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React is a popular, open-source, javascript library created by meta for building dynamic, interactive user interface.

It mainly used to simplify the development of single-page application.

Why it is used ?

1. Component based architecture

Breaks UI into independent pieces.

Makes code easier to maintain.

2. Virtual DOM

React creates a light weight copy of DOM in memory.

Update only the part that changes.

Improves performance and responsiveness.

3. Cross platform flexibility

Used for web apps and extended to mobile apps using react native.

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Main features of react js

1. JSX (javascript syntax extention)

Allows writing HTML like code in javascript.

Makes UI code more readable.

2. Virtual DOM

Updates only the changed part of the UI.

3. Declarative UI

Developers describe what the UI looks like and react handles rendering.

4. Strong community

Rich libraries and tools.

SPA –

A SPA is a web application that loads a single HTML, page and dynamically updates the content as the user interacts.

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React components and their types –

React components are independent, reusable pieces of UI. They can be nested and combine to build complex interface.

Types of Components –

1. Functional component.
2. Class component
3. Higher-order component
4. Pure component.