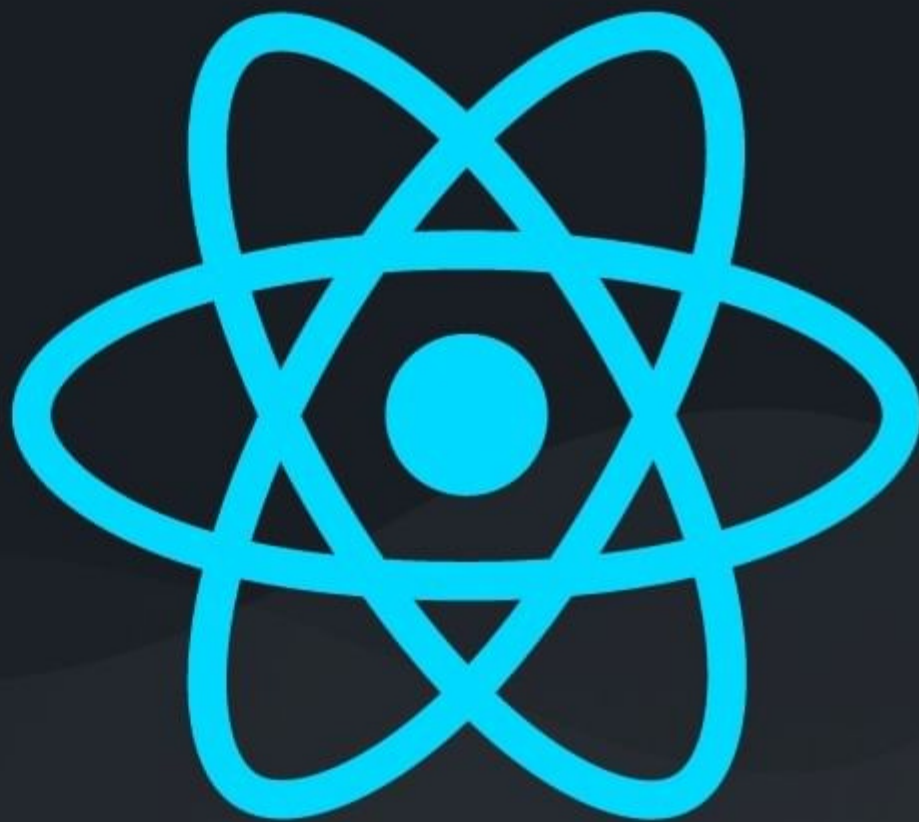


HOC in React JS

Higher Order Components



Mallikarjun | @CodeBustler



Whats Is HOC ?

In React, a **Higher-Order Component (HOC)** is a function that takes a component as an input and returns a new enhanced component as output.

It's like a **special function** that can make your components more **powerful** and add **extra functionality** to them.

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```
const EnhancedComponent =  
  withExtraFunctionality(OriginalComponent);  
  
// Example  
const IronMan = withSuit(TonyStark)
```

HOC Example

Here, i am going to explain with the simple **counter** app components

if we require multiple counter component with useState Hook & onClick event handler function

we need to add useState & function in **each component** & it will make code lengthy or **repeating same code** again and again



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Item1 Component



HOC

Item1 Cost : ₹10

Increase Cost



Item2 Cost : ₹10

Increase Cost



Item2 Component

Code Repeating



```
import React, { useState } from "react";

function Item2() {

  const [cost, setCost] = useState(10);
  let costHandler = () => {
    setCost(cost + 10);
  };

  return (
    <div className="item2">
      <h1>
        Item2 Cost : <span>₹{cost}</span>
      </h1>
      <button onClick={costHandler}>Increase Cost
    </button>
    </div>
  );
}

export default Item2;
```

Item1 Component

```
import React, { useState } from "react";

function Item1() {

  const [cost, setCost] = useState(10);
  let costHandler = () => {
    setCost(cost + 10);
  };

  return (
    <div className="item1">
      <h1>
        Item1 Cost : <span>₹{cost}</span>
      </h1>
      <button onClick={costHandler}>Increase Cost
    </button>
    </div>
  );
}

export default Item1;
```

Item2 Component

Without HOC

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HOC Function

```
import React, { useState } from "react";

function UpdatedComponent(OriginalComponent)
{ function NewComponent() {
    const [cost, setCost] = useState(10);
    let costHandler = () => {
        setCost(cost + 10);
    };
    return (
        <OriginalComponent
            costHandler={costHandler}
            cost={cost}
        />
    );
}
return NewComponent;
}
```

HOC Function

```
export default UpdatedComponent;
```


← In the **example**

Now, useState & event handler function **removed** from Item1 & Item2 component

and added functionality in HOC
this returns a **enhanced component**
with adding **additional functionality**
to original component



```
import React, { useState } from "react";
import UpdatedComponent from "../HOC";

function Item1({ cost, costHandler }) {
  return (
    

# Item1 Cost : ₹{cost}


  );
}

export default UpdatedComponent(Item1);


```

```
import React, { useState } from "react";
import UpdatedComponent from "../HOC";
function Item2({ cost, costHandler }) {
  return (
    

# Item2 Cost : ₹{cost}


  );
}

export default UpdatedComponent(Item2);


```

HOC Function



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