Assignment 9

Roll No 71　　　T14

Aim : : Write a program to implement

      a. Create React refs

      b. How to access Refs

      c. Forward Refs

      d. Callback Ref

Theory:

React is a popular JavaScript library for building user interfaces. React provides a feature called "refs" (short for references) that allows developers to interact directly with DOM elements in a more controlled and efficient manner.

a. **Creating React Refs**:
    • In React, createRef() is used to create a new ref object. This ref object can then be attached to a React element (typically a DOM element) to gain access to it.
    • Your task is to create a React component that uses createRef() to create a ref and demonstrate how this ref can be attached to a DOM element.
    • Implement a functionality that allows you to interact with the DOM element using the created ref.

b. **Accessing Refs**:
    • After creating a ref and attaching it to a DOM element, you should learn how to access and manipulate that DOM element.
    • Develop a React component that demonstrates how to access and modify the properties or behavior of a DOM element using the ref you created earlier.

c. **Forward Refs**:
    • Forwarding refs is a mechanism in React that enables parent components to provide a ref to their child components.
    • Create a parent and a child component. In the parent component, render the child component and pass a ref to it.
    • In the child component, forward this ref to a DOM element and showcase how the child component can access and interact with the DOM element using the forwarded ref.

d. **Callback Refs:**
    • Callback refs are a flexible way to access and manage refs in React. Instead of using createRef(), you can use a callback function to handle refs.
    • Implement a React component that uses callback refs to create and manage refs for DOM elements.
    • Demonstrate how to use the callback refs to focus on, update, or otherwise interact with the DOM elements.

Conclusion:

Gained knowledge in using React refs to create, access, forward, and manage DOM elements in a React application. Learned valuable techniques for controlling and manipulating the user interface, making React applications more dynamic and interactive. React refs are a powerful tool in toolbox for building efficient and responsive web applications