

FORM

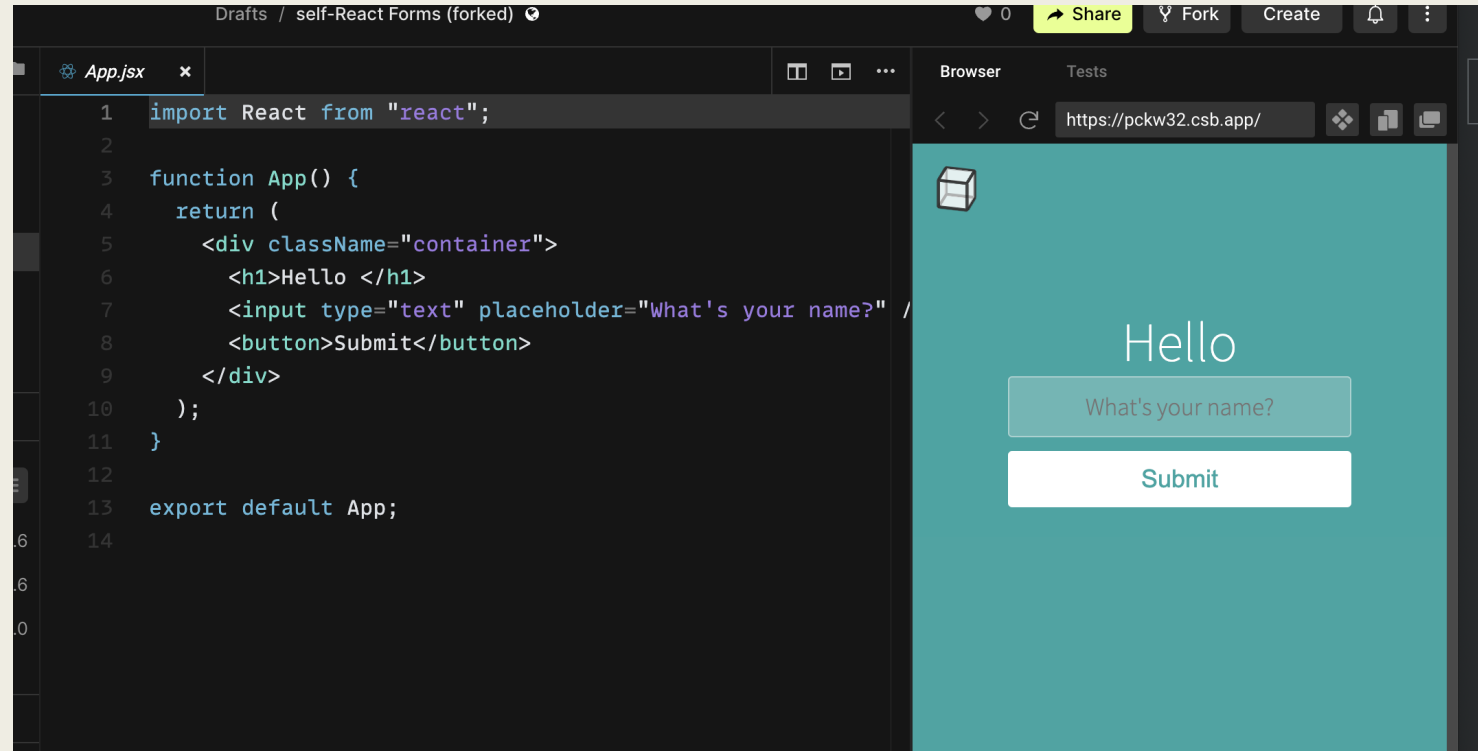


Where are forms used in web development?

Learning objective

- Events that rises from forms.
- Forms are commonly used for login, registration, contact etc.
- How to get the user input for the input element and
- How to use the submit button to use the input from the users.
- Codesandbox - <https://codesandbox.io/s/students-react-forms-forked-gx6rzj?file=/src/index.js>

Initial code



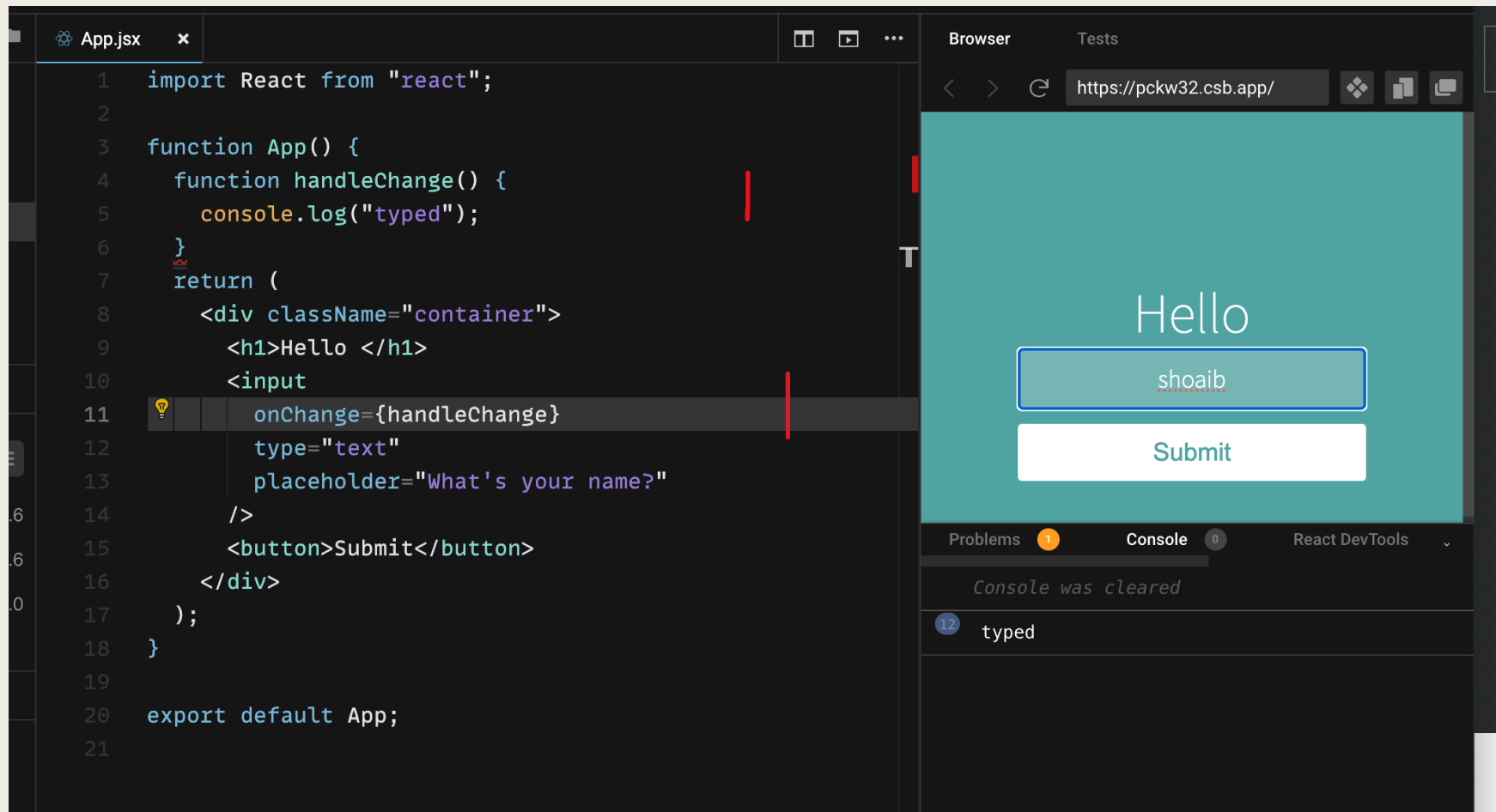
The screenshot displays a code editor with a file named `App.jsx` open. The code defines a functional component `App` that renders a simple form. The form consists of a teal background with the word "Hello" at the top, a text input field with the placeholder "What's your name?", and a "Submit" button. The code is as follows:

```
1 import React from "react";
2
3 function App() {
4   return (
5     <div className="container">
6       <h1>Hello </h1>
7       <input type="text" placeholder="What's your name?" /
8       <button>Submit</button>
9     </div>
10  );
11 }
12
13 export default App;
```

The right side of the editor shows the rendered output in a browser window. The browser's address bar shows the URL `https://pckw32.csb.app/`. The rendered UI matches the code: a teal background with the word "Hello", a text input field with the placeholder "What's your name?", and a "Submit" button.

How to get the value of user input?

We can use onChange event which assigned to a function:



The image shows a code editor on the left and a browser window on the right. The code editor displays the following JavaScript code in `App.jsx`:

```
1 import React from "react";
2
3 function App() {
4   function handleChange() {
5     console.log("typed");
6   }
7   return (
8     <div className="container">
9       <h1>Hello </h1>
10      <input
11        onChange={handleChange}
12        type="text"
13        placeholder="What's your name?"
14      />
15      <button>Submit</button>
16    </div>
17  );
18 }
19
20 export default App;
```

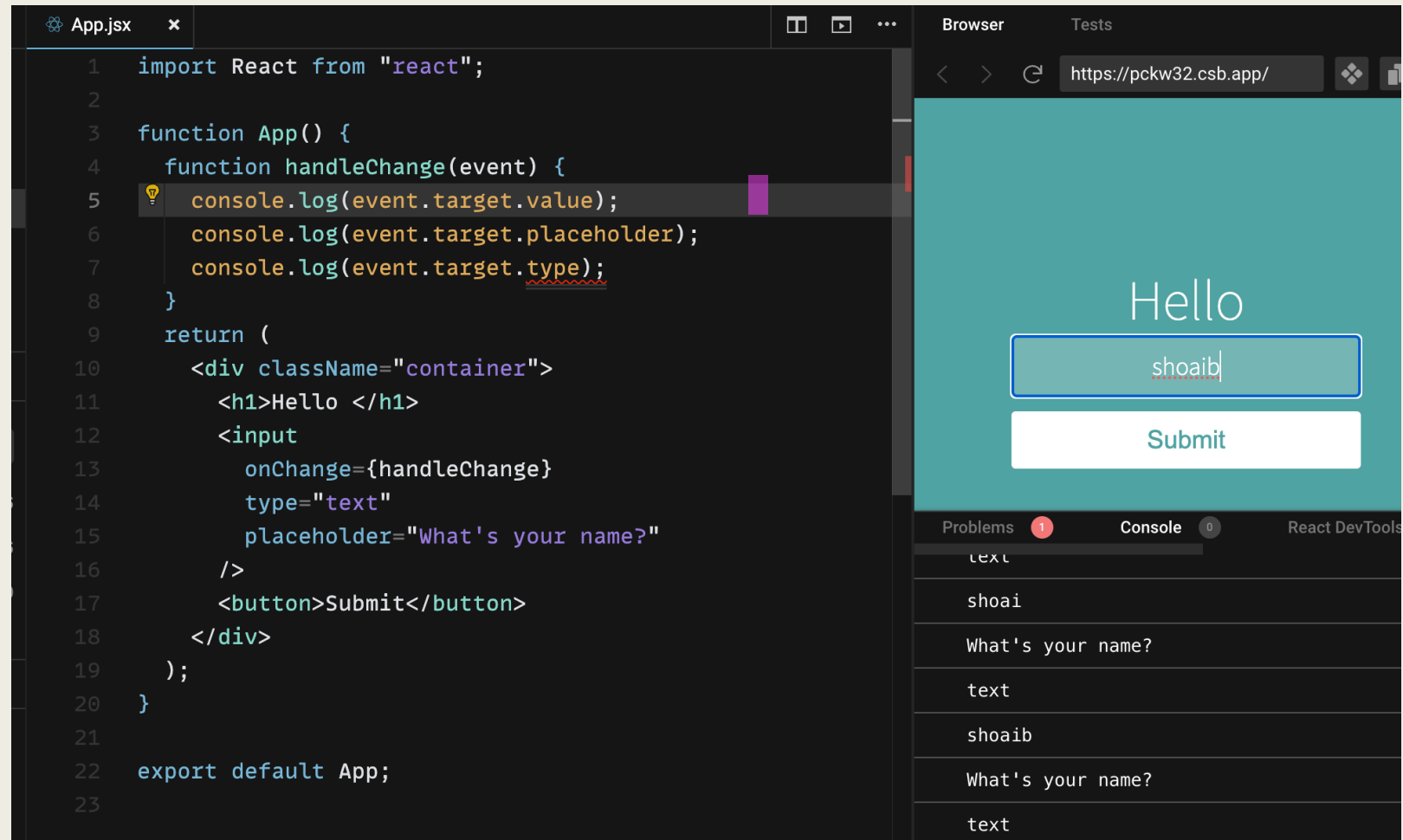
The browser window shows the rendered application at `https://pckw32.csb.app/`. It features a teal background with the word "Hello" in white. Below it is a text input field containing the text "shoaib" and a white "Submit" button. The React DevTools interface is visible at the bottom, showing the "Console" tab with the message "Console was cleared" and a log entry "12 typed".

We still didn't get the value of what's
being typed! What to do?

Need to know -

- When input element triggers the function that stored in OnChange event, it also passes over **an object**.
- We can log various things related to the event.
- Example: **`console.log(event.target.value);`**
- **event** is the event that triggered the onChnage.
- **target** is the element that triggers the element.
- **value** is value of the attributes.

event.target.value for getting the input value



```
App.jsx
1 import React from "react";
2
3 function App() {
4   function handleChange(event) {
5     console.log(event.target.value);
6     console.log(event.target.placeholder);
7     console.log(event.target.type);
8   }
9   return (
10    <div className="container">
11      <h1>Hello </h1>
12      <input
13        onChange={handleChange}
14        type="text"
15        placeholder="What's your name?"
16      />
17      <button>Submit</button>
18    </div>
19  );
20 }
21
22 export default App;
23
```

Browser: https://pckw32.csb.app/

Console:

Text
shoaib
What's your name?
text
shoaib
What's your name?
text

How to place user input after the initial
'hello'?

- We need a state

```
App.jsx
1 import React, { useState } from "react";
2
3 function App() {
4   const [name, setName] = useState("");
5
6   function handleChange(event) {
7     console.log(event.target.value);
8     setName(event.target.value);
9   }
10  return (
11    <div className="container">
12      <h1>Hello {name}</h1>
13      <input
14        onChange={handleChange}
15        type="text"
16        placeholder="What's your name?"
17      />
18      <button>Submit</button>
19    </div>
20  );
21 }
22
23 export default App;
24
```

Browser: https://pckw32.csb.app/

Hello Shoaib

Shoaib

Submit

Problems 1 Console 0 React DevTools

console was cleared

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Shoa

Shoai

Shoaib

Note:

- In HTML the elements are responsible to handle their own state. Input element has an attribute called 'value' which corresponds what's inside of the input.
- For react the value should be set to `event.target.value` e.g. name property.
- In this way there's only single source of truth, used in other components or in input, it's the same.
- This in React called controlled component. More on this - <https://legacy.reactjs.org/docs/forms.html#controlled-components>

Challenge : How to add your name in H1
only after you click the submit button?

Solution

The image shows a web application running in a browser and its source code in a code editor. The browser window displays the URL `https://pckw32.csb.app/` and the page content: "Hello Shoaib". Below the text, there is a text input field containing "Shoaib" and a "Submit" button. The code editor shows the source code for `App.jsx`, which uses `useState` to manage the state of the application.

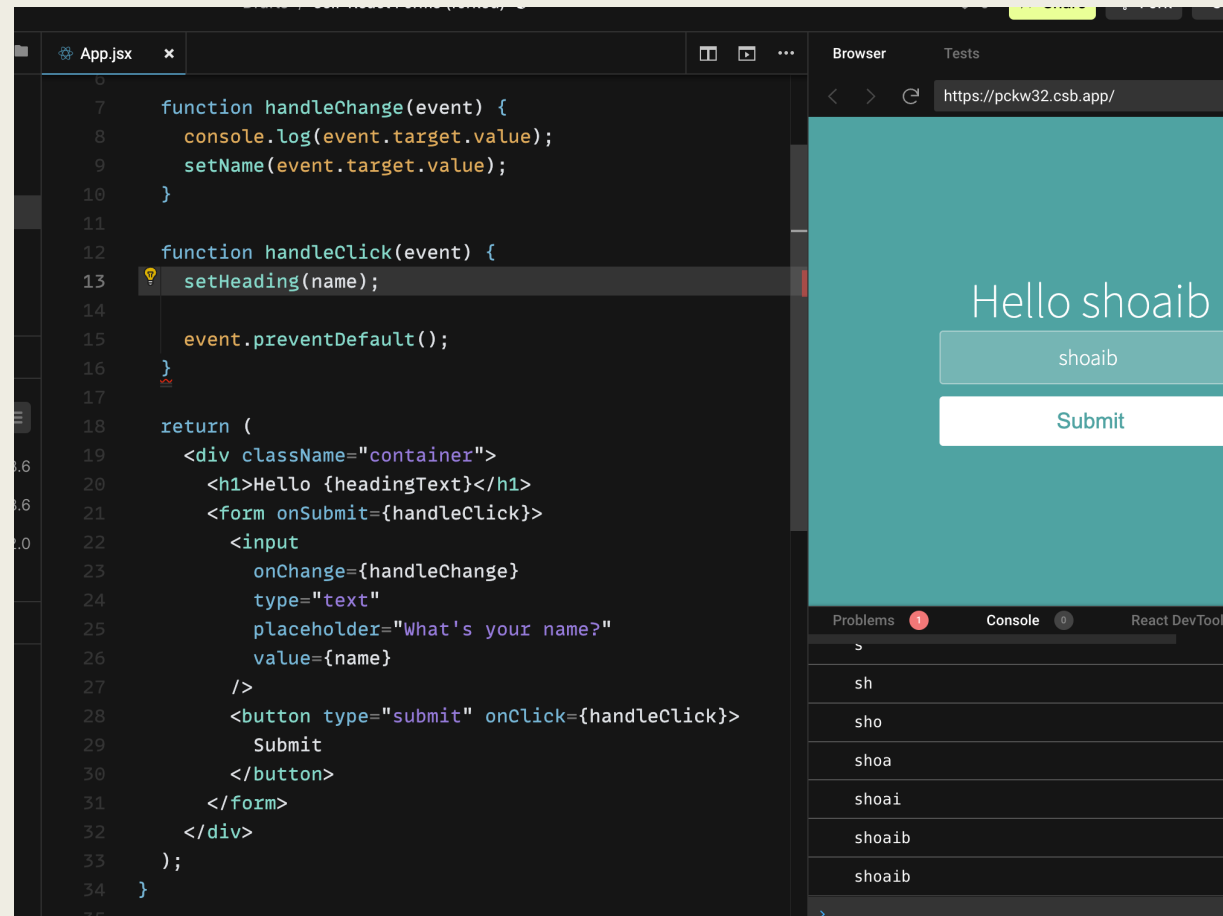
```
1 import React, { useState } from "react";
2
3 function App() {
4   const [name, setName] = useState("");
5   const [headingText, setHeading] = useState("");
6
7   function handleChange(event) {
8     console.log(event.target.value);
9     setName(event.target.value);
10  }
11
12  function handleClick() {
13    setHeading(name);
14  }
15
16  return (
17    <div className="container">
18      <h1>Hello {headingText}</h1>
19      <input
20        onChange={handleChange}
21        type="text"
22        placeholder="What's your name?"
23        value={name}
24      />
25      <button onClick={handleClick}>Submit</button>
26    </div>
27  );
28 }
29
30 export default App;
```

Adding some more -

- HTML form element contains all the form related elements e.g. input, button etc.
- Button type set to submit.
- But using form may trigger refresh by it's default behavior.
- To fix this, do - `<form onSubmit={handleClick}>` and

```
function handleClick(event) {  
    setHeading(name);  
  
    event.preventDefault();  
}
```

Final code -



The image shows a development environment with VS Code on the left and a web browser on the right. The VS Code editor displays the final code for a web application. The code includes two event handlers: `handleChange` for updating the name and `handleClick` for updating the heading. The JSX returns a container with a heading, a form with an input field, and a submit button. The browser shows the rendered application with the heading 'Hello shoaib', an input field containing 'shoaib', and a 'Submit' button. The console in the bottom right shows the sequence of state updates.

```
App.jsx
7   function handleChange(event) {
8     console.log(event.target.value);
9     setName(event.target.value);
10  }
11
12  function handleClick(event) {
13    setHeading(name);
14
15    event.preventDefault();
16  }
17
18  return (
19    <div className="container">
20      <h1>Hello {headingText}</h1>
21      <form onSubmit={handleClick}>
22        <input
23          onChange={handleChange}
24          type="text"
25          placeholder="What's your name?"
26          value={name}
27        />
28        <button type="submit" onClick={handleClick}>
29          Submit
30        </button>
31      </form>
32    </div>
33  );
34 }
```

Browser: <https://pckw32.csb.app/>

Hello shoaib

shoaib

Submit

Problems 1 Console 0 React DevTools

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shoaib

shoaib

- Everything we did so far can be viewed here - <https://codesandbox.io/s/self-react-forms-forked-pckw32?file=/src/components/App.jsx>