

# Итоговое задание. FastApi

GitHub: <https://github.com/MaksimKolosov/FastApiProject>

DockerHub: <https://hub.docker.com/repositories/maksimkolosov>

## TODO-сервис

В командной строке выполнил команды:

```
docker volume create todo_data
```

```
docker build -t todo-sqlite:latest .
```

```
docker run -d -p 8000:80 -v todo_data:/app/data todo-sqlite:latest
```

В браузере открыл ссылку:

<http://localhost:8000/docs>

The screenshot shows a web browser window displaying the FastAPI OpenAPI documentation. The browser's address bar shows 'localhost'. The page title is 'FastAPI 0.1.0 OAS 3.1' with a link to '/openapi.json'. Below the title, there is a section titled 'default' which lists five API endpoints:

- GET** `/items` Get Items
- POST** `/items` Create Item
- GET** `/items/{item_id}` Get Item
- PUT** `/items/{item_id}` Update Item
- DELETE** `/items/{item_id}` Delete Item

Each endpoint entry has a dropdown arrow on the right. Below the endpoints, there is a section titled 'Schemas' which lists four data models:

- HTTPValidationError** > Expand all object
- TodoCreate** > Expand all object
- TodoItem** > Expand all object
- ValidationError** > Expand all object

Тестируем приложение.

Создаём item:

FastAPI

0.1.0

OAS 3.1

/openapi.json

default

GET /items Get Items

POST /items Create Item

Parameters

No parameters

Request body required

application/json

```
{
  "title": "Visit grocery store",
  "description": "Visit grocery store and buy food",
  "completed": true
}
```

Execute

Curl

```
curl -X 'POST' \
'http://localhost:8000/items' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "title": "Visit grocery store",
  "description": "Visit grocery store and buy food",
  "completed": true
}'
```

Request URL

`http://localhost:8000/items`

Server response

Code	Details
200	<p>Response body</p> <pre>{   "id": 1,   "title": "Visit grocery store",   "description": "Visit grocery store and buy food",   "completed": true }</pre> <p>Response headers</p> <pre>content-length: 104 content-type: application/json date: Thu, 26 Dec 2024 09:25:53 GMT server: uvicorn</pre>

Responses

Code	Description	Links
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Responses

Code	Description	Links
200	<p>Successful Response</p> <p>Media type <input type="text" value="application/json"/></p> <p>Controls Accept header.</p> <p>Example Value   Schema</p> <pre>{   "id": 0,   "title": "string",   "description": "string",   "completed": false }</pre>	No links
422	<p>Validation Error</p> <p>Media type <input type="text" value="application/json"/></p> <p>Example Value   Schema</p> <pre>{   "detail": [     {       "loc": [         "string",         0       ],       "msg": "string",       "type": "string"     }   ] }</pre>	No links

Создадим ещё несколько items (без скриншотов).

Протестируем получение item по id:

GET /items/{item\_id} Get Item

Parameters

Cancel

Name	Description
item_id * required integer (path)	3

Execute Clear

Responses

Curl

```
curl -X 'GET' \
'http://localhost:8000/items/3' \
-H 'accept: application/json'
```

Request URL

```
http://localhost:8000/items/3
```

Server response

Code	Details
200	<p>Response body</p> <pre>{   "id": 3,   "title": "Clean my table",   "description": "Clean my table and make it shine",   "completed": true }</pre> <p>Download</p>

Тестируем получение всех items:

GET /items Get Items

Parameters

Cancel

No parameters

Execute Clear

Responses

Curl

```
curl -X 'GET' \
'http://localhost:8000/items' \
-H 'accept: application/json'
```

Request URL

```
http://localhost:8000/items
```

Server response

Code

Details

200

Response body

```
[
  {
    "id": 1,
    "title": "Visit grocery store",
    "description": "Visit grocery store and buy food",
    "completed": true
  },
  {
    "id": 2,
    "title": "Have a dinner",
    "description": "Have a dinner to be not hungry",
    "completed": true
  },
  {
    "id": 3,
    "title": "Clean my table",
    "description": "Clean my table and make it shine",
    "completed": true
  },
  {
    "id": 4,
    "title": "Ventilate room",
    "description": "Ventilate room with fresh air",
    "completed": true
  },
  {
    "id": 5,
    "title": "Do fast-api project",
    "description": "Do fast-api project and add it to GitHub and DockerHub",
    "completed": false
  }
]
```

Download

Response headers

```
content-length: 528
content-type: application/json
date: Thu, 26 Dec 2024 09:35:48 GMT
server: uvicorn
```

Responses

Code

Description

Links

200

Successful Response

No links

Media type

application/json

Controls Accept header.

Example Value | Schema

```
[
  {
    "id": 0,
    "title": "string",
    "description": "string",
    "completed": false
  }
]
```

Тестируем редактирование item:

PUT

/items/{item\_id}

Update Item

Parameters

Cancel

Reset

Name	Description
<b>item_id</b> * required	
integer	5
(path)	

Request body required

application/json

```
{
  "title": "Do Fast-API project",
  "description": "Do Fast-API project and prepare screenshots",
  "completed": true
}
```

Responses

Curl

```
curl -X 'PUT' \
  'http://localhost:8000/items/5' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "title": "Do Fast-API project",
    "description": "Do Fast-API project and prepare screenshots",
    "completed": true
  }'
```

Request URL

http://localhost:8000/items/5

Server response

Code	Details
200	<div><div>Response body</div><div><pre>{   "id": 5,   "title": "Do Fast-API project",   "description": "Do Fast-API project and prepare screenshots",   "completed": true }</pre></div><div><div></div><div>Download</div></div></div> <div><div>Response headers</div><div><pre>content-length: 115 content-type: application/json date: Thu, 26 Dec 2024 09:44:18 GMT server: uvicorn</pre></div></div>

Отображаем все items:

Response body

```
[
  {
    "id": 1,
    "title": "Visit grocery store",
    "description": "Visit grocery store and buy food",
    "completed": true
  },
  {
    "id": 2,
    "title": "Have a dinner",
    "description": "Have a dinner to be not hungry",
    "completed": true
  },
  {
    "id": 3,
    "title": "Clean my table",
    "description": "Clean my table and make it shine",
    "completed": true
  },
]
```

```
{
  "id": 4,
  "title": "Ventilate room",
  "description": "Ventilate room with fresh air",
  "completed": true
},
{
  "id": 5,
  "title": "Do Fast-API project",
  "description": "Do Fast-API project and prepare screenshots",
  "completed": true
}
]
```



Download

Тестируем удаление. Удалим первый item:

**DELETE** /items/{item\_id} Delete Item

Parameters

Cancel

Name	Description
<b>item_id</b> * required integer (path)	<input type="text" value="1"/>

ExecuteClear

Responses

Curl

```
curl -X 'DELETE' \
'http://localhost:8000/items/1' \
-H 'accept: application/json'
```

Request URL

```
http://localhost:8000/items/1
```

Server response

Code	Details
200	<div>Response body<pre>{   "message": "Item deleted" }</pre><div>Download</div></div>

Response body

```
[
  {
    "id": 2,
    "title": "Have a dinner",
    "description": "Have a dinner to be not hungry",
    "completed": true
  },
  {
    "id": 3,
    "title": "Clean my table",
    "description": "Clean my table and make it shine",
    "completed": true
  },
  {
    "id": 4,
    "title": "Ventilate room",
    "description": "Ventilate room with fresh air",
    "completed": true
  },
  {
    "id": 5,
    "title": "Do Fast-API project",
    "description": "Do Fast-API project and prepare screenshots",
    "completed": true
  }
]
```

Download




Отправляем на Docker Hub:



```
docker build -t maksimkolosov/todo-sqlite .
```



```
docker login
```

```
docker push maksimkolosov/todo-sqlite:latest
```

**maksimkolosov/todo-sqlite** 

Last pushed 7 minutes ago

[Add a description](#)   INCOMPLETE

[Add a category](#)   INCOMPLETE



**Docker commands** [Public view](#)

To push a new tag to this repository:

```
docker push maksimkolosov/todo-sqlite:tagname
```

**Tags**


This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
 latest		Image	7 minutes ago	7 minutes ago

[See all](#)

**Automated builds**

Manually pushing images to Docker Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.

Available with Pro, Team and Business subscriptions. [Read more about automated builds](#) .

[Upgrade](#)

ShortUrl-сервис:

В командной строке выполнил команды:

```
docker volume create shorturl_data
```

```
docker build -t short_url:latest .
```

```
docker run -d -p 8001:80 -v shorturl_data:/app/data short_url:latest
```

В браузере открыл ссылку:

<http://localhost:8001/docs>

default ^

POST	/shorten	Shorten Url	▼
GET	/short_id	Redirect To Full	▼
GET	/stats/short_id	Get Stats	▼

Schemas ^

HTTPValidationError > Expand all		object
URLCreate > Expand all		object
ValidationError > Expand all		object

Тестируем приложение.

Создаём short\_url для https://example.com:

default

^

POST /shorten Shorten Url

^

Parameters

Cancel

No parameters

Request body required

application/json

^

{  
 "url": "https://example.com/"  
}

Execute

Clear

Responses

Curl

```
curl -X 'POST' \
'http://localhost:8001/shorten' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "url": "https://example.com/"
}'
```

Request URL

```
http://localhost:8001/shorten
```

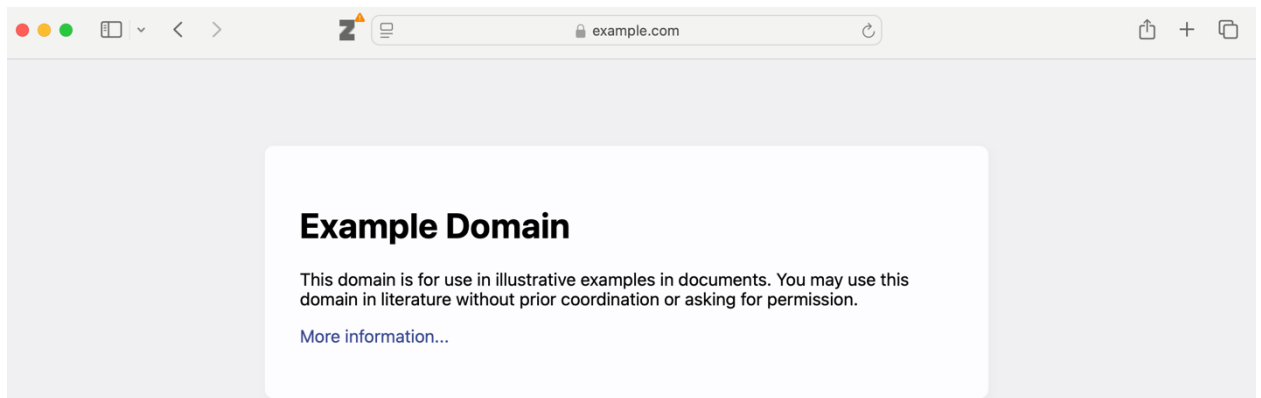
Server response

Code	Details
200	<div><div>Response body</div><pre>{   "short_url": "http://localhost:8001/XcEoIx" }</pre><div><div></div>Download</div></div> <div><div>Response headers</div><pre>content-length: 44 content-type: application/json date: Thu, 26 Dec 2024 12:01:09 GMT server: uvicorn</pre></div>

Responses

Code	Description	Links
200	<div>Successful Response</div> <div>Media type</div> <div>application/json</div> <div>Controls Accept header.</div>	No links

Пробуем ссылку <http://localhost:8001/XcEoIx>




Открылось именно то, что было нужно!

Отправляем на Docker Hub:

`docker build -t maksimkolosov/short_url .`

`docker login`

`docker push maksimkolosov/short_url:latest`


 docker hub


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maksimkolosov




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Create a repository

Name	Last Pushed 	Contains	Visibility	Scout
maksimkolosov/short_url	less than a minute ago		Public	Inactive
maksimkolosov/todo-sqlite	about 1 hour ago		Public	Inactive

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