Full Stack Hands On

Q1) Create a Simple React App. Display “Hello, World!” inside an <h1> tag.

-> App.js

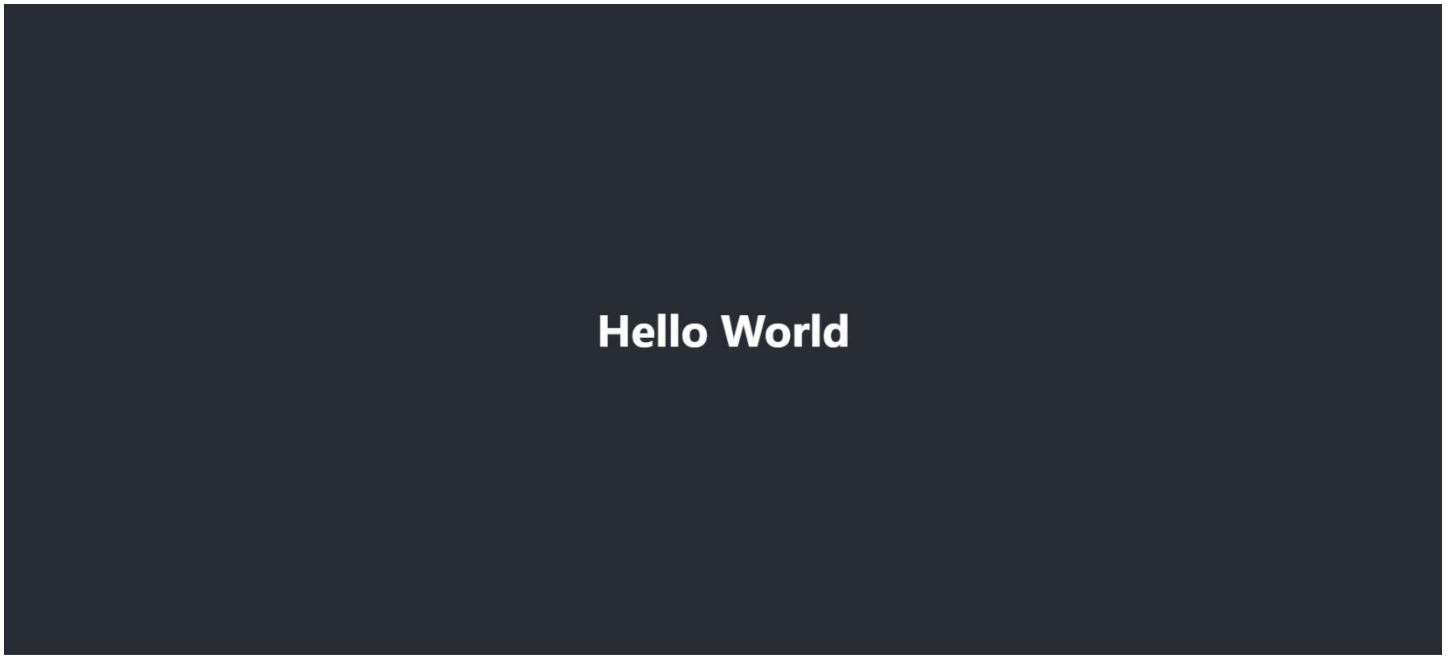
```
import './App.css';
function App() {
  return (
    <div className="App">
      <header className="App-header">
        <h1>Hello World</h1>
      </header>
    </div>
  );
}
export default App;
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import App from './App';
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
```

```
root.render(
  <React.StrictMode>
    <App />
  </React.StrictMode>
);
```

-> Output:



Q2) Write JSX to Display a Paragraph Inside a , display a <p> tag with your name.

-> Nihal.jsx

```
import './App.css';
function Name() {
   return (
     <div className="App">
       <header className="App-header">
         <p>Pratyush Majumdar</p>
       </header>
     </div>
   );
}
export default Name;
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Nihal from './Nihal'
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
```

```
    <Nihal/>
  </React.StrictMode>
);
```

-> Output:

Q3) Create a JSX expression that renders the current date and time dynamically.

-> Nihal.jsx

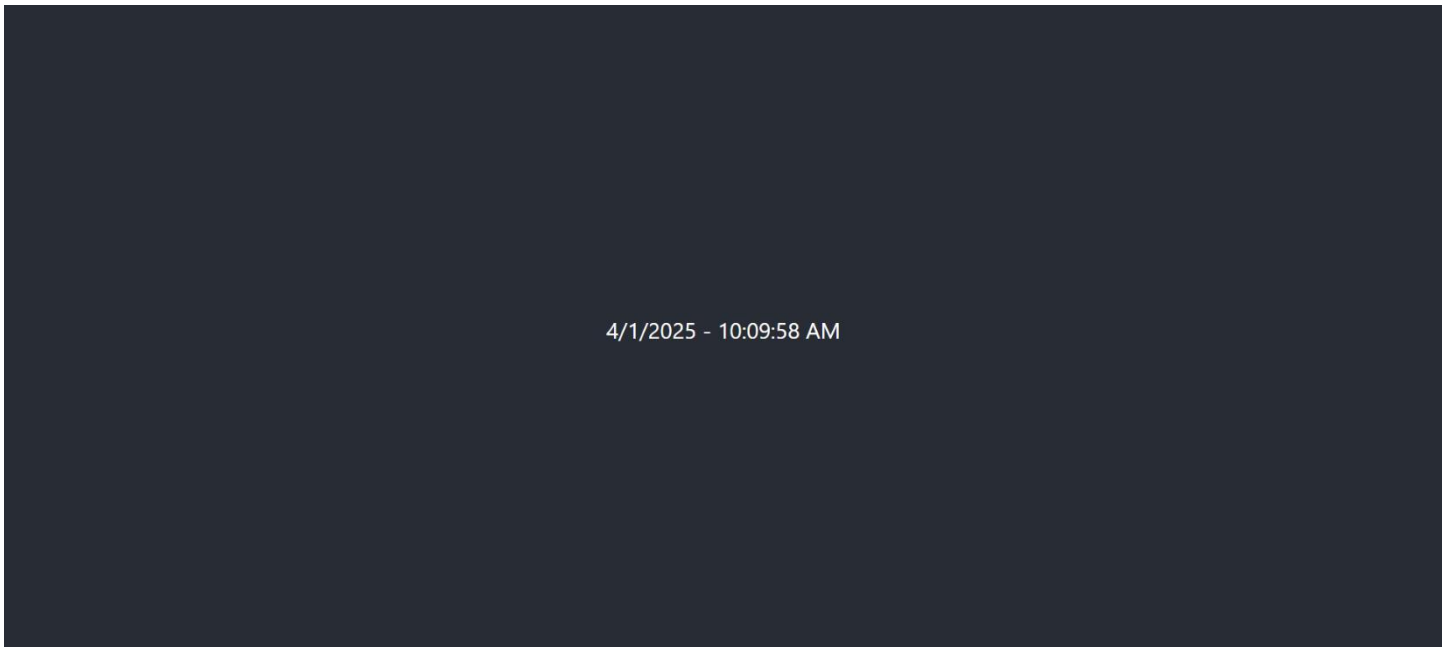
```
import './App.css';
function Name() {
   const currentDate = new Date().toLocaleDateString();
   const currentTime = new Date().toLocaleTimeString();
   return (
     <div className="App">
       <header className="App-header">
         <p>{currentDate} - {currentTime}</p> {/* JSX expression */}
       </header>
     </div>
   );
}
export default Name;
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Nihal from './Nihal'
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
```

```
  <React.StrictMode>
    <Nihal/>
  </React.StrictMode>
);
```

-> Output:



Q4) Create a simple functional component that returns a heading <h2>.

-> Nihal.jsx

```
function Name() {
   return <h2>This is an example of a simple functional component that returns a heading</h2>;
}
export default Name;
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Nihal from './Nihal'
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
    <Nihal/>
  </React.StrictMode>
);
```

-> Output:

This is an example of a simple functional component that returns a heading

Q5) Write a program to demonstration of nested functional component.

-> Nihal.jsx

```
import './App.css';
function OuterName() {
   return (
     <div className="App">
       <InnerName/>
     </div>
   );
}
function InnerName() {
   return <h2>This is an example of inner funtional component in react js</h2>;
}
export default OuterName;
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Pratyush from './Pratyush'
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
```

```
    <Nihal/>
  </React.StrictMode>
);
```

-> Output:

This is an example of inner funtional component in react js

Q6) Create a parent component that passes a name prop to a child component and displays it.

-> Nihal.jsx

```
import './App.css';
function ParentComponent(prop) {
   return (
     <div className="App">
       <ChildComponent name = {prop.name}/>
     </div>
   );
}
function ChildComponent(prop) {
   const name = "Pratyush"
   return <h2>Hello, {name}</h2>;
}
export default ParentComponent;
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Pratyush from './Pratyush'
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
```

```
root.render(
  <React.StrictMode>
    <Nihal/>
  </React.StrictMode>
);
```

-> Output:

Hello, Nihal

Q7) Create an array of students which includes roll number, name and age pass it as a props to functional component and display all information.

-> Nihal.jsx

```
import './App.css'
function StudentList(props) {
  return (
    <ul>
      {props.students.map((student) => (
        <li key={student.rollNumber}>
          Roll No: {student.rollNumber}, Name: {student.name}, Age: {student.age}
        </li>
      ))}
    </ul>
  );
}
const students = [
  { rollNumber: 2401121, name: 'Nihal Shaikh', age: 21 },
  { rollNumber: 2401178, name: 'Pratyush', age: 22 },
  { rollNumber: 2401154, name: 'Saad', age: 22 },
];
export default function App() {
  return (
    <div>
      <h1>Student List</h1>
```

```
      <StudentList students={students} />
    </div>
  );
}
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Nihal from './Nihal'
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
    <Nihal/>
  </React.StrictMode>
);
```

-> Output:

Student List

Roll no:2401181, Name:Nihal Shaikh, Age:21,

Roll no:2401181, Name:Pratyush, Age:22,

Roll no:2401181, Name:Saad, Age:22,

Q8) Pass an array of colors (as props) to a child component and render them as <li> items.

-> Nihal.jsx

```
import './App.css'
function ColorList(props) {
   return (
     <ul>
       {props.colors.map((color) => (
         <li key={color}>{color}</li>
       ))}
     </ul>
   );
 }
const colors = ['red', 'green', 'blue', 'yellow'];
function App() {
   return (
     <div>
       <h1>Color List</h1>
       <ColorList colors={colors} />
     </div>
   );
}
export default App;
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Nihal from './Nihal'
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
    <Pratyush/>
  </React.StrictMode>
);
```

-> Output:

Q9) Build a counter with two buttons (+ and -) to increment/decrement a state variable.

-> Nihal.jsx

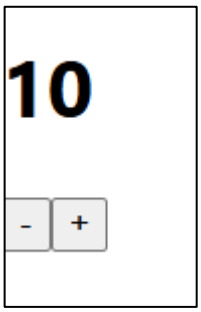
```
import React, { useState } from 'react';
function Counter() {
  const [count, setCount] = useState(0);
  const increment = () => setCount(count + 1);
  const decrement = () => setCount(count - 1);
  return (
    <div>
      <h1>{count}</h1>
      <button onClick={decrement}>-</button>
      <button onClick={increment}>+</button>
    </div>
  );
}
export default Counter;
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Nihal from './Nihal'
import reportWebVitals from './reportWebVitals';
```

```
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
    <Pratyush/>
  </React.StrictMode>
);
```

-> Output:



Q10) Create an input field that logs its value to the console on every keystroke (use onChange).

-> Nihal.jsx

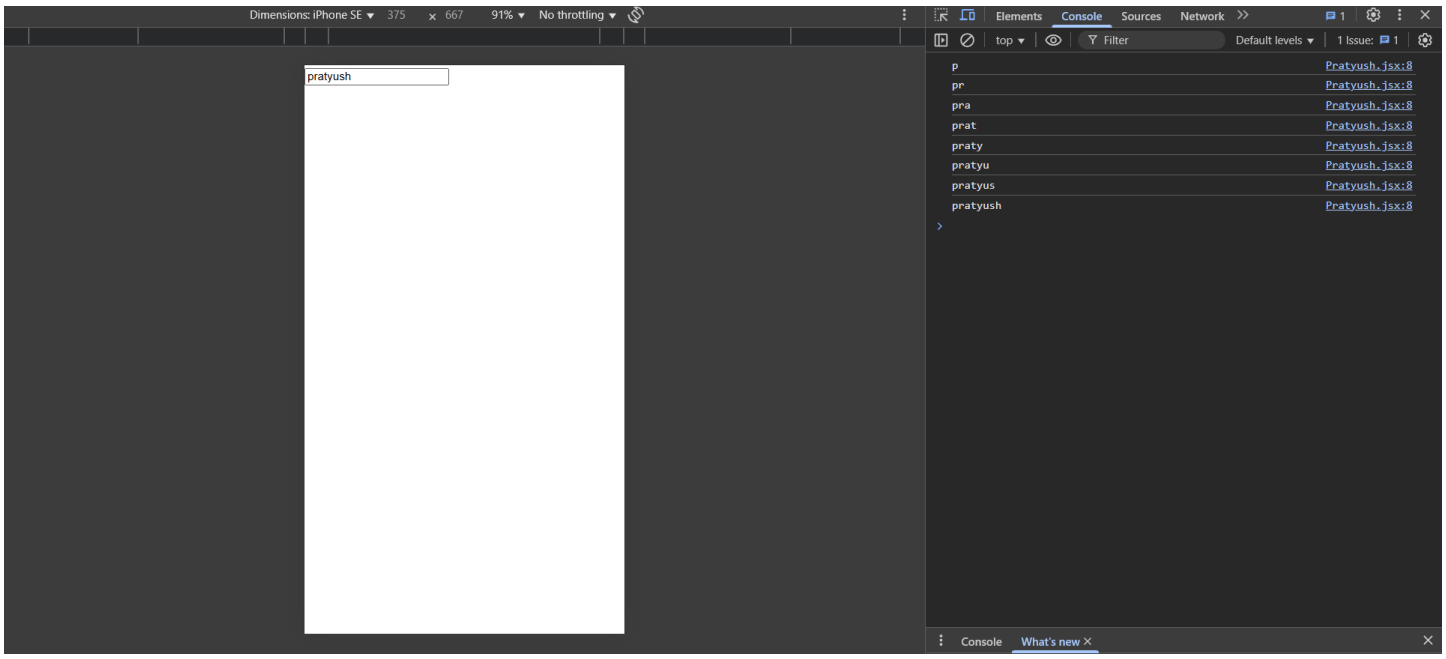
```
import React, { useState } from 'react';
function InputField() {
  const [inputValue, setInputValue] = useState('');
  const handleChange = (event) => {
    setInputValue(event.target.value);
    console.log(event.target.value); // log the input value
  };
  return (
    <div>
      <input type="text" value={inputValue} onChange={handleChange} />
    </div>
  );
}
export default InputField;
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Nihal from './Nihal'
import reportWebVitals from './reportWebVitals';
```

```
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
    <Nihal/>
  </React.StrictMode>
);
```

-> Output:



Q11) Create a button that changes its background color when clicked (use onClick and state).

-> Nihal.jsx

```
import React, { useState } from 'react';
function ColorButton() {
  const [color, setColor] = useState('lightblue');
  const handleClick = () => {
    setColor(prevColor => prevColor === 'lightblue' ? 'blue' : 'lightblue');
  };
  return (
    <button style={{ backgroundColor: color }} onClick={handleClick}>
      Click Me
    </button>
  );
}
export default ColorButton;
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Nihal from './Nihal'
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
```

```
root.render(
  <React.StrictMode>
    <Nihal/>
  </React.StrictMode>
);
```

-> Output:

Q12) Build a form with name and email fields that alerts the submitted values (use onSubmit).

-> Nihal.jsx

```
import React, { useState } from 'react';

function MyForm() {
  const [name, setName] = useState('');
  const [email, setEmail] = useState('');
  const handleSubmit = (event) => {
    event.preventDefault(); // Prevent page reload
    alert(`Name: ${name}, Email: ${email}`);
  };
  return (
    <form onSubmit={handleSubmit}>
      <div>
        <label htmlFor="name">Name:</label>
        <input
          type="text"
          id="name"
          value={name}
          onChange={(e) => setName(e.target.value)}
        />
      </div>
      <div>
        <label htmlFor="email">Email:</label>
```

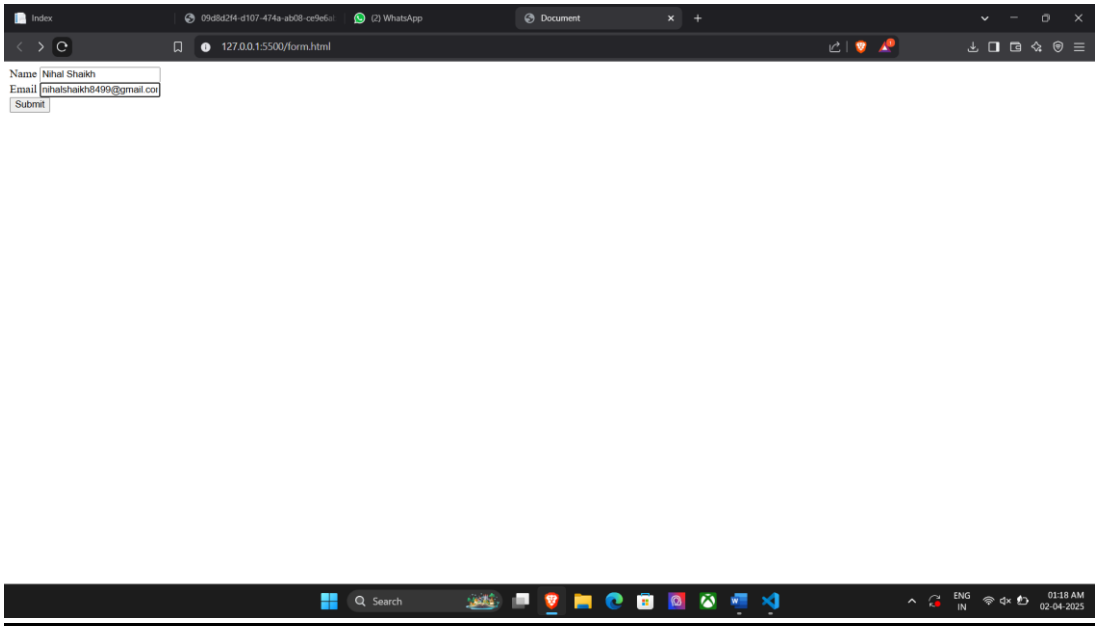
```
        <input
          type="email"
          id="email"
          value={email}
          onChange={(e) => setEmail(e.target.value)}
        />
      </div>
      <button type="submit">Submit</button>
    </form>
  );
}
export default MyForm;
```

-> index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Nihal from './Nihal'
import reportWebVitals from './reportWebVitals';
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
    <Nihal/>
  </React.StrictMode>
```

);

-> Output:


Index
Document
(2) WhatsApp
127.0.0.1:5500/form.html
Name Nihal Shaikh
Email nihalshaikh8499@gmail.com
Submit
Search
ENG
IN
01:18 AM
02-04-2025