**REACT**

**WEEK-6 HANDSON-3 EXPLANATION**

**1. Explain React Components**

React components are the vital components of React application.

These are reusable independent pieces of UI.

A component returns JSX (JavaScript XML), which describes how the UI should look.

Props incoming will provide data into components and each component will manage its state.

**2. Differences Between Components and JavaScript Functions**

Feature React Components JavaScript Functions

Purpose Return UI using JSX Perform a specific task or computation

Return Type Returns JSX (UI structure) Returns any JavaScript value

React Usage Used to define and structure UI General-purpose code

State and Lifecycle Can manage state and lifecycle (in React) No state and lifecycle management

Usage Syntax Used in JSX like <ComponentName /> Called using functionName()

**3. Types of Components**

React supports two types of components:

Class components

Function components

**4. Explain Class Component**

A Class Component is defined with a class like an ES6 class.

It must extend React.Component.

It has a method called render() that returns JSX.

It has the ability to manage its own state and include lifecycle methods such as componentDidMount.

Example:

import React, { Component } from 'react';

class Welcome extends Component {

render() {

return <h2>Hello from Class Component</h2>;

}

}

**5. Explain Function Component**

A Function Component is a JavaScript function returning JSX.

Simpler and most commonly adopted in modern React apps.

With hooks, like state management and use side effects enabled in modern functions.

Example:

import React from 'react';

function Welcome() {

return <h2>Hello from Function Component</h2>;

}

**6. Define Component Constructor**

A special method in class components is referred to as the constructor.

This method is called only once when the component is created.

It is used to initialize the state and bind event handlers.

Example:

constructor(props) {

super(props);

this.state = { name: 'Nikitha' };

}

**7. Define render() Function**

Without render(), there is no such thing as a class component.

It returns the JSX to describe the UI of the component while being called every time its state or props change.

Example:

render() {

return <h1>Welcome</h1>;

}