React Notes

**What is reactJs?**

It is Open source JavaScript library used to build a user interface (UI)

**Who was created reactjs?**

The reactJs was created by meta.

**What is mean by library?**

Library accomplish certain functionality. For example: Form validation, Image slider.

**What is mean by Framework?**

It has all tools to build an software application.

**What is the usage of Render?**

In React, Render is the technique that can redirect a page with the help of function render(). Most importantly, render a function we can use to define the HTML code within the HTML element. It helps to display certain views in the UI using certain logic defined in the render function and returns the output.

**What is JSX?**

* JSX stands for JavaScript XML.
* JSX allows us to write HTML in React.
* JSX makes it easier to write and add HTML in React.
* As you can see in the first example, JSX allows us to write HTML directly within the JavaScript code.
* JSX is an extension of the JavaScript language based on ES6, and is translated into regular JavaScript at runtime.

**What is Hooks?**

Hooks are nothing but javascript functions.

**React Hooks**

UseEffect will handle the server side

**UseState?**

 Purpose: Manages state in a functional component.

 Usage: Initializes and updates state variables.

### **useEffect?**

* **Purpose**: Handles side effects in a functional component.
* **Usage**: Executes code after rendering (e.g., fetching data, updating the DOM, setting up subscriptions).

### **useRef?**

* **Purpose**: Accesses and stores a mutable value that does not cause re-renders when updated.
* **Usage**: Manages references to DOM elements or persistent values across renders.

### **useReducer?**

* **Purpose**: Manages complex state logic with a reducer function.
* **Usage**: Similar to useState but for more complex state transitions, often used when state logic depends on the previous state.

useMemo ?

* The useMemo Hook only runs when one of its dependencies update.
* This can improve performance.

**UseContext?**

is used to create a new Context object, which is essential for managing global state in a React application.

**What are the usese of spread operator?**

* The spread operator allows you to create a shallow copy of an array.
* The spread operator can be used to pass elements of an array as arguments to a function.
* The spread operator is often used in combination with destructuring.
* The spread operator is a versatile tool that simplifies working with arrays and objects, making your code more concise and readable. Whether you need to copy, merge, or manipulate data structures, the spread operator offers a clean and efficient solution.

**What is DOM?**

The Document Object Model (DOM) is a programming interface for web documents. It represents the structure of a document as a tree of objects, making it possible for programming languages like JavaScript to interact with the content, structure, and style of web pages dynamically.