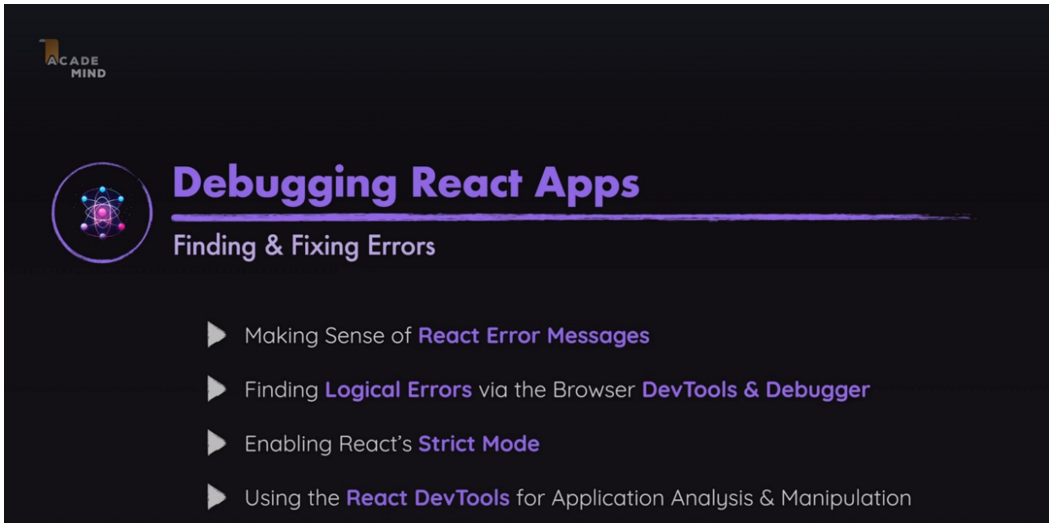
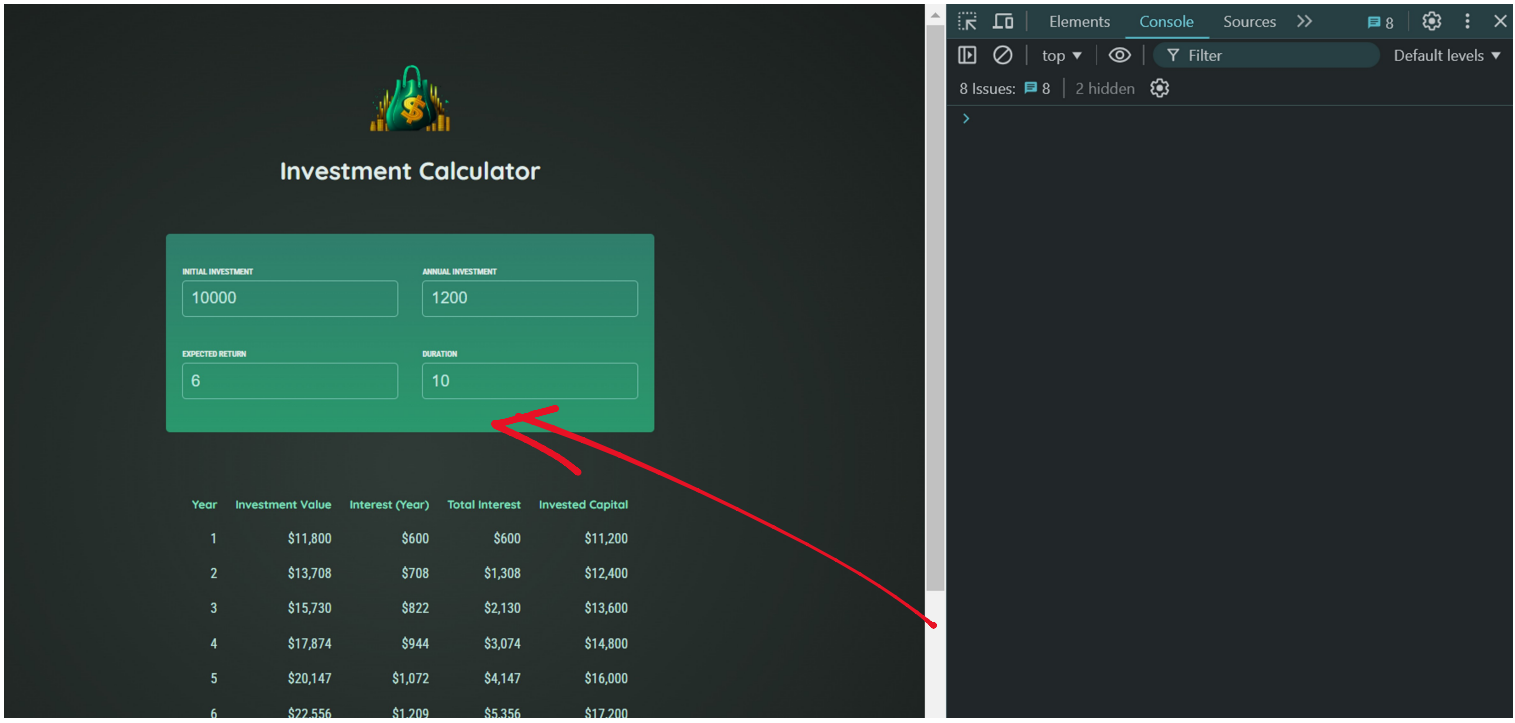
Section 7 : Debugging React Apps

Saturday, October 12, 2024 11:53 PM



Understanding React Error Message



So far our application works fine. Our conosle has not error at all.

now press 0 to the duration and our application crashes! Go to console and understand the error.

```
at beginWork$1 (react-dom_client.js?v=87f26b8d:19791:15)
at performUnitOfWork (react-dom_client.js?v=87f26b8d:19224:20)
at workLoopSync (react-dom_client.js?v=87f26b8d:19163:13)
```

```
▶ Uncaught TypeError: Cannot read properties of undefined (reading 'valueEndOfYear')   Results.jsx:8
    at Results (Results.jsx:8:16)
    at renderWithHooks (react-dom_client.js?v=87f26b8d:11566:26)
    at updateFunctionComponent (react-dom_client.js?v=87f26b8d:14600:28)
    at beginWork (react-dom_client.js?v=87f26b8d:15942:22)
    at HTMLUnknownElement.callCallback2 (react-dom_client.js?v=87f26b8d:3672:22)
    at Object.invokeGuardedCallbackDev (react-dom_client.js?v=87f26b8d:3697:24)
    at invokeGuardedCallback (react-dom_client.js?v=87f26b8d:3731:39)
    at beginWork$1 (react-dom_client.js?v=87f26b8d:19791:15)
    at performUnitOfWork (react-dom_client.js?v=87f26b8d:19224:20)
    at workLoopSync (react-dom_client.js?v=87f26b8d:19163:13)
```

```
▶ The above error occurred in the <Results> component:   console.js:288

    at Results (http://localhost:5173/src/components/Results.jsx:18:35)
    at App (http://localhost:5173/src/App.jsx:24:37)

Consider adding an error boundary to your tree to customize error handling behavior.
Visit https://reactjs.org/link/error-boundaries to learn more about error boundaries.
```

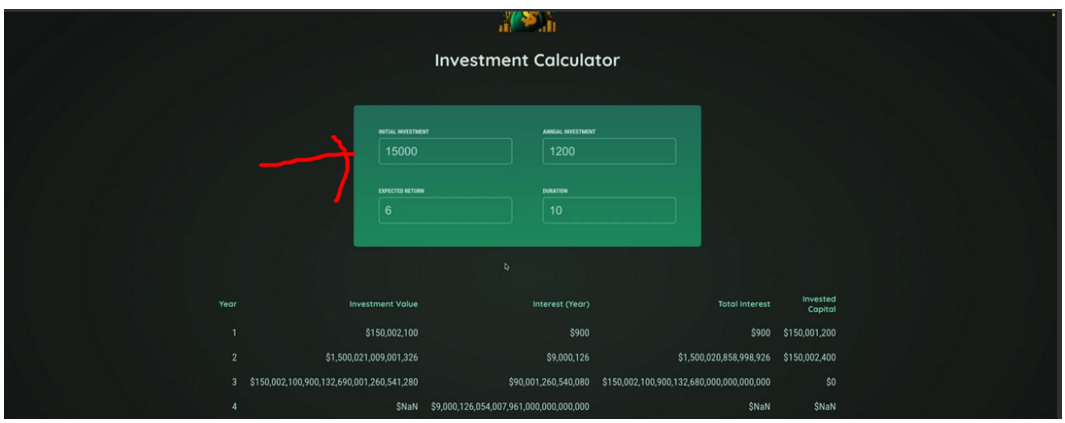
```
▶ Uncaught TypeError: Cannot read properties of undefined (reading   react-dom_client.js?v=87f26b8d:9143
'valueEndOfYear')
    at Results (Results.jsx:8:16)
    at renderWithHooks (react-dom_client.js?v=87f26b8d:11566:26)
```

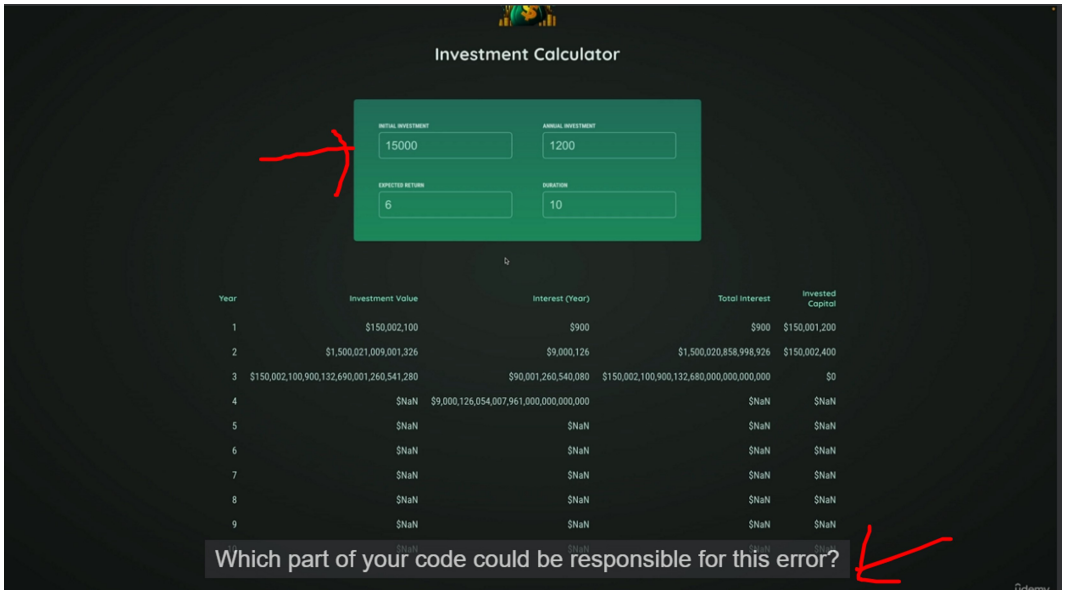
Go to Result Component line no 8

```
le  Edit  Selection  View  Go  Run  ···        01-starting-project
App.jsx   Results.jsx ×
src > components > Results.jsx > Results
      You, 19 minutes ago | 1 author (You)
1     import { calculateInvestmentResults, formatter } from '../util/investment.js';
2
3
4     export default function Results({ input }) {      You, 19 minutes ago • Section 7: Debugging React Apps
5       const results = [];
6       calculateInvestmentResults(input, results);
7       const initialInvestment =
8         results[0].valueEndOfYear -
9         results[0].interest -
10        results[0].annualInvestment;
11
12      return (
13        <table id="result">
14          <thead>
15            <tr>
16              <th>Year</th>
17              <th>Investment Value</th>
18              <th>Interest (Year)</th>
19              <th>Total Interest</th>
20              <th>Invested Capital</th>
```

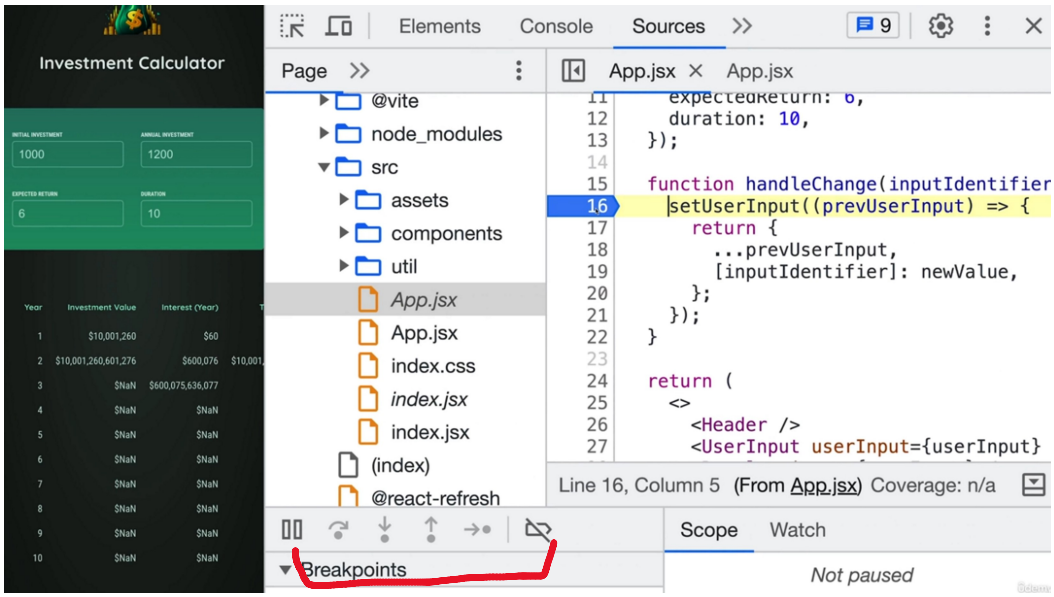
Using the Browser Debugger & Breakpoints

Not all error shows to the console. Some are logical error.
Write 15000 in the investment input and you can see everything meesed up.
If you encounter this kinda error, you should ask yourself which part of the code
Could be responsible for this error?

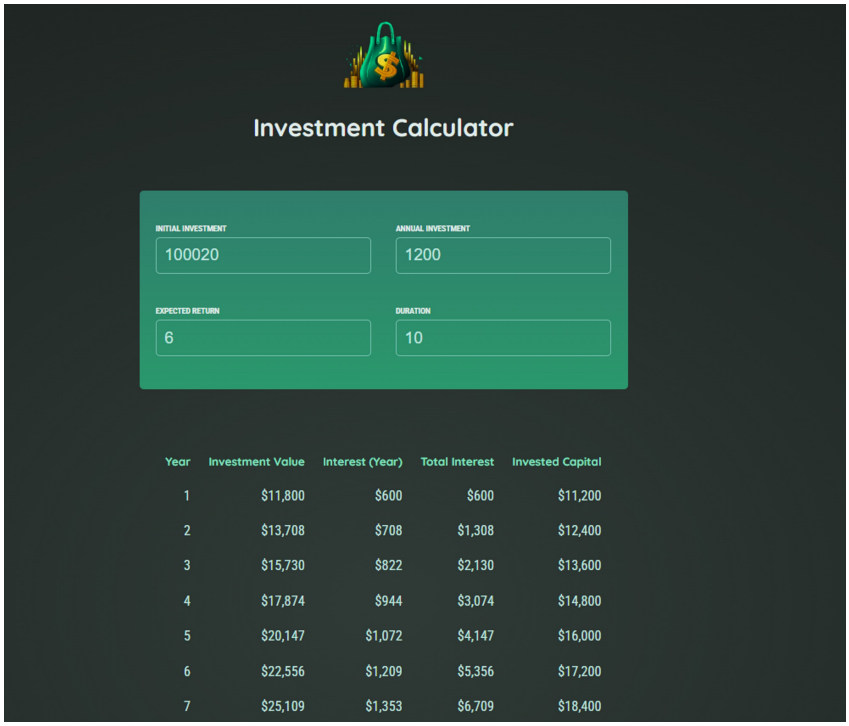




Go to Browser Sources tab and add a break point to line 16. and investigate.



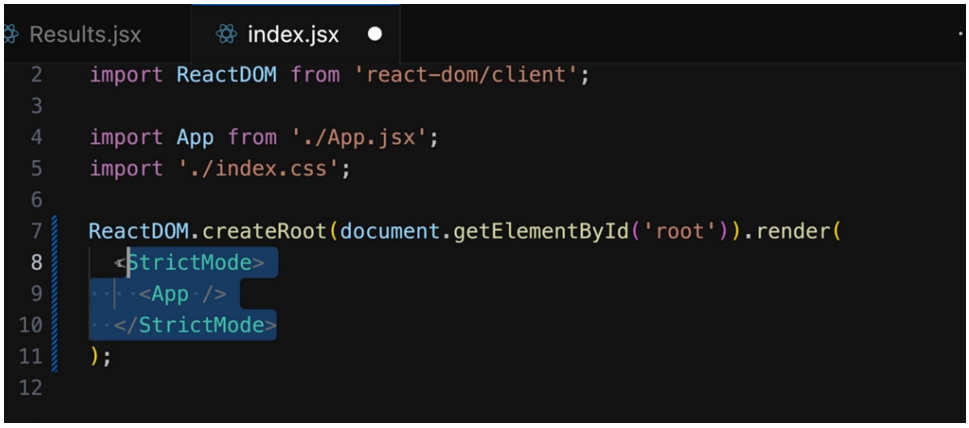
Understanding React's Strict Mode



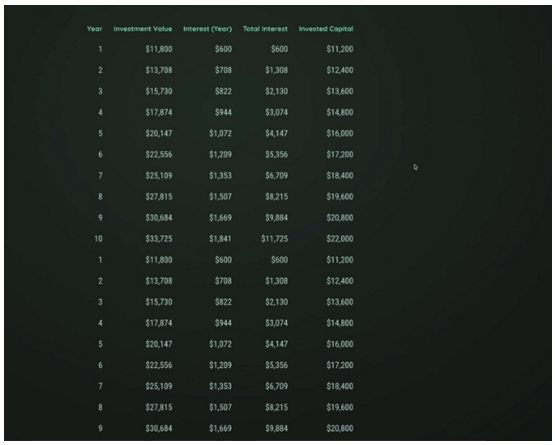
Our component renders perfectly. But as soon as we start typing to the Initial Investment, We get this error.

The list keeps adding and adding.

We could get this error initially we if use React Strict mode.



Strict Mode does couple of things behind the scene to help us catch the certain errors. It executes every component function twice.
It only does that for development. If every component gets executed twice , it can help you identify error like this



Year	Investment Value	Interest (Year)	Total Interest	Invested Capital
1	$11,800	$600	$600	$11,200
2	$13,708	$708	$1,308	$12,400
3	$15,730	$822	$2,130	$13,600
4	$17,874	$944	$3,074	$14,800
5	$20,147	$1,072	$4,147	$16,000
6	$22,556	$1,209	$5,356	$17,200
7	$25,109	$1,353	$6,709	$18,400
8	$27,815	$1,507	$8,215	$19,600
9	$30,684	$1,669	$9,884	$20,800
10	$33,725	$1,841	$11,725	$22,000
1	$11,800	$600	$600	$11,200
2	$13,708	$708	$1,308	$12,400
3	$15,730	$822	$2,130	$13,600
4	$17,874	$944	$3,074	$14,800
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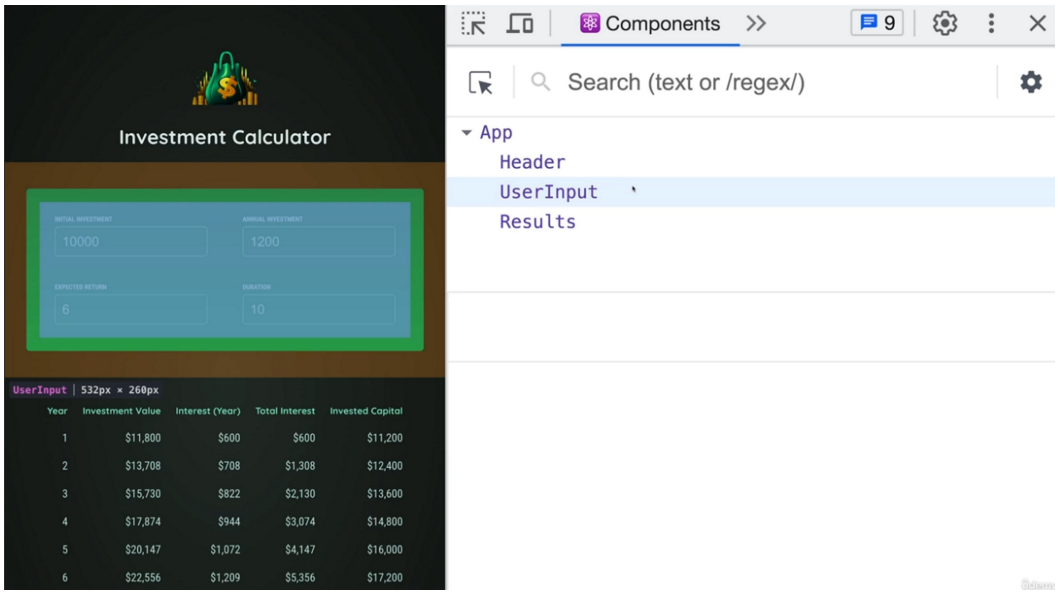
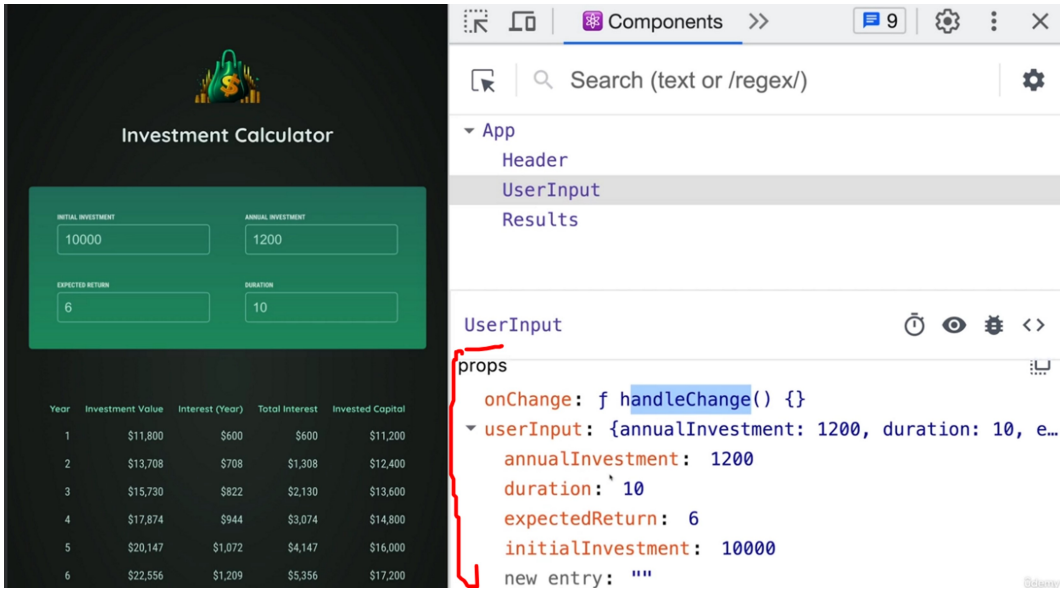
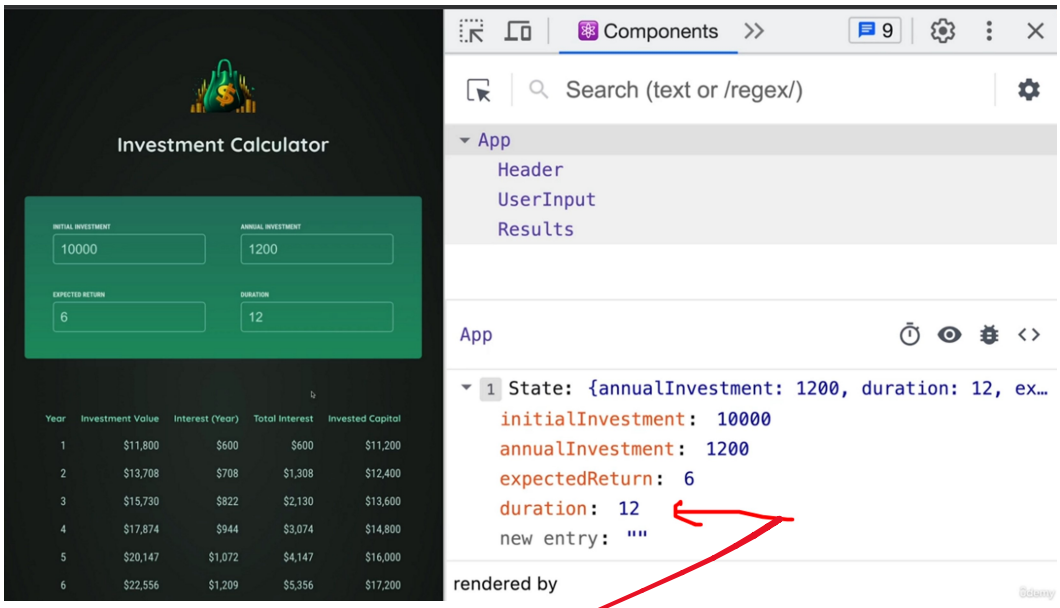
8	$27,815	$1,507	$8,215	$19,600
9	$30,684	$1,669	$9,884	$20,800

Using the React DevTools (Browser Extension)







You can also edit those prop value and show the UI reflection.