

A Dynamic **Card** in React Bootstrap - Part 2

Phillip G. Bradford*

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Abstract

The Nakamoto-simulator dynamic card component uses a number of interesting features from React-bootstrap. This dynamic card uses the *useState* function from *React hooks*.

1 A dynamic card design

Listing 1 shows a basic React hook *useState*. The hook *useState* remembers state through the life of the function *DynamicCardCollapsible*.

```
1  export default function DynamicCardCollapsible ({ props }) {
2
3  const [open, setOpen] = useState(false);
4  const myList = Object.entries(props);
5  const firstThree = myList.slice(0, 3);
6  const theRest = myList.slice(3);
7
8  return (
9
10     <div className="card custom-card border-primary mb-3">
11     <Card style={{ maxWidth: "700px", margin: "auto" }}
12       className="container ms-0" >
13       <Card.Body>
14         <Card.Title><h3>{props['card_title']}</h3>
15         </Card.Title>
16         <ul className="list-group list-group-flus no-bullets">
17           <li className="list-group-item text-primary">
```

*phillip.bradford@uconn.edu, phillip.g.bradford@gmail.com, UNIVERSITY OF CONNECTICUT, DEPARTMENT OF COMPUTING, STAMFORD, CT USA

```

18         <Button
19             onClick={() => setOpen(!open)}
20             className="mb-2"
21         >
22             <h6>{open ? "Hash: " + props['hash'] :
23                 "Hash tail: " + props['hash'].slice(-20) }
24         </h6>
25         </Button>
26
27     <...>
28 );
29 };

```

Listing 1: Dynamic card

An explanation of some highlights from in Listing 1.

1. The line

```
const [open, setOpen] = useState(false);
```

initializes the state open to **false** the first this React hooks function is called. The state open should only be updated by the accompanying function setOpen.

2. The line

```
onClick={() => setOpen(!open)}
```

inside the <button> ... </button> tags toggles the state open in each button click.

3. The lines

```
<h6>{open ? "Hash:-" + props['hash'] :
    "Hash-tail:-" + props['hash'].slice(-20) }
</h6>
```

outputs "Hash:-" + props['hash'] when open is **true** and outputs "Hash-tail:-" + props['hash'].slice(-20) when open is **false**.

4. The lines in Listing 2 are just below the button in the DynamicCardCollapsible component. This react-bootstrap <Collapse **in**={open}> component collapses when open is **true** and opens when open is **false**.
5. The lines

```

theRest.map(([key, value]) => (
  <li key={key}>
    {key}: {JSON.stringify(value)}
  </li>
)))}

```

is an array method that runs the anonymous function over all elements in its array `theRest`.

```

1 <Collapse in={open}>
2   <div id="collapse-text">
3     {open ? <h6>
4       {theRest.map(([key, value]) => (
5         <li key={key}>
6           {key}: {JSON.stringify(value)}
7         </li>
8       )})}
9     </h6> : <p>Loading ...</p>}
10   </div>
11 </Collapse>

```

Listing 2: Collapsible card component

References

- [1] Ryan J. Blake: *Mastering Bootstrap 5*, Beginners Handbook, 2024.
- [2] React Bootstrap: *React Bootstrap Cards*,
<https://react-bootstrap.netlify.app/docs/components/cards/> , Accessed: 2025-03-15.