

Python

REST: TASKS SERVER

Building a REST server in Python

A case study with the todo list application



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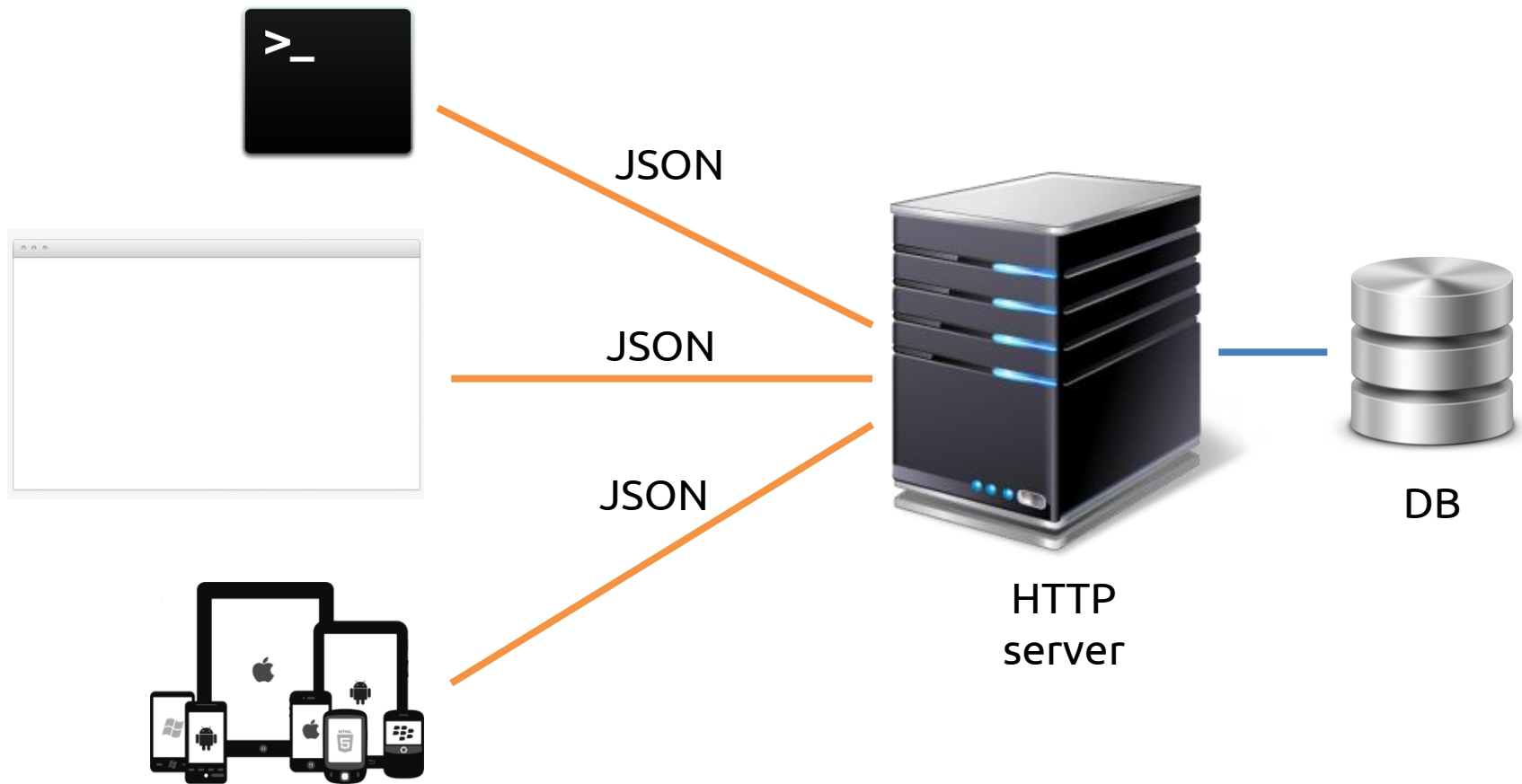
Goals

- Understanding how to design a REST service
- Implementing a REST service in Python
 - Using Flask
- Be concrete
 - Build upon previous knowledge (Lab)
 - REST Server for managing Tasks

Flask Tasks Server

- A basic server that:
 - Connect to a database that contains a series of tasks
 - For each task provides information such as
 - task description and task priority
 - Can show
 - a single task
 - all the existing tasks
 - Can create a new task

Flask Tasks Server



Resources

- Identify the resources to expose
 - Task
 - Represents a single task with its own information
 - Each task is identified by a unique id
 - Tasks
 - The set of tasks available

REST service design

- URLs built on resources
 - `/api/v1.0/tasks` → the collection of tasks
- How to represent a single task
 - They are identified by a unique id
 - `/api/v1.0/tasks/22` → the task with id=22

Tasks

- GET /api/v1.0/tasks
 - return all the tasks in JSON
- GET /api/v1.0/tasks/22
 - return task #22 in JSON
- Example

```
{  
  "task": {  
    "description": "call Giovanni for Aml project organization",  
    "id": 22,  
    "urgent": 1  
  }  
}
```

Tasks

- POST /api/v1.0/tasks
 - create a new task
 - an id is assigned automatically to the newly created tasks
 - task description and priority in JSON
- Example of the HTTP request body

```
{  
  "description": "This is a new task",  
  "urgent": 0  
}
```


Result

- Checkout on GitHub
 - <https://github.com/Aml-2017/python-rest>

Questions?




01QZP AMBIENT INTELLIGENCE

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