



MODUL WEB PROGRAMMER (REACT JS)

REST API

REST API (Representational State Transfer Application Programming Interface) adalah jenis API (Application Programming Interface) yang mengikuti prinsip REST. REST API memungkinkan aplikasi atau sistem untuk berkomunikasi dan bertukar data melalui permintaan HTTP standar, seperti **GET**, **POST**, **PUT**, dan **DELETE**.

HTTP Method	Fungsi	Deskripsi
GET	Membaca data	Mengambil atau membaca data dari server tanpa mengubah apa pun. Misalnya, mengambil daftar produk atau detail pengguna.
POST	Menambah data baru	Menambah data baru ke server. Misalnya, membuat pengguna baru atau menambah artikel baru.
PUT	Memperbarui data	Memperbarui data yang sudah ada di server. Biasanya digunakan untuk memperbarui seluruh resource.
PATCH	Memperbarui sebagian data	Memperbarui sebagian data pada resource. Misalnya, mengubah nama pengguna tanpa mengubah data lainnya.
DELETE	Menghapus data	Menghapus data dari server. Misalnya, menghapus akun pengguna atau produk tertentu.

Dokumentasi REST API

- Untuk menggunakan API umumnya kita dapat membaca dokumentasi penggunaannya. Untuk melakukan testing API kita bisa menggunakan tools seperti Postman, Insomnia, Swagger UI dan lainnya.
- Untuk API Todo yang akan dikerjakan bisa dilihat dokumentasinya di:
<https://jsonplaceholder.typicode.com/guide/>

Guide

Below you'll find examples using [Fetch API](#) but you can JSONPlaceholder with any other language.

You can copy paste the code in your browser console to quickly test JSONPlaceholder.

Getting a resource

```
fetch('https://jsonplaceholder.typicode.com/posts/1')  
  .then((response) => response.json())  
  .then((json) => console.log(json));
```

👉 Output

```
{  
  id: 1,  
  title: '...',  
  body: '...',  
  userId: 1  
}
```

Praktik SPA REST

1. Buat project baru (di folder belajar_react) melalui cmd : `npx create-react-app todo-app`
2. Buka VSCode, arahkan ke folder todo-app
3. Buka terminal , install dependencies:
`npm install axios react-bootstrap bootstrap react-router-dom react-router-bootstrap`
4. Import css di index.js : `import 'bootstrap/dist/css/bootstrap.min.css';`
5. Sesuaikan index.html yaitu: title, content
6. Buat Home.js (buka project photo-gallery juga untuk jadi referensi) dengan endpoint :
<https://jsonplaceholder.typicode.com/todos>. Sesuaikan dengan json nya.
7. Buat Header.js

Praktik SPA REST

8. Buat Header.js

JS Header.js U X

src > JS Header.js > [default]

```
1 import React from "react";
2 import { Navbar, Nav } from "react-bootstrap";
3 import { LinkContainer } from "react-router-bootstrap";
4 function Header() {
5   return (
6     <Navbar bg="light" expand="lg">
7       <LinkContainer to="/">
8         <Navbar.Brand>Todo App</Navbar.Brand>
9       </LinkContainer>
10      <Navbar.Toggle aria-controls="basic-navbar-nav" />
11      <Navbar.Collapse id="basic-navbar-nav">
12        <Nav className="ml-auto">
13          <LinkContainer to="/">
14            <Nav.Link>Home</Nav.Link>
15          </LinkContainer>
16        </Nav>
17      </Navbar.Collapse>
18    </Navbar>
19  );
20 }
21 export default Header;
```

Praktik SPA REST

9. Modifikasi App.js

JS App.js M X

src > JS App.js > App

```
1  import React from 'react';
2  import { BrowserRouter as Router, Route, Routes } from 'react-router-dom';
3  import Home from './Home';
4  import Header from './Header';
5
6  function App() {
7    return (
8      <Router>
9        <div className="container">
10         <Header />
11         <Routes>
12           <Route path="/" element={<Home />} />
13         </Routes>
14       </div>
15     </Router>
16   );
17 }
18
19 export default App;
```

Praktik SPA REST

10. Hasil

localhost:3000

Todo App

Home

List Of Todos

Title	Completed
delectus aut autem	Not Completed
quis ut nam facilis et officia qui	Not Completed
fugiat veniam minus	Not Completed
et porro tempora	Completed
laboriosam mollitia et enim quasi adipisci quia provident illum	Not Completed
qui ullam ratione quibusdam voluptatem quia omnis	Not Completed
illo expedita consequatur quia in	Not Completed
quo adipisci enim quam ut ab	Completed
molestiae perspiciatis ipsa	Not Completed
illo est ratione doloremque quia maiores aut	Completed

Lanjutan TODO

- Menambahkan component Add Todo : AddTodo.js
 - Component ini handle add todo dan Edit Todo
- Menambahkan tombol edit dan hapus ada Home.js
 - Klik Edit Todo maka akan ke page AddTodo dengan mengirimkan id
 - Hapus Todo Maka akan menghapus todo By Id

Mini Project

- Simple e commerce dari <https://fakestoreapi.com/>, lihat dokumentasi API nya
- Menampilkan list item
 - Menampilkan list item dari endpoint GET <https://fakestoreapi.com/products>
- Menampilkan detail item
 - Menampilkan detail item dari endpoint GET <https://fakestoreapi.com/products/idProduct>
 - Di halaman detail **input jumlah item**, tombol **Order**. Klik order hit endpoint POST <https://fakestoreapi.com/carts>
- Menampilkan halaman Cart
 - Di halaman Cart end point GET <https://fakestoreapi.com/carts/user/userid>
 - Terdapat delete dengan endpoint DELETE : <https://fakestoreapi.com/carts/cartid>
- Menampilkan halaman Checkout
 - Di halaman Checkout end point GET <https://fakestoreapi.com/carts/user/userid>

Mini Project

[Fake Store](#) [Home](#) [Cart](#)

List of Items



Fjallraven - Foldsack No. 1
Backpack, Fits 15 Laptops

\$109.95

[View Details](#)

Mens Casual Premium Slim
Fit T-Shirts

\$22.3

[View Details](#)

Mens Cotton Jacket

\$55.99

[View Details](#)

Mens Casual Slim Fit

\$15.99

[View Details](#)

John Hardy Women's
Legends Naga Gold & Silver
Dragon Station Chain

\$695

[View Details](#)

Solid Gold Petite Micropave

\$168

[View Details](#)

White Gold Plated Princess

\$9.99

[View Details](#)

Pierced Owl Rose Gold
Plated Stainless Steel
Double

\$10.99

[View Details](#)

WD 2TB Elements Portable
External Hard Drive - USB
3.0

\$64

[View Details](#)

SanDisk SSD PLUS 1TB
Internal SSD - SATA III 6
Gb/s

\$109

[View Details](#)

Silicon Power 256GB SSD 3D
NAND A55 SLC Cache
Performance Boost SATA III

\$109

[View Details](#)

WD 4TB Gaming Drive
Works with Playstation 4
Portable External Hard Drive

\$114

[View Details](#)

Fjallraven - Foldsack No. 1 Backpack, Fits 15 Laptops



Your perfect pack for everyday use and walks in the forest. Stash your
laptop (up to 15 inches) in the padded sleeve, your everyday

Price: \$109.95

Quantity

1

[Add to Cart](#)

Mini Project

Your Cart

Order Details

Date: 1/2/2020

Mens Casual Premium Slim Fit T-Shirts

\$22.3 x 4

Subtotal: \$89.20

[Remove](#)

Fjallraven - Foldsack No. 1 Backpack, Fits 15 Laptops

\$109.95 x 10

Subtotal: \$1099.50

[Remove](#)

John Hardy Women's Legends Naga Gold & Silver Dragon Station Chain Bracelet

\$695 x 2

Subtotal: \$1390.00

[Remove](#)

Summary

Grand Total: \$2578.70

[Proceed to Checkout](#)

Checkout Preview

Your Cart

Mens Casual Premium Slim Fit T-Shirts

\$22.3 x 4

Subtotal: \$89.20

Fjallraven - Foldsack No. 1 Backpack, Fits 15 Laptops

\$109.95 x 10

Subtotal: \$1099.50

John Hardy Women's Legends Naga Gold & Silver Dragon Station Chain Bracelet

\$695 x 2

Subtotal: \$1390.00

Order Summary

Total: \$2578.70

[Preview Only](#)

Mini Project

1. Buat project baru (di folder belajar_react) melalui cmd : `npx create-react-app olshop-app`
2. Buka VSCode, arahkan ke folder olshop-app
3. Buka terminal , install dependencies:
`npm install axios react-bootstrap bootstrap react-router-dom react-router-bootstrap`
4. Import css di index.js : `import 'bootstrap/dist/css/bootstrap.min.css';`
5. Sesuaikan index.html yaitu: title, content
6. Buat Header.js

Mini Project

Header.js

JS Header.js U X

src > JS Header.js > [🔗] default

```
1 import React from "react";
2 import { Navbar, Nav } from "react-bootstrap";
3 import { LinkContainer } from "react-router-bootstrap";
4 function Header() {
5   return (
6     <Navbar bg="light" expand="lg">
7       <LinkContainer to="/">
8         <Navbar.Brand>Fake Store</Navbar.Brand>
9       </LinkContainer>
10      <Navbar.Toggle aria-controls="basic-navbar-nav" />
11      <Navbar.Collapse id="basic-navbar-nav">
12        <Nav className="ml-auto">
13          <LinkContainer to="/">
14            <Nav.Link>Home</Nav.Link>
15          </LinkContainer>
16          <LinkContainer to="/cart">
17            <Nav.Link>Cart</Nav.Link>
18          </LinkContainer>
19        </Nav>
20      </Navbar.Collapse>
21    </Navbar>
22  );
23 }
24 export default Header;
```

Mini Project

7. Buat Home.js

JS Home.js U X

src > JS Home.js > [🔗] default

```
1  function Home(){
2    return (
3      <div>
4        <h1>Welcome to Our Fake Store!</h1>
5        <p>Here are some of our products:</p>
6      </div>
7    )
8  }
9  export default Home;
```

Mini Project

8. App.js

JS Home.js U

JS App.js M X

src > JS App.js > ...

```
1 import { BrowserRouter as Router, Routes, Route } from 'react-router-dom';
2 import Header from './Header';
3 import Home from './Home';
4
5 function App() {
6   return (
7     <Router>
8     <div className="container">
9       <Header />
10      <Routes>
11        <Route path="/" element={<Home />} />
12      </Routes>
13    </div>
14  </Router>
15  );
16 }
17 You, 2 hours ago • Initialize project using Create React App
18 export default App;
19
```

Mini Project

9. Buat file constants.js untuk menyimpan konstanta userid. Karena untuk saat ini userid nya di hardcode.

JS constants.js ×

src > JS constants.js

```
1 export const USER_ID = 1;
```

10. Buat file ApiService.js, yang isinya adalah kumpulan function-function untuk mengakses Api supaya mudah dalam manajemen kode. file akan diberikan.
11. Buat file css component.css. (file akan diberikan)

Mini Project

12. Home.js

JS Home.js U X

src > JS Home.js > ...

```
1  import React, { useState, useEffect } from 'react';
2  import { Card, Button, Row, Col } from 'react-bootstrap';
3  import { Link } from 'react-router-dom';
4  import { fetchProducts } from './ApiService';
5  import './component.css'
6
7  function Home() {
8    const [products, setProducts] = useState([]);
9
10   useEffect(() => {
11     const getProducts = async () => {
12       try {
13         const data = await fetchProducts();
14         setProducts(data);
15       } catch (error) {
16         console.error('Error fetching products:', error);
17       }
18     };
19     getProducts();
20   }, []);
21
```

Mini Project

13. Home.js

```

22   return (
23     <div>
24       <h1>List of Items</h1>
25       <Row>
26         {products.map((product) => (
27           <Col key={product.id} xs={12} sm={6} md={2} lg={2}>
28             <Card style={{ marginBottom: '1rem', display: 'flex', flexDirection: 'column' }}>
29               <Card.Img
30                 variant="top"
31                 src={product.image}
32                 style={{
33                   objectFit: 'cover',
34                   height: '120px',
35                   width: '100%',
36                 }}
37               />
38               <Card.Body style={{ flex: 1 }}>
39                 <Card.Text style={{ height: '60px', overflow: 'hidden' }}>{product.title}</Card.Text>
40                 <Card.Text>${product.price}</Card.Text>
41                 <Link className="d-flex justify-content-center" to={` /detail/${product.id}`}>
42                   <Button variant="primary">View Details</Button>
43                 </Link>
44               </Card.Body>
45             </Card>
46           </Col>
47         ))}
48       </Row>
49     </div>
50   );
51













```

Mini Project

14. Checking Point

Fake Store Home Cart

List of Items

 <p>Fjallraven - Foldsack No. 1 Backpack, Fits 15 Laptops</p> <p>\$109.95</p> <p>View Details</p>	 <p>Mens Casual Premium Slim Fit T-Shirts</p> <p>\$22.3</p> <p>View Details</p>	 <p>Mens Cotton Jacket</p> <p>\$55.99</p> <p>View Details</p>	 <p>Mens Casual Slim Fit</p> <p>\$15.99</p> <p>View Details</p>	 <p>John Hardy Women's Legends Naga Gold & Silver Dragon Station Chain</p> <p>\$695</p> <p>View Details</p>	 <p>Solid Gold Petite Micropave</p> <p>\$168</p> <p>View Details</p>
 <p>White Gold Plated Princess</p> <p>\$9.99</p> <p>View Details</p>	 <p>Pierced Owl Rose Gold Plated Stainless Steel Double</p> <p>\$10.99</p> <p>View Details</p>	 <p>WD 2TB Elements Portable External Hard Drive - USB 3.0</p> <p>\$64</p> <p>View Details</p>	 <p>SanDisk SSD PLUS 1TB Internal SSD - SATA III 6 Gb/s</p> <p>\$109</p> <p>View Details</p>	 <p>Silicon Power 256GB SSD 3D NAND A55 SLC Cache Performance Boost SATA III</p> <p>\$109</p> <p>View Details</p>	 <p>WD 4TB Gaming Drive Works with Playstation 4 Portable External Hard Drive</p> <p>\$114</p> <p>View Details</p>

Mini Project

15. Buat Detail.js

JS Detail.js U X

src > JS Detail.js > ...

```
1  import React, { useState, useEffect } from 'react';
2  import { useParams } from 'react-router-dom';
3  import { Button, Col, Form, Row } from 'react-bootstrap';
4  import { fetchProductDetails, addToCart } from '../service/ApiService';
5  import { USER_ID } from '../constants';
6
7  function Detail() {
8    const { id } = useParams();
9    const [product, setProduct] = useState({});
10   const [quantity, setQuantity] = useState(1);
11
12   useEffect(() => {
13     const getProductDetails = async () => {
14       try {
15         const data = await fetchProductDetails(id); // Fetch product using the service
16         setProduct(data);
17       } catch (error) {
18         console.error('Error fetching product details:', error);
19       }
20     };
21     getProductDetails();
22   }, [id]);
23 }
```

Mini Project

16. Buat Detail.js

JS Detail.js U X

src > JS Detail.js > ...

```
1  import React, { useState, useEffect } from 'react';
2  import { useParams } from 'react-router-dom';
3  import { Button, Col, Form, Row } from 'react-bootstrap';
4  import { fetchProductDetails, addToCart } from '../service/ApiService';
5  import { USER_ID } from '../constants';
6
7  function Detail() {
8    const { id } = useParams();
9    const [product, setProduct] = useState({});
10   const [quantity, setQuantity] = useState(1);
11
12   useEffect(() => {
13     const getProductDetails = async () => {
14       try {
15         const data = await fetchProductDetails(id); // Fetch product using the service
16         setProduct(data);
17       } catch (error) {
18         console.error('Error fetching product details:', error);
19       }
20     };
21     getProductDetails();
22   }, [id]);
23 }
```

Mini Project

17. Buat Detail.js

```
--  
24  const handleAddToCart = async () => {  
25    try {  
26      await addToCart(USER_ID, [{ productId: product.id, quantity }]);  
27      alert('Product added to cart');  
28    } catch (error) {  
29      console.error('Error adding to cart:', error);  
30    }  
31  };  
32
```

18. Kode selanjutnya ada di potongan kode di snippet.txt

19. App.js

```
12  <Route path="/" element={<Home />} />  
13  <Route path="/detail/:id" element={<Detail />} />  
--
```

Mini Project

18. Checking point

The screenshot shows a web browser at `localhost:3000/detail/1`. The page displays a product image of a blue bag with a brown patch. Below the image, the text reads: "Your perfect pack for everyday use and walks in the forest. Stash your laptop (up to 15 inches) in the padded sleeve, your everyday". The price is listed as "Price: \$109.95". At the bottom, there is a "Quantity" input field with the value "1" and a blue "Add to Cart" button.

A modal dialog box is displayed over the product image, showing the message: "localhost:3000 says Product added to cart" with an "OK" button.

The browser's Network tab is open, showing a POST request to `https://fakestoreapi.com/carts`. The request status is 200 OK. The request headers are visible:

Name	Value
authority	fakestoreapi.com
method	POST
path	/carts
scheme	https
Accept	application/json, text/plain, */*
Accept-Encoding	gzip, deflate, br, zstd
Accept-Language	id-ID;id;q=0.9,en-US;q=0.8,en;q=0.7
Content-Length	88
Content-Type	application/json
Origin	http://localhost:3000
Priority	u=1, i
Referer	http://localhost:3000/
Sec-Ch-Ua	"Google Chrome";v="131", "Chromium";v="131", "Not_A_Brand";v="24"
Sec-Ch-Ua-Mobile	?1

Mini Project

19. Buat Cart.js (file diberikan)

20. Buat Checkout.js (file diberikan)

21. Sesuaikan App.js

```
13 | <Routes>
14 |   <Route path="/" element={<Home />} />
15 |   <Route path="/detail/:id" element={<Detail />} />
16 |   ... <Route path="/cart" element={<Cart />} /> ... You
17 |   ... <Route path="/checkout" element={<Checkout />} />
18 | </Routes>
```


terima kasih njengkepi parikan
 tarima kase terime kaseh
 teghemo kasih nerima nihan
 kurre sumanga' saohagölö
 rutam nuwus kasuwun lias ate
 tarimo kasih teghima kasih
 ngatur nuhun sukur dofu dangke
 ta' kabessa nyo'on surak sabeu
 tarima kasi teurimong geunaseh makase suwun
 epang gawang keso'on tiba teing sura'
 makaseh makapulu sama' mokaseh
 tumpu lalo matur nuwun e saparauni
 tampi asih bujur
 matur suksma sukur moanto
 obrigado diate tupa berijin brejen
 odu'olo terima kaseh kurru sumange
 mauliate waniyam walidi'a
 tumpuno laloku sinmung
 hatur nuhun tampeasu
 minta rela kasumasa
 tinatauan mator sekelangkong
 masurak bagat



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