

Introduction to Flask & Building a REST API

Python Web Framework

What is Flask?

- Flask is a lightweight Python web framework
- Used to build web apps and APIs
- Minimal, flexible, and easy to learn
- Based on WSGI (Web Server Gateway Interface)
- Comes with a built-in development server

Why Use Flask?

- Simple and clean syntax
- Great for small to medium projects
- Easy to teach to beginners
- Large community and documentation
- Supports extensions (Auth, DB, etc.)

Installing Flask

- Install Python
- Create a project folder
- Create virtual environment=> `python -m venv venv`
- Activate virtual environment=> `venv\Scripts\Activate.ps1`
- Install Flask=> `pip install flask`
- Install dotenv=> `pip install python-dotenv`

Virtual Environment

- Isolates your project dependencies
- Prevents conflicts between different projects
- Keeps your system clean

Using a .env File

- Store environment variables safely
- Example values:
 - PORT
 - HOST
 - DEBUG
- Loaded using=> `from dotenv import load_dotenv`

What Is an API?

- Application Programming Interface
- Allows apps to communicate
- Works over HTTP
- Request → Response

HTTP Request Methods

- GET → Read data
- POST → Create data
- PUT → Replace data
- PATCH → Update part of data
- DELETE → Remove data
- These are the **CRUD** operations.

Our Flask API Endpoints

- GET /users
- GET /users/<id>
- POST /users
- PUT /users/<id>
- PATCH /users/<id>
- DELETE /users/<id>

Adding Logs

- Use `print()` inside each request
- Example
 - `print("[GET] Fetching users...")`