**Real-world Example: HR Salary System**

**Features:**

1. Only **authenticated employees** can see their salary details (withAuth).
2. Every time a salary component renders, it will **log props for debugging or analytics** (withLogger).
3. If the user isn’t logged in → show a login warning.

**🔹 Code Example**

import React, { useState } from "react";

// Higher Order Component (HOC) - Logger

const withLogger = (WrappedComponent) => {

return (props) => {

console.log(`[Logger] Rendering ${WrappedComponent.name} with props:`, props);

return <WrappedComponent {...props} />;

};

};

// Higher Order Component (HOC) - Authentication

const withAuth = (WrappedComponent) => {

return (props) => {

if (!props.isAuthenticated) {

return <h3>⚠️ Please login to view this content.</h3>;

}

return <WrappedComponent {...props} />;

};

};

// Salary Component

const SalaryDetails = ({ name, salary }) => {

return (

<div>

<h2>💼 Employee: {name}</h2>

<p>💰 Salary: {salary}</p>

</div>

);

};

// Wrap SalaryDetails with Logger

const SalaryWithLogger = withLogger(SalaryDetails);

// Wrap SalaryDetails with Auth + Logger

const SalaryWithAuthAndLogger = withAuth(withLogger(SalaryDetails));

export default function HrSalarySystem() {

const [isAuthenticated, setIsAuthenticated] = useState(false);

const toggleAuth = () => {

setIsAuthenticated((prev) => !prev);

};

return (

<div>

<h1>🏢 HR Salary System</h1>

<button onClick={toggleAuth}>

{isAuthenticated ? "Logout" : "Login"}

</button>

<hr />

{/\* Only Logger (for admin to debug data flow) \*/}

<SalaryWithLogger name="Preety" salary="20000" />

<hr />

{/\* Auth + Logger (for employee to see salary securely) \*/}

<SalaryWithAuthAndLogger

name="Deepika"

salary="30000"

isAuthenticated={isAuthenticated}

/>

</div>

);

}

**🔹 How it works in real time:**

1. **Click Login** → You become authenticated.
2. SalaryWithAuthAndLogger will now render salary details.
3. withLogger will log props (name, salary, auth status) in **browser console** for debugging.
4. **Click Logout** → Salary component will hide, and you’ll see:  
   ⚠️ *Please login to view this content.*

**✅ Realistic Usage**

* **HR Portal** → Employees see salary only when logged in.
* **Admin Panel** → Admins can still wrap components with just withLogger to monitor what data is passed.
* **Security + Monitoring** → Combining both ensures sensitive salary data is protected and also tracked.