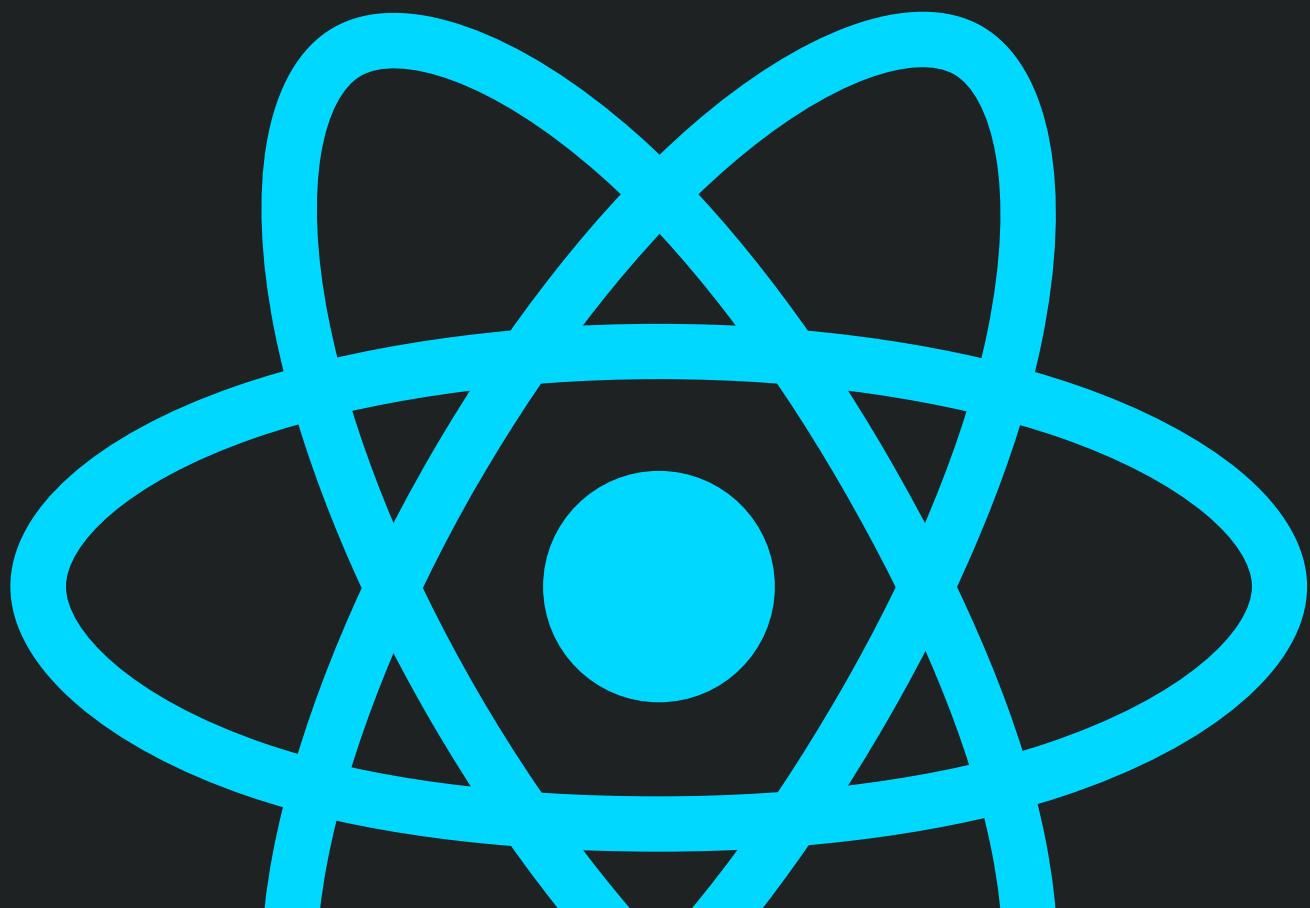


The Ultimate React.js Guide

Created by **JS Mastery**

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What's in the guide?

Learning JavaScript libraries and frameworks can be overwhelming. There are many libraries to choose from, and no proper step-by-step guides that'll teach you how to use these libraries to their fullest potential.

That's why, in this guide, you'll learn the most popular JavaScript library, used by hundreds of thousands of developers worldwide – **React.js**.

This guide covers the complete React.js roadmap, JavaScript prerequisites, essential React.js concepts, and project ideas that you can build & deploy and put up on your portfolio and get a job.



Brought to you by JSM

This guide will provide you with useful information and actionable steps, but if you truly want to dominate the competition and secure a high-paying job as a full-stack software developer, jsmastery.pro is the answer.

Read until the end for more information and **special discounts!**



Introduction to React.js

React.js is a front-end JavaScript library for building user interfaces. It was developed by Facebook and is maintained by Facebook and the open-source community.

React.js is a phenomenal library that is easy to understand, has excellent cross-platform support, has a fantastic community, and is one of the most loved libraries out there.

There are also two great React.js competitors: **Vue.js**, **Angular**. These libraries and frameworks are mainly used to create fast and efficient Single Page Applications. Although these are great technologies, taking a quick look at Google trends, we can clearly see that React.js is still in the lead by far.

JavaScript prerequisites

You might be wondering, what are the prerequisites to learn such a great JavaScript library?

There's only one prerequisite and that is – [JavaScript](#).

Do not jump straight into React.js without understanding the topics I've mentioned below.

Before learning React, you should have a good understanding of these JavaScript topics:

Basic Syntax

ES6+ features

Arrow functions

Template literals

JavaScript prerequisites

Array Methods

Object property shorthand

Destructuring

Rest operator

Spread operator

Promises

Async/Await syntax

Import and export syntax

React.js Roadmap

Basic things to learn in React.js

File & Folder structure

Components

JSX

Props

State

Events

Styling

Conditional Rendering

React.js Roadmap

*Learn about React.js Hooks –
the essential hooks to learn:*

`useState`

`useEffect`

`useRef`

`useContext`

`useReducer`

`useMemo`

`useCallback`

React.js Roadmap

Then learn some of the React.js UI Frameworks

★  Material UI

★  Ant Design

★  Chakra UI

 React Bootstrap

Rebass

Blueprint

Semantic UI React

React.js Roadmap

Learn to use some of the most popular React.js packages



React Router



React Query



Axios

React Hook Form

Styled Components



Storybook

Framer Motion

React.js Roadmap

*Learn how to manage state
with state management tools*



Redux

MobX

Hookstate



Recoil



Akita

React.js Roadmap

More things to learn after learning React.js fundamentals

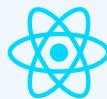


Next JS

Gatsby



TypeScript



React Native



Electron

React.js Roadmap

Important things to learn in Next.js

File & Folder structure

Static Site Generation

Server Side Rendering

Incremental Static Regeneration

Dynamic Pages

CSS / SASS Modules

Lazy loading Modules

API Routes

React.js Roadmap

Learn to test your React.js applications with some of these libraries/frameworks



Jest



Testing Library

Cypress

Enzyme



Jasmine



Mocha

React.js Roadmap

Learn to deploy your React.js applications



Netlify



Vercel



Firebase



Github Pages

Heroku



Render

React.js Concepts

Components

React JS is a **component-based** front-end library which means that all parts of a web application are divided into small components.

A component is a small piece of the User interface. Every React.js application is a tree of components.

Components let you split the UI into independent, reusable parts. So when you're building an application with React, you'll build independent and reusable components, and then you'll combine them to build a full fledged web application.

Components explanation

Let's take an example to represent what are React.js components:

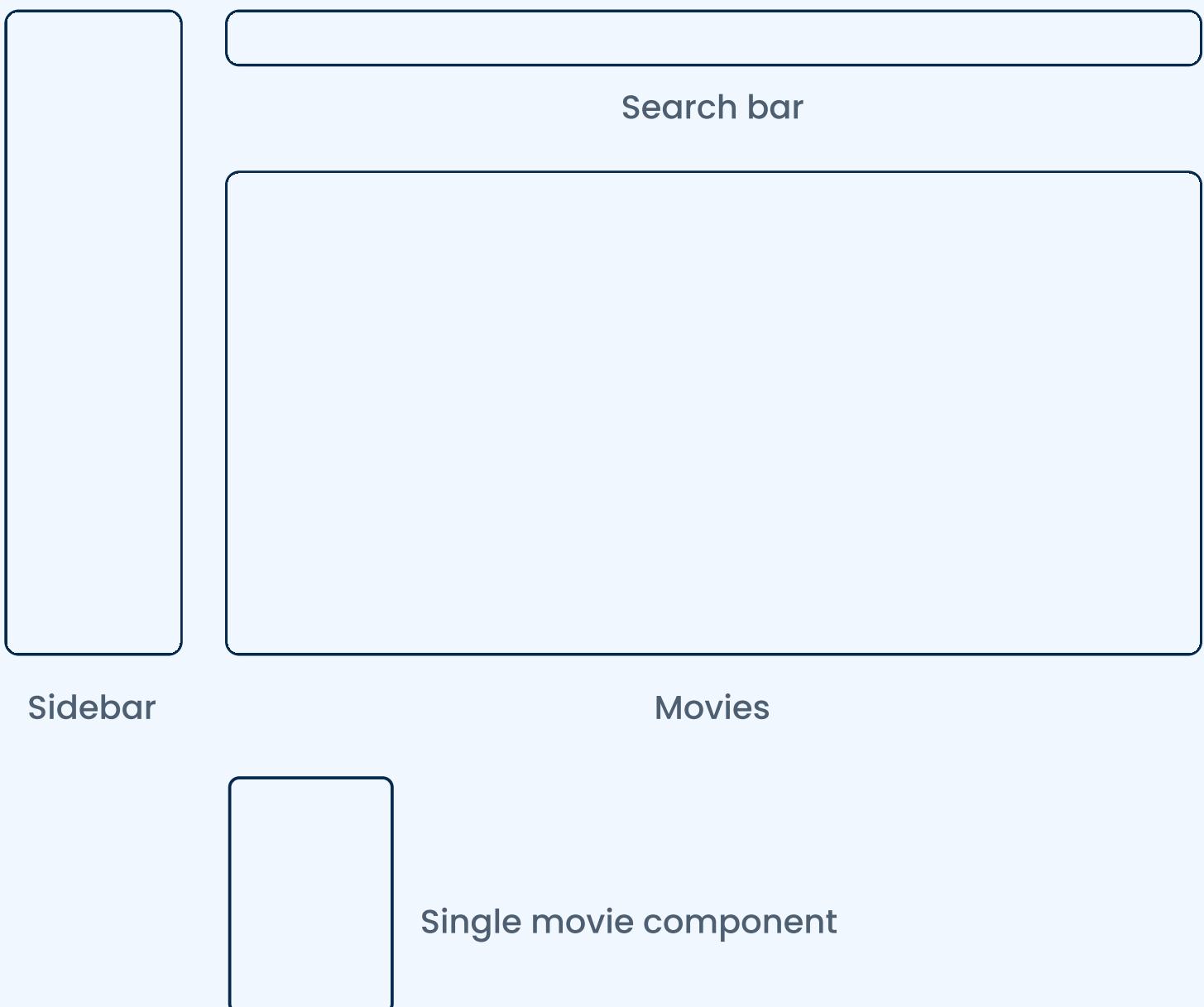
First project of the JSM Pro Platform

filmpire.netlify.app

This website is entirely built in React.js. So imagine we're building this website. How would we make it?

Components explanation

Firstly we'll split the User Interface into small components like Sidebar, Search bar, and Movies, including several single movie components with names and ratings.



Components explanation

In React, there are two types of components – **Functional Components & Class Component**

Class-based Component

Components explanation

If you don't fully understand, how to use classes, what are the class methods, and what does 'extends' means, don't you worry at all. Class based are not being used at all anymore and they were replaced by their simpler counterparts ↓

Functional Component

Components explanation

That's it! This is a React Component. You can see how easy it is.

You might be thinking, why are we writing HTML when returning something.

This tag syntax is neither a string nor HTML.
It is called **JSX**.

JSX – JavaScript XML

JSX is a syntax extension to JavaScript. It is used in React to describe what the UI should look like. JSX may remind you of a template language, but it comes with the full power of JavaScript.

JSX produces React "elements". JSX forms the core syntax of React..

JSX – JavaScript XML

There are a few differences between HTML & JSX, although generally it's incredibly similar. Some of the differences are:

Writing `className` instead of `class`,



Because the `class` is a reserved keyword in JavaScript. Since we use JSX in React, the extension of JavaScript, we have to use '`className`' instead of the `class` attribute.

JSX – JavaScript XML

Same as class, there's also one more reserved keyword of JavaScript that is used in HTML. That is the 'for' attribute used with the `<label>` element.

So, to define **for** attribute in JSX, you do it as '**htmlFor**'

```
<label htmlFor="">
```



```
<label for="">
```

Example

JSX – JavaScript XML

One of the major differences between HTML and JSX is that in JSX, you must return a single parent element, or it won't compile.

You can use 'React fragments' instead of divs

```
<> ... </>
```



```
<div> ... </div>
```

You can also use divs instead of React fragments, it's not necessary to use a particular, but using 'React fragments' makes the code more readable.

JSX – JavaScript XML

You can implement JavaScript directly in JSX. To use JavaScript expressions, we use curly brackets `{...}`

Whereas in HTML, you need a script tag or an external JavaScript file to implement JavaScript

What are Props?

To make our components accept different data, we can use props. Props are arguments passed into React components. They are passed to components via HTML attributes.

Props is just a shorter way of saying **properties**.

We use props in React to pass data from one component to another (*from a parent component to child components*), But you can't pass props from a child component to parent components.

Data from props is read-only and cannot be modified by a component receiving it from outside.

What is State?

A State is a plain JavaScript object used by React to represent a piece of information about the component's current situation. It's managed in the component (*just like any variable declared in a function*).

The state object is where you store property values that belongs to the component. When the state object changes, the component re-renders.

State data can be modified by its own component, but is private (cannot be accessed from outside)

What is Events?

An event is an action that could be triggered as a result of the user action or a system-generated event. For example, a mouse click, pressing a key, and other interactions are called events.

Handling events with React elements is similar to handling events on DOM elements. There are just some syntax differences.

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

How to add Events?

What are React.js Hooks?

Hooks are a new addition to React in version 16.8 that allows you to use state and other React features, like lifecycle methods. Using hooks makes your code cleaner.

Hooks don't work inside classes – they let you use React without classes.

Hooks let you always use functions instead of having to constantly switch between functions, classes, higher-order components, and render props.

Nowadays, hooks are widely used. So you should start using it as well. You can also create your own Hooks to reuse stateful behavior between different components.

Project Ideas

Real Estate App

Cryptocurrency App

Travel Companion App

ECommerce Web Shop

Voice Assistant News App

Portfolio Website

Voice Powered Budget Tracker

Blog App with CMS

Project Ideas

Social Media Web App

Modern UI/UX Website

Chat App

Video Chat App

Progressive Web Apps

Covid-19 Tracker App

Google Search Clone

Premium Landing Page

JS Mastery Pro

Looking to advance your career and understand the concepts & technologies that top-shelf employers are looking for?

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