## **Objectives**

**Explain various ways of conditional rendering**

Conditional rendering in React means showing different content based on a condition. It can be done using “if-else”, the ternary operator, or logical AND (&&). These methods help show specific UI elements depending on whether a condition is true or false, like showing a login button for guests and a logout button for users.

**Explain how to render multiple components**

To render multiple components in React, you group them together inside a parent container. This lets you display several parts of the interface, like a header, menu, and main content, all at once. It’s useful for building structured and reusable layouts.

**Define list component**

A list component is used to display a group of similar items, like a list of users or products. Instead of repeating code, React lets you loop through an array and show each item automatically. This keeps the app dynamic and efficient.

**Explain about keys in React applications**

Keys are unique values given to items in a list to help identify them. They improve performance by making updates faster when the list changes. A key should be unique among siblings, often based on an ID or index.

**Explain how to extract components with keys**

When a list item’s structure is complex, it’s better to extract it into its own component. Even then, each item must still have a unique key to help React keep track of which item is which during updates or re-renders.

**Explain React Map, map() function**

The map() function in React is used to loop through arrays and display a list of elements. It helps convert data into visual components, making it easier to show things like lists of posts, products, or users.

**Codes:**

**data.js:**

export const books=[

    {id:101,bname:'Master React',price:670},

    {id:102,bname:'Deep Dive into Angular 11',price:800},

    {id:101,bname:'Mongo Essentials',price:450},

];

export const courses=[

    {id:1,name:'Angular',date:'4/5/2021'},

    {id:2,name:'React',date:'6/3/20201'},

];

export const blogs=[

    {

        id:1,

        title:'React Learning',

        author:'Stephen Biz',

        content:'Welcome to learning React!',

    },

    {

        id:2,

        title:'Installation',

        author:'Schewzdenier',

        content:'You can install React from npm.',

    },

];

**CourseDetails.jsx:**

function **CourseDetails**({courses}){

    return(

        <div>

            {

                courses.**map**((course)=>(

                    <div *key*={course.id}>

                        <h3>{course.name}</h3>

                        <p>{course.date}</p>

                    </div>

                ))

            }

        </div>

    );

}

export default **CourseDetails**;

**BookDetails.jsx:**

function **BookDetails**({books}){

    return(

        <div>

            {books.**map**((book)=>(

                <div *key*={book.id}>

                    <h3>{book.bname}</h3>

                    <h4>{book.price}</h4>

                </div>

            ))}

        </div>

    );

}

export default **BookDetails**;

**BlogDetails.jsx:**

function **BlogDetails**({blogs}){

    return(

        <div>

            {

                blogs.**map**((blogs)=>(

                    <div *key*={blogs.id}>

                        <h3>{blogs.title}</h3>

                        <p><strong>{blogs.author}</strong></p>

                        <p>{blogs.content}</p>

                    </div>

                ))

            }

        </div>

    );

}

export default **BlogDetails**;

**App.js:**

import React from 'react';

import BookDetails from './BookDetails';

import CourseDetails from './CourseDetails';

import BlogDetails from './BlogDetails';

import { books,courses,blogs } from './data';

import './App.css';

function **App**() {

  return (

    <div *className*="main-container">

     <div *className*='column'>

      <h1>Course Details</h1>

      <**CourseDetails** *courses*={courses}/>

     </div>

     <div *className*='column border-left'>

      <h1>Book Details</h1>

      <**BookDetails** *books*={books}/>

     </div>

     <div *className*='column border-left'>

      <h1>Blog Details</h1>

      <**BlogDetails** *blogs*={blogs}/>

     </div>

    </div>

  );

}

export default **App**;

**App.css:**

.main-container{

display: flex;

justify-content: space-evenly;

padding: 40px;

font-family: Arial, sans-serif;

}

.column{

flex:1;

padding:20px;

}

.border-left{

border-left:4px solid green;

}

**Output:**

