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Semester: 5th semester

LAB REPORT 7
WEB TECHNOLOGIES
React and JSX

Institute of Space and Technology

Submitted to: Miss Maryam

What is React?

React is a JavaScript library used to build user interfaces (UIs) — especially for web applications that update data frequently (Facebook, Instagram, dashboards, etc.).

React helps you build fast, interactive, and reusable components in your website or app.

Main.jsx:

```jsx
src > ⚛ main.jsx
1    import React from 'react';
2    import ReactDOM from 'react-dom/client';
3    import App from './App.jsx';
4    import './index.css';
5
6    ReactDOM.createRoot(document.getElementById('root')).render(
7      <React.StrictMode>
8        <App />
9      </React.StrictMode>
10   );
11
```

Student.jsx:

```jsx
src > ⚛ student.jsx > ...
1    import React from 'react';
2
3    export default function Student({ name, age }) {
4      return (
5        <div style={{ fontSize: 20, marginTop: 10 }}>
6          <p><strong>Name:</strong> {name}</p>
7          <p><strong>Age:</strong> {age}</p>
8        </div>
9      );
10   }
11
```

ProfileCard.jsx:

```jsx
import React from 'react';

export default function ProfileCard({ name, role, imageUrl }) {
  return (
    <div
      style={{
        display: 'flex',
        alignItems: 'center',
        gap: '20px',
        background: '#ffffff',
        padding: '20px',
        borderRadius: 16,
        boxShadow: '0 5px 20px rgba(0,0,0,0.1)',
        marginTop: 20,
        maxWidth: 450
      }}
    >
      <img
        src={imageUrl}
        alt={name}
        style={{
          width: 100,
          height: 100,
          borderRadius: 12,
          objectFit: 'cover'
        }}
      />

      <div>
        <h3 style={{ margin: 0, fontSize: 22 }}>{name}</h3>
        <p style={{ margin: 0, fontSize: 16, color: '#555' }}>{
      </div>
    </div>
  ).
```

Index.css:

```css
body {
  margin: 0;
  padding: 0;
  font-family: 'Poppins', Arial, sans-serif;
  background: #f0f4f8;
}

h1, h2, h3, p {
  margin: 0;
}

img {
  user-select: none;
}
```

Task1

```jsx
{/* Header */}
<h1 style={{fontSize: 42, color: '#1f2937', marginBottom: 10}}>React Lab 7</h1>
 <h2 style={{marginTop: 40, fontSize: 28, color: '#1f2937'}}>Task 1 – Create a simple JSX element

{/* Button Counter */}
<button
  onClick={() => setCount(c => c + 1)}
  style={{
    marginTop: 20,
    padding: '12px 28px',
    background: '#6366f1',
    color: 'white',
    fontWeight: 600,
    fontSize: 16,
    border: 'none',
    borderRadius: 10,
    cursor: 'pointer',
    transition: '0.3s',
  }}
  onMouseOver={e => e.currentTarget.style.background='#4f46e5'}
  onMouseOut={e => e.currentTarget.style.background='#6366f1'}
>
  {/* Task 2: Function Result */}
      Click me ({count})
</button>

{/* Banner Image */}
<div style={{marginTop: 30}}>
  <img
    src="https://static.vecteezy.com/system/resources/previews/026/828/581/original/click-here-butt
    alt="banner"
    style={{borderRadius: 16, width: '30%', boxShadow: '0 10px 25px rgba(0,0,0,0.1)'}}
  />
```

Task2

```jsx
{/* Task 2: Function Result */}
<h2 style={{marginTop: 40, fontSize: 28, color: '#1f2937'}}>Task 2 – Create a simple function and show its result in JSX</h2>
      <h3>  2 + 3 = <span style={{color: '#6366f1', fontWeight: 600}}>{2 + 3}</span>
</h3>
```

Task3

```jsx
{/* Task 3: Student Component */}
<section style={{marginTop: 40}}>
  <h2 style={{fontSize: 28, color: '#1f2937'}}>Task 3 – Student Component</h2>
  <Student name="Ali" age={20} />
</section>
```

Task 4

```jsx
{/* Task 4: Profile Card */}
<section style={{marginTop: 40}}>
  <h2 style={{fontSize: 28, color: '#1f2937'}}>Task 4 – Profile Card</h2>
  <ProfileCard
    name="Sara Ahmed"
    role="Frontend Developer"
    imageUrl="https://img.freepik.com/premium-photo/portrait-young-professional-business-woman-confidently-smiling-camera_564692-2364.jpg"
  />
</section>
</div>
</div>
)
```

App.jsx:

```jsx
mport React, { useState } from 'react'
mport Student from './components/Student'
mport ProfileCard from './components/ProfileCard'

xport default function App() {
  const [count, setCount] = useState(0)

  return (
    <div style={{
      fontFamily: 'Poppins, Arial, sans-serif',
      background: '#f0f4f8',
      minHeight: '100vh',
      padding: '40px 20px'
    }}>
      <div style={{
        maxWidth: 900,
        margin: '0 auto',
        background: '#ffffff',
        padding: '40px',
        borderRadius: 20,
        boxShadow: '0 15px 35px rgba(0,0,0,0.1)'
      }}>
        {/* Header */}
        <h1 style={{fontSize: 42, color: '#1f2937', marginBottom: 10}}>React Lab 7</h1>
        <h2 style={{marginTop: 40, fontSize: 28, color: '#1f2937'}}>Task 1 – Create a simple JSX element</h2>

        {/* Button Counter */}
        <button
          onClick={() => setCount(c => c + 1)}
          style={{
            marginTop: 20,
            padding: '12px 28px',
            background: '#6366f1',
            color: 'white',
            fontWeight: 600,
            fontSize: 16,
            border: 'none',
            borderRadius: 10,
            cursor: 'pointer',
            transition: '0.3c'
```

```jsx
45        {/* Task 2: Function Result */}
46           Click me ({count})
47    </button>
48
49    {/* Banner Image */}
50    <div style={{marginTop: 30}}>
51      <img
52        src="https://static.vecteezy.com/system/resources/previews/026/828/581/original/click-here-button-web-banner-templates-illustration-ve
53        alt="banner"
54        style={{borderRadius: 16, width: '30%', boxShadow: '0 10px 25px rgba(0,0,0,0.1)'}}
55      />
56    </div>
57
58    {/* Task 2: Function Result */}
59    <h2 style={{marginTop: 40, fontSize: 28, color: '#1f2937'}}>Task 2 – Create a simple function and show its result in JSX</h2>
60          <h3>  2 + 3 = <span style={{color: '#6366f1', fontWeight: 600}}>{2 + 3}</span>
61    </h3>
62
63    {/* Task 3: Student Component */}
64    <section style={{marginTop: 40}}>
65      <h2 style={{fontSize: 28, color: '#1f2937'}}>Task 3 – Student Component</h2>
66      <Student name="Ali" age={20} />
67    </section>
68
69    {/* Task 4: Profile Card */}
70    <section style={{marginTop: 40}}>
71      <h2 style={{fontSize: 28, color: '#1f2937'}}>Task 4 – Profile Card</h2>
72      <ProfileCard
73        name="Sara Ahmed"
74        role="Frontend Developer"
75        imageUrl="https://img.freepik.com/premium-photo/portrait-young-professional-business-woman-confidently-smiling-camera_564692-2364.jpg"
76      />
77    </section>
78    </div>
79    </div>
80  )
81
82
```

Output: