**REACT**

**WEEK-6 HANDSON-2 EXPLANATION**

**1). React Component Explanations:**

The elements that make up a React application are called React components. They are reusable, individual components of a web application that display HTML with JavaScript.

Components are functions or classes.

Organizes this UI into smaller manageable pieces.

Every component can have its own specific state, props, and lifecycle methods.

Ex- Header, Footer, Button, Form, etc.

**2. Component Differences and JavaScript Functions**

| Aspect | React Components | JavaScript Functions |

| ----------------- | ------------------------------------ | ----------------------------- |

| Purpose | Return UI elements | Perform operations or logic |

| Return Value | Returns JSX (UI) | Returns values or nothing |

| React Integration | Constructing the UI in React | General programming usage |

| React Lifecycle | State and lifecycle can be included | No concept of state/lifecycle |

| Usage in React | Called in JSX syntax like `<Comp />` | Called as `funcName()` |

**3. Component Types:**

There are two main types of React components:

Class Components

Functional Components

Both types can return JSX and accept props.

**4). Class Component Explanation**

A Class Component is a React component defined using an ES6 class.

Must extend React.Component

Must have a render() method that returns JSX

Can use state and lifecycle methods

Example:

import React, { Component } from 'react';

class Welcome extends Component {

render() {

return <h2>Welcome to Class Component</h2>;

}

}

export default Welcome;

**5). Define Function Component**

A Function Component is a React component defined using a regular JavaScript function.

More concise and easier to write than class components

React Hooks can be utilized to govern state and lifecycle.

It is typically what is used in modern React development as well.

Example :

import React from 'react';

function Welcome() {

return <h2>Welcome to Function Component</h2>;

}

export default Welcome;

**6). Define Component Constructor**

In a class Component, the constructor is a special method for:

Initializing state

Binding Event handlers

It is called before the component is mounted.

Example:

constructor(props) {

super(props);

this.state = { message: 'Hello' };

}

super(props) is to avail this.props

State is defined as an Object

**7). Define render() Function**

The render() method is used in class components to return JSX.

It's required in every class component

It describes how should look the UI

Example:

render() {

return <h1>Hello from render method</h1>;

}

This method automatically calls whenever the need leads to render or update the component.