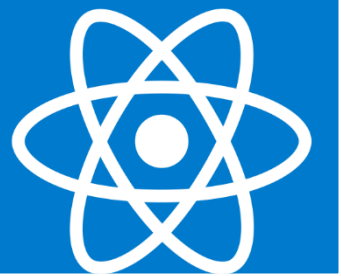
Forms in React JS

#React Notes

Form



Get Event All Details

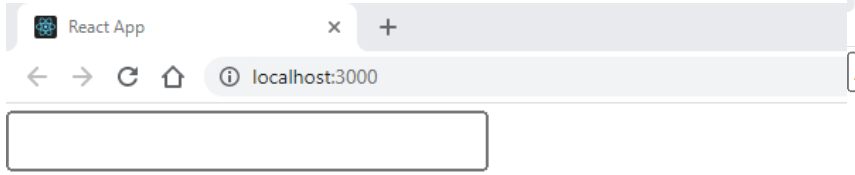
App.js M

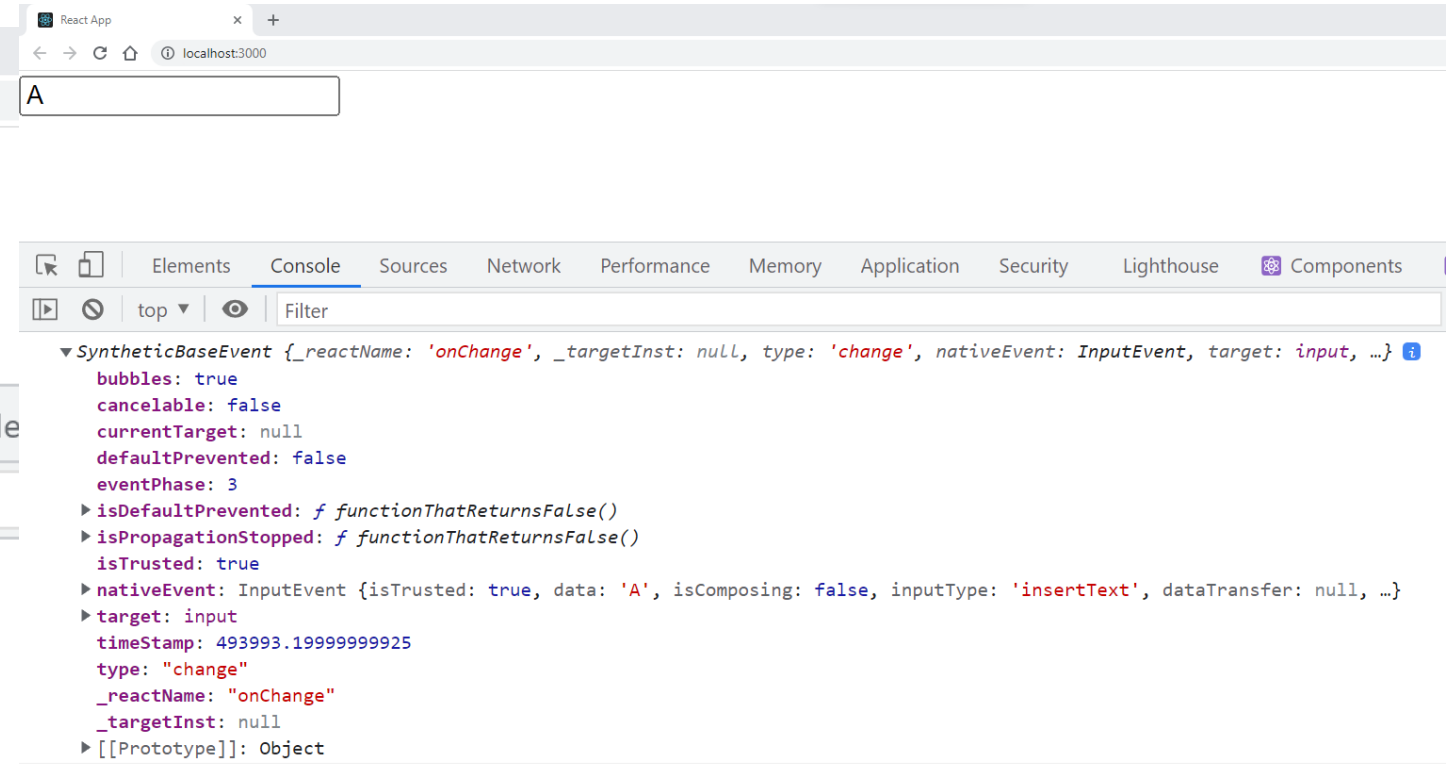
src > App.js > ...

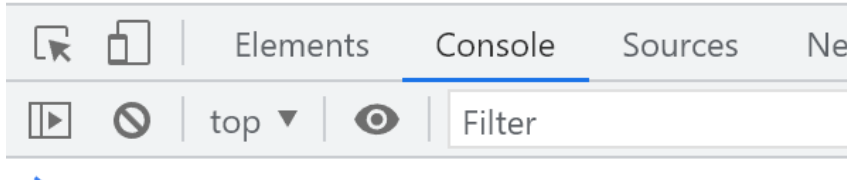
```
1  import React from 'react';
2  class App extends React.Component {
3    constructor(props) {
4      super(props);
5      this.state = { };
6    }
7
8    onChangeProcess(event){
9      console.log(event);
10   }
11
12   render() {
13     return (
14       <div>
15         <input type="text" name="txt1" onChange={this.onChangeProcess.bind(this)}/>
16       </div>
17     );
18   }
19 }
20
21 export default App;
```

```
import React from 'react';
class App extends React.Component {
 constructor(props) {
  super(props);
  this.state = { };
 }
 onChangeProcess(event){
  console.log("Event Target Name is " + event.target.name + " Value is " + event.target.value);
 }
 render() {
  return (
   <div>
    <input type="text" name="txt1" onChange={this.onChangeProcess.bind(this)}/>
   </div>
  );
 }
}

export default App;
```

Event Details Print





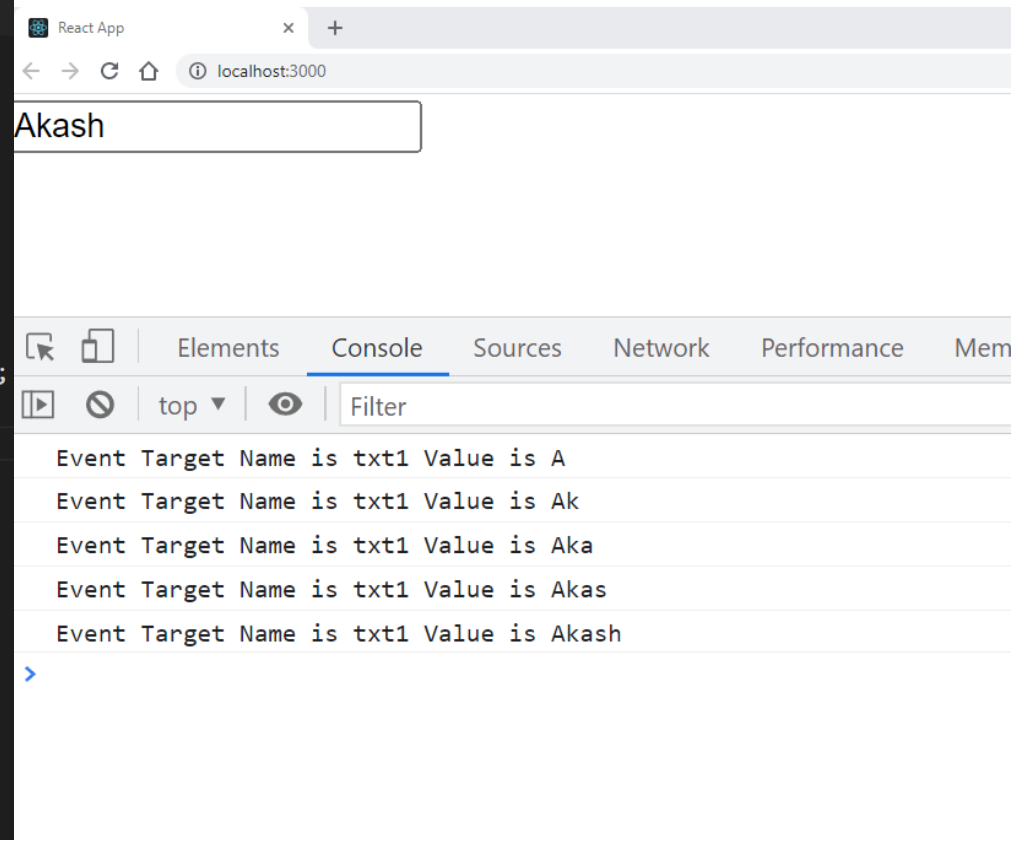


Get Event Name and Value

App.js M

src > App.js > App

```
1  import React from 'react';
2  class App extends React.Component {
3    constructor(props) {
4      super(props);
5      this.state = { };
6    }
7
8    onChangeProcess(event){
9      console.log("Event Target Name is " + event.target.name + " Value is " + event.target.value);
10   }
11
12   render() {
13     return (
14       <div>
15         <input type="text" name="txt1" onChange={this.onChangeProcess.bind(this)}/>
16       </div>
17     );
18   }
19 }
20
21 export default App;
```

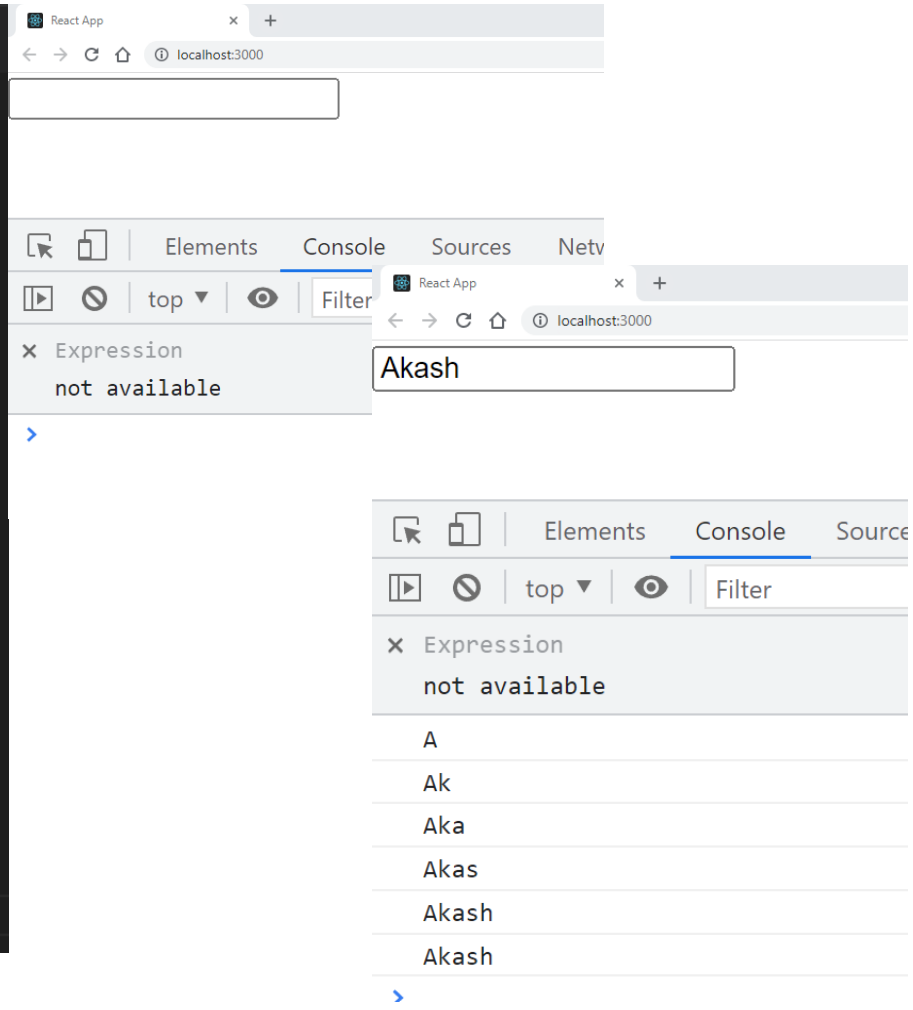


Form on Change Get Value

App.js M

src > App.js > default

```
1  import React from "react";
2  class App extends React.Component {
3    constructor(props) {
4      super(props);
5      this.state = {};
6    }
7
8    handleChange(event){
9      console.log(event.target.value);
10   }
11
12   render() {
13     return (
14       <div>
15         <input type="text" name="txt1" onChange={this.handleChange.bind(this)} />
16       </div>
17     );
18   }
19 }
20 export default App;
```



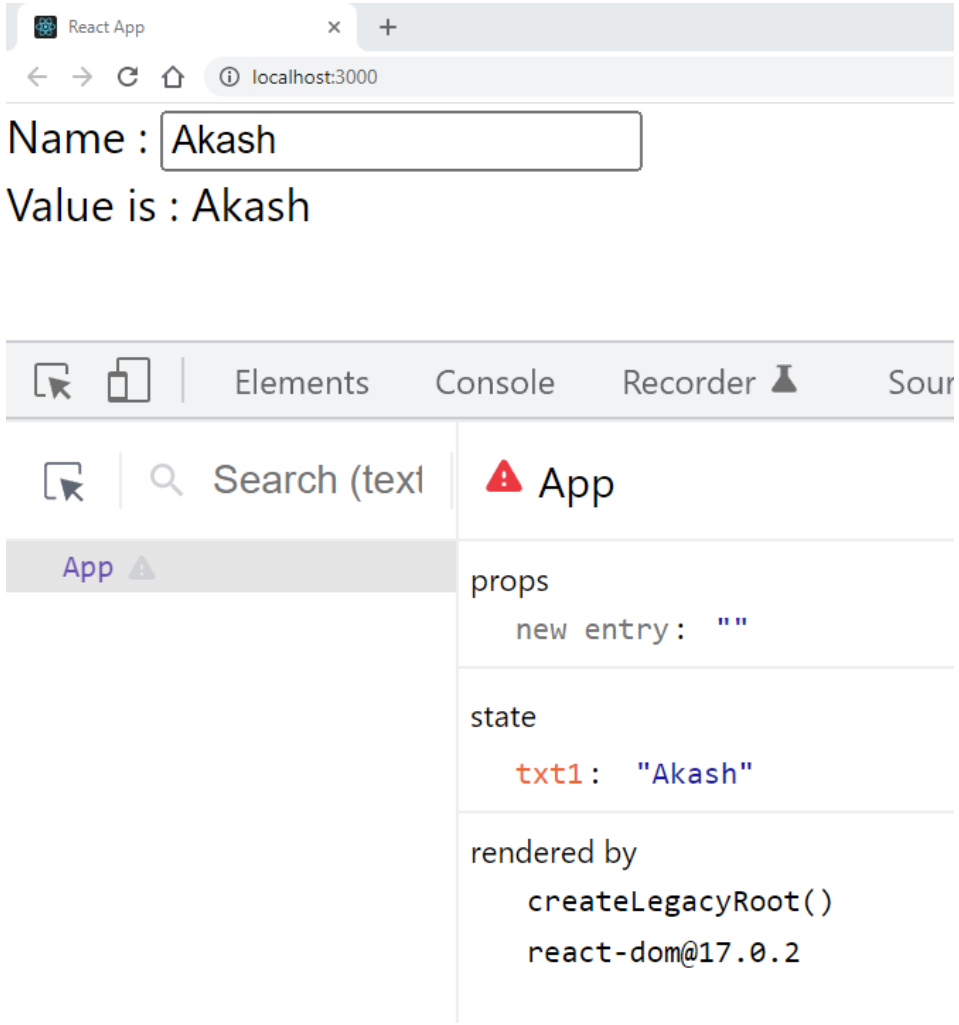
Assign Textbox Value to State and Print it

App.js

src > App.js > ...

```
1  import React from 'react';
2  class App extends React.Component {
3    constructor(props) {
4      super(props);
5      this.state = {txt1 : ""}
6    }
7    handleChange(event) {
8        this.setState(
9          {
10           txt1 : event.target.value,
11         }
12       );
13   }
14   render() {
15     return (
16       <div>
17         Name : <input type="text" name="txt1" autoComplete="off" onChange={this.handleChange.bind(this)} />
18         <br/>
19         Value is : {this.state.txt1}
20       </div>
21     )
22   }
23 }
24 export default App;
25
```

OnChange Value will be Store and State and Print it.

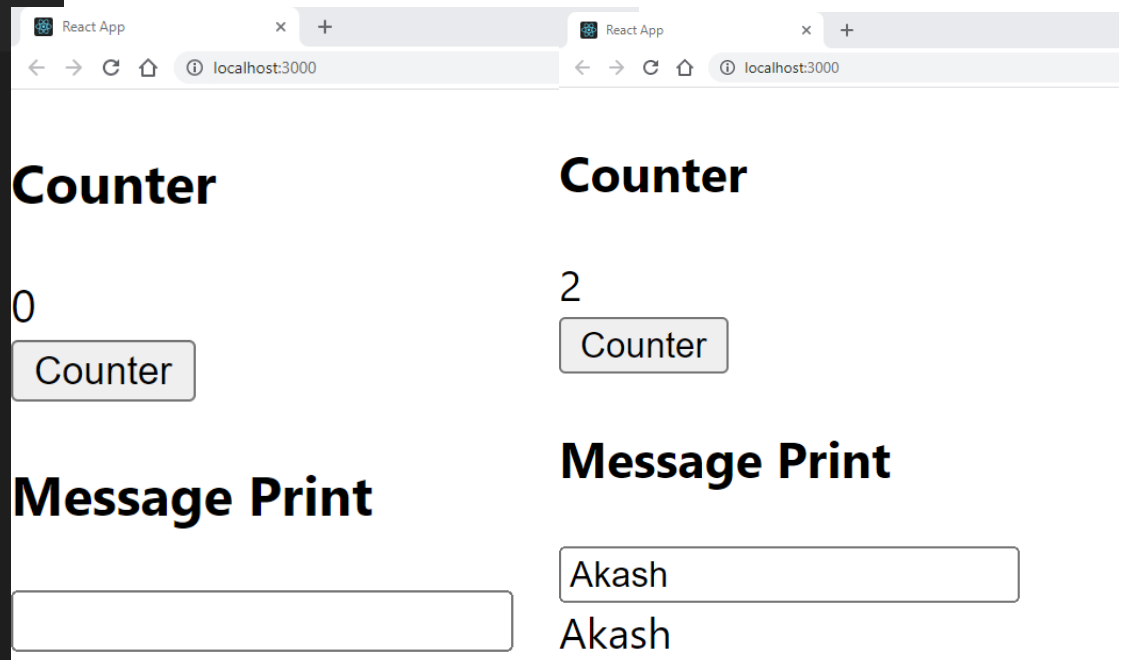


OnChange and OnSubmit

App.js

src > App.js > default

```
1  import React from 'react';
2  class App extends React.Component {
3    constructor(props) {
4      super(props);
5      this.state = { no1: 0,msg:''};
6    }
7    onclickValue() {
8      this.setState({ no1: this.state.no1 + 1 });
9    }
10   onchangeValue(event) {
11     var myvalue = event.target.value;
12     this.setState({ msg: myvalue });
13   }
14   render() {
15     return (
16       <div>
17         <h3>Counter</h3>
18         {this.state.no1}
19         <br/>
20         <button onClick={this.onclickValue.bind(this)}>Counter</button>
21         <h3>Message Print</h3>
22         <input type="text" name='txt1' onChange={this.onchangeValue.bind(this)} />
23         <br/>
24         {this.state.msg}
25       </div>
26     );
27   }
28 }
29 export default App;
```

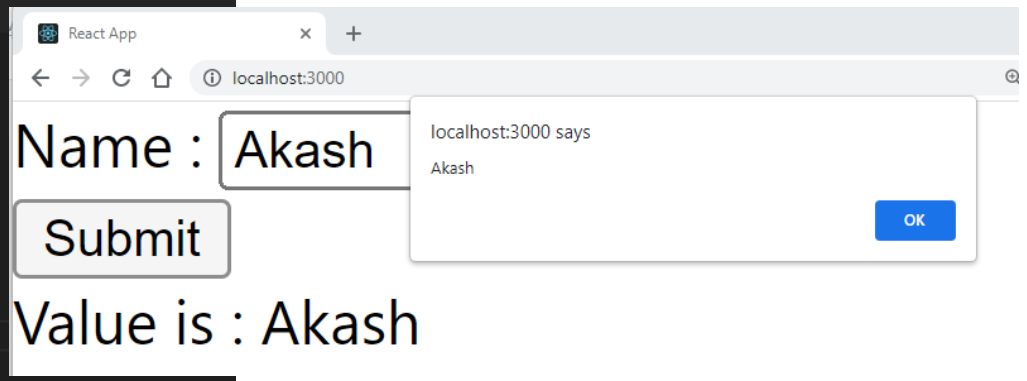


FormSubmit Data Get

App.js

src > App.js > App > handleChange

```
1  import React from 'react';
2  class App extends React.Component {
3    constructor(props) {
4      super(props);
5      this.state = {txt1 : ""}
6    }
7    handleChange(event) {
8        this.setState(
9          {
10           txt1 : event.target.value,
11         }
12       );
13   }
14   handleSubmit(event) {
15     alert(this.state.txt1);
16     event.preventDefault();
17   }
18   render() {
19     return (
20       <div>
21         <form onSubmit={this.handleSubmit.bind(this)}>
22          Name : <input type="text" name="txt1" autoComplete="off" onChange={this.handleChange.bind(this)} /> <br/>
23          <input type="submit" /> <br/>
24          Value is : {this.state.txt1}
25         </form>
26       </div>
27     )
28   }
29 }
30 export default App;
31
```

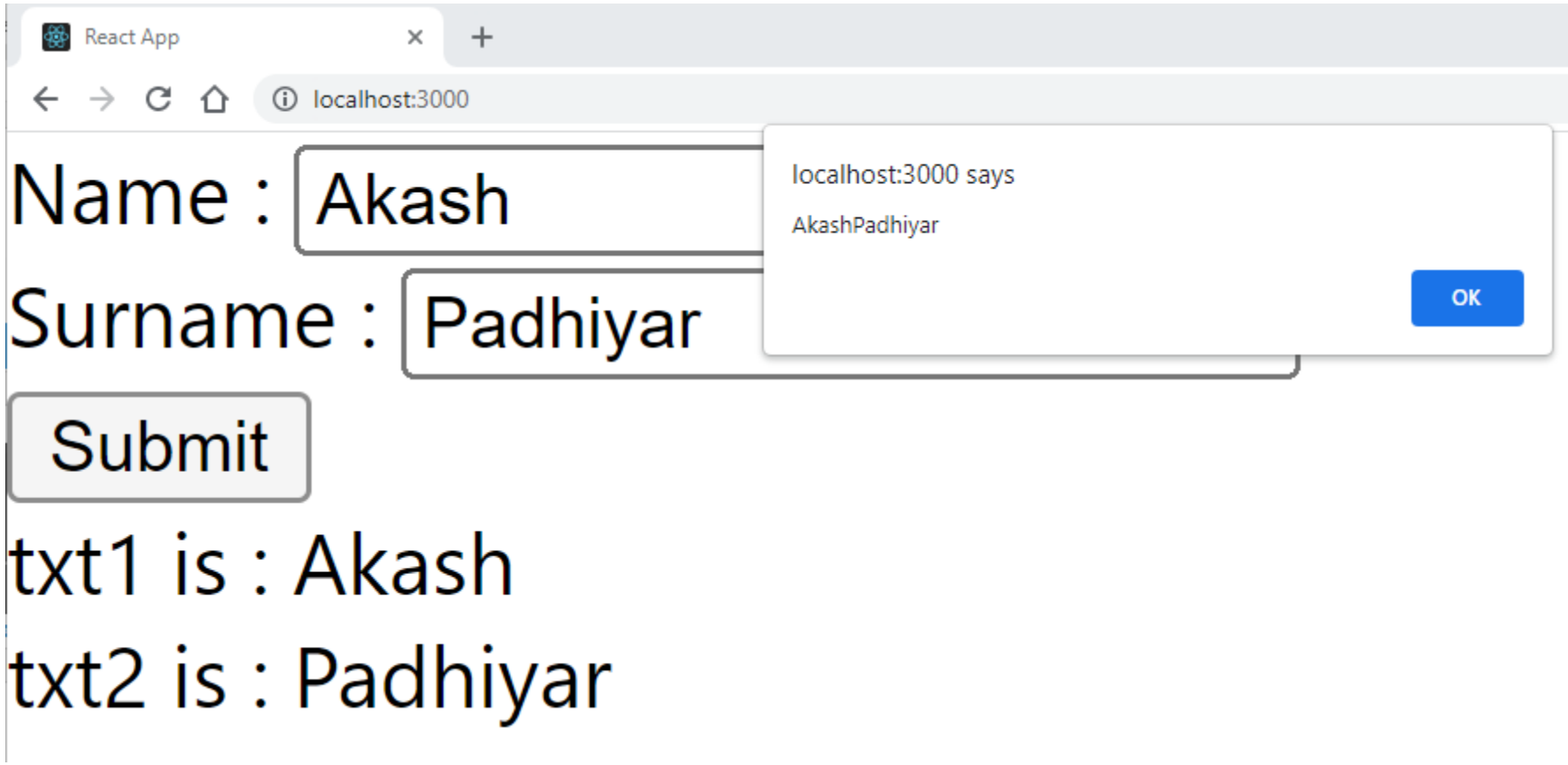


Multiple Textbox with Different Handle

App.js

src > App.js > App

```
import React from 'react';
class App extends React.Component {
  constructor(props) {
    super(props);
    this.state = {txt1 : "",txt2 : ""}
  }
  handleChange1(event) {
      this.setState(
        { txt1 : event.target.value}
      );
  }
  handleChange2(event) {
    this.setState(
      { txt2 : event.target.value}
    );
}
  handleSubmit(event) {
    alert(this.state.txt1 + this.state.txt2);
    event.preventDefault();
  }
  render() {
    return (
      <div>
        <form onSubmit={this.handleSubmit.bind(this)}>
        Name : <input type="text" name="txt1" autoComplete="off" onChange={this.handleChange1.bind(this)} /> <br/>
        Surname : <input type="text" name="txt2" autoComplete="off" onChange={this.handleChange2.bind(this)} /> <br/>
        <input type="submit" /> <br/>
        txt1 is : {this.state.txt1} <br/>
        txt2 is : {this.state.txt2}
        </form>
      </div>
    )
  }
}
export default App;
```


React App
localhost:3000
Name : Akash
Surname : Padhiyar
Submit
txt1 is : Akash
txt2 is : Padhiyar
localhost:3000 says
AkashPadhiyar
OK

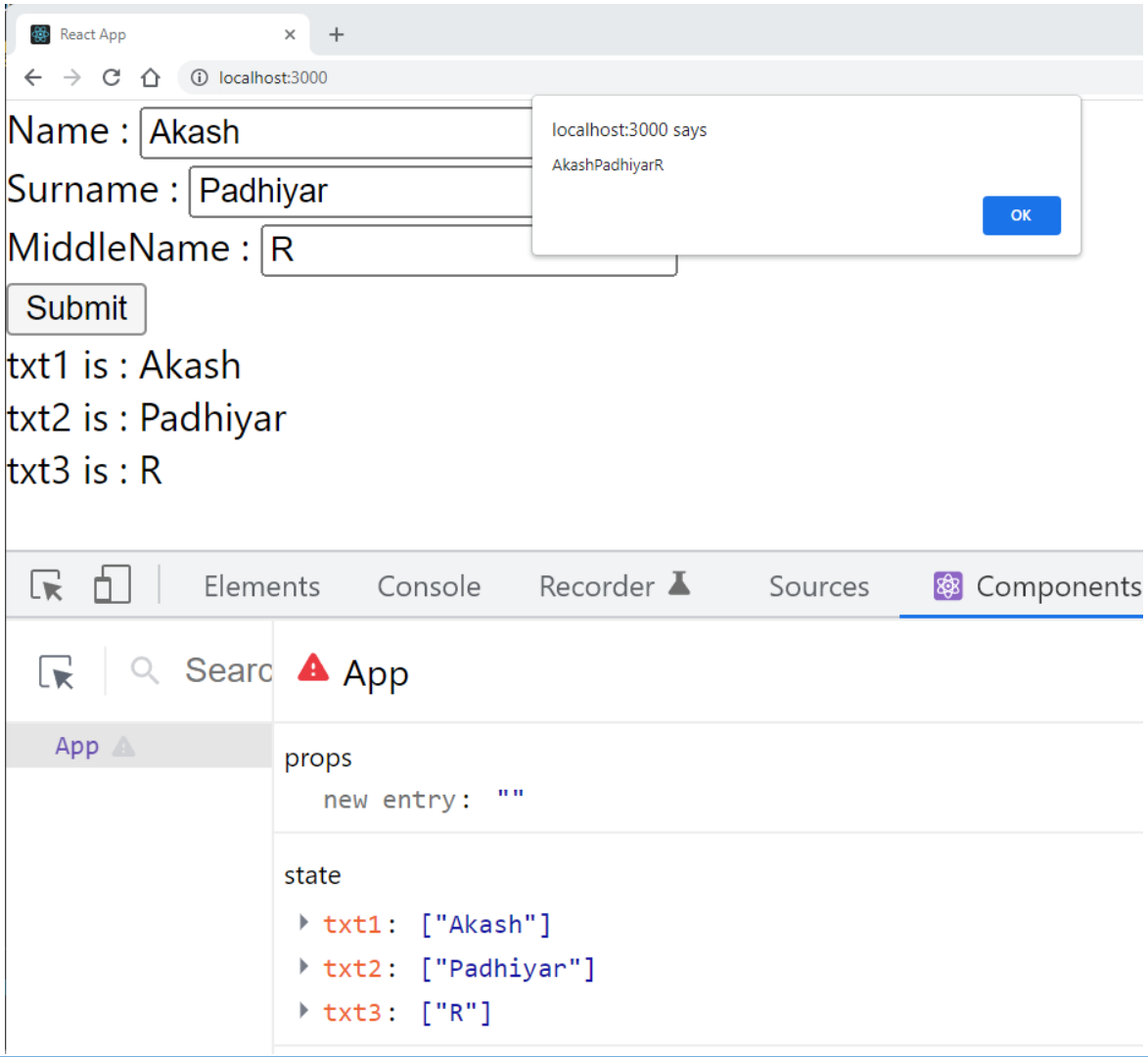
Multiple Value with Array

- To get multiple values we can use array object.
- State name and control name need to be same.

App.js

src > App.js > App > render

```
1  import React from 'react';
2  class App extends React.Component {
3    constructor(props) {
4      super(props);
5      this.state = {txt1 : "",txt2 : "",txt3 : ""}
6    }
7    handleChange(event) {
8        this.setState(
9          { [event.target.name]:[event.target.value] }
10       );
11   }
12   handleSubmit(event) {
13     alert(this.state.txt1 + this.state.txt2 + this.state.txt3);
14     event.preventDefault();
15   }
16   render() {
17     return (
18       <div>
19         <form onSubmit={this.handleSubmit.bind(this)}>
20         Name : <input type="text" name="txt1" autoComplete="off" onChange={this.handleChange.bind(this)} /> <br/>
21         Surname : <input type="text" name="txt2" autoComplete="off" onChange={this.handleChange.bind(this)} /> <br/>
22         MiddleName : <input type="text" name="txt3" autoComplete="off" onChange={this.handleChange.bind(this)} /> <br/>
23         <input type="submit" /> <br/>
24         txt1 is : {this.state.txt1} <br/>
25         txt2 is : {this.state.txt2}<br/>
26         txt3 is : {this.state.txt3}<br/>
27         </form>
28       </div>
29     )
30   }
31 }
32 export default App;
```

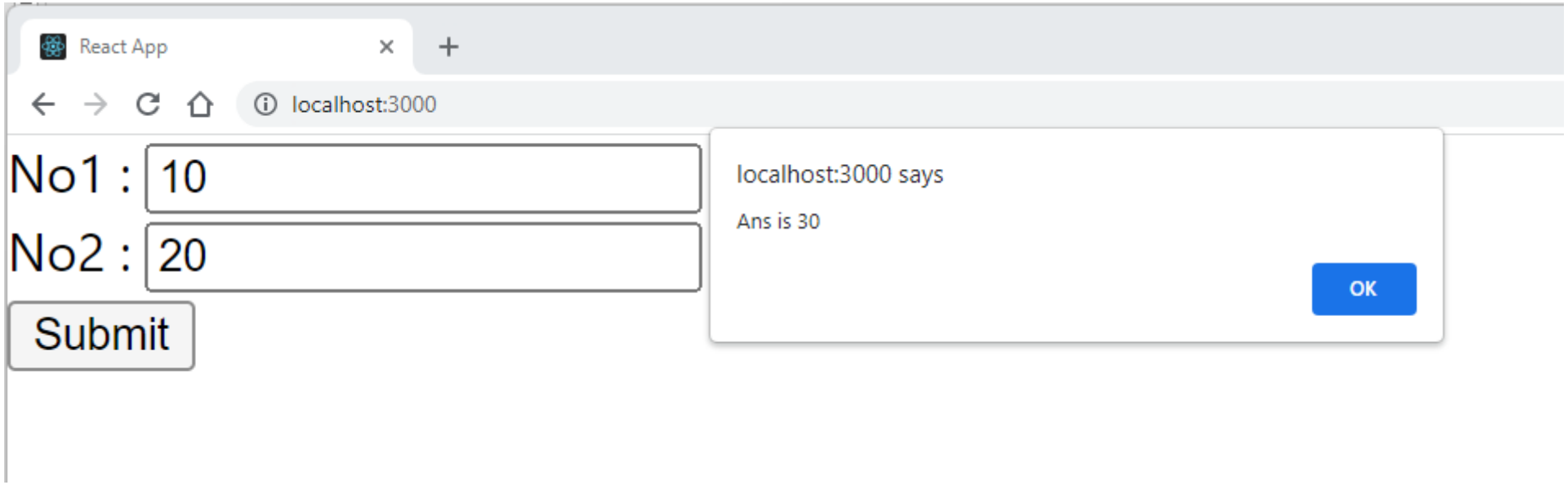

React App
localhost:3000
Name : Akash
Surname : Padhiyar
MiddleName : R
Submit
txt1 is : Akash
txt2 is : Padhiyar
txt3 is : R
localhost:3000 says
AkashPadhiyarR
OK
Elements
Console
Recorder
Sources
Components
App
props
new entry: ""
state
txt1: ["Akash"]
txt2: ["Padhiyar"]
txt3: ["R"]

Sum (Same Function for Both txt)

App.js

src > App.js > App

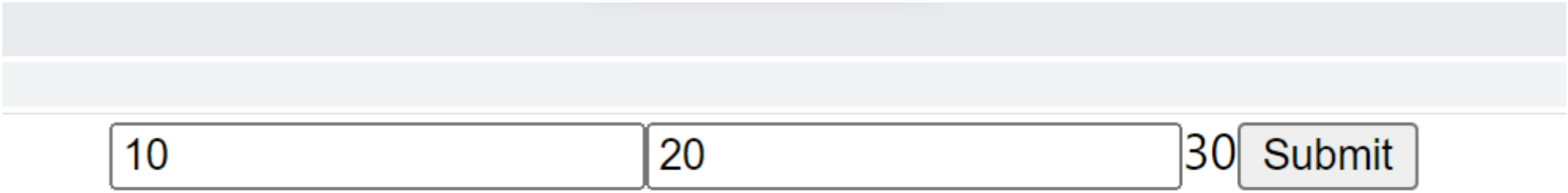
```
1  import React from 'react';
2  class App extends React.Component {
3    constructor(props) {
4      super(props);
5      this.state = {no1 : "",no2 : "",ans : ""}
6    }
7    handleChange(event) {
8        this.setState(
9          { [event.target.name]:[event.target.value] }
10       );
11
12   }
13   handleSubmit(event) {
14     var a = parseInt(this.state.no1);
15     var b = parseInt(this.state.no2);
16     var c = a + b;
17     this.setState({ans : this.state.ans});
18     alert("Ans is " + c);
19     event.preventDefault();
20   }
21   render() {
22     return (
23       <div>
24         <form onSubmit={this.handleSubmit.bind(this)}>
25          No1 : <input type="number" name="no1"  onChange={this.handleChange.bind(this)} /> <br/>
26          No2 : <input type="number" name="no2"  onChange={this.handleChange.bind(this)} /> <br/>
27          <input type="submit" /> <br/>
28         </form>
29       </div>
30     )
31   }
32 }
33 export default App;
34
```


React App
localhost:3000
No1 : 10
No2 : 20
Submit
localhost:3000 says
Ans is 30
OK

Sum Example

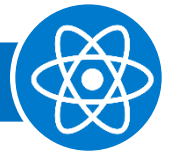
```
import React from 'react';
class App extends React.Component {
    constructor(props) {
        super(props);
        this.state = {
            txt1: "", txt2: "", txt3: "",
        }
    }

    onChangeProcess(event) {
        this.setState({ txt1: event.target.value });
    }
    onChangeProcess1(event) {
        this.setState({ txt2: event.target.value });
    }

    onClickData(event) {

        var a = this.state.txt1;
        var b = this.state.txt2;
        var c = parseInt(a) + parseInt(b);
        this.setState({ txt3: c });
        event.preventDefault();
    }

    render() {
        return (
            <div>

                <form onSubmit={this.onClickData.bind(this)}>
                    <input type="text" name='txt1' onChange={this.onChangeProcess.bind(this)} />
                    <input type="text" name='txt2' onChange={this.onChangeProcess1.bind(this)} />
                    {this.state.txt3}
                    <input type="submit" />
                </form>
            </div>
        );
    }
}
export default App;
```

Output



Output

```
import React from 'react';
class App extends React.Component {
   constructor(props) {
      super(props);
      this.state = {
         txt1: "", txt2: "", txt3: "",
      }
   }

   onChangeProcess(event) {
      this.setState({ txt1: event.target.value });
   }
   onChangeProcess1(event) {
      this.setState({ txt2: event.target.value });
   }

   onClickData(event) {

      var a = this.state.txt1;
      var b = this.state.txt2;
      var c = parseInt(a) + parseInt(b);
      this.setState({ txt3: c });
      event.preventDefault();
   }
render() {
      return (
         <div>

            <form onSubmit={this.onClickData.bind(this)}>
               <input type="text" name='txt1' onChange={this.onChangeProcess.bind(this)} />
               <input type="text" name='txt2' onChange={this.onChangeProcess1.bind(this)} />
               {this.state.txt3}
               <input type="submit" />
            </form>
         </div>
      );
   }
}
export default App;
```



Textbox Radio Dropdown

App.js

src > App.js > App > onChangeHandler

```
1  import React, { Component } from "react";
2
3  class App extends Component {
4    constructor(props) {
5      super(props);
6      this.state = {
7        studentName: "",
8        gender: "",
9        state: "Ahmedabad"
10     };
11     this.onChangeHandler = this.onChangeHandler.bind(this);
12   }
13   onChangeHandler(e) {
14     this.setState({
15       [e.target.name]: e.target.value
16     });
17   }
```

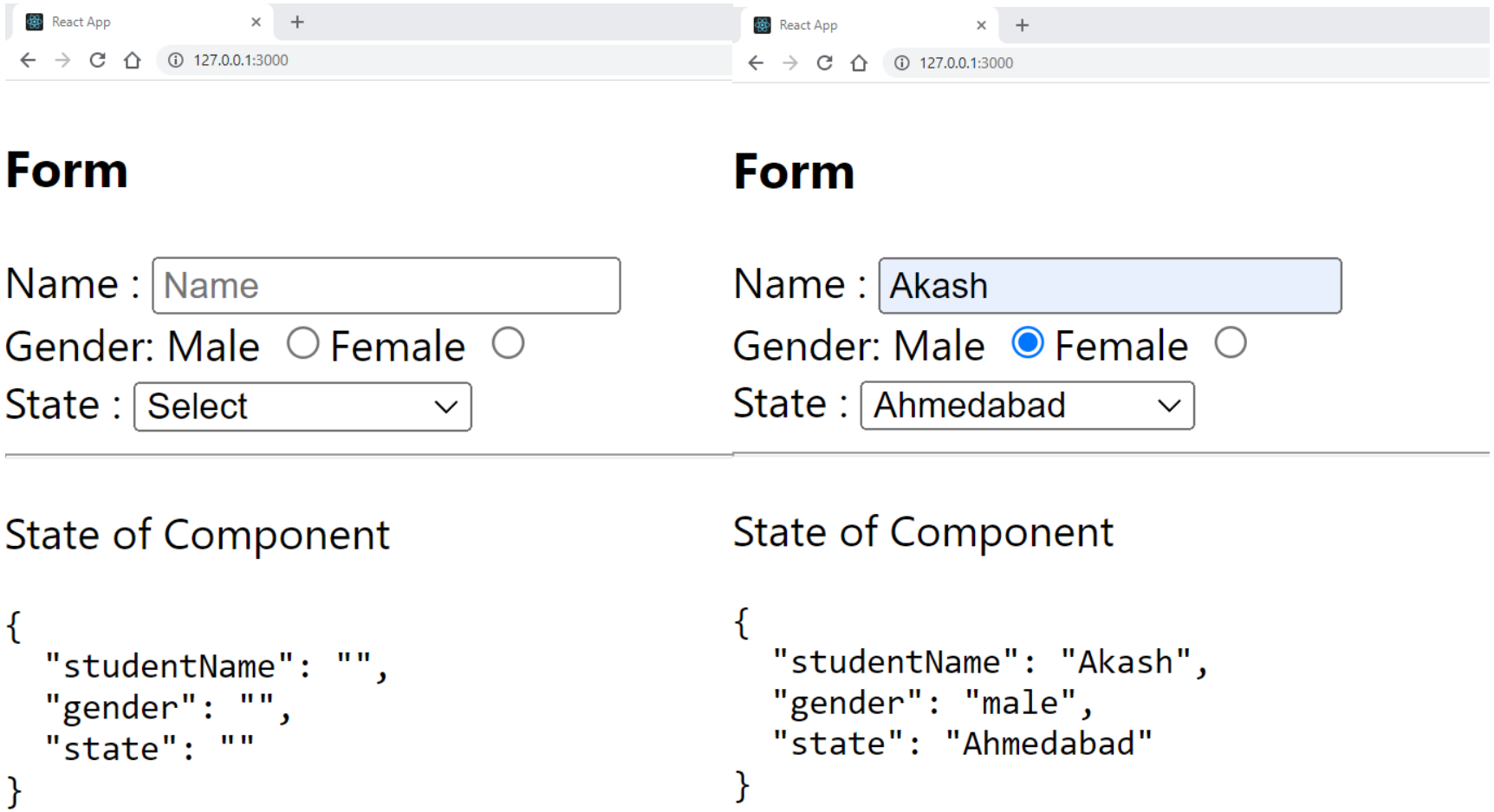
```
import React, { Component } from "react";

class App extends Component {
  constructor(props) {
    super(props);
    this.state = {
      studentName: "",
      gender: "",
      state: "Ahmedabad"
    };
    this.onChangeHandler = this.onChangeHandler.bind(this);
  }
  onChangeHandler(e) {
    this.setState({
      [e.target.name]: e.target.value
    });
  }
```

Code

```
19    render() {
20      return (
21      <div>
22        <h3>Form</h3>
23      <form>
24      Name  : <input type="text" name="studentName" placeholder="Name" onChange={this.onChangeHandler} />
25               <br />
26      Gender: Male <input type="radio" name="gender" value="male"
27               checked={this.state.gender === "male"}  onChange={this.onChangeHandler} />
28               Female <input type="radio" name="gender" value="female"
29               checked={this.state.gender === "female"} onChange={this.onChangeHandler} />
30               <br />
31      State : <select name="state" value={this.state.state} onChange={this.onChangeHandler}>
32                 <option value="">Select</option>
33                 <option value="Ahmedabad">Ahmedabad</option>
34                 <option value="Maharashtra">Maharashtra</option>
35                 <option value="Madhya Pradesh">Madhya Pradesh</option>
36               </select>
37      </form>
38        <hr />
39      <p>State of Component</p>
40          <pre>{JSON.stringify(this.state, null, 2)}</pre>
41        </div>
42      );
43    }
44  }
45  export default App;
```

```
render() {
  return (
  <div>
    <h3>Form</h3>
  <form>
  Name  : <input type="text" name="studentName" placeholder="Name" onChange={this.onChangeHandler} />
          <br />
  Gender: Male <input type="radio" name="gender" value="male"
        checked={this.state.gender === "male"}  onChange={this.onChangeHandler} />
        Female <input type="radio" name="gender" value="female"
        checked={this.state.gender === "female"} onChange={this.onChangeHandler} />
        <br />
  State : <select name="state" value={this.state.state} onChange={this.onChangeHandler}>
          <option value="">Select</option>
          <option value="Ahmedabad">Ahmedabad</option>
          <option value="Maharashtra">Maharashtra</option>
          <option value="Madhya Pradesh">Madhya Pradesh</option>
        </select>
  </form>
    <hr />
  <p>State of Component</p>
    <pre>{JSON.stringify(this.state, null, 2)}</pre>
   </div>
  );
 }
}
export default App;
```

Output


React App
127.0.0.1:3000
Form
Name : Name
Gender: Male Female
State : Select
State of Component
{
"studentName": "",
"gender": "",
"state": ""
}
React App
127.0.0.1:3000
Form
Name : Akash
Gender: Male Female
State : Ahmedabad
State of Component
{
"studentName": "Akash",
"gender": "male",
"state": "Ahmedabad"
}

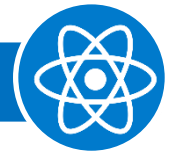
Code

```
import React, { Component } from "react";

class App extends Component {
  constructor(props) {
    super(props);
    this.state = {
      studentName: "",
      gender: "",
      state: ""
    };
    this.onChangeHandler = this.onChangeHandler.bind(this);
  }
  onChangeHandler(e) {
    this.setState({
      [e.target.name]: e.target.value
    });
  }
```

```
render() {
    return (
    <div>
      <h3>Form</h3>
    <form>
    Name  : <input type="text" name="studentName" placeholder="Name"
onChange={this.onChangeHandler} />
          <br />
    Gender: Male <input type="radio" name="gender" value="male"
          checked={this.state.gender === "male"}  onChange={this.onChangeHandler} />
          Female <input type="radio" name="gender" value="female"
          checked={this.state.gender === "female"} onChange={this.onChangeHandler} />
          <br />
    State : <select name="state" value={this.state.state} onChange={this.onChangeHandler}>
            <option value="">Select</option>
            <option value="Ahmedabad">Ahmedabad</option>
            <option value="Maharashtra">Maharashtra</option>
            <option value="Madhya Pradesh">Madhya Pradesh</option>
          </select>
    </form>
      <hr />
    <p>State of Component</p>
       <pre>{JSON.stringify(this.state, null, 2)}</pre>
      </div>
    );
  }
}
export default App;
```

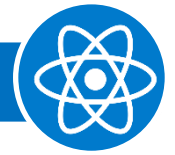
Task

- Create basic c programs in React with State and HTML Controls.
- Take a Values from HTML Control and Use State Concept.
- Example:
  - No is Even or Odd.
  - Year is Leap Year or not.
  - Marksheet program
  - Mini Calculator 2 textbox with 4 Button + - * /



What are the differences between props and state?

- Props are used to pass data(Between Component), whereas state is for managing data (Inside Component)
- State data can be modified by its own component, but is private (cannot be accessed from outside)
- Modifying state should happen with the setState ( ) method
- Props can only be passed from parent component to child (unidirectional flow)
- Components receive data from outside with props, whereas they can create and manage their own data with state
- Data from props is read-only, and cannot be modified by a component that is receiving it from outside



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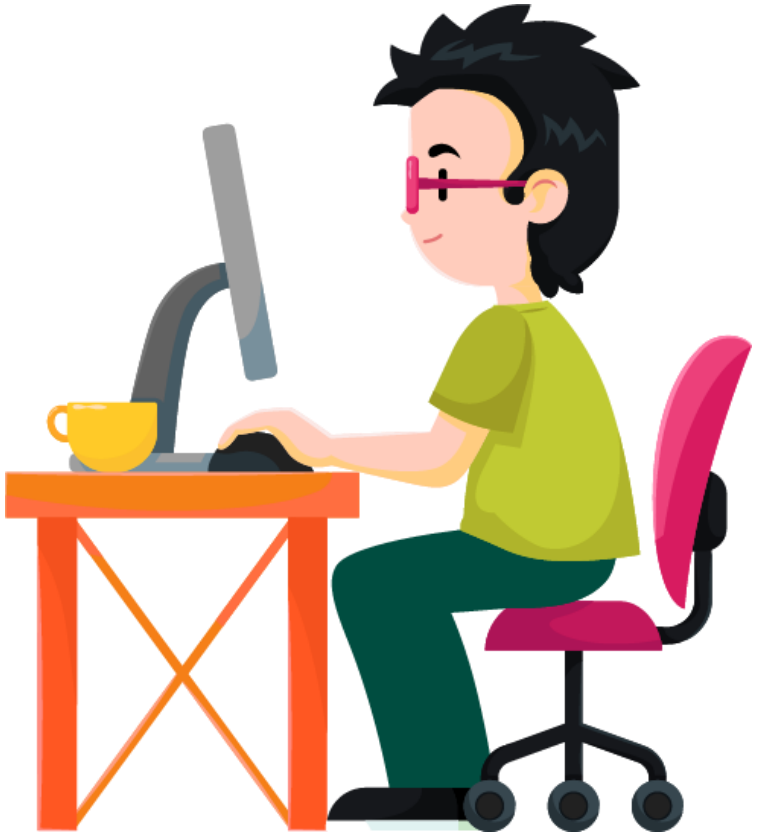

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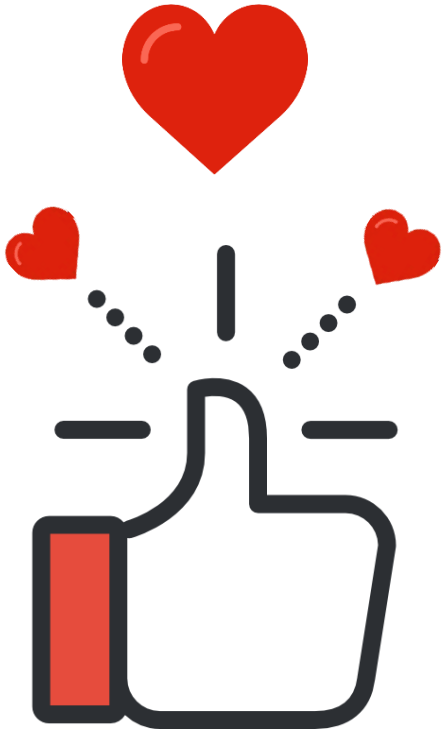

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