**Namaste React Notes**

**Lecture 1- Inception**

**Hello World Program by using HTML**

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Namaste React</title>

</head>

<body>

  <div id="root">

    <h1>Hello World using HTML</h1>

  </div>

</body>

</html>

**Hello World Program by using Javascript**

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Namaste React</title>

</head>

<body>

  <div id="root">

  </div>

  <script>

    const heading = document.createElement("h1");

    heading.innerHTML = "Hello World from JavaScript"

    const root = document.getElementById("root")

    root.appendChild(heading)

  </script>

</body>

</html>

**Injecting React into Html file using CDN(Content Delivery Network)**

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Namaste React</title>

</head>

<body>

  <div id="root">

  </div>

  <script crossorigin src="https://unpkg.com/react@18/umd/react.development.js"></script>

  <script crossorigin src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>

</body>

</html>

**Hello World Program using React**

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Namaste React</title>

</head>

<body>

  <div id="root">

  </div>

  <script crossorigin src="https://unpkg.com/react@18/umd/react.development.js"></script>

  <script crossorigin src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>

  <script>

    const heading = React.createElement("h1", {}, "Hello World from React")

    const root = ReactDOM.createRoot(document.getElementById("root"))

    root.render(heading)

  </script>

</body>

</html>

**Separating the JavaScript Code, CSS and HTML into separate files**

**index.html**

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <link rel="stylesheet" href="index.css">

  <title>Namaste React</title>

</head>

<body>

  <div id="root">

  </div>

  <script crossorigin src="https://unpkg.com/react@18/umd/react.development.js"></script>

  <script crossorigin src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>

  <script src="App.js"></script>

</body>

</html>

**App.js**

const heading = React.createElement(

  "h1",

  { id: "heading", "data-testid": "heading", testid: "heading" },

  "Hello World from React"

);

const root = ReactDOM.createRoot(document.getElementById("root"));

root.render(heading);

**index.css**

#root {

  background-color: aqua;

}

**Output:**

****

**If we console.log(heading) in App.js**

const heading = React.createElement(

  "h1",

  { id: "heading", "data-testid": "heading", testid: "heading" },

  "Hello World from React"

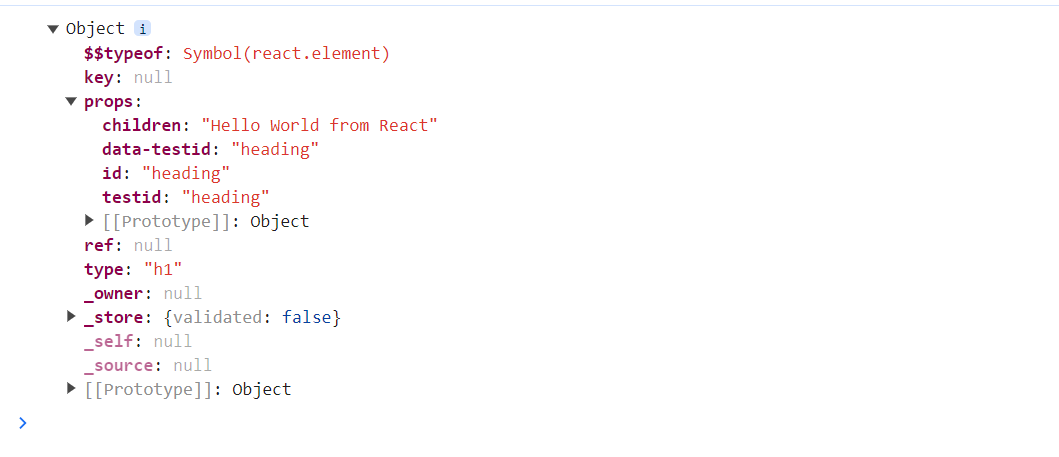
);

console.log(heading)

const root = ReactDOM.createRoot(document.getElementById("root"));

root.render(heading);

**Output:**

****

**Creating Nested Elements in React**

**Trying to create**

  <div id="parent">

    <div id="child">

      <h1 id="inner-child">Hello World!</h1>

    </div>

  </div>

const parent = React.createElement(

  "div",

  { id: "parent" },

  React.createElement(

    "div",

    { id: "child" },

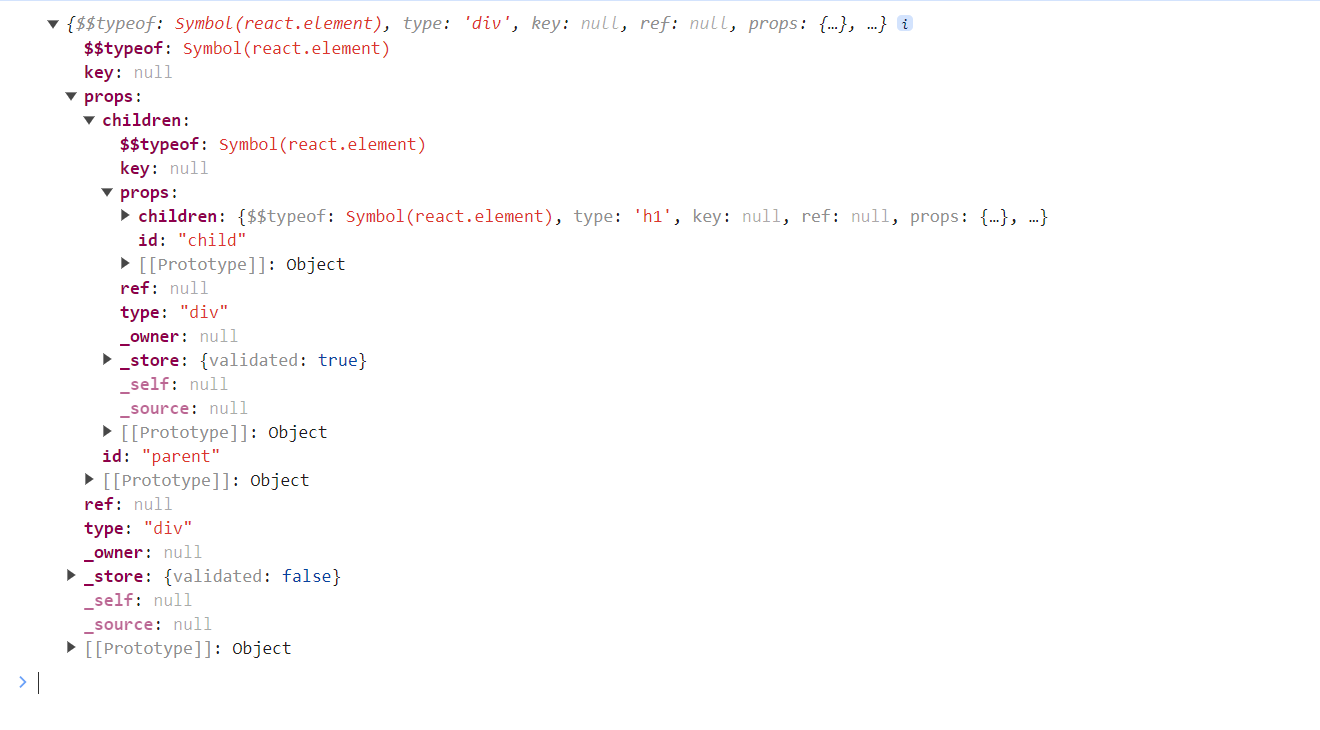
    React.createElement("h1", { id: "inner-child" }, "Hello World!")

  )

);

const root = ReactDOM.createRoot(document.getElementById("root"));

root.render(parent);

****

Notice the children in the above example

**Creating Siblings in React**

  <div id="parent">

    <div id="child">

      <h1 id="inner-child1">H1 Tag</h1>

      <h2 id="inner-child2">H2 Tag</h2>

    </div>

  </div>

const parent = React.createElement(

  "div",

  { id: "parent" },

  React.createElement(

    "div",

    { id: "child" },

    [React.createElement("h1", { id: "inner-child1", key:"1" }, "H1 Tag"),

    React.createElement("h2", { id: "inner-child2", key:"2" }, "H2 Tag")]

  )

);

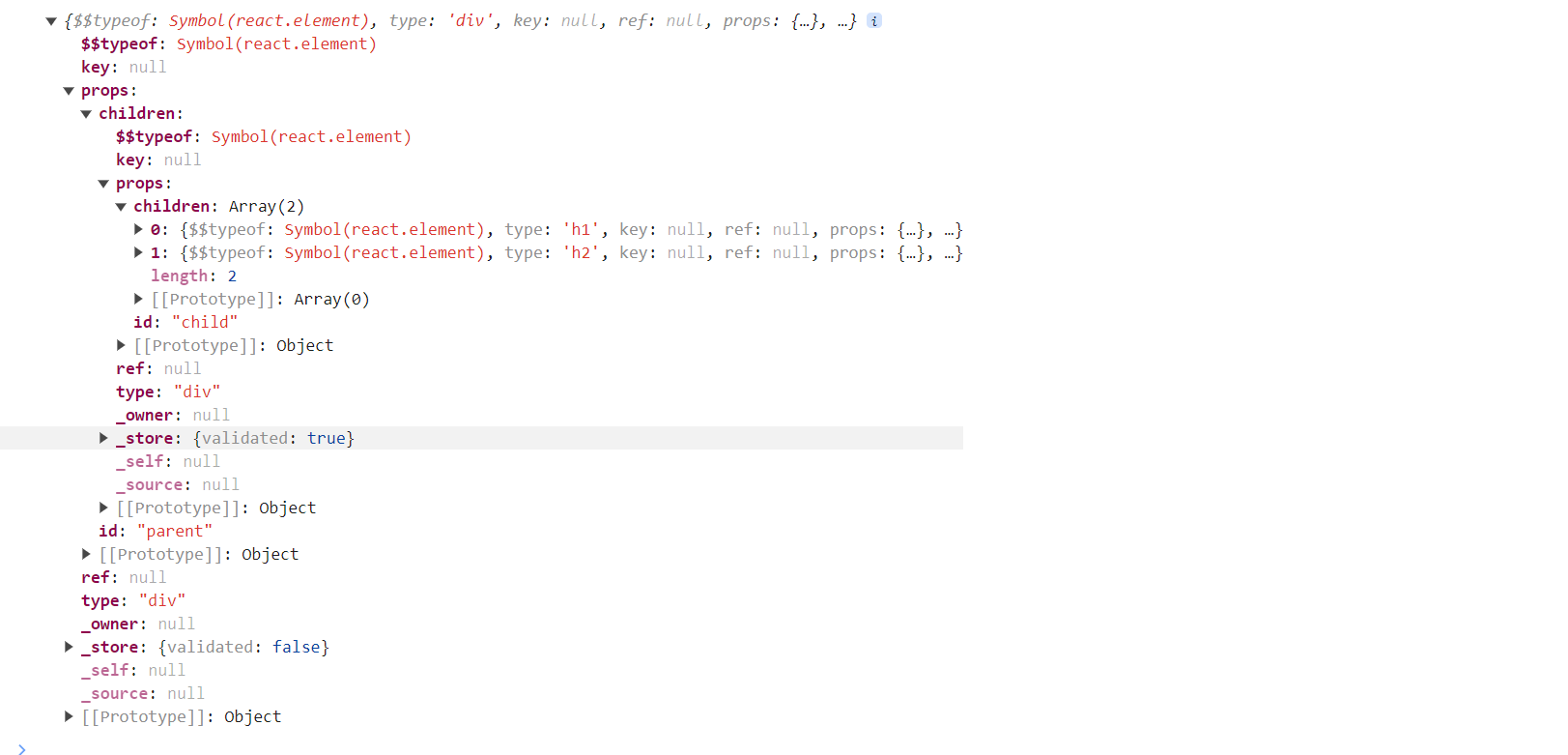
console.log(parent);

const root = ReactDOM.createRoot(document.getElementById("root"));

root.render(parent);

**Siblings are passed inside an Array**

****

****

**It becomes extremely complex to write React Code like this. So, there came the need for JSX (HTML Like syntax inside Javascript)**