Ex 7	**A Responsive UI Form using Bootstrap and React**

Aim

To design a responsive UI form using Bootstrap and React to capture user input and display the result.

Definitions

Responsive UI Form

A **responsive UI form** is a form whose layout and elements automatically adjust to fit the available screen size and orientation of the user's device (e.g., desktop, tablet, or mobile phone). The goal is to provide an optimal and consistent user experience (UX) and usability regardless of the device used to access the form.

Bootstrap

Bootstrap is a popular front-end framework for building responsive and mobile-first websites. It provides pre-designed CSS, JavaScript components, and utility classes to quickly create modern and consistent user interfaces.

React

React.js, commonly known as React, is a free and open-source JavaScript library for building user interfaces (UIs) for web and mobile applications. It is maintained by Meta (formerly Facebook) and a community of individual developers and companies.

Node JS

Node.js is an open-source, cross-platform JavaScript runtime environment that allows developers to execute JavaScript code outside of a web browser. It is built on the V8 JavaScript engine, which is the same engine used by Google Chrome.

Procedure

1. Open Command prompt and type the following command to check the version of Node JS installed,

node –v

2. Type the following commands in command prompt to create a react app,

cd desktop

npx create-react-app responsive-form

cd responsive-form

npm install react-bootstrap bootstrap

3. Open responsive-from folder in Desktop → open 'src' folder →open 'index.js' Java Script File with Notepad++ → add the following import statement

import 'bootstrap/dist/css/bootstrap.min.css';

4. After adding import statement index.js file will look as below,

index.js

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

import 'bootstrap/dist/css/bootstrap.min.css';

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

```
  </React.StrictMode>
);


// If you want to start measuring performance in your app, pass a function

// to log results (for example: reportWebVitals(console.log))

// or send to an analytics endpoint. Learn more: https://bit.ly/CRA-vitals

reportWebVitals();
```

5. Open Notepad++ → Type the following codes to create **FormExample.js** file in **'src'** folder,

FormExample.js

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

import { Form, Button, Container, Row, Col, Card } from 'react-bootstrap';


function FormExample() {

 const [formData, setFormData] = useState({

  name: ',

  email: ',

  message: ',

 });

 const [submittedData, setSubmittedData] = useState(null);


 const handleChange = (e) => {

  const { name, value } = e.target;

  setFormData((prevData) => ({

   ...prevData,

   [name]: value,

  }));

 };
```

```jsx
const handleSubmit = (e) => {
  e.preventDefault();
  setSubmittedData(formData); // Store the submitted data
  setFormData({ name: '', email: '', message: '' }); // Clear the form
};


return (
  <Container className="mt-5">
    <Row className="justify-content-md-center">
      <Col md={6}>
        <Card>
          <Card.Header as="h5">Input Form</Card.Header>
          <Card.Body>
            <Form onSubmit={handleSubmit}>
              <Form.Group className="mb-3" controlId="formName">
                <Form.Label>Name</Form.Label>
                <Form.Control
                  type="text"
                  placeholder="Enter your name"
                  name="name"
                  value={formData.name}
                  onChange={handleChange}
                  required
                />
              </Form.Group>


              <Form.Group className="mb-3" controlId="formEmail">
                <Form.Label>Email address</Form.Label>
                <Form.Control
                  type="email"
```

```jsx
        placeholder="Enter your email"

        name="email"

        value={formData.email}

        onChange={handleChange}

        required

      />

    </Form.Group>


    <Form.Group className="mb-3" controlId="formMessage">

      <Form.Label>Message</Form.Label>

      <Form.Control

        as="textarea"

        rows={3}

        placeholder="Enter your message"

        name="message"

        value={formData.message}

        onChange={handleChange}

      />

    </Form.Group>


    <Button variant="primary" type="submit">

     Submit

    </Button>

   </Form>

  </Card.Body>

 </Card>

</Col>

</Row>


{submittedData && (
```

```jsx
      <Row className="justify-content-md-center mt-4">
        <Col md={6}>
          <Card>
            <Card.Header as="h5">Submitted Data</Card.Header>
            <Card.Body>
              <p><strong>Name:</strong> {submittedData.name}</p>
              <p><strong>Email:</strong> {submittedData.email}</p>
              <p><strong>Message:</strong> {submittedData.message}</p>
            </Card.Body>
          </Card>
        </Col>
      </Row>
    )}
  </Container>
 );
}


export default FormExample;
```

6. Open App.js file in 'src' folder and type the following codes,

App.js

```jsx
import React from 'react';
import FormExample from './FormExample';


function App() {
 return (
  <div className="App">
   <FormExample />
  </div>
 );
```
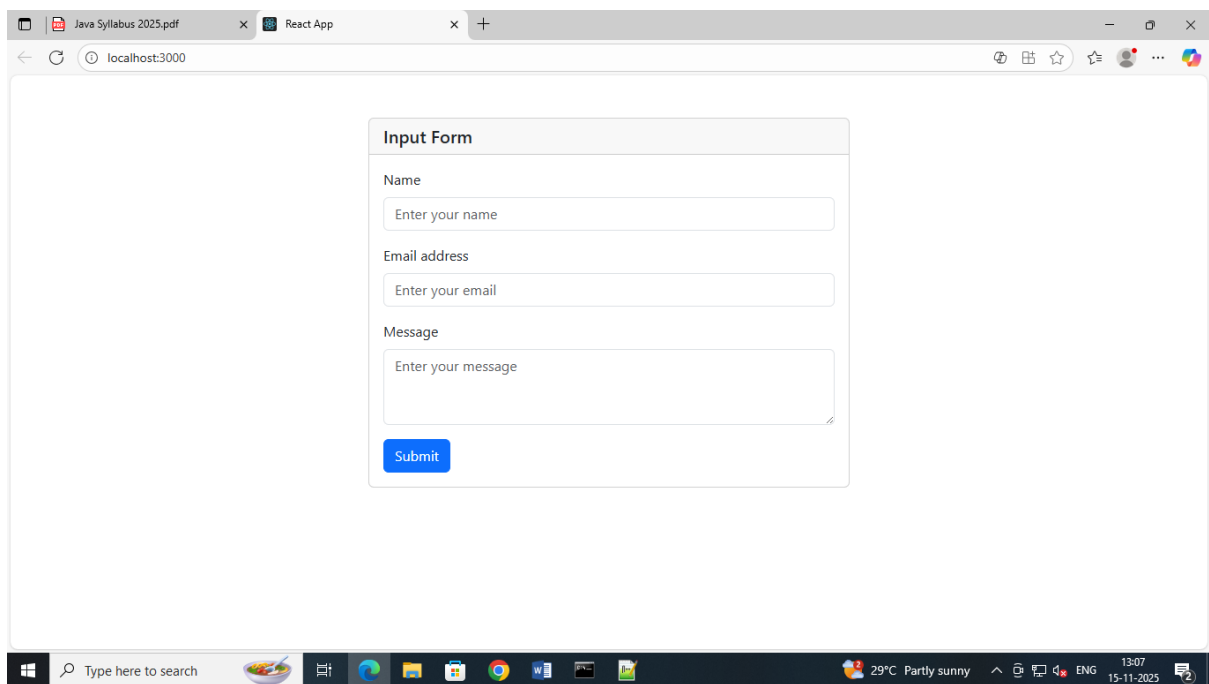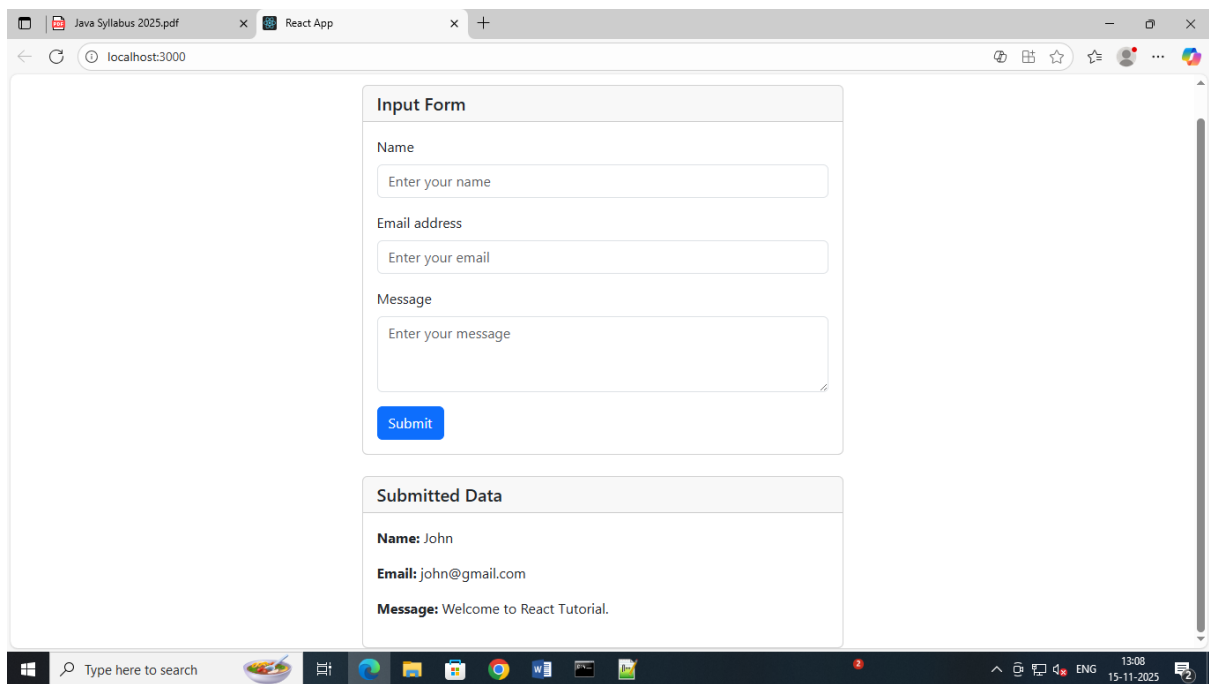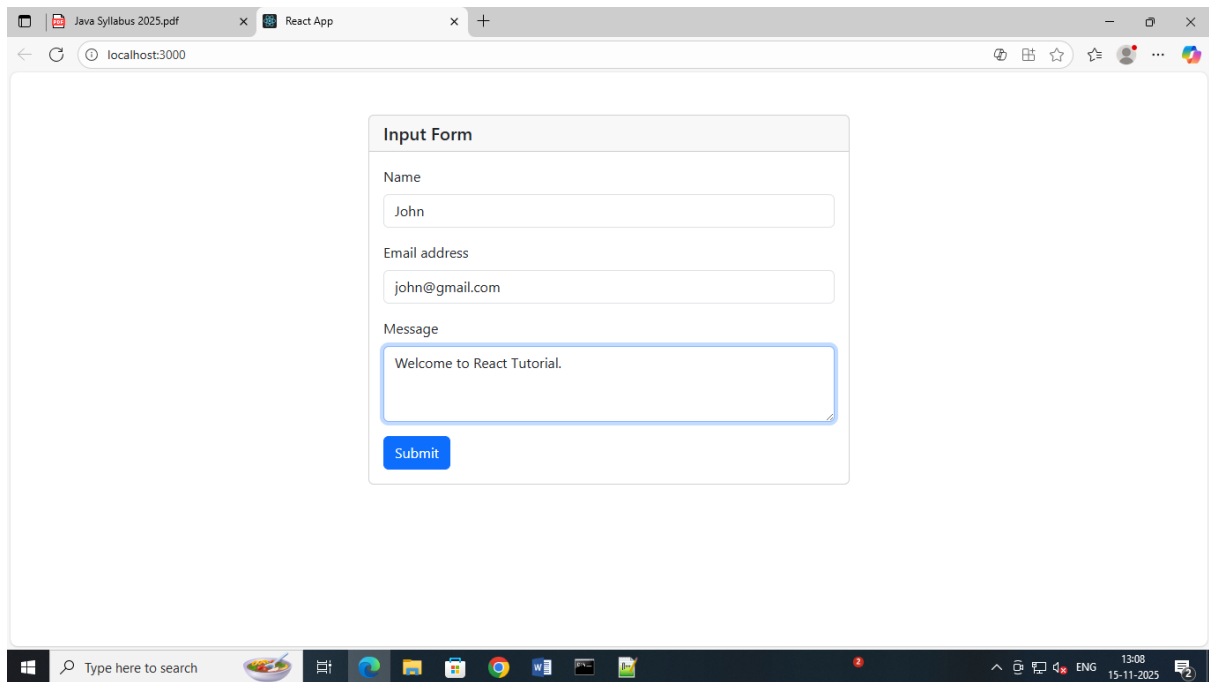
}

export default App;

7. Open Command prompt and type the following command to execute react application,

npm start

Output

You can see the following result in the Browser.

Input Form

Name

John

Email address

john@gmail.com

Message

Welcome to React Tutorial.

Submit

Input Form

Name

Enter your name

Email address

Enter your email

Message

Enter your message

Submit

Submitted Data

Name: John

Email: john@gmail.com

Message: Welcome to React Tutorial.

Result

Thus, a responsive UI form using Bootstrap and React has been designed to capture user input and display the result.