

Frontend Study Guide

in-depth study guide on frontend development for complete beginners, to become professional developers

Section 1



- Programming fundamentals
- Data Structures and Algorithms (DSA)
- Programming challenges

Section 2



- Web fundamentals
- Basics of HTML, CSS, JavaScript
- JavaScript in depth

Section 3



- Document Object Model
- Git & GitHub
- ReactJS

Section 4



- TypeScript and Unit testing
- React ecosystem
- Other popular tools

For complete guide with resources, [Click Here](#)

Section 1

Programming fundamentals

- Variables
- Data Types
- Conditions
- Loops
- Input and Output
- Functions
- Arguments & Parameters
- Array
- Set
- Map

Data Structures and Algorithms

- Arrays
- Stack
- Queue
- HashMaps
- Sets
- Linked list
- Linear search
- Binary search
- Bubble sort
- Selection sort
- Insertion sort
- Count sort

Programming problems

- [Hackerrank](#)
-
- [Edabit](#)
-
- [Leetcode](#)

Section 2

Web fundamentals

- Client and Server
- HTTP
- API
- REST
- Browser communication
- Status codes

Basics of HTML, CSS, JavaScript

- HTML elements and tags
- HEAD and metadata
- List, Tables, and Anchors
- Forms, Images
- Selectors, pseudo selectors
- Box model, Inheritance, Specificity
- Positioning, Flex
- Primitives, Type Conversions
- Scopes, Hoisting, Closures
- Error handling
- Objects, Functions
- Timeout & Interval

JavaScript in depth

- Promises, Async-await
- "this" keyword
- template strings, Prototypes
- Modules, Classes
- Sets, Maps
- ES6+ features

Section 3

Document Object Model

- DOM Tree
- Element selectors
- Events handling
- Event bubbling & delegation
- Working with Nodelist
- Browser APIs
- Event loop

Git & GitHub

- Clone, Pull, Push
- Commits, Log
- Branching
- Switch, Checkout
- Pull request
- Github

ReactJS

- Components & JSX
- State & Props
- Functional components
- Hooks
- Forms & Event Handling
- Context API
- Lazy loading
- Higher order components
- Virtual DOM
- Reconciliation

Section 4

Compiler and Libraries

- TypeScript
- Unit testing with Jest / Vitest

React ecosystem

- State Management using Redux / Redux Toolkit
- Routing using React Router
- Components usage with React Material
- Forms using React Hook Form / Formik
- API communication using Axios

Other tools

- TailwindCSS or Bootstrap
- NextJS

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This document is a guideline based on personal knowledge & opinions