**ReactJS-HOL 13**

**Questions & Answers –**

1. **Explain various ways of conditional rendering**

**Ans -** Conditional rendering in React means showing different UI based on conditions (like if statements). They are:

1. **Using if statements:**

if (isLoggedIn) {

return <Dashboard />;

} else {

return <Login />;

}

1. **Using ternary operator:**

{isLoggedIn ? <Dashboard /> : <Login />}

1. **Using && operator (renders only if condition is true):**

{isAdmin && <AdminPanel />}

1. **Using switch-case (for multiple conditions):**

switch (userType) {

case 'admin':

return <AdminPanel />;

case 'user':

return <UserPanel />;

default:

return <Guest />;

}

1. **Explain how to render multiple components**

**Ans -** You can render multiple components in React by:

1. **Returning them in a single parent (usually a <div> or a fragment)**:

function App() {

return (

<div>

<Header />

<Main />

<Footer />

</div>

);

}

1. **Using React Fragments (shorthand: <>...</>) to avoid extra DOM nodes:**

function App() {

return (

<>

<Header />

<Main />

<Footer />

</>

);

}

1. **Mapping an array of components (e.g., list items):**

const components = [<Comp1 />, <Comp2 />, <Comp3 />];

return <div>{components}</div>;

1. **Define list component**

**Ans -** A List component in React is used to render a list of items dynamically, usually by mapping over an array.

**Example –**

function NameList(props) {

const names = props.names;

return (

<ul>

{names.map((name, index) => (

<li key={index}>{name}</li>

))}

</ul>

);

}

1. **Explain about keys in React applications**

**Ans –**

* Keys are unique identifiers used by React to efficiently update and render list items.
* When a list is re-rendered, keys help React know which items changed, added, or removed.
* Keys must be unique among siblings and stable (shouldn’t change over time).

1. **Explain how to extract components with keys**

**Ans –** When rendering a list of complex components, you can extract them into separate components, still passing the key in the parent list.

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

**Ans –**

* In React, the map() function (JavaScript array method) is used to loop through arrays and return JSX for each element.
* Commonly used for rendering lists.

**Hands-On – (Code)**

*App.js –*

import React, { useState } from 'react';

import './App.css';

import CourseDetails from './components/CourseDetails';

import BookDetails from './components/BookDetails';

import BlogDetails from './components/BlogDetails';

export default function App() {

  const [showCourse, setShowCourse] = useState(true);

  const [showBook, setShowBook] = useState(true);

  const [showBlog, setShowBlog] = useState(true);

  return (

    <div className="container">

      {showCourse && (

        <>

          <CourseDetails />

          {(showBook || showBlog) && <div className="divider" />}

        </>

      )}

      {showBook && (

        <>

          <BookDetails />

          {showBlog && <div className="divider" />}

        </>

      )}

      {showBlog && <BlogDetails />}

    </div>

  );

}

*App.css –*

*.container {*

*display: flex;*

*justify-content: center;*

*padding: 20px;*

*font-family: Arial, sans-serif;*

*}*

*.section {*

*padding: 0 20px;*

*min-width: 200px;*

*}*

*.title {*

*font-size: 20px;*

*font-weight: bold;*

*margin-bottom: 20px;*

*}*

*.item {*

*margin-bottom: 15px;*

*}*

*.divider {*

*border-left: 4px solid green;*

*height: auto;*

*}*

*BookDetails.js –*

import React from 'react';

export default function BookDetails() {

  return (

    <div className="section">

      <h2 className="title">Book Details</h2>

      <div className="item">

        <strong>Master React</strong>

        <p>670</p>

      </div>

      <div className="item">

        <strong>Deep Dive into Angular 11</strong>

        <p>800</p>

      </div>

      <div className="item">

        <strong>Mongo Essentials</strong>

        <p>450</p>

      </div>

    </div>

  );

}

*CourseDetails.js –*

import React from 'react';

export default function CourseDetails() {

  return (

    <div className="section">

      <h2 className="title">Course Details</h2>

      <div className="item">

        <strong>Angular</strong>

        <p>4/5/2021</p>

      </div>

      <div className="item">

        <strong>React</strong>

        <p>6/3/20201</p>

      </div>

    </div>

  );

}

*BlogDetails.js –*

import React from 'react';

export default function BlogDetails() {

  return (

    <div className="section">

      <h2 className="title">Blog Details</h2>

      <div className="item">

        <strong>React Learning</strong>

        <p><b>Stephen Biz</b></p>

        <p>Welcome to learning React!</p>

      </div>

      <div className="item">

        <strong>Installation</strong>

        <p><b>Schwezdenier</b></p>

        <p>You can install React from npm.</p>

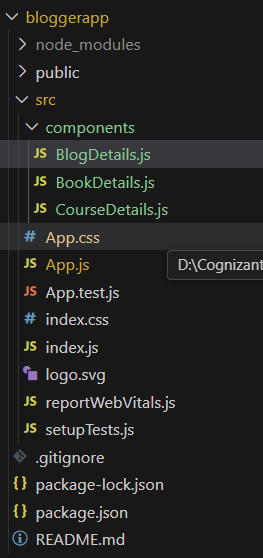
      </div>

    </div>

  );

}

**Output –**

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