

A Dynamic **Card** in React Bootstrap

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Abstract

The Card component in React bootstrap can be made dynamic. Card components play an important role for our block explorer. This dynamic card uses the *useState* function from *React hooks*.

1 Basic Dynamic card component

To create a basic Card component, do the next steps.

1. `npx create-react-app card-example-dynamic`
2. `cd card-example-dynamic`

In Listing 1, we update the *App.js* file in the `src` directory. We have truncated the hash values to fit on the page.

```
1 import './App.css';
2
3 import DynamicCard from './components/DynamicCard';
4
5 const container =
6 {
7   "canonical": true,
8   "height": 733786,
9   "hash": "0x456ff10c1f3d870697fe8ea80ce27f01756ba4875515c47d...",
10  "block_time": 1741441821,
11  "block_time_iso": "2025-03-08T13:50:21.000Z",
12  "tenure_height": 187940,
13  "index_block_hash": "0xa9900a4323c92ae587f8e55622b8d46cb991...",
```

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```

14   "parent_block_hash": "0xfeb3d1dd27e2555ea372669c9547b7887d3...",
15   "burn_block_time": 1741441223,
16   "burn_block_time_iso": "2025-03-08T13:40:23.000Z",
17   "burn_block_hash": "0x00000000000000000000079a14b7bcddfc0c1...",
18   "burn_block_height": 886865,
19   "miner_txid": "0x0813472654ee73ed1686c1a72a3e7d28c655ded29d...",
20   "execution_cost_read_count": 0,
21   "execution_cost_read_length": 0,
22   "execution_cost_runtime": 0,
23   "execution_cost_write_count": 0,
24   "execution_cost_write_length": 0,
25   "txs": [
26     "0xc2f9bb6a6a73e08ce38da86757cd866e54381c2bde43141e70ab52...",
27     "0xd0c97bf834e9e87e6e0811a1e7fb4ccc9dbf1fc3ebccee83ab2ebc..."
28   ],
29   "parent_microblock_hash": "",
30   "parent_microblock_sequence": -1,
31   "microblocks_accepted": [],
32   "microblocks_streamed": [],
33   "microblock_tx_count": {}
34 };
35
36 export default function App() {
37   return (
38     <div className="App">
39       <header className="App-header">
40         <DynamicCard props={container} />
41       </header>
42     </div>
43   );
44 }

```

Listing 1: Update app.js in the *src* folder

3. `npm install react bootstrap react-bootstrap`

4. Replace the code in App.js in the *src* directory with the code in Listing 1.

Next we generate the component `<DynamicCardFull />`.

1. Create a subdirectory `components` of the *src* directory.

2. Create a file `BlockCard.js` in the *src/components* directory.

- Put the content of Listing 2 in `DynamicCardFull.js`.

This code will host a *DynamicCardFull* in *App.js* on line 7. Specifically, Add `<DynamicCardFull />` between `<header className="App-header">` and `</header>`

This card is dynamic. It is dynamic by storing *state* based on `const [open, setOpen] = useState(false);`
This is from *React hooks*.

Update `<DynamicCardFull />` with the following properties in the *container* object.

```
height="888217",  
hash="000000000000000000000000008567ffc2eb86897fd8db31b2dd0b71db42684178a0dd", etc.
```

In Listing 1, the basic updated version is,

<DynamicCardFull props={container} />

```

1  import React, { useState } from "react";
2  import { Card, Button } from "react-bootstrap";
3  import "bootstrap/dist/css/bootstrap.min.css";
4
5  export default function DynamicCardFull ({ props }) {
6      const entries = Object.entries(props);
7      const [open, setOpen] = useState(false);
8
9      return (
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>Burn Block</h3></Card.Title>
15                     <ul className="list-group list-group-flus no-bullets">
16                         <li class="list-group-item text-primary">
17                             <Button
18                                 onClick={() => setOpen(!open)}
19                                 aria-controls="collapse-text"
20                                 aria-expanded={open}
21                                 className="mb-2"
22                             >
23                             </Button>
24                             <h6>{open ? "Hash tail: " + props['hash'].slice(-20)
25                                 : "Hash: " + props['hash']}</h6>
26                         </li>
27                         <ul className="list-group list-group-flus no-bullets">
28                             {Object.entries(props).map(([key, value]) => (
29                                 <li key={key}>
30                                     <h6>{key}: {JSON.stringify(value)}</h6>
31                                 </li>
32                             ))}
33                         </ul>
34                     </ul>
35                 </Card.Body>
36             </Card>
37         </div>
38     );
39 };
```

Listing 2: Basic Dynamic Card from React-bootstrap

Listing 2 shows a basic *dynamic* card from React-bootstrap. This is in the file `DyanmicCardFull.js` in the `src/components` directory.

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.