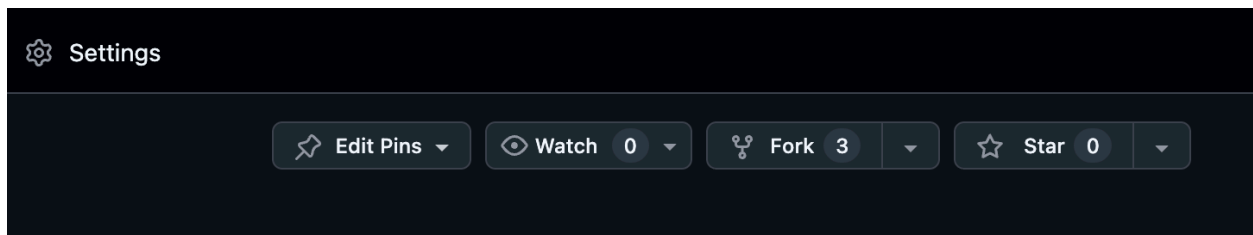


FastAPI Environment Setup Instructions

Follow these steps to fork a repo, open it in a GitHub Codespace, set up Python, install dependencies, run FastAPI, and explore the API docs.

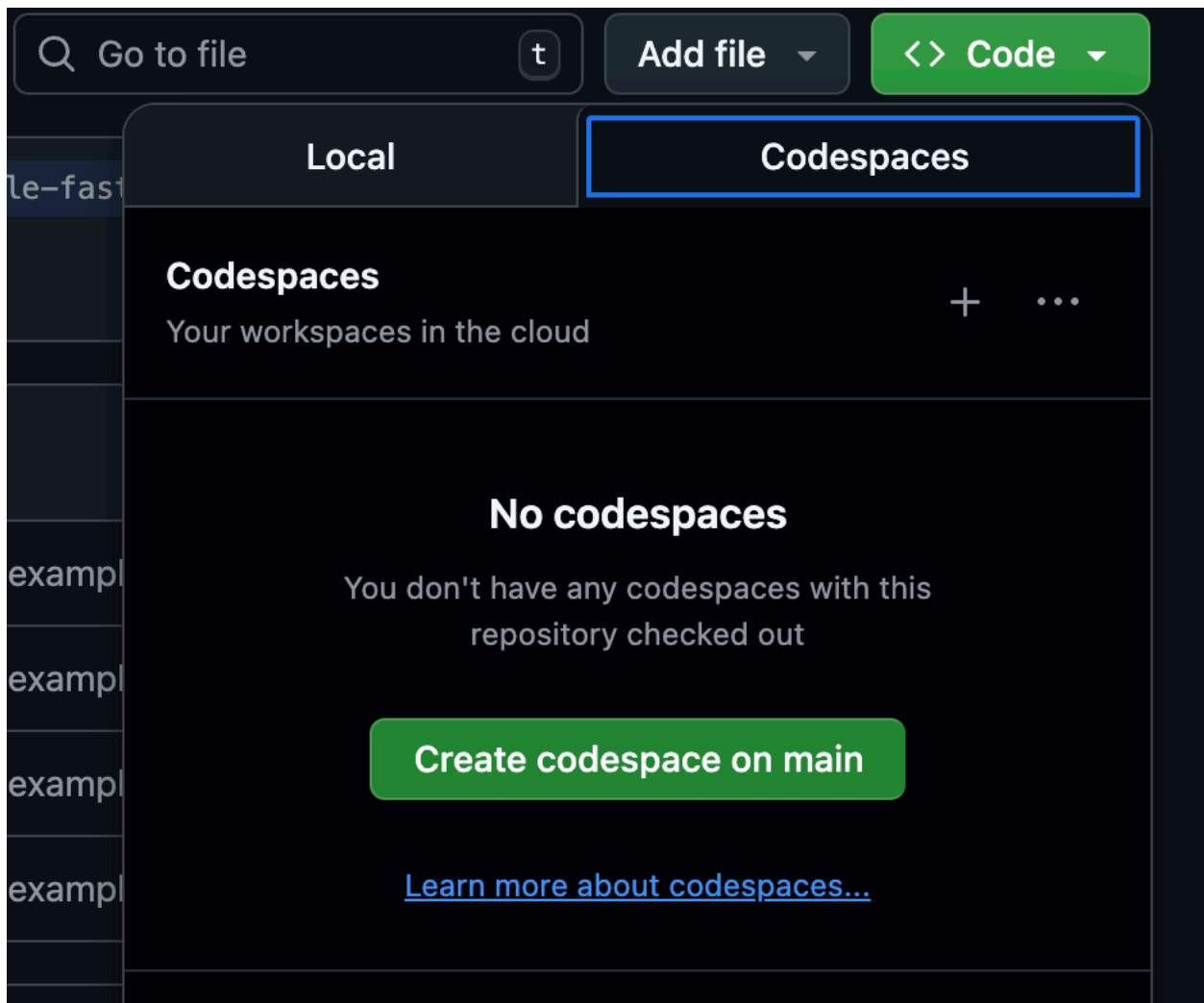
1) Fork the repository on GitHub

- Open the repository page in your browser.
 - <https://github.com/Software-System-Development/simple-fastapi-example>
- Click **Fork** (top-right) → choose your account → **Create fork**.



2) Open a Codespace from your fork

- In **your fork**, click the green **Code** button.
- Select the **Codespaces** tab → **Create codespace on main**.
 - GitHub will launch a VS Code environment in the browser.

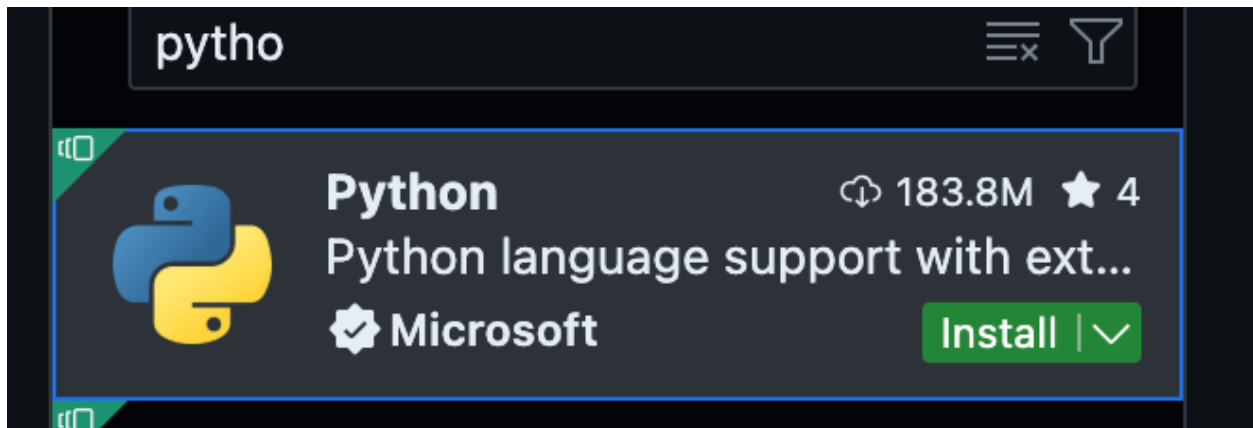


3) Install the Python extension (in Codespaces)

- In the left sidebar, click the **Extensions** icon.



- Search **"Python"** (by Microsoft) → **Install**.

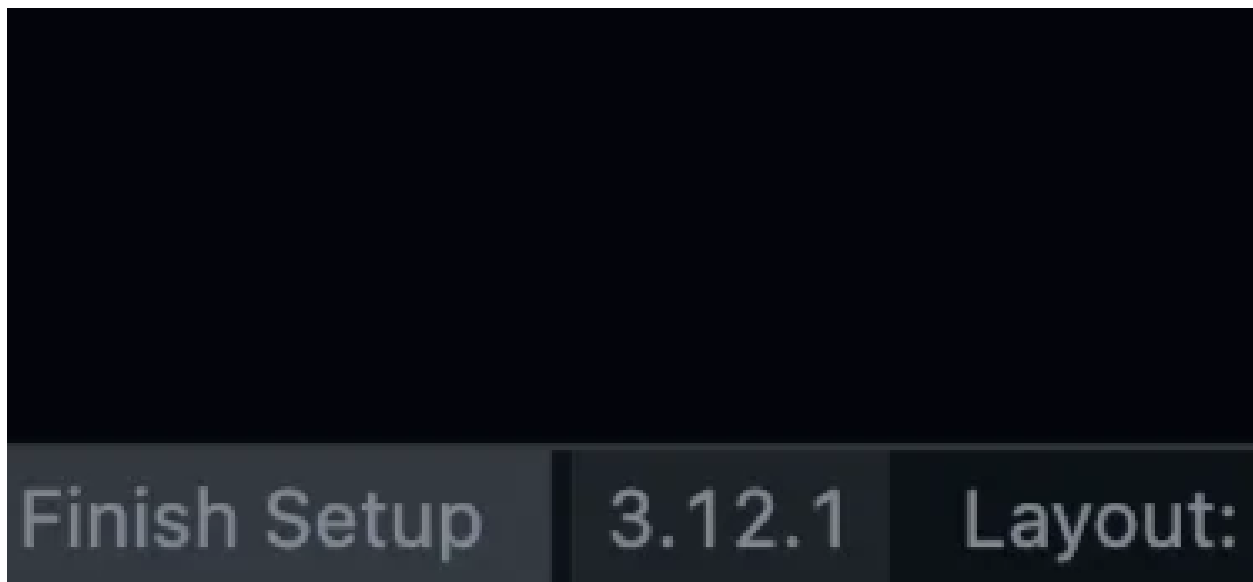


- If prompted, let VS Code **reload**.

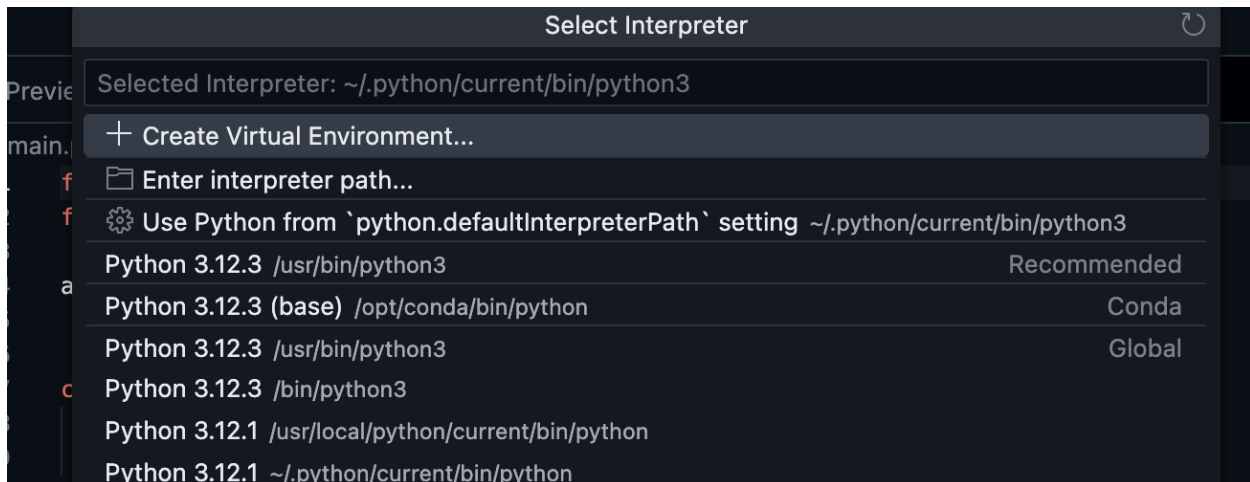
Tip: Codespaces often pre-installs Python, but you still want the Python extension for linting, formatting, and virtual env detection.

4) Create & activate a virtual environment (easy way)

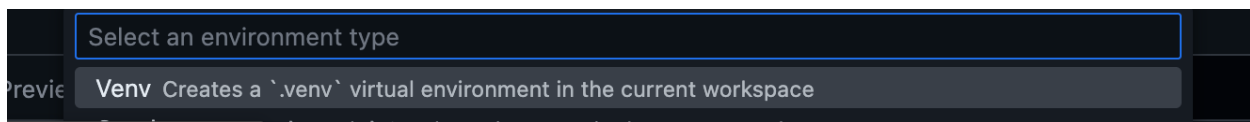
- Click your Python runtime at the bottom left of VS Code(e.g. `3.XX.X`):



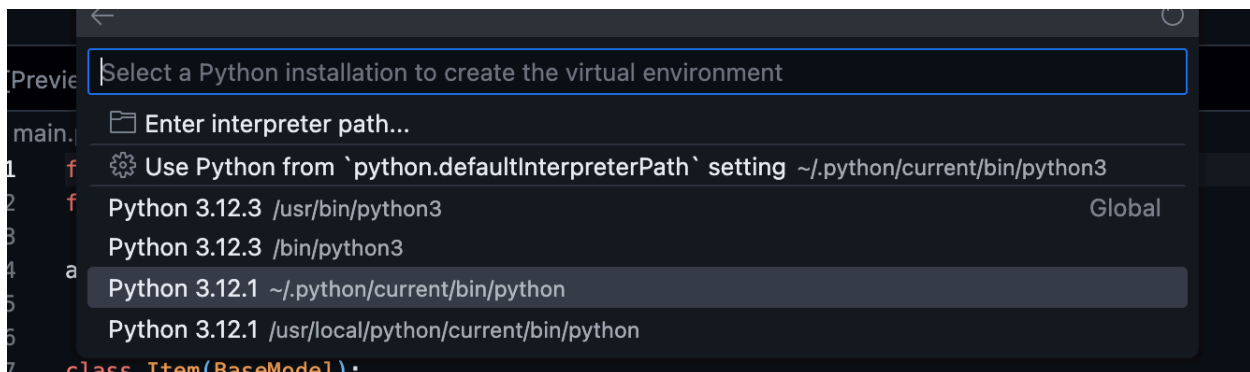
- You should see the following dropdown. Click `Create Virtual Environment` :



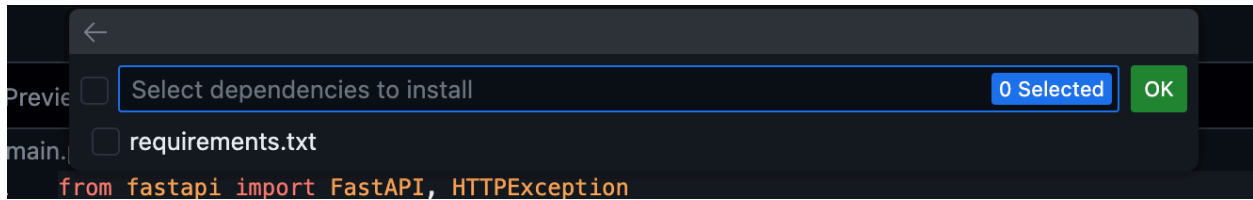
- Choose Venv for your environment type:



- Choose one of the python 3.12.1 options:



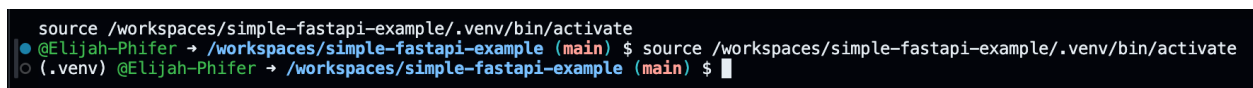
- Check the `requirements.txt` and then click `OK`. This allows the environment to download the two packages you need (e.g. `fastapi` and `uvicorn`)



- Create a new terminal by clicking the plus button on the VS Code Terminal. This is just to make sure you are in the `venv`:



- Make sure you have a `(.venv)` in your command line now:



You should see `(.venv)` at the start of your terminal prompt when it's active.

5) Install FastAPI (with the CLI and server tools)

```
pip install "fastapi[standard]"
```

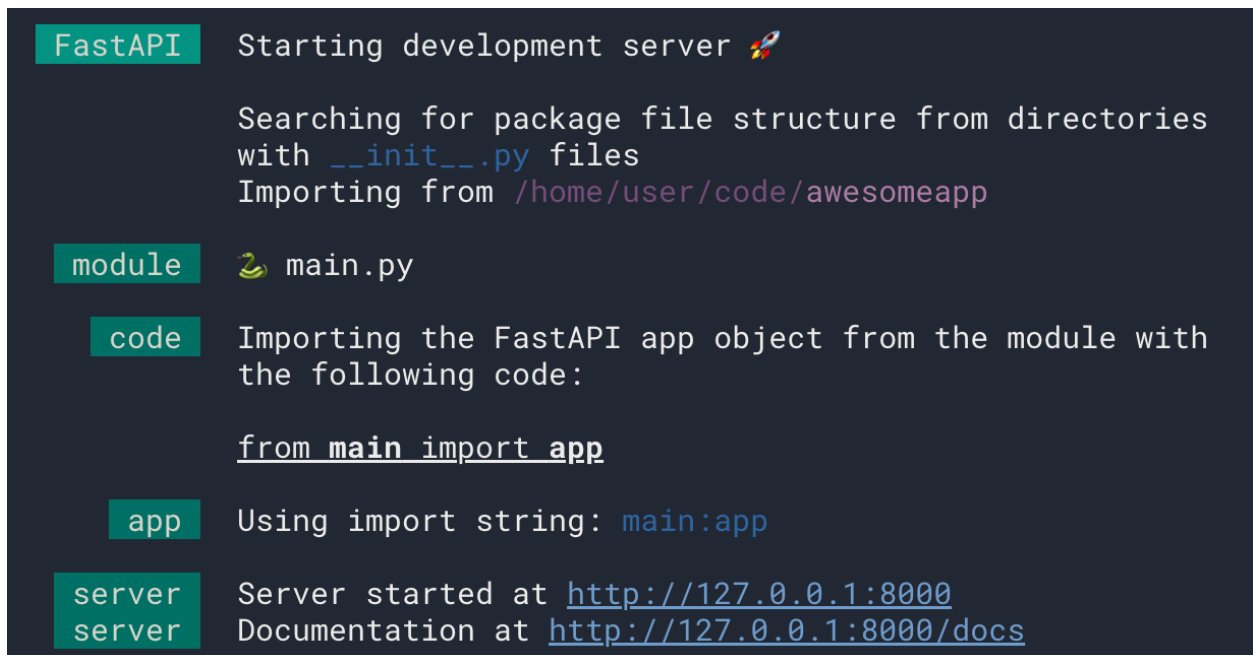
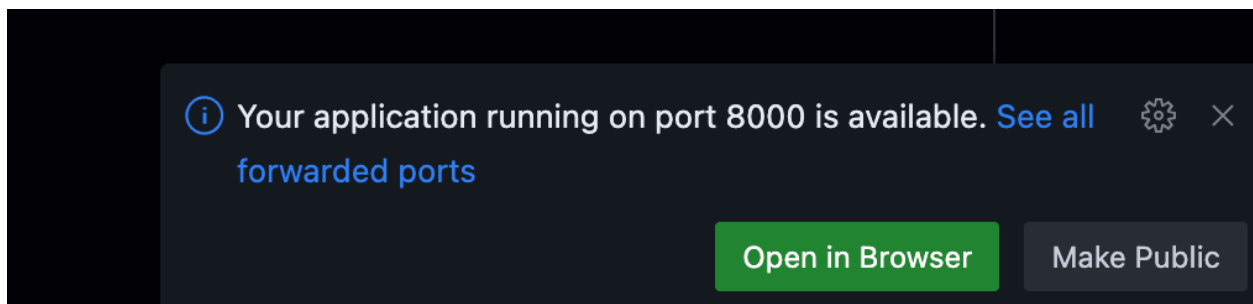
This includes the **FastAPI CLI** (`fastapi`) and common web server tools.

6) Run your FastAPI app

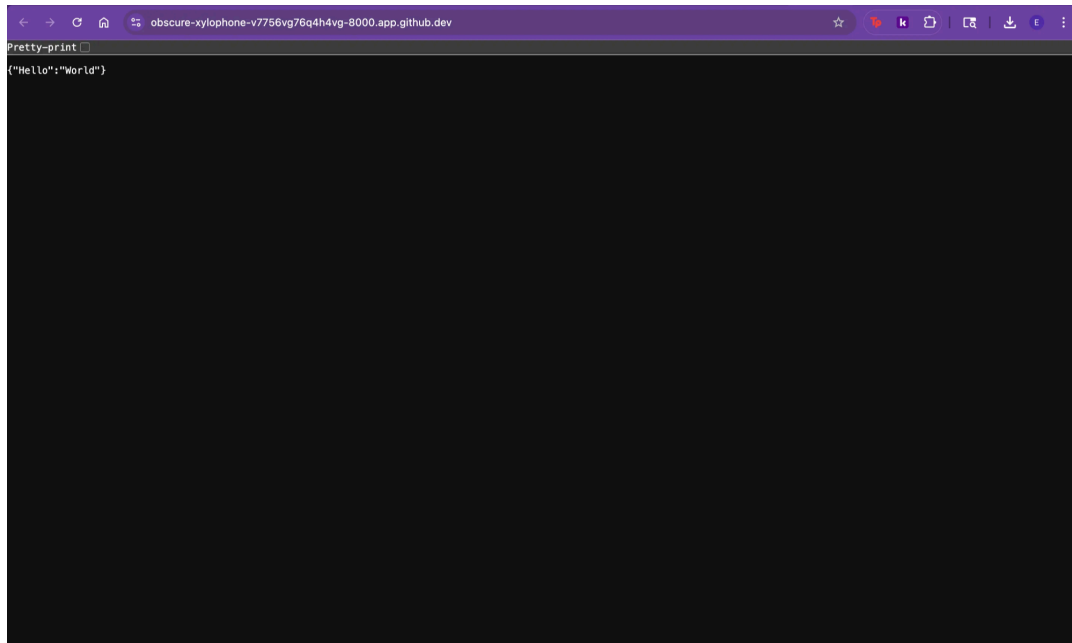
Make sure your app file is named `main.py` (and has an `app = FastAPI()` instance). Then:

```
fastapi dev main.py
```

- The terminal will show a **Forwarded Port** (e.g., 8000).
- In Codespaces, a pop-up or the **Ports** panel will offer an **Open in Browser** link.
- Click `Open in Browser` or `ctrl + click` the link in the terminal:



- Your screen should look something like this:



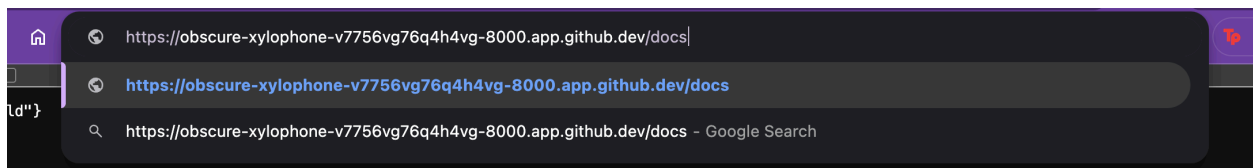
7) Open the interactive API docs (Swagger UI)

- Take the URL from the terminal / forwarded port (e.g., `https://<your-codespace>-8000.app.github.dev`) and append:

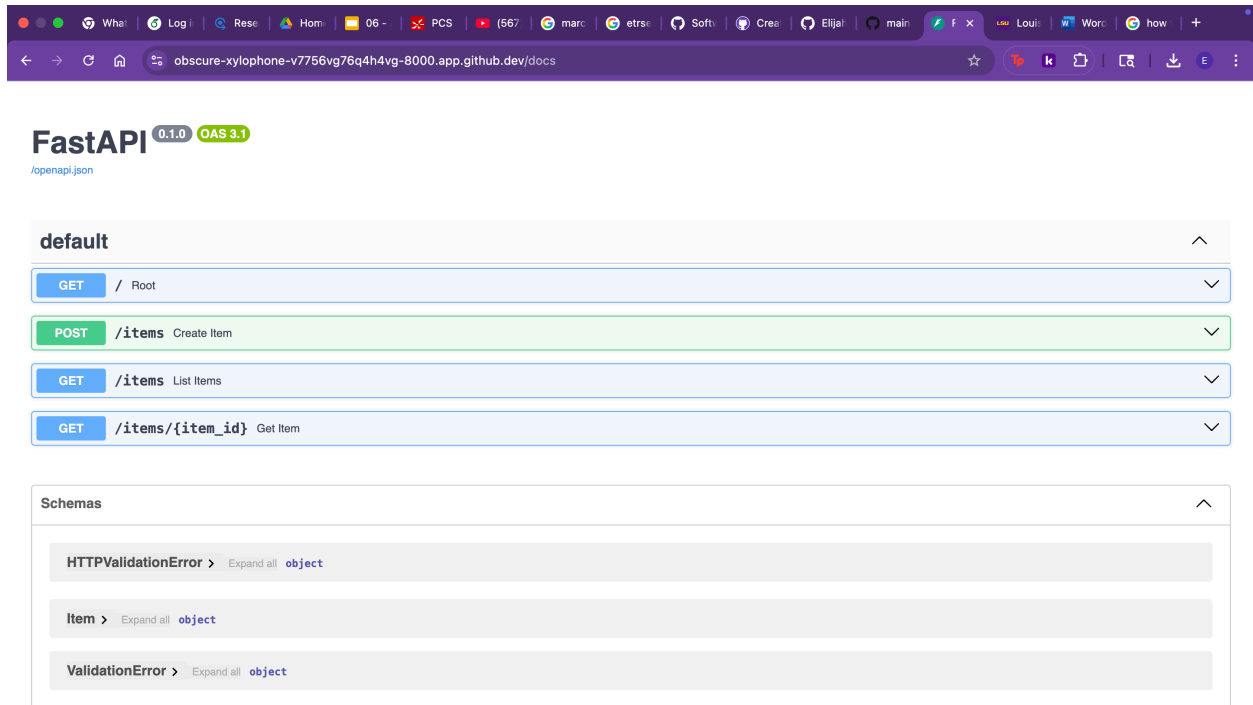
`/docs`

Example:

`https://<your-codespace>-8000.app.github.dev/docs`



- You'll see the **Swagger UI**.



10) Try the endpoints

- In Swagger UI, find your **GET** and **PUT** endpoints.
- Click an endpoint → **Try it out**.
- For **GET**, click **Execute** to call it.

default

GET / Root

Parameters

No parameters

Execute

Responses

Code	Description	Links
200	Successful Response	No links

Media type: application/json

Controls Accept header.

Example Value | Schema

```
"string"
```

- For **POST**, provide any required JSON body or parameters → **Execute**.

POST /items Create Item

Parameters

No parameters

Request body required

application/json

Edit Value | Schema

```
{
  "text": "Take out the dog",
  "is_done": false
}
```

Execute

- Inspect the **Response body** and **Status code** returned below.
 - From a **GET** endpoint:

Responses

Curl

```
curl -X 'GET' \
  'https://obscure-xylophone-v7756vg76q4h4vg-8000.app.github.dev/' \
  -H 'accept: application/json'
```

Request URL

```
https://obscure-xylophone-v7756vg76q4h4vg-8000.app.github.dev/
```

Server response

Code	Details
200	<p>Response body</p> <pre>{ "Hello": "World" }</pre> <p>Response headers</p> <pre>cache-control: no-cache,no-store content-length: 17 content-type: application/json date: Thu, 18 Sep 2025 00:57:23 GMT expires: Thu, 01 Jan 1970 00:00:00 GMT pragma: no-cache ratelimit-limit: HttpRequestRatePerPort:1500/m,HttpRequestRatePerPort:1500/m ratelimit-remaining: HttpRequestRatePerPort:1499,HttpRequestRatePerPort:1499 ratelimit-reset: HttpRequestRatePerPort:14s,HttpRequestRatePerPort:10s referrer-policy: same-origin strict-transport-security: max-age=31536000; includeSubDomains vssas-request-id: 6fae201e-c20f-440a-a7ed-9e81c1b9b742 x-content-type-options: nosniff,nosniff x-ms-ratelimit-limit: x-ms-ratelimit-remaining: x-ms-ratelimit-reset: x-ms-ratelimit-used: 1 x-report-abuse: https://msrc.microsoft.com/report/abuse,https://msrc.microsoft.com/report/abuse x-robots-tag: noindex,nofollow x-served-by: tunnels-prod-rel-usw3-v3-cluster</pre>

- From a **POST** endpoint:

Code	Details
200	<p>Response body</p> <pre>[{ "text": "Take out the dog", "is_done": false }]</pre> <p>Response headers</p> <pre>cache-control: no-cache,no-store content-length: 45 content-type: application/json date: Thu, 18 Sep 2025 00:57:54 GMT expires: Thu, 01 Jan 1970 00:00:00 GMT pragma: no-cache ratelimit-limit: HttpRequestRatePerPort:1500/m,HttpRequestRatePerPort:1500/m ratelimit-remaining: HttpRequestRatePerPort:1499,HttpRequestRatePerPort:1499 ratelimit-reset: HttpRequestRatePerPort:49s,HttpRequestRatePerPort:39s referrer-policy: same-origin strict-transport-security: max-age=31536000; includeSubDomains vssas-request-id: e3cde0c9-7060-4ab1-95e8-58bb5948a6d5 x-content-type-options: nosniff,nosniff x-ms-ratelimit-limit: x-ms-ratelimit-remaining: x-ms-ratelimit-reset: x-ms-ratelimit-used: 1 x-report-abuse: https://msrc.microsoft.com/report/abuse,https://msrc.microsoft.com/report/abuse x-robots-tag: noindex,nofollow x-served-by: tunnels-prod-rel-usw3-v3-cluster</pre>

Troubleshooting

- Port not opening:** Check the **Ports** tab in Codespaces; ensure the app is still running and the port is **Public** or **Preview in Browser**.
- Command not found (**fastapi**):** Confirm your venv is active and **fastapi[standard]** installed. Run **which fastapi** (should point to **.venv/bin/fastapi**).

- **Python not detected:** In VS Code, press `⌘⇧P` / `Ctrl⇧P` → “Python: Select Interpreter” → choose `.venv` interpreter.
- **Different app filename:** Replace `main.py` with your app file name (e.g., `app.py`).
- **App instance name:** The `fastapi dev` command will auto-detect `app` in `main.py`. If your variable is different, use `fastapi dev main:my_app`.