long description
    - **price**: required
    - **tax**: if the item doesn't have tax, you can omit this
    - **tags**: a set of unique tag strings for this item
    """
    return item
```

▸ 🤓 Other versions and variants

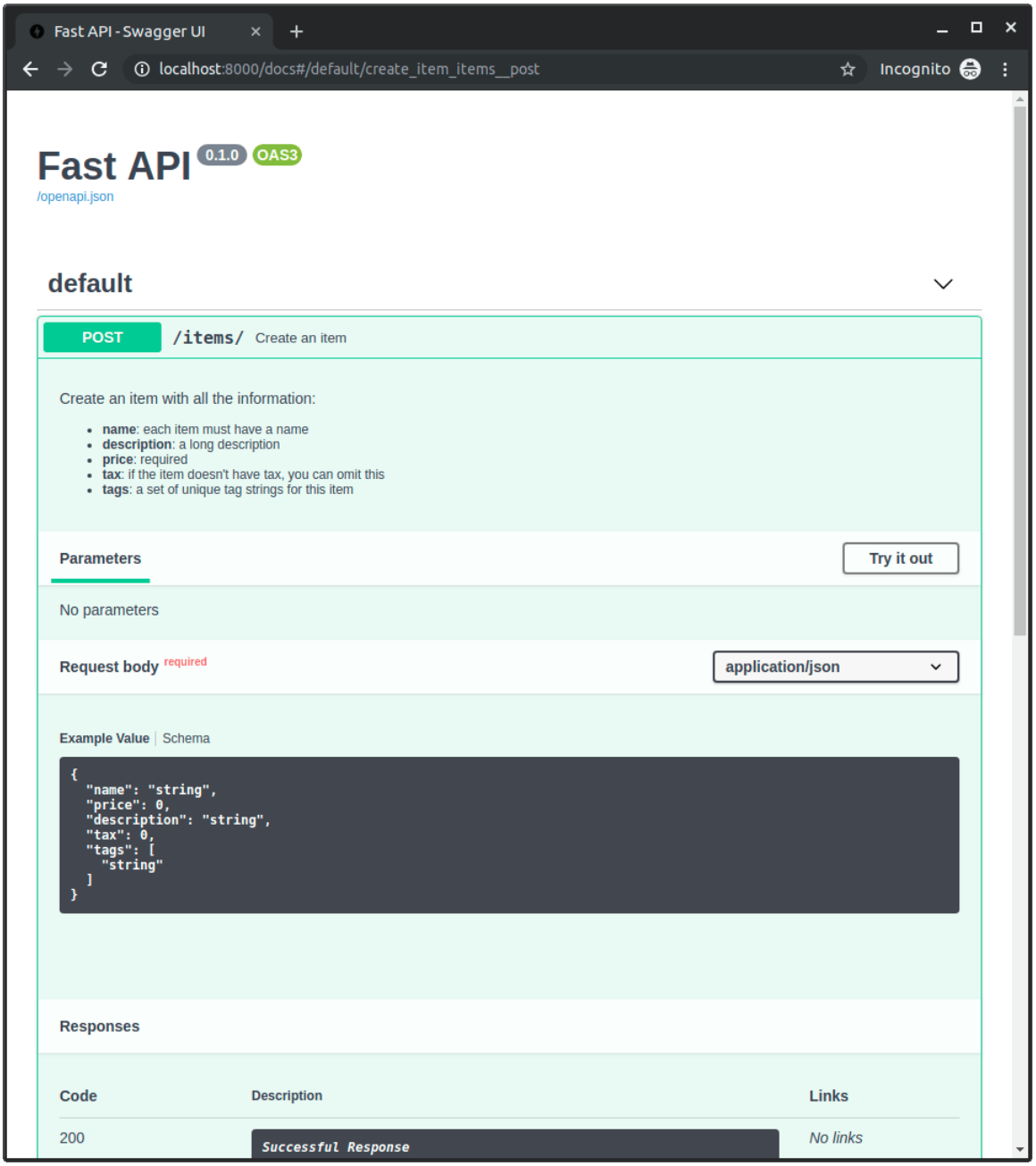
Python 3.9+

```python
from typing import Union

from fastapi import FastAPI
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: Union[str, None] = None
    price: float
    tax: Union[float, None] = None
    tags: set[str] = set()


@app.post("/items/", response_model=Item, summary="Create an item")
async def create_item(item: Item):
    """
    Create an item with all the information:

    - **name**: each item must have a name
    - **description**: a long description
    - **price**: required
    - **tax**: if the item doesn't have tax, you can omit this
    - **tags**: a set of unique tag strings for this item
    """
    return item
```

Python 3.8+

```python
from typing import Set, Union

from fastapi import FastAPI
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: Union[str, None] = None
    price: float
    tax: Union[float, None] = None
    tags: Set[str] = set()


@app.post("/items/", response_model=Item, summary="Create an item")
async def create_item(item: Item):
    """
    Create an item with all the information:

    - **name**: each item must have a name
    - **description**: a long description
    - **price**: required
    - **tax**: if the item doesn't have tax, you can omit this
    - **tags**: a set of unique tag strings for this item
    """
    return item
```

It will be used in the interactive docs:



Response description

You can specify the response description with the parameter `response_description`:

Python 3.10+

```
from fastapi import FastAPI
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: str | None = None
    price: float
    tax: float | None = None
    tags: set[str] = set()


@app.post(
    "/items/",
    response_model=Item,
    summary="Create an item",
    response_description="The created item",
)
async def create_item(item: Item):
    """
    Create an item with all the information:

    - **name**: each item must have a name
```

```
    - **description**: a long description
    - **price**: required
    - **tax**: if the item doesn't have tax, you can omit this
    - **tags**: a set of unique tag strings for this item
    """
    return item
```

▸ 🤓 Other versions and variants

Python 3.9+

```
from typing import Union

from fastapi import FastAPI
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: Union[str, None] = None
    price: float
    tax: Union[float, None] = None
    tags: set[str] = set()


@app.post(
    "/items/",
    response_model=Item,
    summary="Create an item",
    response_description="The created item",
)
async def create_item(item: Item):
    """
    Create an item with all the information:

    - **name**: each item must have a name
    - **description**: a long description
    - **price**: required
    - **tax**: if the item doesn't have tax, you can omit this
    - **tags**: a set of unique tag strings for this item
    """
    return item
```

Python 3.8+

```
from typing import Set, Union

from fastapi import FastAPI
from pydantic import BaseModel

app = FastAPI()


class Item(BaseModel):
    name: str
    description: Union[str, None] = None
    price: float
    tax: Union[float, None] = None
    tags: Set[str] = set()


@app.post(
    "/items/",
    response_model=Item,
    summary="Create an item",
    response_description="The created item",
)
async def create_item(item: Item):
    """
    Create an item with all the information:

    - **name**: each item must have a name
    - **description**: a long description
    - **price**: required
    - **tax**: if the item doesn't have tax, you can omit this
    - **tags**: a set of unique tag strings for this item
    """
    return item
```

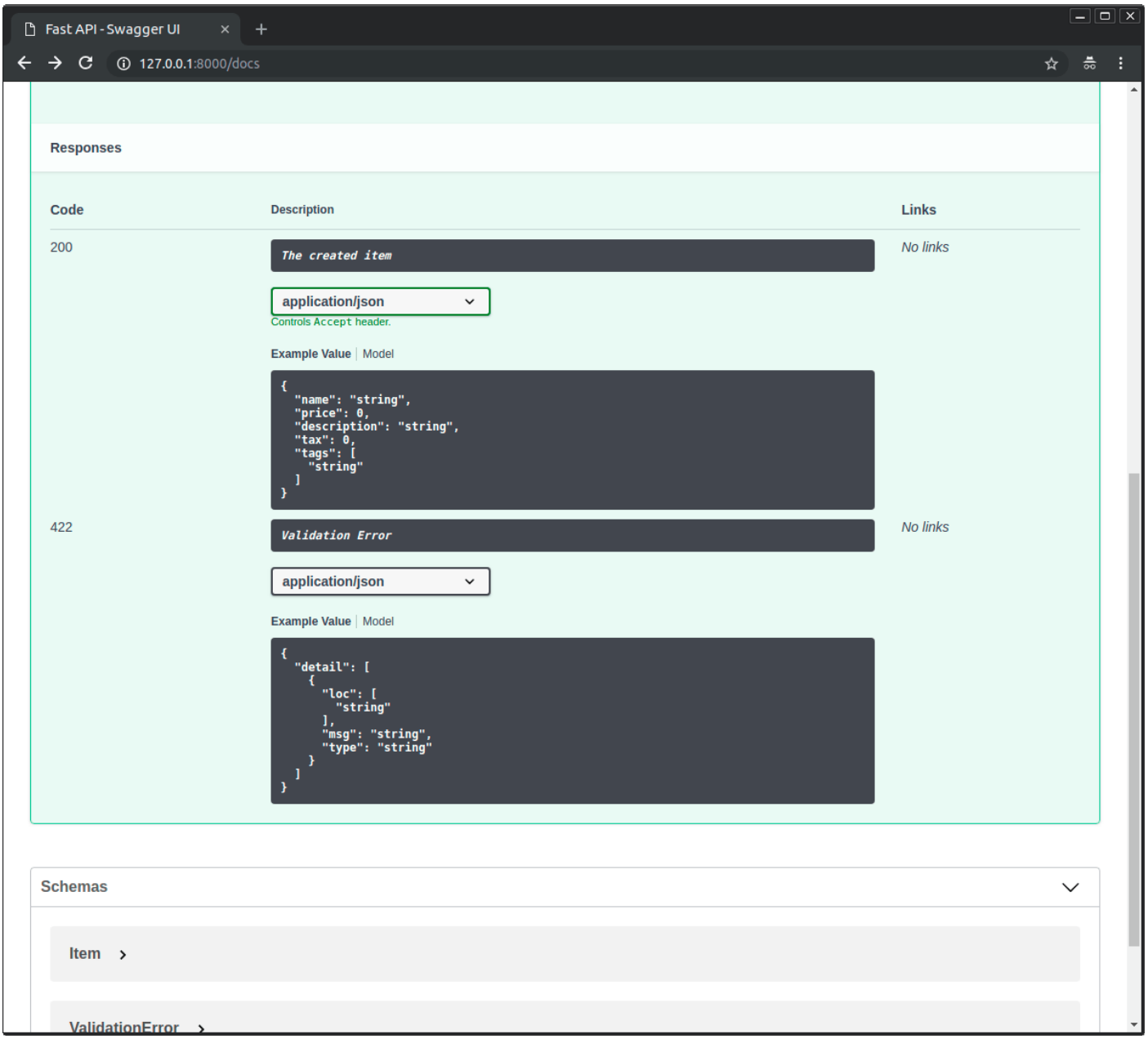
Info

Notice that `response_description` refers specifically to the response, the `description` refers to the *path operation* in general.

Check

OpenAPI specifies that each *path operation* requires a response description.

So, if you don't provide one, **FastAPI** will automatically generate one of "Successful response".



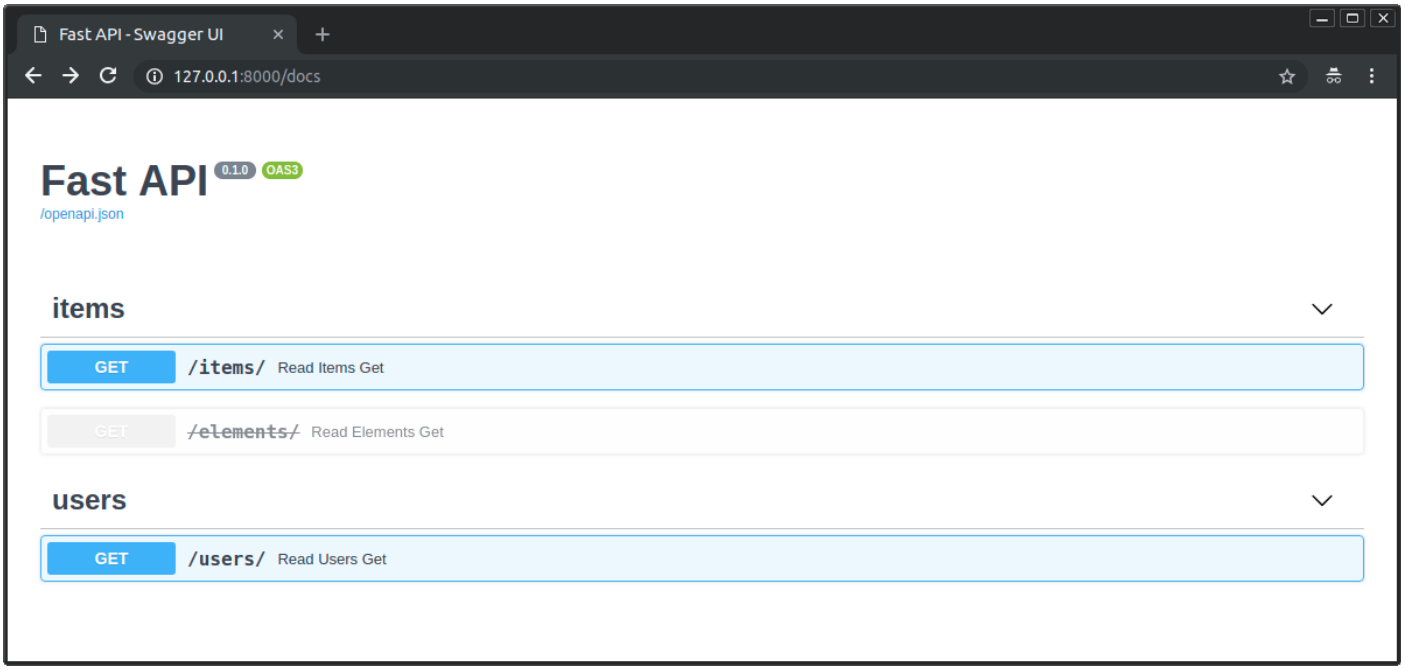
Deprecate a *path operation*

If you need to mark a *path operation* as deprecated, but without removing it, pass the parameter `deprecated`:

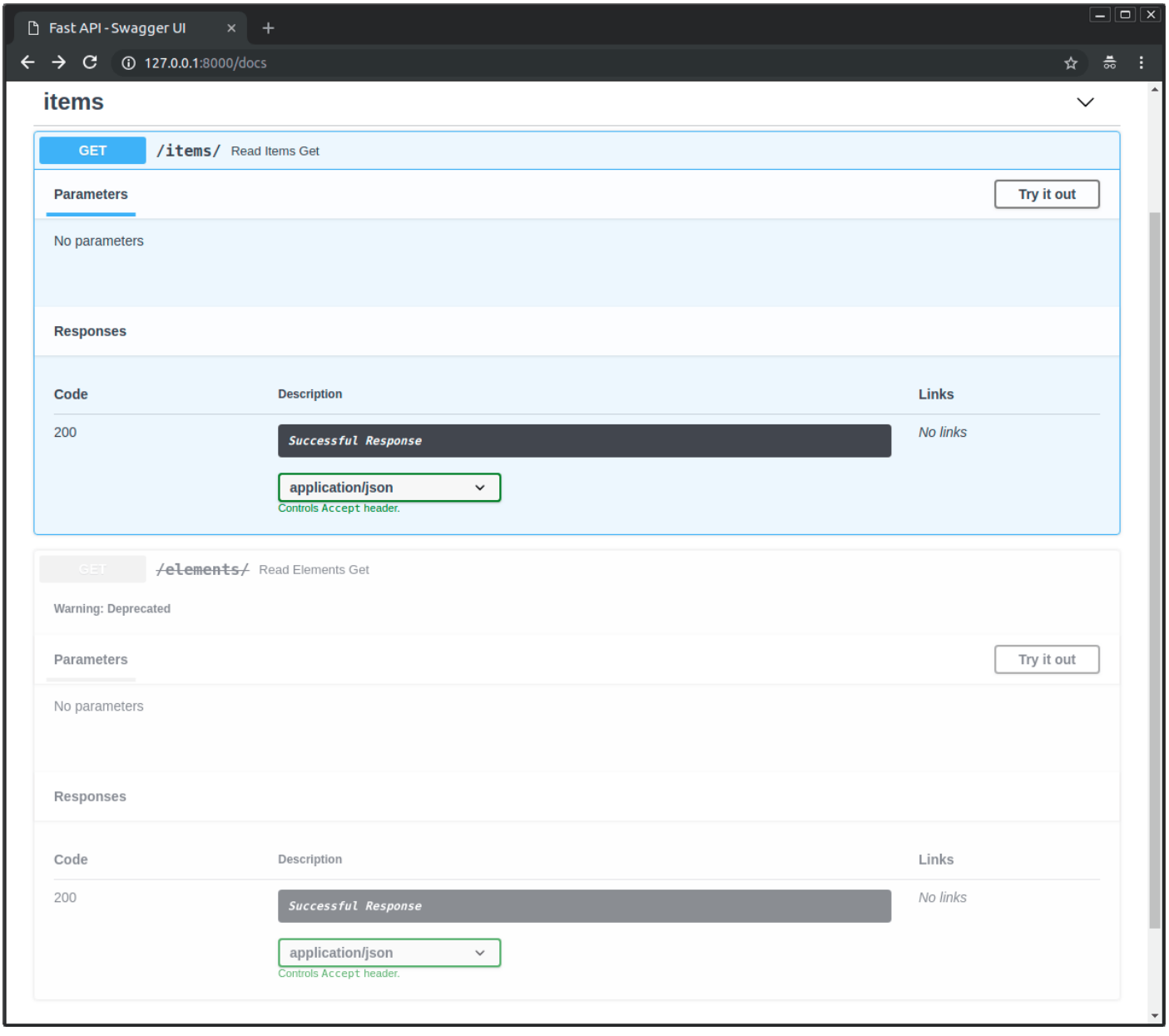
Python 3.8+

```
from fastapi import FastAPI

app = FastAPI()


@app.get("/items/", tags=["items"])
async def read_items():
    return [{"name": "Foo", "price": 42}]


@app.get("/users/", tags=["users"])
async def read_users():
    return [{"username": "johndoe"}]


@app.get("/elements/", tags=["items"], deprecated=True)
async def read_elements():
    return [{"item_id": "Foo"}]
```

It will be clearly marked as deprecated in the interactive docs:



Check how deprecated and non-deprecated *path operations* look like:



Recap

You can configure and add metadata for your *path operations* easily by passing parameters to the *path operation decorators*.