Assignment - 3 (React JS)

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1. What is React Js ?

- React is a javascript library created by facebook.

- React is a User Interface (UI) library.

- React is a tool for building UI components.

- A React JS application is made up of multiple component,each component responsible for outputting a

   small ,reusable piece of HTML code.

- The components are the heart of all React applications.

- These components can be nested with other components to allow complex applications to be built of

   simple building blocks.

- ReactJs uses virtual DOM based mechanism to fill data in HTML DOM.

- The virtual DOM works fast as it only changes individual DOM elements instead of reloading complete

    DOM every time.

- Form component is made up of various input components.

2. What is NPM in React JS?

➜   NPM is short for node package manager. an online directory that contains the various already

   registered open-source packages. NPM modules consume the various functions as a third-party

   package when installed into an app using the NPM command npm install.

3. What is Role of Node.js in React JS?

➜ Node.js enables the creation of scalable and quick back-end RESTful APIs. On the other hand,

   react is a front-end library that creates interactive user interface. With both tools, you can fast

   build complex and scalable web apps. Node is the most popular platform for hosting and

running web servers for React apps.

4. What is CLI command in React JS?

➔   ReactCLI is a ReactJS component that provides a simple way to present a command line interface to your user in your web app.

5. What is component in React JS?

➔ Components are independent and reusable bits of code. They serve the same purpose as JavaScript functions, but work in isolation and return HTML. Components come in two types, Class components and Function components, in this tutorial we will concentrate on Function components.

6. What is Header and Content components in react js?

Header Components :

➔ The Header component is simply a black bar with the Tesla logo and text. Create the src/components/Header directory , create a Header.js file in it .

Content Components :

➔ Components are independent and reusable bits of code. They serve the same purpose as javascript functions, but work in isolation and return HTML. Components come in two types, class components and function components, in this tutorial we will concentrate on function components.

7. How to install React Js on Windows, linux Operating System? How to install NPM and How to check version of NPM?

➔   Node.js Download
➔   **check version of NPM :**   npm -v
➔ **install React Js on Windows :**

npx create-react-app my-app

cd my-app

npm start

8. How to check version of React Js?

➔ Three ways to the React version :
1. Using package.json file
2. Using command line
3. Using version property of default import from React

9. How to change in components of React Js?

➔ Class component :

Changing the state Object : To change a value in the state object, use the this.setState() method.

When a value in the state object changes,the component will re-render, meaning that the output will change according to the new values(s).

➔ Function component :
1. Change the function to a class.
2. Add the render method.
3. Convert all function to a method.
4. Add Constructor.
5. Replace hooks with lifecycle methods.

10. Create Increment decrement state change by button click?

➔ **Assignment3.js**

```
import React, { useState } from 'react'

import './assignment3.css'

export default function Assignment3() {

   const initCount = 0

   const [count, setCount] = useState(initCount)

   return (

      <div>

          <h1>Count : {count}</h1>
```

```
        <button onClick={() => setCount(initCount)}
className="btn">Reset</button>

        <button onClick={() => setCount(count + 1)}
className="btn">Increment</button>

        <button onClick={() => setCount(count - 1)}
className="btn">Decrement</button>

    </div>

  )

}
```

Assignment3.css

```css
div{

    /* background-color: rgb(231, 194, 231); */

    color: rgb(27, 62, 157);

}

.btn{

    background-color: rgb(21, 80, 132);

    color: white;

    padding: 5px 20px  5px 20px;

    border: 2px groove rgb(48, 32, 3);

    border-radius: 6px;

}
```

Output :

Count : 0

Reset   Increment   Decrement