Zero to Expert: FastAPI API Parameters + Project with uv CLI

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FastAPI Parameters Overview + Project

Introduction:

FastAPI is a high-performance web framework for building APIs using Python 3.7+ based on standard Python type hints.

Parameters in FastAPI:

1. Path Parameters - Used to capture values from the URL.

2. Query Parameters - Used to capture values passed in the URL query string.

3. Body Parameters - Used to send structured JSON data in POST requests.

4. Header Parameters - Values sent in request headers.

5. Form Parameters - Values submitted via HTML forms.

6. Cookie Parameters - Values stored in cookies.

7. File Parameters - For uploading files.

Project Setup using uv CLI:

```
$ uv init task_4_api_parameters
$ cd task_4_api_parameters
$ uv venv
$ source .venv/bin/activate
$ uv add "fastapi[standard]"
```

Sample Endpoints:

- GET /items/{item_id} -> Path Parameter

- GET /items?q=abc&skip=1&limit=10 -> Query Parameters

- POST /items -> Body Parameter with JSON

- GET /header-info/ -> Header Parameter

- POST /login/ -> Form Data

- GET /cookie/ -> Cookie Parameter (use curl)

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- POST /upload/ -> File Upload

Run your app:

$ uv run uvicorn main:app --host 0.0.0.0 --port 8000

Testing Tips:

Use Swagger docs at http://localhost:8000/docs to test all endpoints visually.

Tip:

To test cookie endpoint via curl:

curl -X GET http://localhost:8000/cookie/ --cookie "session_id=1234"