INTERNSHIP REPORT WEEK 6 DAY 2

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React.js Basics

Topics: JSX, Components (Functional), Props

Objective

To understand the use of **JSX** in React for rendering content, how to create **reusable functional components**, and how to **pass data (props)** between them to build dynamic UIs.

Topics Covered:

- JSX Recap and Rules
- Creating Functional Components
- Reusability with Props
- Rendering multiple components using props

What is React?

React is a **JavaScript library** used to build **user interfaces (UI)**, especially for **web applications**. It helps you create **dynamic**, **reusable components** that can change based on data without needing to reload the page.

Why Use React?

- **Component-Based**: Break your UI into small, reusable pieces (like buttons, forms, headers).
- Fast and Efficient: Uses a virtual DOM to update only the changed parts of the UI.
- One-Way Data Flow: Data flows in one direction, making the app easier to debug and manage.
- Reusable JSX Code: Write HTML-like code inside JavaScript using JSX.

1. JSX:

JSX lets you write HTML inside JavaScript functions.

```
function App() {
  return <h1>Hello, world!</h1>;
}
```

2. Functional Components

- A component is just a function that returns JSX.
- They can be **reused** and help split UI into smaller, manageable pieces.

```
function Greet(props) {
   return <h3>Hello, {props.name}!</h3>;
}
```

3. Props Example:

 Props (short for "properties") allow data to be passed from one component to another.

4. Destructuring Props Example:

```
function Card({ title, description }) {
return (
 <div className="card">
  <h2>{title}</h2>
  {description}
 </div>
);
}
function App() {
return (
 <div>
  <Card title="React" description="JS library for building UI" />
  <Card title="Props" description="Pass data to components" />
  </div>
);
}
export default App;
```

CODING:

.app.js

```
);
function App() {
 return (
   <div className="container">
     Explore the greatest rulers of ancient
realms:
     <div className="card-grid">
       <KingCard name="King Arthur" kingdom="Camelot" power="Excalibur &</pre>
Honor" />
       <KingCard name="King Leonidas" kingdom="Sparta" power="Courage &</pre>
Strategy" />
       <KingCard name="King Ragnar" kingdom="Denmark" power="Warrior's</pre>
Spirit" />
       <KingCard name="King Xerxes" kingdom="Persia" power="Immortal Army" />
     </div>
   </div>
 );
export default App;
```

.index.css

```
body {
  margin: 0;
  font-family: -apple-system, BlinkMacSystemFont, 'Segoe UI', 'Roboto',
'Oxygen',
    'Ubuntu', 'Cantarell', 'Fira Sans', 'Droid Sans', 'Helvetica Neue',
    sans-serif;
  -webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
}

code {
  font-family: source-code-pro, Menlo, Monaco, Consolas, 'Courier New',
    monospace;
}
body {
```

```
margin: 0;
 padding: 0;
 background: linear-gradient(135deg, #1e1e2f, #2a2a40);
 font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
 color: #f1f1f1;
.container {
 max-width: 960px;
 margin: auto;
 padding: 40px 20px;
.title {
 text-align: center;
 font-size: 2.8rem;
 color: gold;
 margin-bottom: 10px;
.subtitle {
 text-align: center;
 font-size: 1.2rem;
 color: #ddd;
 margin-bottom: 40px;
.card-grid {
 display: grid;
 grid-template-columns: repeat(auto-fit, minmax(250px, 1fr));
 gap: 25px;
.king-card {
 background: #2e2e4d;
 border: 1px solid #444;
 border-radius: 16px;
 padding: 20px;
 transition: transform 0.2s ease, box-shadow 0.2s ease;
 box-shadow: 0 4px 12px rgba(0, 0, 0, 0.4);
.king-card:hover {
 transform: translateY(-5px);
 box-shadow: 0 8px 20px rgba(255, 215, 0, 0.4);
```

```
.king-card h2 {
    margin-top: 0;
    color: #ffd700;
}

.king-card p {
    margin: 8px 0;
    color: #ddd;
}
```



CONCUSLION:

Today, I learned the foundational concepts of building user interfaces in React using JSX, functional components, and props. I understood how JSX allows mixing HTML with JavaScript, how functional components make code modular and reusable, and how props help pass data dynamically to components. By building and styling a reusable "Kings Card" layout, I practiced applying these concepts in a real-world scenario. This knowledge sets a strong base for learning advanced React topics like state management and routing in the upcoming days.