React-13

**Project Title: BloggerApp – React Application with Conditional Rendering and Component Lists**

**Objectives**

* Explain multiple techniques for **conditional rendering** in React.
* Describe how to **render multiple components** conditionally.
* Define the concept and use of a **list component** in React.
* Understand the importance and role of **keys** in list rendering.
* Explain how to **extract components with keys**.
* Introduce the use of the **map() function** and **React Map** concept.

**Learning Outcomes**

After completing this hands-on lab, the learner will be able to:

* Apply various **conditional rendering methods** in React.
* Render lists of components efficiently using map() and unique keys.
* Reuse and extract components in a structured and scalable manner.

**Prerequisites**

To complete this lab successfully, the following tools are required:

* Node.js
* NPM
* Visual Studio Code

**Estimated Time**

* Approximately 60 minutes.

**Implementation Instructions**

1. **Project Setup**
   * Create a new React application named bloggerapp using create-react-app.
2. **Component Structure**
   * Define three components:
     + BookDetails
     + BlogDetails
     + CourseDetails
3. **Conditional Rendering**
   * Implement logic to display the above components using various conditional rendering approaches:
     + If-else statements
     + Ternary operators
     + Logical && (AND) operations
     + Switch-case rendering logic (optional for advanced implementation)
4. **List and Keys**
   * If rendering lists of data within any of the components:
     + Use the map() function to iterate over data.
     + Assign unique **keys** to each rendered item.
     + Demonstrate component extraction using keys for better performance and maintainability.