**Day 17: React Functional Components — Output**

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**Objective**

Create and use functional components in React to build modular and reusable UI elements, then pass props to display multiple student cards.

**What are functional components in React?**

Functional components are plain JavaScript functions that return JSX. They accept props as input and, with React Hooks, can manage state and side effects. They are simple, concise, and the modern standard for building React UIs.

**Difference between functional and class components**

• Syntax: Functional components are functions; class components extend React.Component.  
• State/Side effects: Hooks (useState, useEffect, etc.) vs. setState and lifecycle methods.  
• this keyword: Not used in functional components; class components rely on this.  
• Today: Most new React code uses functional components with Hooks.

**What are props?**

Props (properties) are read-only inputs passed from a parent to a child component. They make components reusable by supplying dynamic data.

**Code Snippets**

**src/components/Header.js**

import React from 'react';  
  
const Header = ({ title }) => {  
 return (  
 <header className="header">  
 <h1>{title}</h1>  
 </header>  
 );  
};  
  
export default Header;

**src/components/Footer.js**

import React from 'react';  
  
const Footer = () => {  
 const year = new Date().getFullYear();  
 return (  
 <footer className="footer">  
 <p>© {year} Web Team Pvt. Ltd. — Internship</p>  
 </footer>  
 );  
};  
  
export default Footer;

**src/components/StudentCard.js**

import React from 'react';  
  
const StudentCard = ({ name, course }) => {  
 return (  
 <div className="student-card">  
 <h3>{name}</h3>  
 <p>Course: {course}</p>  
 </div>  
 );  
};  
  
export default StudentCard;

**src/App.js**

import React from 'react';  
import Header from './components/Header';  
import Footer from './components/Footer';  
import StudentCard from './components/StudentCard';  
import './App.css';  
  
function App() {  
 const students = [  
 { id: 1, name: 'Aisha Khan', course: 'Computer Science' },  
 { id: 2, name: 'Rahul Sharma', course: 'Information Technology' },  
 { id: 3, name: 'Shifa Aqueel', course: 'Computer Engineering' },  
 ];  
  
 return (  
 <div className="app">  
 <Header title="Day 17 — React Functional Components" />  
 <main className="content">  
 {students.map((s) => (  
 <StudentCard key={s.id} name={s.name} course={s.course} />  
 ))}  
 </main>  
 <Footer />  
 </div>  
 );  
}  
  
export default App;

**src/App.css**

.app { min-height: 100vh; display: flex; flex-direction: column; }  
.header { background: #111827; color: white; padding: 16px 24px; }  
.header h1 { margin: 0; font-size: 20px; }  
.content { padding: 24px; display: grid; grid-template-columns: repeat(auto-fill, minmax(240px, 1fr)); grid-gap: 16px; }  
.student-card { background: white; border-radius: 12px; padding: 16px; box-shadow: 0 4px 14px rgba(0,0,0,0.08); }  
.student-card h3 { margin: 0 0 8px 0; }  
.footer { margin-top: auto; background: #f3f4f6; color: #111827; padding: 12px 24px; font-size: 14px; text-align: center; }

**src/index.js**

import React from 'react';  
import ReactDOM from 'react-dom/client';  
import './index.css';  
import App from './App';  
  
const root = ReactDOM.createRoot(document.getElementById('root'));  
root.render(  
 <React.StrictMode>  
 <App />  
 </React.StrictMode>  
);

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