

Pertanyaan:

1. Jelaskan sesuai dengan pemahaman anda mengenai REST Client!

REST Client merupakan bagian dari *REST API* yang bertugas untuk mengirim *request* atau permintaan ke *REST Server*.

2. Berikan gambaran proses request data dari REST Client ke REST Server!

Pertama pihak *Client* akan mengirim permintaan, permintaan tersebut akan diproses di dalam *REST API*, lalu akan dikirimkan ke *REST Server*, dan data akan dikembalikan ke *API* untuk diproses, setelah itu data yang telah diproses akan dikirim kembali ke pihak *Client*.

3. Sebutkan teknologi atau bahasa pemrograman yang mendukung untuk pengembangan REST Client!

REST bisa digunakan diberbagai bahasa pemrograman, *REST* juga memiliki *Official ToolKit* yang bernama *Octokit* yang dapat digunakan pada bahasa pemrograman *Ruby*, *dotNet*, dan *JavaScript*, selain *Official Toolkit* terdapat juga *library* pihak ketiga untuk berbagai macam bahasa pemrograman seperti *libsas* untuk *Python*, *Ghee* untuk *Ruby*, dan lain lain.

4. Berikan penjelasan anda mengenai apa itu jQuery!

jQuery merupakan sebuah *library* yang berisi fungsi fungsi berbasis *javascript*, *jQuery* ini bertujuan untuk mempermudah *developer* untuk menggunakan fungsi *javascript*.

5. Buatlah sebuah REST Client yang memiliki tampilan yang menarik (minimal terdapat navbar, carousel, table, jumbotron dan card) dengan menggunakan jQuery dan Bootstrap, adapun data yang ditampilkan adalah data JSON yang telah anda kerjakan pada postlab 6!

Source Codes**a.** app.py

```
from flask import Flask, jsonify, render_template
import mysql.connector
app = Flask(__name__)

db = mysql.connector.connect(
    host = "localhost",
    user = "root",
    password = "",
    database = "sia_383"
)

@app.route("/")
def index():
    return render_template("home.html")

@app.route("/mhs")
def mhs():
    return render_template("apprentices.html")

@app.route("/news")
def news():
    return render_template("news.html")

@app.route("/show", methods=["GET"])
def show():
    cur = db.cursor()
    cur.execute("select * from mhs_383")
    getall = cur.fetchall()
    res = jsonify(getall)
    res.status_code = 200
    res.headers.add('Access-Control-Allow-Origin', '*')
    return res

if __name__ == "__main__":
    app.run(debug=True)
```

b. header.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Akihiko Dojo</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js"></script>
```

```

<script src="https://code.jquery.com/jquery-3.6.0.js" integrity="sha256-H+K7U5CnX11h5ywQfKtSj8PCmoN9aaq30gDh27Xc0jk="
crossorigin="anonymous"></script>
</head>
<body>
<div class="p-4 bg-secondary text-white text-center">
  <h1>Welcome to Akihiko Dojo</h1>
  <p>The Most Honorable Dojo in Tamriel!</p>
</div>
<nav class="navbar navbar-expand-sm bg-dark navbar-dark sticky-top">
  <div class="container-fluid">
    <ul class="navbar-nav">
      <span class="navbar-text">道場 |</span>
      <li class="nav-item">
        <a class="nav-link" href="/">Home</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="/news">News</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="/mhs">Apprentices</a>
      </li>
      <li class="nav-item">
        <a class="nav-link disabled" href="#">Join</a>
      </li>
    </ul>
  </div>
</nav>

<div class="container-fluid">
  <div class="row ps-4 mt-3">
    <div class="col-sm-4 p-2 border w-25">
      <div class="container border">
        <h2>About Us</h2>
        <h5>Our Logo:</h5>
        
        <p>"Having ascended to the apex of his strength, Father Servo put everything on the line and win.
          With his victory achieved, nothing remains but to build a dojo"</p>
      </div>
      <div class="container border py-3">
        <h3>道場</h3>
        <p>Akihiko Dojo</p>
        <ul class="nav nav-pills flex-column">
          <li class="nav-item">
            <a class="nav-link" href="#">Twitter</a>
          </li>
          <li class="nav-item">
            <a class="nav-link" href="#">Instagram</a>
          </li>
          <li class="nav-item">
            <a class="nav-link" href="#">Youtube</a>
          </li>
        </ul>
      </div>
    </div>
  </div>
</div>

```

c. footer.html

```

<div class="mt-5 p-4 bg-dark text-white text-center">
  <p>Copyright © 1972-2022 Akihiko Dojo. All rights reserved.</p>
</div>
</body>
</html>

```

d. home.html

```

{% include 'header.html' %}
<div class="col-sm-8">
  <div id="demo" class="carousel slide" data-bs-ride="carousel">
    <div class="carousel-indicators">
      <button type="button" data-bs-target="#demo" data-bs-slide-to="0" class="active"></button>
      <button type="button" data-bs-target="#demo" data-bs-slide-to="1"></button>
      <button type="button" data-bs-target="#demo" data-bs-slide-to="2"></button>
    </div>
    <div class="carousel-inner">
      <div class="carousel-item active">
        
      </div>
    </div>
  </div>

```

```

        <div class="carousel-item">
            
        </div>
        <div class="carousel-item">
            
        </div>
    </div>
    <button class="carousel-control-prev" type="button" data-bs-target="#demo" data-bs-slide="prev">
    <span class="carousel-control-prev-icon"></span>
    </button>
    <button class="carousel-control-next" type="button" data-bs-target="#demo" data-bs-slide="next">
    <span class="carousel-control-next-icon"></span>
    </button>
</div>
<div class="p-3 bg-secondary text-white">
    <h2>私たちの道場へようこそ | Welcome to Our Dojo</h2>
</div>
</div>
</div>
</div>
{% include 'footer.html' %}

```

e. news.html

```

{% include 'header.html' %}
<div class="col-sm-8">
    <div class="p-3 bg-secondary text-white rounded">
        <h2>News (情報)</h2>
        <p>This is the what happens at our Dojo, Recently.</p>
    </div>
    <div class="container mt-2 border">
        <h2 class="mt-3">Back on the Mat - The Dojo Re-Opens</h2>
        <h5>By Fujimoto Sensei, Dec 7, 2021</h5>
        
        <p>Finally after..</p>
        <p>The dojo was closed for about 17 months.
            The NY Aikikai offered zoom classes for most of those months.
            After all the effort done to re-open the dojo,
            finally Yamada Sensei got to teach on Tuesday June 8th.
            It was a very festive day at the dojo.
        </p>
        <h2 class="mt-5">My Journey with Online Training</h2>
        <h5>By Tanaka Sensei, Sep 2, 2021</h5>
        
        <p>Sadly..</p>
        <p>When the New York Aikikai announced its online classes
            in response to the realities imposed by COVID, I supported their decision.
            At that time, I saw these classes as an opportunity for the community to remain in touch.</p>
    </div>
</div>
</div>
</div>
{% include 'footer.html' %}

```

f. apprentices.html

```

{% include 'header.html' %}
<div class="col-sm-8">
    <div class="p-3 bg-secondary text-white rounded">
        <h2>Apprentice (弟子) Data</h2>
        <p>This is the data for our Apprentices in Akihiko Dojo</p>
    </div>
    <table class="table table-striped table-bordered table-hover mt-3">
        <thead>
            <tr>
                <th scope="col">#</th>
                <th scope="col">Name</th>
                <th scope="col">Birth Place</th>
                <th scope="col">Birth Date</th>
                <th scope="col">Gender</th>
                <th scope="col">Address</th>
                <th scope="col">Email</th>
            </tr>
        </thead>
    </table>

```

```
<tbody id="row"></tbody>
</table>
<script>
$.ajax({
  type:"GET",
  url:"http://127.0.0.1:5000/show",
  success: function(result) {
    for(var i = 0;i < result.length; i++){
      var row = $('<tr><td>' + result[i][0] +
        '</td><td>' + result[i][1] +
        '</td><td>' + result[i][2] +
        '</td><td>' + result[i][3] +
        '</td><td>' + result[i][4] +
        '</td><td>' + result[i][5] +
        '</td><td>' + result[i][6] +
        '</td></tr>')
      $('#row').append(row)
    }
  }
})
</script>
</div>
</div>
</div>
</div>
{% include 'footer.html' %}
```

Screenshot


Welcome to Akihiko Dojo

The Most Honorable Dojo in Tamriel!

道場 | [Home](#) [News](#) [Apprentices](#) [Join](#)

About Us

Our Logo:



"Having ascended to the apex of his strength, Father Servo put everything on the line and win. With his victory achieved, nothing remains but to build a dojo"


道場

Akihiko Dojo

[Twitter](#)

[Instagram](#)

[Youtube](#)



私たちの道場へようこそ | Welcome to Our Dojo

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Welcome to Akihiko Dojo

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道場

Akihiko Dojo

[Twitter](#)

[Instagram](#)

[Youtube](#)

News (情報)

This is the what happens at our Dojo, Recently.

Back on the Mat – The Dojo Re-Opens

By Fujimoto Sensei, Dec 7, 2021

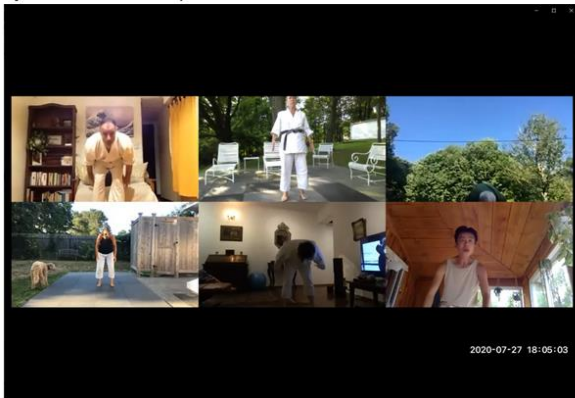


Finally after..

The dojo was closed for about 17 months. The NY Aikikai offered zoom classes for most of those months. After all the effort done to re-open the dojo, finally Yamada Sensei got to teach on Tuesday June 8th. It was a very festive day at the dojo.

My Journey with Online Training

By Tanaka Sensei, Sep 2, 2021



Sadly..

When the New York Aikikai announced its online classes in response to the realities imposed by COVID, I supported their decision. At that time, I saw these classes as an opportunity for the community to remain in touch.

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Welcome to Akihiko Dojo

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About Us

Our Logo:



"Having ascended to the apex of his strength, Father Servo put everything on the line and win. With his victory achieved, nothing remains but to build a dojo"

道場

Akihiko Dojo

[Twitter](#)

[Instagram](#)

[Youtube](#)

Apprentice (弟子) Data

This is the data for our Apprentices in Akihiko Dojo

#	Name	Birth Place	Birth Date	Gender	Address	Email
111	Allan	Pati	Wed, 09 Jan 2002 00:00:00 GMT	Pria	Alamat Disini	email1@email.com
222	Stacy	Texas	Sat, 05 Dec 1992 00:00:00 GMT	Wanita	Alamat Disana	email2@email.com

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6. Tambahkan penjelasan anda pada soal nomor 5!

a. app.py | bagian 1

Source Codes

```
from flask import Flask, jsonify, render_template
import mysql.connector

app = Flask(__name__)
db = mysql.connector.connect(
    host = "localhost",
    user = "root",
    password = "",
    database = "sia_383"
)
```

Penjelasan

Bagian kode ini digunakan untuk memasukan/*import flask* dan *mysql*, dan mengkoneksikan *database mysql* ke aplikasi kita.

b. app.py | bagian 2

Source Code

```
@app.route("/")
def index():
    return render_template("home.html")

@app.route("/mhs")
def mhs():
    return render_template("apprentices.html")

@app.route("/news")
def news():
    return render_template("news.html")

@app.route("/show", methods=["GET"])
def show():
    cur = db.cursor()
    cur.execute("select * from mhs_383")
    getall = cur.fetchall()
    res = jsonify(getall)
    res.status_code = 200
    res.headers.add('Access-Control-Allow-Origin', '*')
    return res

if __name__ == "__main__":
    app.run(debug=True)
```

Penjelasan

Pada bagian kode ini, *python* akan melakukan *routing* yaitu yang secara *default* untuk menampilkan halaman *home.html*, untuk *routing* yang kedua digunakan untuk menampilkan halaman mahasiswa alias *apprentices.html*, lalu untuk yang *route* ketiga berfungsi untuk menampilkan halaman *news.html*, dan *route* yang terakhir digunakan untuk mengambil data dari *database* dan akan dikirim ke bentuk *json*. Untuk yang *if* tersebut digunakan untuk menjalankan program ini.

c. header.html | bagian 1

Source Code

```
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet">
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js"></script>
<script src="https://code.jquery.com/jquery-3.6.0.js" integrity="sha256-
H+K7U5CnXl1h5ywQfKtSj8PCmoN9aaq30gDh27Xc0jk=" crossorigin="anonymous"></script>
```

Penjelasan

Kode HTML ini digunakan untuk mengambil fungsi fungsi dari *Bootstrap* yang biasanya berupa *css*, dan juga *script* dari *jQuery*.

d. header.html | bagian 2

Source Code

```
<div class="p-4 bg-secondary text-white text-center">
  <h1>Welcome to Akihiko Dojo</h1>
  <p>The Most Honorable Dojo in Tamriel!</p>
</div>
<nav class="navbar navbar-expand-sm bg-dark navbar-dark sticky-top">
```

```

<div class="container-fluid">
  <ul class="navbar-nav">
    <span class="navbar-text">道場 |</span>
    <li class="nav-item">
      <a class="nav-link" href="/">Home</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="/news">News</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="/mhs">Apprentices</a>
    </li>
    <li class="nav-item">
      <a class="nav-link disabled" href="#">Join</a>
    </li>
  </ul>
</div>
</nav>

```

Penjelasan

Pada kode HTML ini berfungsi untuk membuat *jumbotron*, dan *navbar*.

e. header.html | bagian 3

Source Code

```

<div class="container-fluid">
  <div class="row ps-4 mt-3">
    <div class="col-sm-4 p-2 border w-25">
      <div class="container border">
        <h2>About Us</h2>
        <h5>Our Logo:</h5>
        
        <p>"Having ascended to the apex of his strength, Father Servo put everything on the line and win. With his victory achieved, nothing remains but to build a dojo"</p>
      </div>
      <div class="container border py-3">
        <h3>道場</h3>
        <p>Akihiko Dojo</p>
        <ul class="nav nav-pills flex-column">
          <li class="nav-item">
            <a class="nav-link" href="#">Twitter</a>
          </li>
          <li class="nav-item">
            <a class="nav-link" href="#">Instagram</a>
          </li>
          <li class="nav-item">
            <a class="nav-link" href="#">Youtube</a>
          </li>
        </ul>
      </div>
    </div>
  </div>
</div>

```

Penjelasan

Pada kode HTML ini berfungsi untuk membuat *container* yang berisi *text* dan gambar, lalu *container* yang berisi *navlinks*.

f. footer.html

Source Code

```

<div class="mt-5 p-4 bg-dark text-white text-center">
  <p>Copyright © 1972-2022 Akihiko Dojo. All rights reserved.</p>
</div>
</body>
</html>

```

Penjelasan

Pada kode HTML ini berfungsi untuk membuat membuat *footer*.

g. home.html

Source Code

```
{% include 'header.html' %}
<div class="col-sm-8">
  <div id="demo" class="carousel slide" data-bs-ride="carousel">
    <div class="carousel-indicators">
      <button type="button" data-bs-target="#demo" data-bs-slide-to="0" class="active"></button>
      <button type="button" data-bs-target="#demo" data-bs-slide-to="1"></button>
      <button type="button" data-bs-target="#demo" data-bs-slide-to="2"></button>
    </div>
    <div class="carousel-inner">
      <div class="carousel-item active">
        
      </div>
      <div class="carousel-item">
        
      </div>
      <div class="carousel-item">
        
      </div>
    </div>
    <button class="carousel-control-prev" type="button" data-bs-target="#demo" data-bs-slide="prev">
      <span class="carousel-control-prev-icon"></span>
    </button>
    <button class="carousel-control-next" type="button" data-bs-target="#demo" data-bs-slide="next">
      <span class="carousel-control-next-icon"></span>
    </button>
  </div>
  <div class="p-3 bg-secondary text-white">
    <h2>私たちの道場へようこそ | Welcome to Our Dojo</h2>
  </div>
</div>
</div>
</div>
{% include 'footer.html' %}
```

Penjelasan

Pertama pada kode HTML ini akan mengambil dari *header* dan *footer*, dan ditengahnya akan diisi dengan *carousel* dan *jumbotron*.

h. news.html

Source Code

```
{% include 'header.html' %}
<div class="col-sm-8">
  <div class="p-3 bg-secondary text-white rounded">
    <h2>News (情報)</h2>
    <p>This is the what happens at our Dojo, Recently.</p>
  </div>
  <div class="container mt-2 border">
    <h2 class="mt-3">Back on the Mat - The Dojo Re-Opens</h2>
    <h5>By Fujimoto Sensei, Dec 7, 2021</h5>
    
    <p>Finally after..</p>
    <p>The dojo was closed for about 17 months.
      The NY Aikikai offered zoom classes for most of those months.
      After all the effort done to re-open the dojo,
      finally Yamada Sensei got to teach on Tuesday June 8th.
      It was a very festive day at the dojo.
    </p>
    ... news/post bagian dua disini ...
  </div>
</div>
</div>
</div>
{% include 'footer.html' %}
```

Penjelasan

Seperti di bagian *Home* pada kode HTML ini akan mengambil dari *header* dan *footer*, dan ditengahnya akan diisi dengan *jumbotron* dan *container* yang berisi *paragraph* dan *image*.

i. apprentices.html

Source Code

```
{% include 'header.html' %}
<div class="col-sm-8">
  <div class="p-3 bg-secondary text-white rounded">
    <h2>Apprentice (弟子) Data</h2>
    <p>This is the data for our Apprentices in Akihiko Dojo</p>
  </div>
  <table class="table table-striped table-bordered table-hover mt-3">
    <thead>
      <tr>
        <th scope="col">#</th>
        <th scope="col">Name</th>
        <th scope="col">Birth Place</th>
        <th scope="col">Birth Date</th>
        <th scope="col">Gender</th>
        <th scope="col">Address</th>
        <th scope="col">Email</th>
      </tr>
    </thead>
    <tbody id="row"></tbody>
  </table>
  <script>
    $.ajax({
      type:"GET",
      url:"http://127.0.0.1:5000/show",
      success: function(result) {
        for(var i = 0;i < result.length; i++){
          var row = $('<tr><td>' + result[i][0] +
            '</td><td>' + result[i][1] +
            '</td><td>' + result[i][2] +
            '</td><td>' + result[i][3] +
            '</td><td>' + result[i][4] +
            '</td><td>' + result[i][5] +
            '</td><td>' + result[i][6] +
            '</td></tr>')
          $('#row').append(row)
        }
      }
    })
  </script>
</div>
</div>
</div>
</div>
{% include 'footer.html' %}
```

Penjelasan

Seperti di bagian *Home* pada kode HTML ini akan mengambil dari *header* dan *footer*, dan ditengahnya akan diisi dengan *jumbotron* dan *table* yang berisi data dari *json*. Di dalam HTML page ini terdapat *script* yang berupa *jQuery* untuk mengambil data yang berformat *json*.