# 2. ReactJs HOL

## Explain React components

React components are independent and reusable bits of code that serve as the building blocks of a React application. They return elements that describe what should appear on the screen. Components can be functional or class-based.

## Identify the differences between components and JavaScript functions

- React components return JSX (React elements), while regular JS functions do not.  
- Components can maintain internal state (especially class components), whereas JS functions cannot.  
- Components have a lifecycle, JavaScript functions do not.

## Identify the types of components

There are mainly two types of React components:  
1. Class Components  
2. Function Components

## Explain class component

Class components are ES6 classes that extend from React.Component and must contain a render() method. They can manage state and have access to lifecycle methods.

## Explain function component

Function components are simpler components written as JavaScript functions. They can use hooks (like useState, useEffect) to manage state and side-effects.

## Define component constructor

The constructor is a special function in class components used to initialize state and bind methods. It is called before the component is mounted.  
  
Example:  
constructor(props) {  
 super(props);  
 this.state = { count: 0 };  
}

## Define render() function

The render() function is required in class components. It returns the JSX (UI) to be rendered on the screen. It gets called every time the component’s state or props change.