**PRAKTIKUM**

**PENGEMBANGAN APLIKASI BERGERAK**

**MODUL 2**

**Pengenalan React Tingkat Lanjut**

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**PROGRAM STUDI S1 SISTEM INFORMASI**

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**MODUL 2**

**PENGENALAN REACT TINGKAT LANJUT**

Pada praktikum kali ini kita akan melanjutkan pengenalan React, mulai dari React Hooks sampai bagaimana konsep siklus hidup komponen React. Kegiatan ini dilakukan agar mahasiswa mampu menerapkan konsep dasar React di dalam pemrograman React Native.

# **1. UseState Hook**

* Buat folder ***/01\_usestate\_1*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>UseState Hook</title> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>UseState Hook</h2>    <div id="root"></div>   <script src="https://unpkg.com/react@18/umd/react.development.js"></script>  <script src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>  <script src="https://unpkg.com/@babel/standalone/babel.min.js"></script>   <script type="text/babel" src="usestate.js"></script> </body> </html> |

* Buat file **usestate.js** pada folder yang baru saja anda buat. Kemudian pahami dan terapkan kode program di bawah ini. Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.

|  |
| --- |
| *// Functional Component* const Cat = (props) => {  *// State declaration with Hook*  const [isHungry, setIsHungry] = React.useState(true);   *// Return Value with JSX*  return (  <div>  <p>I am {props.name}, and I am {isHungry ? " hungry" : " full"}!</p>  <button  onClick={() => {  // Change the state value  setIsHungry(false);  }}  disabled={!isHungry}  >  {isHungry ? "Pour me some milk, please!" : "Thank you!"}  </button>  </div>  ); }  *// Functional Component* const Cafe = () => {  return (  <div>  <Cat name="Munkustrap" />  <Cat name="Spot" />  </div>  ); }  const myElement = <Cafe />; const myApp = myElement;  ReactDOM.createRoot(document.getElementById('root')).render(myApp); |

* Jalankan **index.html** via extension **Live Server** pada vsCode.

# **2. React State (2)**

* Buat folder ***/02\_state\_2*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>React State</title> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>React State</h2>    <div id="root"></div>   <script src="https://unpkg.com/react@18/umd/react.development.js"></script>  <script src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>  <script src="https://unpkg.com/@babel/standalone/babel.min.js"></script>   <script type="text/babel" src="state.js"></script> </body> </html> |

* Buat file **state.js** pada folder yang baru saja anda buat. Kemudian pahami dan terapkan kode program di bawah ini. Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.

|  |
| --- |
| *// Class Component* class MyApp extends React.Component {  *// Constructor Function*  constructor() {  super();  *// State Declaration*  this.state = {  title\_1: "What are you studying?",  title\_2: "Learn What Else?"  };  }   *// Arrow Function*  handleButtonClick = () => {  *// Change the state value*  this.setState({  title\_1: "Learn Javascript",  title\_2: "Learn React"  });  }   render() {  return (  <div>  <h3>{this.state.title\_1}</h3>  <h3>{this.state.title\_2}</h3>  <button onClick={this.handleButtonClick}>Let's Learn Programming</button>  </div>  )  } }  const myElement = <MyApp />; const myApp = myElement;  ReactDOM.createRoot(document.getElementById('root')).render(myElement); |

* Jalankan **index.html** via extension **Live Server** pada vsCode.

# **3. UseState Hook (2)**

* Buat folder ***/03\_usestate\_2*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>UseState Hook</title> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>UseState Hook</h2>    <div id="root"></div>   <script src="https://unpkg.com/react@18/umd/react.development.js"></script>  <script src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>  <script src="https://unpkg.com/@babel/standalone/babel.min.js"></script>   <script type="text/babel" src="usestate.js"></script> </body> </html> |

* Buat file **usestate.js** pada folder yang baru saja anda buat. Kemudian pahami dan terapkan kode program di bawah ini. Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.

|  |
| --- |
| *// Functional Component* const MyApp = () => {  *// State Declaration with Hook*  const [title\_1, setTitle\_1] = React.useState("What are you studying?");  const [title\_2, setTitle\_2] = React.useState("Learn What Else?");   *// Arrow Function*  const handleButtonClick = () => {  *// Change the state value*  setTitle\_1("Learn Javascript");  setTitle\_2("Learn React");  }   return (  <div>  <h3>{title\_1}</h3>  <h3>{title\_2}</h3>  <button onClick={handleButtonClick}>Ayo Belajar Pemrograman</button>  </div>  ) }  const myElement = <MyApp />; const myApp = myElement;  ReactDOM.createRoot(document.getElementById('root')).render(myApp); |

* Jalankan **index.html** via extension **Live Server** pada vsCode.

# **4. Re-render pada Functional Component**

* Buat folder ***/04\_rerender\_func*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>Re-Render Function</title> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>Re-Render Function</h2>    <div id="root"></div>   <script src="https://unpkg.com/react@18/umd/react.development.js"></script>  <script src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>  <script src="https://unpkg.com/@babel/standalone/babel.min.js"></script>   <script type="text/babel" src="rerender.js"></script> </body> </html> |

* Buat file **rerender.js** pada folder yang baru saja anda buat. Kemudian pahami dan terapkan kode program di bawah ini. Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.

|  |
| --- |
| *// Functional Component* const MyApp = () => {  *// State declaration with Hook*  const [title, setTitle] = React.useState("Learn React");   *// Variable declaration*  let foo = "Hei";  console.log('A:', foo);   *// Arrow Function inside Functional Component*  const handleButtonClick = () => {  console.log('B:', foo);  foo = "Hello";  console.log('C:', foo);   if (title === "Learn React") {  *// Change the state value*  setTitle("Learn JavaScript");  }  else {  *// Change the state value*  setTitle("Learn React");  }  }   *// Arrow Function inside Functional Component*  const handleFooClick = () => {  console.log(foo);  alert(foo);  }   return (  <div>  <h3>Title: {title}</h3>  <div>  <p><button onClick={handleButtonClick}>Change Title</button></p>  <p><button onClick={handleFooClick}>Get Foo Value</button></p>  </div>  </div>  ) }  const myElement = <MyApp />; const myApp = myElement;  ReactDOM.createRoot(document.getElementById('root')).render(myApp); |

* Jalankan **index.html** via extension **Live Server** pada vsCode.
* **Inspect** halaman web anda, lihat hasil kode program pada Tab **Console**.

# **5. UseRef pada Functional Component**

* Buat folder ***/05\_useref*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>useRef Hook</title> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>useRef Hook</h2>    <div id="root"></div>   <script src="https://unpkg.com/react@18/umd/react.development.js"></script>  <script src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>  <script src="https://unpkg.com/@babel/standalone/babel.min.js"></script>   <script type="text/babel" src="useref.js"></script> </body> </html> |

* Buat file **useref.js** pada folder yang baru saja anda buat. Kemudian pahami dan terapkan kode program di bawah ini. Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.

|  |
| --- |
| *// Functional Component* const MyApp = () => {  *// State Declaration*  const [title, setTitle] = React.useState("Learn React");   *// Variable Declaration with useRef*  const foo = React.useRef("Hei");  console.log('A:', foo);   *// Functional Component*  const handleButtonClick = () => {  console.log('B:', foo.current);  foo.current = "Hello"; *// Change variable value*  console.log('C:', foo.current);   if (title === "Learn React") {  setTitle("Learn JavaScript");  }  else {  setTitle("Learn React");  }  }   *// Functional Component*  const handleFooClick = () => {  console.log('Get Foo:', foo.current);  alert(foo.current);  }   return (  <div>  <h3>Title: {title}</h3>  <div>  <p><button onClick={handleButtonClick}>Change Title</button></p>  <p><button onClick={handleFooClick}>Get Foo Value</button></p>  </div>  </div>  ) }  const myElement = <MyApp />;  ReactDOM.createRoot(document.getElementById('root')).render(myElement); |

* Jalankan **index.html** via extension **Live Server** pada vsCode.
* **Inspect** halaman web anda, lihat hasil kode program pada Tab **Console**.

# **6. Ref pada Class Component**

* Buat folder ***/06\_ref\_class*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>Ref in Class Component</title> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>Ref in Class Component</h2>    <div id="root"></div>   <script src="https://unpkg.com/react@18/umd/react.development.js"></script>  <script src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>  <script src="https://unpkg.com/@babel/standalone/babel.min.js"></script>   <script type="text/babel" src="ref\_class.js"></script> </body> </html> |

* Buat file **ref\_class.js** pada folder yang baru saja anda buat. Kemudian pahami dan terapkan kode program di bawah ini. Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.

|  |
| --- |
| *// Class Component* class MyApp extends React.Component {  *// Constructor method*  constructor() {  super();  *// State Declaration*  this.state = {  title: "Learn React"  };  *// Ref Declaration*  this.foo = "Hei";  console.log('A:', this.foo);  }   *// Arrow Function*  handleButtonClick = () => {  console.log('B:', this.foo);  this.foo = "Hello"; *// Change variable value*  console.log('C:', this.foo);   if (this.state.title === "Learn React") {  this.setState({ title: "Learn JavaScript" });  }  else {  this.setState({ title: "Learn React" });  }  }   *// Arrow Function*  handleFooClick = () => {  console.log('Get Foo:', this.foo);  alert(this.foo);  }   render() {  return (  <div>  <h3>Title: {this.state.title}</h3>  <div>  <p><button onClick={this.handleButtonClick}>Change Title</button></p>  <p><button onClick={this.handleFooClick}>Get Foo Value</button></p>  </div>  </div>  )  } }  const myElement = <MyApp />;  ReactDOM.createRoot(document.getElementById('root')).render(myElement); |

* Jalankan **index.html** via extension **Live Server** pada vsCode.
* **Inspect** halaman web anda, lihat hasil kode program pada Tab **Console**.

# **7. Mengakses Nilai Form via Javascript Native**

* Buat folder ***/07\_form\_js*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>Get Form Value via Javascript</title> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>Get Form Value via Javascript</h2>   <input type="text" id="input" />  <input type="button" value="OK" onclick="getInput()">   <script>  *// Normal javascript function*  function getInput() {  var inputVal = document.getElementById("input").value; *// Get element value*  alert(inputVal);  }  </script> </body> </html> |

* Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.
* Jalankan **index.html** via extension **Live Server** pada vsCode.

# **8. Mengakses Nilai Form via React (OnChange)**

* Buat folder ***/08\_form\_realtime*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>Get Form Value via React (OnChange)</title> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>Get Form Value via React (OnChange)</h2>   <div id="root"></div>   <script src="https://unpkg.com/react@18/umd/react.development.js"></script>  <script src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>  <script src="https://unpkg.com/@babel/standalone/babel.min.js"></script>    <script type="text/babel" src="form\_realtime.js"></script> </body> </html> |

* Buat file **form\_realtime.js** pada folder yang baru saja anda buat. Kemudian pahami dan terapkan kode program di bawah ini. Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.

|  |
| --- |
| *// Class Component* class MyApp extends React.Component {   *// Constructor method*  constructor(props) {  super(props);  *// State Declaration*  this.state = {   input: ""   };  }   *// Arrow Function*  handleInputChange = (event) => {  *// Change state value*  this.setState({   input: event.target.value  })  }   render() {  return (  <div>  <h1>Judul: {this.state.input}</h1>  <input type="text" onChange={this.handleInputChange} />  </div>  )  } }  const myElement = <MyApp />;  ReactDOM.createRoot(document.getElementById('root')).render(myElement); |

* Jalankan **index.html** via extension **Live Server** pada vsCode.

# **9. Form State**

* Buat folder ***/09\_form\_state*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>Form State</title>   <style>  .container div {  padding-bottom: 0.6rem;  }    div label:first-child {  display: inline-block;  width: 180px;  }    label {  vertical-align: top;  }    input[type="text"],  input[type="email"],  textarea,  select {  width: 230px;  font-size: 1rem;  }  </style> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>Form State</h2>   <div id="root"></div>   <script src="https://unpkg.com/react@18/umd/react.development.js"></script>  <script src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>  <script src="https://unpkg.com/@babel/standalone/babel.min.js"></script>    <script type="text/babel" src="form\_state.js"></script> </body> </html> |

* Buat file **form\_state.js** pada folder yang baru saja anda buat. Kemudian pahami dan terapkan kode program di bawah ini. Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.

|  |
| --- |
| *// Class Component* class MyApp extends React.Component {  *// Constructor method*  constructor(props) {  super(props);   *// State Declaration*  this.state = {  name: "",  email: "",  address: "",  department: "",  gender: "",  scholarship: false  };  }   *// Arrow Function*  handleInputChange = (event) => {   console.log(event.target);   if (event.target.type === "checkbox") {  *// Change state value*  this.setState({ [event.target.name]: event.target.checked })  }  else {  *// Change state value*  this.setState({ [event.target.name]: event.target.value })  }  }   *// Arrow Function*  handleButtonClick = (event) => {  event.preventDefault();  console.log(this.state);  }   render() {  return (  <form action="" method="get" className="container">   <div>  <label htmlFor="name">Name </label>  <input type="text" name="name" id="name" onChange={this.handleInputChange} />  </div>   <div>  <label htmlFor="email">Email </label>  <input type="email" name="email" id="email" onChange={this.handleInputChange} />  </div>   <div>  <label htmlFor="address">Address </label>  <textarea name="address" id="address" onChange={this.handleInputChange} />  </div>   <div>  <label htmlFor="department">Department </label>  <select name="department" value={this.state.department} onChange={this.handleInputChange}>  <option value="Ilmu Komputer">Ilmu Komputer</option>  <option value="Sistem Informasi">Sistem Informasi</option>  <option value="Teknik Informatika">Teknik Informatika</option>  <option value="Teknik Komputer">Teknik Komputer</option>  </select>  </div>   <div>  <label>Jenis kelamin </label>    <input   type="radio"  name="gender"   id="gender1"   value="Man"   checked={this.state.gender === "Man"}   onChange={this.handleInputChange}   />  <label htmlFor="gender1">Man</label>    <input   type="radio"   name="gender"   id="gender2"   value="Woman"   checked={this.state.gender === "Woman"}   onChange={this.handleInputChange}   />  <label htmlFor="gender2">Woman</label>  </div>   <div>  <label>Scholarship Status </label>  <input type="checkbox" id="scholarship" name="scholarship" onChange={this.handleInputChange} />  <label htmlFor="scholarship">Get a scholarship</label>  </div>   <input type="submit" onClick={this.handleButtonClick} value="Save" />  </form>  )  } }  const myElement = <MyApp />;  ReactDOM.createRoot(document.getElementById('root')).render(myElement); |

* Jalankan **index.html** via extension **Live Server** pada vsCode.

# **10. Form Ref**

* Buat folder ***/10\_form\_ref*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>Form Ref</title>   <style>  .container div {  padding-bottom: 0.6rem;  }    div label:first-child {  display: inline-block;  width: 180px;  }    label {  vertical-align: top;  }    input[type="text"],  input[type="email"],  textarea,  select {  width: 230px;  font-size: 1rem;  }  </style> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>Form Ref</h2>   <div id="root"></div>   <script src="https://unpkg.com/react@18/umd/react.development.js"></script>  <script src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>  <script src="https://unpkg.com/@babel/standalone/babel.min.js"></script>    <script type="text/babel" src="form\_ref.js"></script> </body> </html> |

* Buat file **form\_ref.js** pada folder yang baru saja anda buat. Kemudian pahami dan terapkan kode program di bawah ini. Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.

|  |
| --- |
| *// Class Component* class MyApp extends React.Component {  constructor(props) {  super(props);   *// Ref Declaration*  this.nameRef = React.createRef();  this.emailRef = React.createRef();  this.addressRef = React.createRef();  this.departmentRef = React.createRef();  this.genderManRef = React.createRef();  this.genderWomanRef = React.createRef();  this.scholarshipRef = React.createRef();  }   *// Arrow Function*  handleFormSubmit = (event) => {  event.preventDefault();   *// Get Ref Value*  let hasil = {  name: this.nameRef.current.value,  email: this.emailRef.current.value,  alamat: this.addressRef.current.value,  department: this.departmentRef.current.value,  genderMan: this.genderManRef.current.checked,  genderWoman: this.genderWomanRef.current.checked,  scholarship: this.scholarshipRef.current.checked,  }    console.log(hasil);  }   render() {  return (  <div className="container">  <form onSubmit={this.handleFormSubmit} noValidate>  <div>  <label htmlFor="name">Name: </label>  <input type="text" name="name" id="name" ref={this.nameRef} />  </div>   <div>  <label htmlFor="email">Email: </label>  <input type="email" name="email" id="email" ref={this.emailRef} />  </div>   <div>  <label htmlFor="address">Address: </label>  <textarea name="address" id="address" ref={this.addressRef} />  </div>   <div>  <label htmlFor="department">Department: </label>  <select name="department" ref={this.departmentRef}>  <option value="Ilmu Komputer">Ilmu Komputer</option>  <option value="Sistem Informasi">Sistem Informasi</option>  <option value="Teknik Informatika">Teknik Informatika</option>  <option value="Teknik Komputer">Teknik Komputer</option>  </select>  </div>   <div>  <label>Gender: </label>   <input   type="radio"   name="gender"   id="gender1"  value="Man"   ref={this.genderManRef}   />  <label htmlFor="gender1">Man</label>    <input   type="radio"   name="gender"   id="gender2"  value="Woman"   ref={this.genderWomanRef}   />  <label htmlFor="gender2">Woman</label>  </div>   <div>  <label>Scholarship Status: </label>  <input   type="checkbox"   id="scholarship"   name="scholarship"  ref={this.scholarshipRef}   />  <label htmlFor="scholarship">Get a scholarship</label>  </div>   <button type="submit">Save</button>  </form>  </div>  )  } }  const myElement = <MyApp />;  ReactDOM.createRoot(document.getElementById('root')).render(myElement); |

* Jalankan **index.html** via extension **Live Server** pada vsCode.

# **11. Siklus Hidup Komponen React (Class Component)**

* Buat folder ***/11\_lifecycle\_class*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>React Component Life Cycle (Class)</title> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>>React Component Life Cycle (Class)</h2>   <div id="root"></div>   <script src="https://unpkg.com/react@18/umd/react.development.js"></script>  <script src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>  <script src="https://unpkg.com/@babel/standalone/babel.min.js"></script>    <script type="text/babel" src="lifecycle\_class.js"></script> </body> </html> |

* Buat file **lifecycle\_class.js** pada folder yang baru saja anda buat. Kemudian pahami dan terapkan kode program di bawah ini. Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.

|  |
| --- |
| *// Class Component* class Counter extends React.Component {  constructor(props) {  super(props);   *// State Declaration*  this.state = { counter: 0 };   console.log("Ini dari constructor()");  }   *// Arrow Function*  handleButtonClick = (e) => {  let val = parseInt(e.target.getAttribute("val"));   *// Change state value*  this.setState({ counter: this.state.counter + val })  }   render() {  console.log("Ini dari render()");  return (  <div>  <h1> {this.state.counter} </h1>  <button val="+1" onClick={this.handleButtonClick}>Counter + 1</button>  <button val="-1" onClick={this.handleButtonClick}>Counter - 1</button>  </div>  )  }   componentDidMount = () => {  console.log("Ini dari componentDidMount()");  }   componentDidUpdate = () => {  console.log("Ini dari componentDidUpdate()");  }   componentWillUnmount = () => {  console.log("Ini dari componentWillUnmount()");  } }  *// Class Component* class MyApp extends React.Component {  constructor(props) {  super(props);   *// State Declaration*  this.state = { showCounter: false };  }   handleButtonClick = () => {  *// Change State Value*  this.setState({   showCounter: !this.state.showCounter   })  }   render() {  return (  <div>  <button onClick={this.handleButtonClick}>  {this.state.showCounter ? "Hide counter" : "Show counter"}  </button>  {this.state.showCounter && <Counter />}  </div>  )  } }  const myElement = <MyApp />;  ReactDOM.createRoot(document.getElementById('root')).render(myElement); |

* Jalankan **index.html** via extension **Live Server** pada vsCode.
* **Inspect** halaman web anda, lihat hasil kode program pada Tab **Console**.

# **12. Siklus Hidup Komponen React (Functional Component)**

* Buat folder ***/12\_lifecycle\_functional*** pada komputer anda.
* Buat file **index.html** pada folder yang baru anda buat. Tulis kode struktur dasar dokumen HTML seperti di bawah ini.

|  |
| --- |
| <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>React Component Life Cycle (Functional)</title> </head> <body>  <h1>Advanced React Introduction</h1>  <h2>React Component Life Cycle (Functional)</h2>   <div id="root"></div>   <script src="https://unpkg.com/react@18/umd/react.development.js"></script>  <script src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>  <script src="https://unpkg.com/@babel/standalone/babel.min.js"></script>   <script type="text/babel" src="lifecycle\_functional.js"></script> </body> </html> |

* Buat file **lifecycle\_functional.js** pada folder yang baru saja anda buat. Kemudian pahami dan terapkan kode program di bawah ini. Berikan penjelasan pada laporan praktikum dari kode program yang telah anda tulis.

|  |
| --- |
| *// Functional Component* const Counter = () => {  *// State Declaration*  const [counter, setCounter] = React.useState(0);   *// Arrow Function*  const handleButtonClick = (e) => {  let val = parseInt(e.target.getAttribute("val"));   *// Change State Value*  setCounter(counter + val);  }   *// Hook*  React.useEffect(() => {  console.log("Ini seperti componentDidMount()");  return () => {  console.log("Ini seperti componentWillUnmount()");  }  }, []);   *// Hook*  React.useEffect(() => {  console.log("Ini seperti componentDidMount() & componentDidUpdate()");  });   return (  <div>  <h1>{counter}</h1>  <button val="+1" onClick={handleButtonClick}>Counter + 1</button>  <button val="-1" onClick={handleButtonClick}>Counter - 1</button>  </div>  ) }  *// Functional Component*  const MyApp = () => {  *// State Declaration*  const [showCounter, setShowCounter] = React.useState(false);   *// Arrow Function*  const handleButtonClick = () => {  *// Change state value*  setShowCounter(!showCounter);  }   return (  <div>  <button onClick={handleButtonClick}>  {showCounter ? "Hide counter" : "Show counter"}  </button>  {showCounter && <Counter />}  </div>  ) }  const myElement = <MyApp />;  ReactDOM.createRoot(document.getElementById('root')).render(myElement); |

* Jalankan **index.html** via extension **Live Server** pada vsCode.
* **Inspect** halaman web anda, lihat hasil kode program pada Tab **Console**.

# **13. Tugas**

1. Praktekkan seluruh poin praktikum yang ada di atas.
2. Dokumentasikan hasil praktikum tersebut **(screenshot kode program, output pada browser, penjelasan kode program yang ditulis)** dalam bentuk Laporan Praktikum.
3. Letakkan source code hasil praktikum ke **Github**. Sertakan info **link repository** source code nya pada Laporan Praktikum.
4. Kumpulkan Laporan Praktikum **(.pdf)** via E-Learning paling lambat sebelum jadwal praktikum minggu depan.