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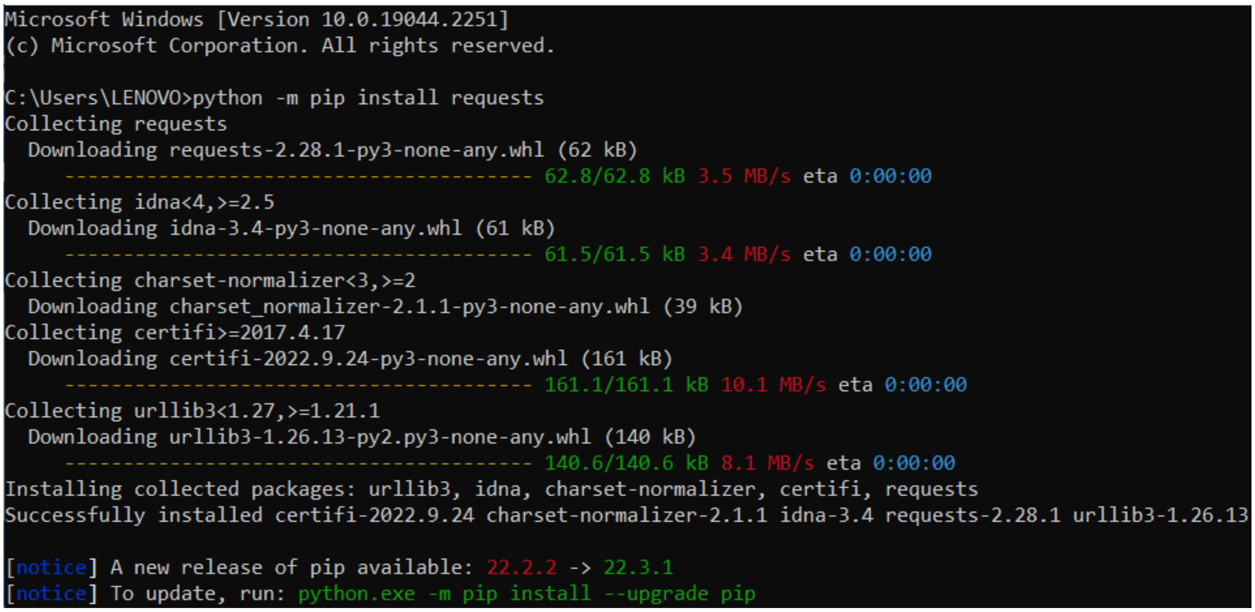
IF – 44 – 01

Tugas Pendahuluan Sistem Paralel dan Terdistribusi Modul 8

1. Service-Oriented Architecture (SOA) merupakan seperangkat komponen yang dapat dipanggil dan yang deskripsi antarmukanya dapat diterbitkan (published) dan ditemukan (discovered).

2. Menurut saya terdapat beberapa perbedaan antara Service-Oriented Architecture dengan Microservice walaupun dapat dikatakan bahwa kedua istilah tersebut merupakan sebuah arsitektur yang sama, setiap fungsionalitas dari Service-Oriented Architecture memiliki satu kesatuan dalam sistem kinerja, dengan kata lain bahwa jika adanya sebuah fungsi yang mengalami kegagalan maka akan mempengaruhi semua fungsi lainnya, sedangkan untuk Microservice tidak, karena setiap kinerja sistem terpisah berdasarkan fungsinya.

1. Penginstalan Library Request:

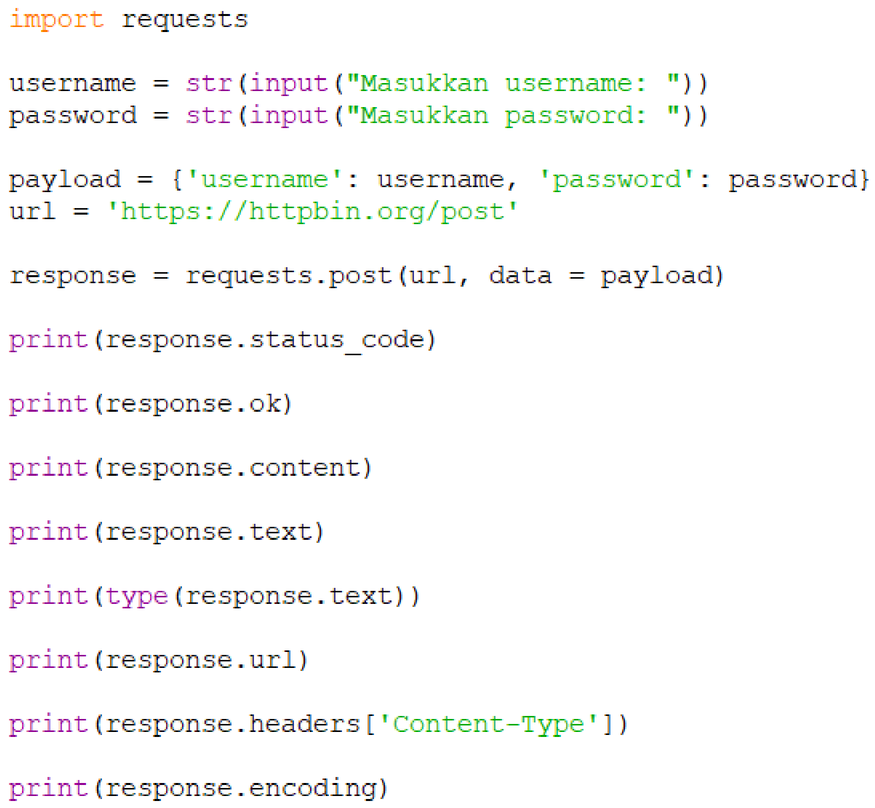


```
Microsoft Windows [Version 10.0.19044.2251]
(c) Microsoft Corporation. All rights reserved.

C:\Users\LENOVO>python -m pip install requests
Collecting requests
  Downloading requests-2.28.1-py3-none-any.whl (62 kB)
     ---------------------------------------- 62.8/62.8 kB 3.5 MB/s eta 0:00:00
Collecting idna<4,>=2.5
  Downloading idna-3.4-py3-none-any.whl (61 kB)
     ---------------------------------------- 61.5/61.5 kB 3.4 MB/s eta 0:00:00
Collecting charset-normalizer<3,>=2
  Downloading charset_normalizer-2.1.1-py3-none-any.whl (39 kB)
Collecting certifi>=2017.4.17
  Downloading certifi-2022.9.24-py3-none-any.whl (161 kB)
     ---------------------------------------- 161.1/161.1 kB 10.1 MB/s eta 0:00:00
Collecting urllib3<1.27,>=1.21.1
  Downloading urllib3-1.26.13-py2.py3-none-any.whl (140 kB)
     ---------------------------------------- 140.6/140.6 kB 8.1 MB/s eta 0:00:00
Installing collected packages: urllib3, idna, charset-normalizer, certifi, requests
Successfully installed certifi-2022.9.24 charset-normalizer-2.1.1 idna-3.4 requests-2.28.1 urllib3-1.26.13

[notice] A new release of pip available: 22.2.2 -> 22.3.1
[notice] To update, run: python.exe -m pip install --upgrade pip
```

Kelompok:

1. RIZKY FERDIAN PRASETYO – 1301204229
2. M. NAUFAL RIFQI RAMDHANI – 1301201572
3. MUHAMMAD RAFI ANDEO PRAJA – 1301200278
4. DIAN RAMADHINI – 1301200254

API POST Program:



```
import requests

username = str(input("Masukkan username: "))
password = str(input("Masukkan password: "))

payload = {'username': username, 'password': password}
url = 'https://httpbin.org/post'

response = requests.post(url, data = payload)

print(response.status_code)

print(response.ok)

print(response.content)

print(response.text)

print(type(response.text))

print(response.url)

print(response.headers['Content-Type'])

print(response.encoding)
```

API GET Program:

```
import requests

# user diganti dengan username yang diinputkan setelah dipost ke httpbin.org oleh user 1
# passwd diganti dengan password yang diinputkan setelah dipost ke httpbin.org oleh user 1

response = requests.get('https://httpbin.org/basic-auth/user/passwd', auth=('user', 'passwd'))

print(response)

print(response.status_code)

print(response.text)

print(response.url)

print(response.headers['Content-Type'])

print(response.json())

print(type(response.json()))
```

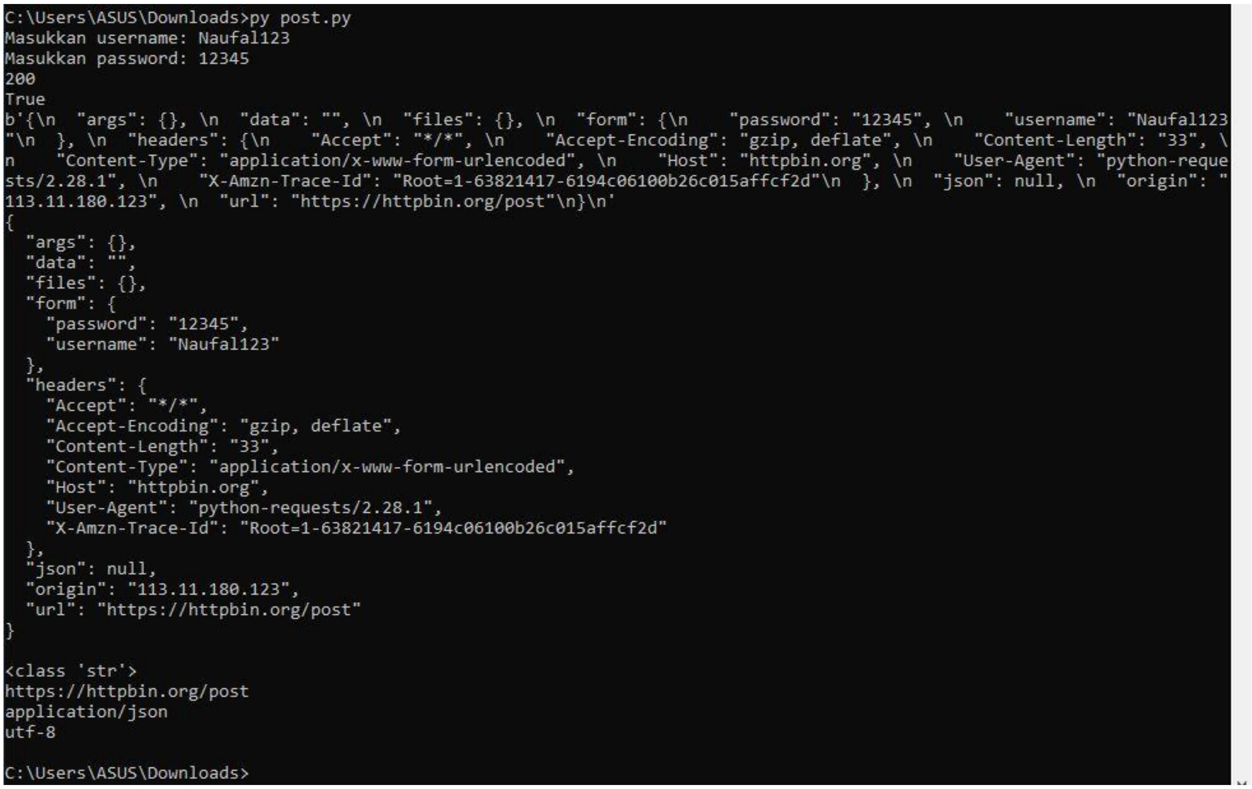
API PUT Program:

```
import requests

username = str(input("Masukkan username: "))
password = str(input("Masukkan password: "))

payload = {'username': username, 'password': password}
url = 'https://httpbin.org/put'

response = requests.put(url, data = payload)

print(response.status_code)

print(response.ok)

print(response.content)

print(response.text)

print(type(response.text))

print(response.url)

print(response.headers['Content-Type'])

print(response.encoding)
```

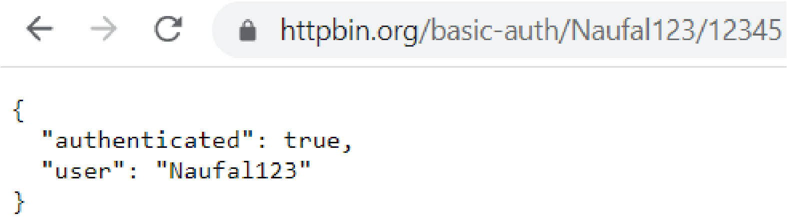
API DELETE Program:

```
import requests

username = str(input("Masukkan username: "))
password = str(input("Masukkan password: "))

payload = {'username': username, 'password': password}
url = 'https://httpbin.org/delete'

response = requests.delete(url, data = payload)

print(response.status_code)

print(response.ok)

print(type(response.text))

print(response.url)

print(response.headers['Content-Type'])

print(response.encoding)
```

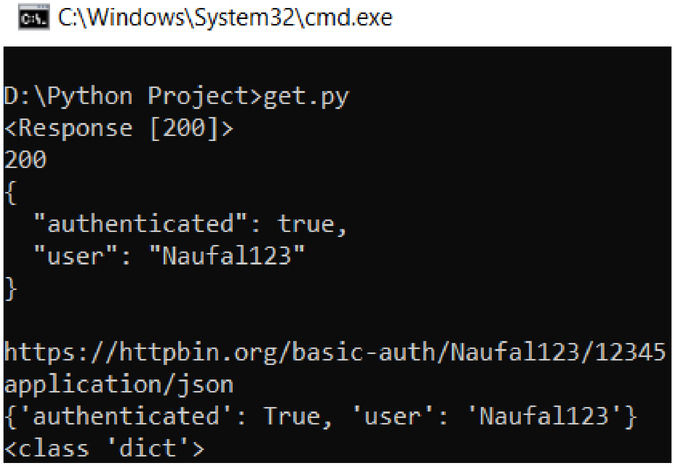
Output:



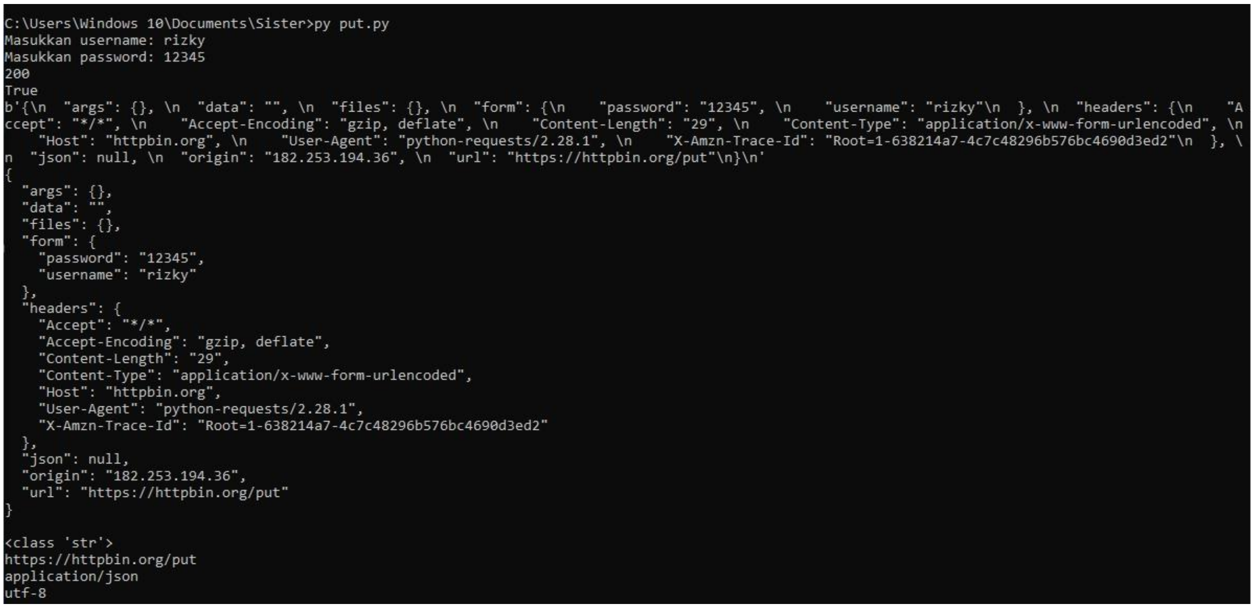
```
C:\Users\ASUS\Downloads>py post.py
Masukkan username: Naufal123
Masukkan password: 12345
200
True
b'{\n  "args": {}, \n  "data": "", \n  "files": {}, \n  "form": {\n    "password": "12345", \n    "username": "Naufal123
"\n  }, \n  "headers": {\n    "Accept": "*/*", \n    "Accept-Encoding": "gzip, deflate", \n    "Content-Length": "33", \
n    "Content-Type": "application/x-www-form-urlencoded", \n    "Host": "httpbin.org", \n    "User-Agent": "python-reque
sts/2.28.1", \n    "X-Amzn-Trace-Id": "Root=1-63821417-6194c06100b26c015affcf2d"\n  }, \n  "json": null, \n  "origin": "
113.11.180.123", \n  "url": "https://httpbin.org/post"\n}\n'
{
  "args": {},
  "data": "",
  "files": {},
  "form": {
    "password": "12345",
    "username": "Naufal123"
  },
  "headers": {
    "Accept": "*/*",
    "Accept-Encoding": "gzip, deflate",
    "Content-Length": "33",
    "Content-Type": "application/x-www-form-urlencoded",
    "Host": "httpbin.org",
    "User-Agent": "python-requests/2.28.1",
    "X-Amzn-Trace-Id": "Root=1-63821417-6194c06100b26c015affcf2d"
  },
  "json": null,
  "origin": "113.11.180.123",
  "url": "https://httpbin.org/post"
}

<class 'str'>
https://httpbin.org/post
application/json
utf-8

C:\Users\ASUS\Downloads>
```



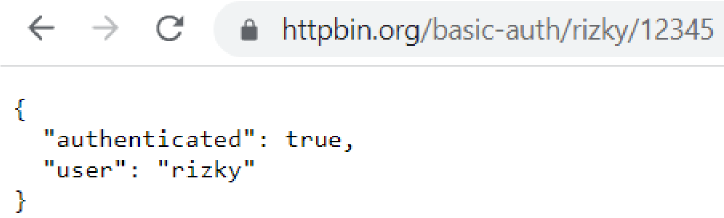
```
{
  "authenticated": true,
  "user": "Naufal123"
}
```



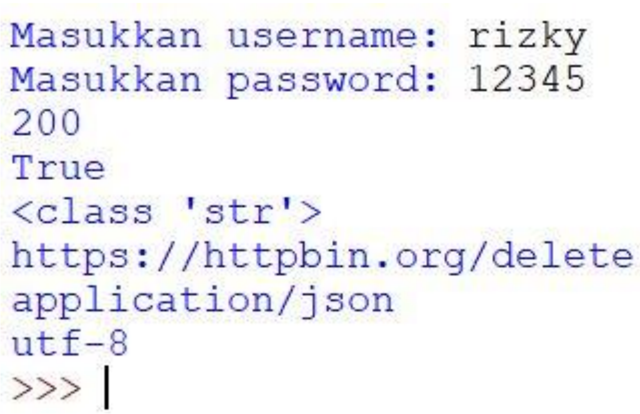
```
D:\Python Project>get.py
<Response [200]>
200
{
  "authenticated": true,
  "user": "Naufal123"
}

https://httpbin.org/basic-auth/Naufal123/12345
application/json
{'authenticated': True, 'user': 'Naufal123'}
<class 'dict'>
```



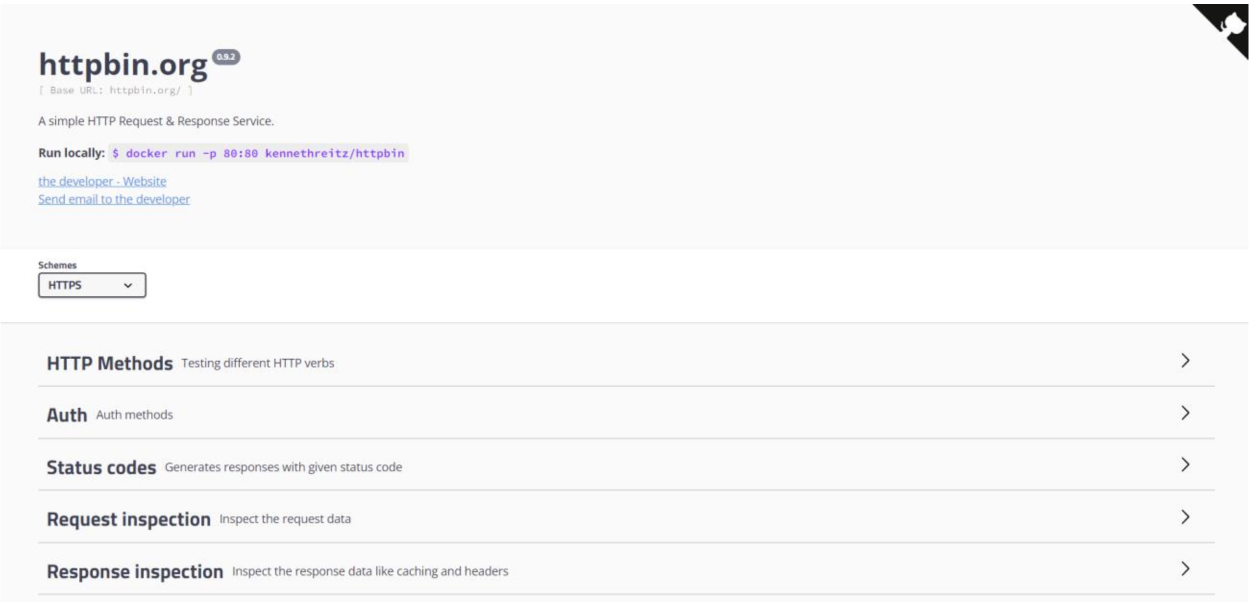
```
C:\Users\Windows 10\Documents\Sister>py put.py
Masukkan username: rizky
Masukkan password: 12345
200
True
b'{\n  "args": {}, \n  "data": "", \n  "files": {}, \n  "form": {\n    "password": "12345", \n    "username": "rizky"\n  }, \n  "headers": {\n    "A
ccept": "*/*", \n    "Accept-Encoding": "gzip, deflate", \n    "Content-Length": "29", \n    "Content-Type": "application/x-www-form-urlencoded", \n
    "Host": "httpbin.org", \n    "User-Agent": "python-requests/2.28.1", \n    "X-Amzn-Trace-Id": "Root=1-638214a7-4c7c48296b576bc4690d3ed2"\n  }, \
n  "json": null, \n  "origin": "182.253.194.36", \n  "url": "https://httpbin.org/put"\n}\n'
{
  "args": {},
  "data": "",
  "files": {},
  "form": {
    "password": "12345",
    "username": "rizky"
  },
  "headers": {
    "Accept": "*/*",
    "Accept-Encoding": "gzip, deflate",
    "Content-Length": "29",
    "Content-Type": "application/x-www-form-urlencoded",
    "Host": "httpbin.org",
    "User-Agent": "python-requests/2.28.1",
    "X-Amzn-Trace-Id": "Root=1-638214a7-4c7c48296b576bc4690d3ed2"
  },
  "json": null,
  "origin": "182.253.194.36",
  "url": "https://httpbin.org/put"
}

<class 'str'>
https://httpbin.org/put
application/json
utf-8
```



```
{
  "authenticated": true,
  "user": "rizky"
}
```



```
Masukkan username: rizky
Masukkan password: 12345
200
True
<class 'str'>
https://httpbin.org/delete
application/json
utf-8
>>> 
```



httpbin.org

[Base URL: httpbin.org/]

A simple HTTP Request & Response Service.

Run locally: `$ docker run -p 80:80 kennethreitz/httpbin`

the developer - Website
Send email to the developer

Schemes
HTTPS

HTTP Methods Testing different HTTP verbs

Auth Auth methods

Status codes Generates responses with given status code

Request inspection Inspect the request data

Response inspection Inspect the response data like caching and headers