

React js que

1) What is react js.

Ans-

React js is a free and open source front end javascript library.
It is maintained by meta.

2) Difference between framework and library?

And– framework acts as a blueprint for building applications while library is a collection of prewritten code that can be used to perform specific tasks.

3) Why react js is used?

Ans- react js is used for web development bcoz it is easy to learn, flexible and has no. of advantages including:

Reusable components, react hooks- allow developer to access state and other react elements in functional components.

React native is a framework that uses reactjs to create mobile user interfaces.

4) How does react js work?

ANS- it follows the virtual DOM approach which optimizes rendering performance by minimizing DOM updates.

5)What is jsx?

Ans:- jsx is a syntax extension for javascript that lets you write html like markup inside a js file.

6) how to create component in react js?

render():- It is used to display the component on the UI returned as HTML or JSX components. The ReactDOM.render() function takes two arguments, HTML code and an HTML element.

Ans– we can create components in react by 2 ways

1. Functional components :-

```
import React from 'react';
```

```
function MyComponent() {
  return (
    <div>
      <h1>Hello, I'm a functional component!</h1>
    </div>
  );
}

export default MyComponent;
```

2. Class components:-

```
import React, { Component } from 'react';

class MyComponent extends Component {
  render() { // use of render function
    return (
      <div>
        <h1>Hello, I'm a class component!</h1>
      </div>
    );
  }
}

export default MyComponent;
```

3. Both functional and class components can receive inputs called props.

```
function Greeting(props) {
  return <h1>Hello, {props.name}!</h1>;
}
```

7) what are the advantage of react js?

Ans-easy to learn

Faster development:
Testing opportunities
Scalability
Work for both ios and android app
Faster debugging and rendering. ..

Use of Virtual Document Object **Model**

8) differentiate between real dom and virtual dom?

Ans- dom stand for document object model

Real dom:-

- means it is the actual structure represented in ui
- Real dom directly update the HTML
- Real dom create a new dom if elements updates

Virtual dom:-

- it is memory representation
- Cannot directly update the html.
- Virtual dom update the jsx if the elements updates.

9) what are forms in react js?

Ans- forms are the components used to collect and manage the user inputs.

Like checkbox,date input, dropdown,textfield etc.

10) difference between react form and html form?

Ans- in html form- data is usually handled by dom itself.

In react form- data is handled by react components.

11)how is react different from react native?

Ans- react- utilizes html,css,js to create interactive ui

React js used virtual dom to render browser code in react

React native - utilizes apis and native ui component to build mobile application

React native uses native api to render component for mobile application

12)feature of react js

Ans- jsx:-

- **jsx is a syntax extension to js.**
- **By using jsx we can write html code in same file that contain js code**

Components:-

- **Components are building blocks of any react application and a single app usually contain multiple components.**
- **It split ui into independent ,reusable parts that can be processed separately.**

Virtual Dom:-

- **Rather than changing or updating all the objects in real dom virtual dom changes only that object in real dom**

One way data binding:-

- **React's one-way [data binding](#) keeps everything modular and fast.**
- **A unidirectional data flow means that when designing a React app, you often nest child components within parent components.**

13) what is jsx?

Ans-jSX is a syntax extension of JavaScript

we can write HTML structures in the same file that contains JavaScript code

14) Can web browsers read JSX directly?

Ans- Web browsers cannot read JSX directly. This is because they are built to only read regular JS objects and JSX is not a regular JavaScript object

- **For a web browser to read a JSX file, the file needs to be transformed into a regular JavaScript object. For this, we use Babel**

15) what is virtual dom?

Ans-DOM stands for Document Object Model. The DOM represents an HTML document with a logical tree structure. Each branch of the tree ends in a node, and each node contains objects.

React keeps a lightweight representation of the real DOM in the memory, and that is known as the virtual DOM. When the state of an object changes, the virtual DOM changes only that object in the real DOM, rather than updating all the objects

16) Why use React instead of other frameworks, like Angular?

Ans:-

- **Easy creation of dynamic applications:**

React makes it easier to create dynamic web applications because it provides less coding and provides more functionality, whereas, with JavaScript applications, code tends to get complex very quickly.

- **Improved performance:** React uses virtual DOM, which makes web applications perform faster.
- **Reusable components:** Components are the building blocks of any React application, and a single app usually consists of multiple components.
- **Unidirectional data flow:** React follows a unidirectional data flow. This means that when designing a React app, we often nest child components within parent components.

17) What is the difference between the ES6 and ES5 standards?

Ans- es5 uses function keyword along with the return keyword to define a function.

In es6 the use of arrow function makes it more compact.

Es5 uses require js module to include a react module or a component

Es6 uses import module to include a react module or a component.

18) how do u create a react app?

Ans:-1. Install node js :- bcoz we need npm to install the react library

Npm stand for node package manager that contains many js libraries, including react.

2- install create-react-app package in terminal

3-install a text editor of ur choice like vs code

19) what is an event in react?

Ans- An event is an action that a user or system may trigger, such as pressing a key, a mouse click, etc.

- React events are named using camelCase, rather than lowercase in HTML.
- With JSX, you pass a function as the event handler, rather than a string in HTML.

20)How do you create an event in React?

Ans- class simple extends `ReactComponents`{
 `work()`
 {
 `alert("good work");`
 }
 `render()`
 {
 `return(<button onclick={this work}> do dome work</button>`
 `);`
 }
}

21) What are synthetic events in React?

Ans- Synthetic events combine the response of different browser's native events into one API, ensuring that the events are consistent across different browsers.

22) Explain how lists work in React

Ans-

- We create lists in React as we do in regular JavaScript. Lists display data in an ordered format
- The traversal of lists is done using the `map()` function

23)How do you create forms in React?

```
class NameForm extends React.Component {
  this.state = {value: ""};

  handleChange(event) {
    this.setState({value: event.target.value});
  }

  handleSubmit(event) {
    alert('A name was entered: ' + this.state.value);
    event.preventDefault();
  }

  render() {
    return (
      <form onSubmit={this.handleSubmit.bind(this)}>
        <label>
          Name:
          <input type="text" value={this.state.value}
onChange={this.handleChange.bind(this)} />
        </label>
        <input type="submit" value="Submit" />
      </form>
    );
  }
}
```

24) How is React different from Angular?

Ans-

Author	Google	Facebook
Architecture	Complete MVC	View layer of MVC
DOM	Real DOM	Virtual DOM
Data-Binding	Bi-directional	Uni-directional
Rendering	Client-Side	Server-Side
Performance	Comparatively slow	Faster due to Virtual DOM

25)What are the components in React?

Ans-Components are the building blocks of any React application, and a single app usually consists of multiple components. A component is essentially a piece of the user interface. It splits the user interface into independent, reusable parts that can be processed separately.

Two types of component:

Functional and class components

Functional:-

- These types of components have no state of their own and only contain render methods, and therefore are also called stateless components. They may derive data from other components as props (properties).

Class —

- These types of components can hold and manage their own state and have a separate render method to return JSX on the screen.

26) What is the use of render() in React?

Ans- It is required for each component to have a render() function. This function returns the HTML, which is to be displayed in the component.

- If you need to render more than one element, all of the elements must be inside one parent tag like <div>, <form>.

27) What is a state in React?

Ans- The state is a built-in React object that is used to contain data or information about the component. The state in a component can change over time, and whenever it changes, the component re-renders.

28) How do you update the state of a component?

Ans- We can update the state of a component by using the built-in 'setState()' method:


29) What are props in React?

Ans- **Props** are short for Properties. It is a React built-in object that stores the value of attributes of a tag and works similarly to HTML attributes.

- Props provide a way to pass data from one component to another component. Props are passed to the component in the same way as arguments are passed in a function.

30) difference between state and props?

Ans-

	State	Props
Use	Holds information about the components	Allows to pass data from one component to other components as an argument
Mutability	Is mutable	Are immutable
Read-Only	Can be changed	Are read-only 
Child components	Child components cannot access	Child component can access
Stateless components	Cannot have state	Can have props

31)What is a higher-order component in React?

Ans-A higher-order component acts as a container for other components. This helps to keep components simple and enables re-usability. They are generally used when multiple components have to use a common logic.

32) What are the differences between class and functional components?

Ans-

State	Can hold or manage state	Cannot hold or manage state
Simplicity	Complex as compared to the stateless component	Simple and easy to understand
Lifecycle methods	Can work with all lifecycle methods	Does not work with any lifecycle method

Reusability	Can be reused	Cannot be reused
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33). Explain the lifecycle methods of components.

Ans-

- **getInitialState():** This is executed before the creation of the component.
- **componentDidMount():** Is executed when the component gets rendered and placed on the DOM.
- **shouldComponentUpdate():** Is invoked when a component determines changes to the DOM and returns a "true" or "false" value based on certain conditions.
- **componentDidUpdate():** Is invoked immediately after rendering takes place.
- **componentWillUnmount():** Is invoked immediately before a component is destroyed and unmounted permanently.

35. What is React Router?

React Router is a routing library built on top of React, which is used to create routes in a React application.

38. How do you implement React routing?

We can implement routing in our React application using this method:

Considering we have the components App, About, and Contact in our application:

```
const routing = (  
  <Router>  
    <div>  
      <h1>React Router Example</h1>  
      <Route path="/" component={App} />  
      <Route path="/about" component={About} />  
      <Route path="/contact" component={Contact} />  
    </div>  
  </Router>  
)
```