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| **Month 1: JavaScript Fundamentals** | |
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| **Week 1** | |
| Day 1 | Introduction to JavaScript, Alerts, and Data Types |
| Day 2 | JavaScript Variables and Naming Conventions |
| Day 3 | String Concatenation, Retrieving Characters, and Slicing |
| Project | Simple webpage with a button that triggers an alert message |
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| **Week 2** | |
| Day 4 | Basic Arithmetic and Modulo Operator |
| Day 5 | JavaScript Arrays, Adding Elements, and Intermediate Techniques |
| Day 6 | Recap and Review of Arrays and Array Methods |
| Project | Implement a basic shopping cart functionality using arrays for items and quantities |
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| **Week 3** | |
| Day 7 | Creating and Calling Functions, Parameters, and Return Values |
| Day 8 | Arrow Functions and Callbacks |
| Day 9 | Destructuring, Spread Operator, and Quiz on Functions |
| Project | Develop a simple quiz application with multiple-choice questions and feedback on the user's score. |
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| **Week 4** | |
| Day 10 | Control Statements (if/else, switch) |
| Day 11 | JavaScript Objects |
| Day 12 | JavaScript Methods, this keyword |
| Project | Simple webpage with dynamic content manipulation using DOM and control statements |
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| **Month 2: Advanced JavaScript and React Basics** | |
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| **Week 5** | |
| Day 13 | Introduction to the Document Object Model (DOM) |
| Day 14 | DOM Manipulation and Selecting HTML Elements |
| Day 15 | Event Handling and Adding Event Listeners |
| Project | Interactive image gallery with event-driven functionalities. |
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| **Week 6** | |
| Day 16 | Asynchronous JavaScript (Callbacks) |
| Day 17 | Asynchronous JavaScript (Promises) |
| Day 18 | Fetch API and Asynchronous Data Fetching |
| Project | Create a simple React application that fetches data from a REST API. |
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| **Week 7** | |
| Day 19 | Introduction to React, JSX |
| Day 20 | React Setup and Writing first program |
| Day 21 | React Components |
| Project | Build a simple interactive React component (e.g., a counter or a toggle button). |
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| **Week 8** | |
| Day 22 | React Prop and PropTypes |
| Day 23 | React State Management |
| Day 24 | React Hooks (useEffect, useRef) |
| Project | Create a basic to-do list application with React. |
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| **Month 3: Advanced React and Asynchronous JavaScript** | |
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| **Week 9** | |
| Day 25 | React Forms and Controlled Components |
| Day 26 | Handling User Input and Form Validation |
| Day 27 | UseReducer for complex state management |
| Project | Develop a contact form with validation using React. |
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| **Week 10** | |
| Day 28 | ContextAPI |
| Day 29 | Introduction to Redux |
| Day 30 | Redux Actions, Reducers, and Store |
| Project | Integrate Redux into the existing React projects (e.g., to-do list, contact form) |
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| **Week 11** | |
| Day 31 | Redux Middleware and Asynchronous Actions |
| Day 32 | React Router and Navigation |
| Day 33 | Render Props |
| Project | Implement routing and navigation in a multi-page React application. |
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| **Week 12** | |
| Day 34 | Higher-Order Components |
| Day 35 | Error boundaries |
| Day 36 | Performance optimization |
| Project | Finalize and polish React projects, focusing on best practices and optimization techniques |
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