

Task: Create and Implement a REST API Server in a Linux machine (virtualization). Do a couple of calls to the server.

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Virtualization Tool Used: OracleVM  
Linux OS: Ubuntu

I used 2 terminal sessions; one for developing the program/running it, the other to call some functions of the API.

My REST API: api.py

Data:

Array of accounts (size 2)  
Each account has string name and int ID number

Functions:

`getAccounts()`: returns ALL accounts  
`getAccount(accountnumber)`: returns details of the specified account  
`addAccount()`: adds an account to the account array

The `getAccounts()` and `getAccount(int)` functions used the `GET` method, while the `addAccount` used the `POST` method.

**The code for the api.py and the linux commands are down below:**

api.py:

```
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from flask import Flask, jsonify
from flask import request

app = Flask(__name__)

accounts = [
 {'name': "Shaun", 'ID': 185188},
 {'name': "Shanelle", 'ID': 216424}
]

@app.route("/accounts", methods=["GET"])

def getAccounts():
 return jsonify(accounts)

@app.route("/account/<an>", methods=["GET"])

def getAccount(an):
 accountNumber = int(an)-1
 return jsonify(accounts[accountNumber])

@app.route("/account", methods=["POST"])

def addAccount():
 name = request.json['name']
 id = request.json['ID']
 data = {'name': name, 'ID': id}
 accounts.append(data)
 return jsonify(data)
```

First Terminal Session (Run script):

```
$ bin/python3 api.py
```

Second Terminal Session (Test):

```
$ curl http://127.0.0.1:5000/accounts
```

```
$ curl http://127.0.0.1:5000/account/1
```

```
$ curl http://127.0.0.1:5000/account/2
```

```
$ curl -X POST -H "Content-Type: application/json" -d '{"name": "Shovon", "balance": 100}' http://127.0.0.1:8080/account
```