



Restful API And Microservices with Python

Day 2



Day 2 - Overview

- Pending items from Day 1 (PUT, DELETE, error handling and testing)
- Running a SQLite database and interacting with it from Python
- Retrieving many items from the database
- Writing our Item resources to a database
- Deleting our Item resources from the database
- Refactoring insertion of items
- The PUT method with database interaction



Prerequisite

- VM with windows OS
- Python 3.8 or >
- Visual Studio Code - Code Editor
- Postman
- Docker - Not Mandatory for current training



PUT, DELETE, validation and error handling

- Copy the contents of below file into your local **app.py**

<https://github.com/saurav-samantray/microservices-flask-series/blob/main/todo-flask-restful/app3.py>

- Copy the contents of below file into a new file in your local called **exceptions.py**

<https://github.com/saurav-samantray/microservices-flask-series/blob/main/todo-flask-restful/exceptions.py>

- Restart application if not running in debug mode.
- Test the PUT endpoint to validate updated content
- Test the DELETE endpoint to validate removal of content
- Test the PUT endpoint with invalid id
- Test the POST call with duplicate entry



Test-First API Design

- Copy the contents of below file into your local as a new file **test_todos.py**

https://github.com/saurav-samantray/microservices-flask-series/blob/main/todo-flask-restful/test_todos.py

- Stop the application server if it is running and execute the below command to initiate the test cases

python -m unittest test_todos.py



Running a SQLite database and interacting with it from Python

- Copy the contents of below file into **app.py** in your local.

<https://github.com/saurav-samantray/microservices-flask-series/blob/main/todo-flask-restful/app4.py>

- Create a new file called **schema.sql** and copy the contents from below location.


<https://github.com/saurav-samantray/microservices-flask-series/blob/main/todo-flask-restful/schema.sql>

- Create a new file called **init_db.py** and copy the contents from below location.

https://github.com/saurav-samantray/microservices-flask-series/blob/main/todo-flask-restful/init_db.py

- Stop the application server if it is already running.
- Execute the below command to initialize the data with schema and initial data.

python init_db.py



Write, List, Update and Delete records from Database using REST APIs

- Execute the GET API to fetch list of items from the database
- Execute the POST API to create new item in the todo database
- Execute the PUT API to update an existing item in the database
- Execute the DELETE API to remove an existing item in the database.



Q and A