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Prodi : S1 Teknologi Informasi

A. Latihan Bootstrap

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Uji Coba Latihan Bootstrap Bab IV</title>
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0alpha1/dist/css/bootstrap.min.css"
rel="stylesheet">
  <style>
    /* Gaya tambahan untuk visualisasi */
    .header-section { margin-top: 30px; margin-bottom: 20px; border-bottom: 2px solid
#eee; padding-bottom: 10px; }
  </style>
</head>
<body>

  <nav class="navbar navbar-expand-lg navbar-dark bg-dark">
    <div class="container-fluid">
      <a class="navbar-brand" href="#">Rekayasa Web</a>
      <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#navbarNav" aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
        <span class="navbar-toggler-icon"></span>
      </button>
      <div class="collapse navbar-collapse" id="navbarNav">
        <ul class="navbar-nav">
          <li class="nav-item"><a class="nav-link active" href="#">Home</a></li>
          <li class="nav-item"><a class="nav-link" href="#">About</a></li>
          <li class="nav-item"><a class="nav-link" href="#">Services</a></li>
          <li class="nav-item"><a class="nav-link" href="#">Contact</a></li>
        </ul>
      </div>
    </div>
  </nav>
```

```
    </div>
  </div>
</nav>
```

```
<div class="container">
```

```
  <h1 class="header-section">1. Hello, World! (Bootstrap Sederhana)</h1>
  <p class="lead">Halaman ini dimuat dengan styling dari Bootstrap.</p>
```

```
  <h2 class="header-section">3. Grid Layout (3 Kolom Responsif)</h2>
```

```
  <div class="row">
```

```
    <div class="col-md-4 col-sm-12 bg-primary text-white p-3 border">
```

```
      Kolom 1: col-md-4
```

```
    </div>
```

```
    <div class="col-md-4 col-sm-12 bg-secondary text-white p-3 border">
```

```
      Kolom 2: col-md-4
```

```
    </div>
```

```
    <div class="col-md-4 col-sm-12 bg-success text-white p-3 border">
```

```
      Kolom 3: col-md-4
```

```
    </div>
```

```
  </div>
```

```
  <h2 class="header-section">4. Card Sederhana</h2>
```

```
  <div class="card" style="width: 18rem;">
```

```
    
```

```
    <div class="card-body">
```

```
      <h5 class="card-title">Judul Card</h5>
```

```
      <p class="card-text">Ini adalah contoh card Bootstrap. Komponen ini bagus
      untuk menampilkan konten dengan rapi.</p>
```

```
      <a href="#" class="btn btn-primary">Klik di sini</a>
```

```
    </div>
```

```
  </div>
```

```
  <h2 class="header-section">5. Form Sederhana</h2>
```

```
  <form style="max-width: 400px; margin-bottom: 40px;">
```

```
    <div class="mb-3">
```

```
      <label for="email" class="form-label">Alamat Email</label>
```

```

        <input type="email" class="form-control" id="email"
placeholder="name@example.com">
    </div>
    <div class="mb-3">
        <label for="password" class="form-label">Kata Sandi</label>
        <input type="password" class="form-control" id="password">
    </div>
    <button type="submit" class="btn btn-success">Kirim</button>
</form>

```

```

<h2 class="header-section">6. Layout dengan Modal</h2>
<button type="button" class="btn btn-danger" data-bs-toggle="modal" data-bs-
target="#exampleModal">
    Buka Modal
</button>

```

```

</div> <div class="modal fade" id="exampleModal" tabindex="-1" aria-
labelledby="exampleModalLabel" aria-hidden="true">
    <div class="modal-dialog">
        <div class="modal-content">
            <div class="modal-header">
                <h5 class="modal-title" id="exampleModalLabel">Judul Modal</h5>
                <button type="button" class="btn-close" data-bs-dismiss="modal" aria-
label="Close"></button>
            </div>
            <div class="modal-body">
                Ini adalah contoh modal menggunakan Bootstrap.
            </div>
            <div class="modal-footer">
                <button type="button" class="btn btn-secondary" data-bs-
dismiss="modal">Tutup</button>
                <button type="button" class="btn btn-primary">Simpan
Perubahan</button>
            </div>
        </div>
    </div>
</div>

```

```
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0alpha1/dist/js/bootstrap.bundle.min
.js"></script>

</body>
</html>
```

B. LATIHAN JAVASCRIPT

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Uji Coba Latihan JavaScript Bab IV</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
  <style>
    .result-section { border: 1px solid #ccc; padding: 15px; margin-bottom: 20px; }
    .header-section { margin-top: 30px; margin-bottom: 20px; border-bottom: 2px solid
#eee; padding-bottom: 10px; }
  </style>
</head>
<body>

  <div style="max-width: 800px; margin: 0 auto; padding: 20px;">
    <h1>Uji Coba Latihan jQuery & JavaScript Lanjutan</h1>

    <h2 class="header-section">1. Show/Hide Elemen (jQuery)</h2>
    <div class="result-section">
      <p id="myText">Ini adalah teks yang akan disembunyikan dan ditampilkan.</p>
      <button id="toggleButton">Sembunyikan/Tampilkan Teks</button>
    </div>

    <h2 class="header-section">2. Validasi Form (jQuery)</h2>
    <div class="result-section">
      <form id="myForm">
        <label for="name">Nama:</label>
        <input type="text" id="name" name="name">
        <button type="submit">Submit</button>
```

```

        </form>
        <p id="error" style="color:red; display:none; margin-top: 10px;">Nama tidak
        boleh kosong!</p>
    </div>

    <h2 class="header-section">3, 4, 5, 6, 7, 8, 9 (Lihat Console Browser)</h2>
    <p>Hasil dari latihan **Async/Await**, **Closures**, **Promises**, **HOF**,
**OOP**, **Currying**, dan **Destructuring** akan ditampilkan di **Console**
    browser Anda.</p>
    <button onclick="runJavascriptExercises()">Jalankan Latihan JS Lanjutan (Ke
    Console)</button>
    <div id="oop-output" style="margin-top: 20px; font-family: monospace;"></div>

</div>

```

```

<script>
    // =====
    // LATIHAN 1: Menampilkan dan Menyembunyikan Elemen (jQuery)
    // =====
    $(document).ready(function(){
        $('#toggleButton').click(function(){
            // Menggunakan metode toggle() jQuery
            $('#myText').toggle();
        });
    });

    // =====
    // LATIHAN 2: Validasi Form dengan jQuery
    // =====
    $(document).ready(function(){
        $('#myForm').submit(function(event){
            event.preventDefault(); // Mencegah submit default
            var name = $('#name').val();

            if(name === ''){
                $('#error').show();
                alert('Nama tidak boleh kosong!');
            } else {

```

```

        $('#error').hide();
        alert('Form berhasil disubmit! Nama: ' + name);
    }
});
});

// =====
// FUNGSI UNTUK MENJALANKAN SEMUA LATIHAN JS LANJUTAN (3-9)
// =====
function runJavaScriptExercises() {

    console.group("Latihan JavaScript Lanjutan (Bab IV)");

    // -----
    // LATIHAN 3: Asynchronous JavaScript dengan Async/Await
    // -----
    console.groupCollapsed("3. Async/Await (Fetch Users)");
    async function fetchUsers() {
        try {
            console.log("Mulai fetch data dari JSONPlaceholder...");
            let response = await fetch('https://jsonplaceholder.typicode.com/users');
            let users = await response.json();

            console.log('Data Mentah Pengguna:', users);

            console.log('--- Detail Pengguna ---');
            users.forEach(user => {
                console.log(`Name: ${user.name}, Email: ${user.email}`);
            });
        } catch (error) {
            console.error('Error fetching users:', error);
        }
    }
    fetchUsers();
    console.groupEnd();

    // -----

```

```
// LATIHAN 4: Closures
// -----
console.groupCollapsed("4. Closures (Counter)");
function counter() {
  let count = 0; // Variabel ini "tertutup" (closed over)
  return function() {
    count++;
    console.log(`Count: ${count}`);
  };
}
const myCounter = counter();
console.log("Panggilan 1:"); myCounter();
console.log("Panggilan 2:"); myCounter();
console.log("Panggilan 3:"); myCounter();
console.groupEnd();
```

```
// -----
// LATIHAN 5: Promises
// -----
console.groupCollapsed("5. Promises");
let processData = new Promise((resolve, reject) => {
  let success = true; // Ubah ke false untuk simulasi gagal
  if(success) {
    resolve('Resolve: Data processed successfully');
  } else {
    reject('Reject: Error processing data');
  }
});

processData
  .then(result => console.log('Promise Result:', result))
  .catch(error => console.error('Promise Error:', error));
console.groupEnd();
```

```
// -----
// LATIHAN 6: Higher-Order Functions (map, filter, reduce)
```

```
// -----  
console.groupCollapsed("6. Higher-Order Functions");  
const numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10];  
console.log('Array Awal:', numbers);  
  
const doubled = numbers.map(num => num * 2);  
console.log('map (Doubled):', doubled);  
  
const evens = numbers.filter(num => num % 2 === 0);  
console.log('filter (Evens):', evens);  
  
const sum = numbers.reduce((total, num) => total + num, 0);  
console.log('reduce (Sum):', sum);  
console.groupEnd();
```

```
// -----  
// LATIHAN 7: Object-Oriented Programming (OOP)  
// -----  
console.groupCollapsed("7. OOP dengan Class (Inheritance)");
```

```
class Person {  
  constructor(name, age) {  
    this.name = name;  
    this.age = age;  
  }  
  greet() {  
    console.log(`Hello, my name is ${this.name} and I am ${this.age} years old.`);  
  }  
}
```

```
class Mahasiswa extends Person {  
  constructor(name, age, major) {  
    super(name, age);  
    this.major = major;  
  }  
  introduce() {  
    console.log(`Hi, I'm ${this.name} and I study ${this.major}.`);  
  }  
}
```



```
    }  
}
```

```
const mhs = new Mahasiswa('Fulan', 22, 'Teknik Informatika');  
console.log('Objek Mahasiswa:', mhs);  
mhs.greet();  
mhs.introduce();  
console.groupEnd();
```

```
// -----  
// LATIHAN 8: Currying  
// -----  
console.groupCollapsed("8. Currying");  
function multiply(a) {  
    return function(b) {  
        return a * b;  
    };  
}
```

```
const double = multiply(2); // Fungsi double yang nilainya selalu dikali 2  
console.log('double(5) [2 * 5]:', double(5));
```

```
const triple = multiply(3);  
console.log('triple(4) [3 * 4]:', triple(4));  
console.groupEnd();
```

```
// -----  
// LATIHAN 9: Destructuring  
// -----  
console.groupCollapsed("9. Destructuring");
```

```
// Array destructuring  
const arr = ['Apel', 'Jeruk', 'Mangga'];  
const [buah1, buah2, buah3] = arr;  
console.log('Array Destructuring:', buah1, buah2, buah3);
```

```
// Object destructuring
```

```
const person = {
  name: 'Budi',
  age: 25,
  city: 'Jakarta'
};

const { name, age, city } = person;
console.log('Object Destructuring:', name, age, city);
console.groupEnd();

console.groupEnd(); // Tutup group utama
}
</script>
</body>
</html>
```