

SECTION I

JavaScript Fundamentals through CLI Apps

10-15 Days

Topics to Cover:

- Basics: Variables, Data Types, Loops, Conditional Statements.
- Functions: Writing reusable code, scope, and return values.
- Arrays and Objects.
- JSON: Parsing and iterating through JSON data.

Hands-On Projects:

Sales Report generator

Generator a report with the data given in JSON format.

Class Report

Generator a class report with Student performance

Marketing Report

Generator a marketing report with with summarized campaign data.

💡 Key Advice for Mastery

Focus on **programmatic thinking**. Using JSON makes your logic closer to **real-world data handling**—think like a developer early on.

SECTION II

HTML & CSS Basics

5-8 Days



Topics to Cover:

- HTML: Basic structure, forms, lists, images, and links.
- CSS: Margin, padding, box model and selectors.
- Multipage site structure and linking pages.



Hands-On Projects:

Build multi-page portfolios

Build multipage portfolio to show case your work.

Websites of famous personalities

Like: A.P.J. Abdul Kalam, Sachin Tendulkar



Key Advice for Mastery

Avoid diving too deep into design. Stick to creating **clean, structured websites** with proper linking and styling.

SECTION III

Vanilla JavaScript + API Calls

15-20 Days

Topics to Cover:

- DOM Manipulation: Select, modify, create, and delete elements dynamically.
- Event handling and debugging with **Chrome DevTools**.
- Fetch API: GET and POST requests.

Hands-On Projects:

Employee Management System

CRUD functionality with local or API data.

Player Manager

Fetch player data from a sports API and manage it (filter, sort).

Movie Database

Build a front-end to fetch and display movies with filters.

💡 Key Advice for Mastery

Master **Chrome DevTools** for debugging—it's a superpower for developers. Combine API calls and DOM manipulation for dynamic apps.

SECTION IV

Getting Ready for React (ES6 + Functional Programming)

7-10 Days



Topics to Cover:

- ES6: let/const, arrow functions, spread/rest operators, destructuring, and template literals.
- Functional Programming: map, reduce and filter.



Hands-On Projects:

Total of a Cart

Calculate the total using reduce.

Dynamic Array Filtering

Filter an array dynamically (e.g., checkbox click filters data on the DOM).



Key Advice for Mastery

Practice functional programming with **real-world examples**. Build confidence in transforming and filtering data.

SECTION V

Introduction to React

4 Weeks



Topics to Cover:

- JSX: Writing HTML-like syntax in JavaScript.
- React Router: Navigation and multi-page apps.
- State Management: `useState` for managing dynamic data.
- Fetch API: Integrate API calls with React.



Hands-On Projects:

To-Do App

Build a multi-page application for task management.

Zomato Clone

Basic restaurant listing with product cart, filters, and navigation.

Simple E-Commerce App

Features include add-to-cart functionality, filtering, mapping, and product search.



Key Advice for Mastery

SECTION VI

Get Started with Backend

1-1.5 Months



Topics to Cover:

- REST APIs: Build APIs with **Express.js**.
- Database: **MongoDB** or **MySQL** basics.
- CRUD Operations: Endpoints for GET, POST, PUT, DELETE.



Hands-On Projects:

Restaurant Management API

Manage menus, orders, and customers efficiently.



Key Advice for Mastery

Focus on **clean and simple REST APIs**. Start with one database—don't complicate things early.

SECTION VII

Backend Integration

2-3 Weeks



Topics to Cover:

- Integrate React frontend with backend APIs.
- Fetch and display API data.



Hands-On Projects:

Meetup App

Includes event search, event details page, and filtering functionality.



Key Advice for Mastery

Master the **frontend-backend connection**. Building full-stack features boosts your confidence as a developer.

SECTION VIII

Redux Toolkit

2 Weeks



Topics to Cover:

- State Management using Redux Toolkit.
- Actions, reducers, and stores.



Hands-On Projects:

School Management App

A comprehensive app to manage student data, track attendance, and record grades for streamlined academic management.

Finance Management App

An intuitive app to manage your finances, track expenses, monitor budgets, and plan savings efficiently.



Key Advice for Mastery

Redux improves app scalability. Learn it through simple projects before adding complexity.

SECTION IX

React Advanced Topics

2 Weeks



Topics to Cover:

- Hooks: `useReducer`, `useContext`, `useMemo`, and custom hooks.



Hands-On Projects:

React Project Upgrades

Enhance existing React projects by incorporating custom hooks and `useReducer` for better state management and code reusability.



Key Advice for Mastery

Custom hooks simplify React code. Learn when and how to create them effectively.

SECTION X

Advanced CSS

2 Weeks



Topics to Cover:

- Flexbox and Grid layout.
- Responsive design and UI components.



Hands-On Projects:

Blog Layout

Design a responsive blog layout using grids and flexbox for modern web design.

UI Component Practice

Focus on building small, reusable UI components like cards, modals, and forms.



Key Advice for Mastery

Advanced CSS is about layout precision. Learn to build clean, responsive components.

SECTION XI

JS Concepts for Interviews

2 Weeks



Topics to Cover:

- Core Concepts: call, bind, apply, closures, promises, hoisting, event loop.



Hands-On Projects:

Practical Task

Record live coding videos to explain each concept and demonstrate problem-solving techniques in real-time.



Key Advice for Mastery

Explain **JavaScript concepts** clearly—this is crucial for interviews and will deepen your knowledge.

SECTION XII

Full-Stack Plus (Advanced Features)

2-3 Weeks

Topics to Cover:

- WebSockets: Real-time apps using [Socket.IO](#).
- Authentication: JWT and OAuth (Google/GitHub).

Hands-On Projects:

Chat App

Build a chat application with real-time messaging and user authentication for secure communication.

Key Advice for Mastery

Learn to handle real-world challenges like **real-time updates** and secure logins.

SECTION XIII

Frontend Plus Plus

2 Weeks



Topics to Cover:

- TypeScript: Types, interfaces, and applying TypeScript to projects.
- Testing: Basics of unit testing with Jest.
- Performance: Debugging and optimization techniques.
- Build Tools: Webpack and build processes.



Hands-On Projects:

Enhancement

Apply TypeScript for type safety and integrate unit tests into existing projects to ensure reliability and maintainability.



Key Advice for Mastery

TypeScript and testing give you an **edge in interviews**. Use these to write reliable, maintainable code.

Conclusion

8-10 Months

Outcome:

- A strong **portfolio** with diverse projects: CLI apps, frontend, backend, integrations, and advanced full-stack apps.
- Expertise in real-world concepts: **APIs, state management, authentication, and TypeScript.**

Key Advice for Mastery

Stay **consistent**. Each section builds on the last—don't skip steps. Focus on **projects** to learn by doing, and explain concepts clearly to master them.