EXPERIMENT 3.1

Aim

To create a reusable React component that displays product details (name, price, stock status) using props, thereby understanding how to pass and render dynamic data in React components.

Objective

- Learn how to build a reusable component in React.
- Understand how to use props to pass data dynamically.
- Display product information in a clear and styled layout.
- Demonstrate reusability by passing different product data without modifying the component code.

Theory

Props in React (short for properties) are used to pass data from a parent component to a child component. Props make components dynamic and reusable, since the same component can display different content depending on the values of the props passed. In this task, we will create a ProductCard component that takes three props: - name ▯ Product Name - price ▯ Product Price - inStock ▯ Stock Availability (true/false)

Code

```
// ProductCard.js
import React from "react";
const ProductCard = ({ name, price, inStock }) => {
return (
<div className="border rounded-xl shadow-md p-4 m-2 w-64">
<h2 className="text-xl fot-semibold">{name}</h2>
<p className="text-gray-700">Price: ${price}</p>
<p
```

```jsx
        className={`mt-2 font-medium ${inStock ? "text-green-600" : "text-red-600"}`}
      >
        {inStock ? "In Stock" : "Out of Stock"}
      </p>
    </div>
  );
};
export default ProductCard;
// App.js
import React from "react";
import ProductCard from "./ProductCard";
function App() {
  return (
    <div className="flex flex-wrap p-6">
      <ProductCard name="Laptop" price={750} inStock={true} />
      <ProductCard name="Headphones" price={120} inStock={false} />
      <ProductCard name="Smartphone" price={999} inStock={true} />
    </div>
  );
}
export default App;
```

Expected OutpuT

Laptop	Price: $750	In Stock
Headphones	Price: $120	Out of Stock
Smartphone	Price: $999	In Stock

Learning Outcomes

- Gained knowledge of using props to make React components reusable.
- Understood how to display dynamic data without modifying component logic.
- Learned to apply conditional rendering and styling based on prop values.