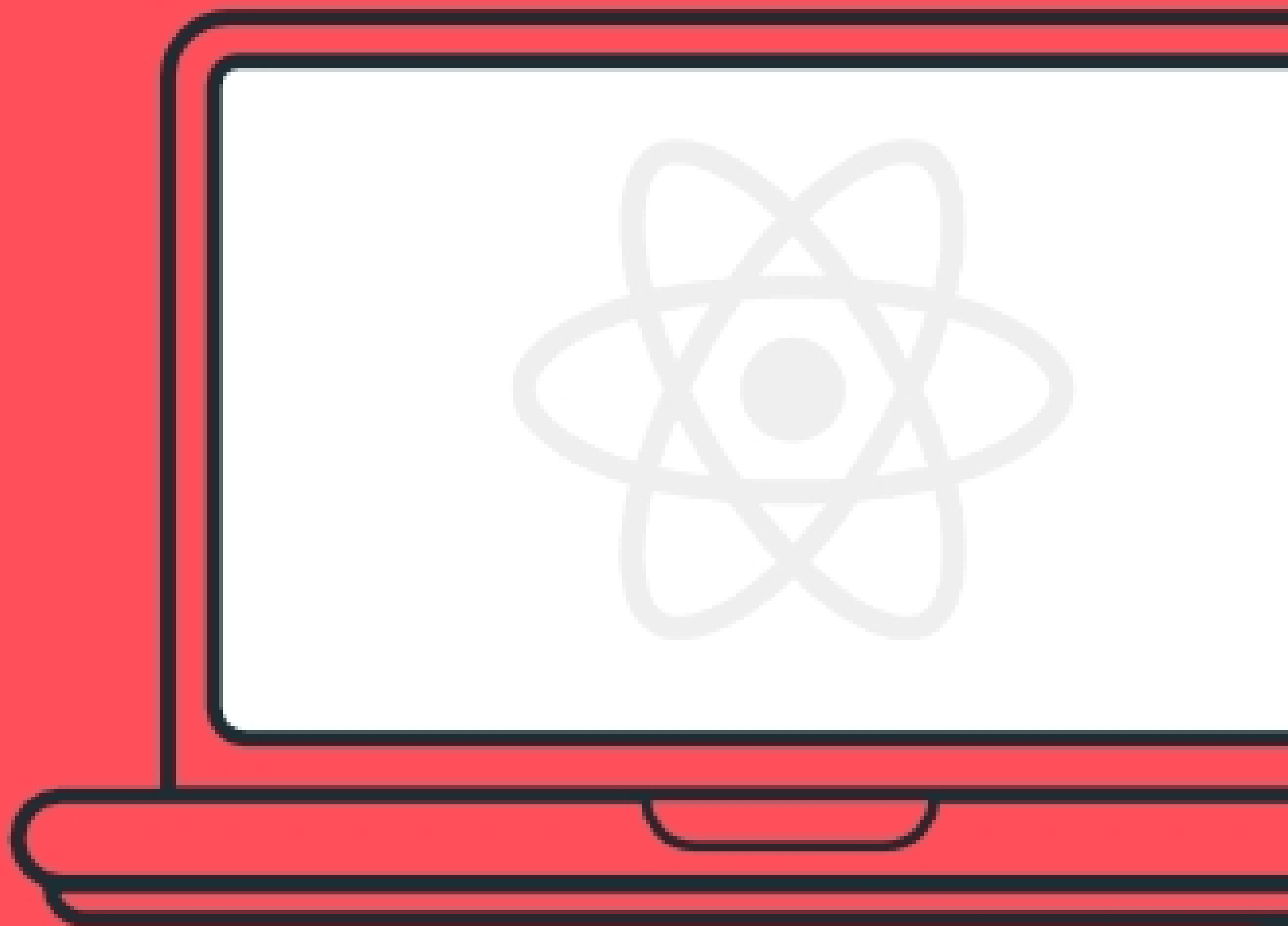




GeeksforGeeks

FULL STACK DEVELOPMENT WITH REACT & NODE JS



DETAILED COURSE SYLLABUS

SESSION 01: INTRODUCTION & BASICS OF VCS

- Introduction to Full Stack Development
- Community Bonding
- What and Why VCS?
- Intro to Git & Git Commands using Command Line Interface
- Git vs. GitHub
- Git WorkFlow & Contribution Guidelines
- Pull Requests in GitHub and Access to Source Code

SESSION 02: BASICS OF FRONT END TECH

- Introduction to Front End
- Semantic HTML
- CSS Basics
- Working with Chrome DevTools
- CSS Layouts: Display Property
- CSS Layouts: Float Property
- CSS Layouts: Position Property
- HTML Forms & Inputs
- Basics of Responsive Website Design
- Responsive Layouts & Mobile First Design with Flexbox

SESSION 03: INTRODUCTION TO JAVASCRIPT

- Programming in JavaScript
- Variables and Data Types
- Functions
- Working with Strings & Numbers
- Application Logic & Loops
- Introduction to Arrays & Objects
- Working with Arrays
- Working with Objects
- Variable Types & Scoping
- ES 7 and Beyond New Features

SESSION 04: MINI FACEBOOK PROJECT

- Introduction to Mini Facebook Project
- Motivation and Objectives
- Tech Stack
- Project Organisation & Plan
- Visual Design Walkthrough

SESSION 05: INTRODUCTION TO REACT JS

- Setting up your Dev Environment
- Introduction to Node & NPM
- Create React App Boilerplate & Introduction to JSX
- Introduction to SCSS & Adding SCSS Support
- Organising Code & Creating a Hello World Application

SESSION 06: REACT COMPONENTS AND STATES

- React Basics: Components with States & Props
- Class Components vs. Functional Components
- Passing Static & Dynamic Data between Components
- Routing Support using React Router
- Event Handling

SESSION 07: WORKING WITH DATA

- Setting States and Props
- Introduction to AJAX & Asynchronous Calls
- Introduction to Axios & Service Calls
- Loading Data into State
- Fetching Data using API Calls
- Using Helper Functions

SESSION 08: UNDERSTANDING API'S AND CRUD OPERATIONS

- Introduction to REST API
- Creating a Mock API Server
- Understanding CRUD & HTTP Verbs
- Implementing CRUD Endpoints

SESSION 09: CONDITIONAL RENDERING

- Introduction to Conditional Rendering using React
- Handling Undefined and Unknown Data
- Completely Componentising Repeats
- Building the App based on Bootstrap
- Content Validation using React

SESSION 10: NODE JS BASICS

- Introduction to Node JS & Express JS
- Basic Hello World REST API in Express JS
- Creating modular Routers in Express JS
- Using POST Variables with Body Parser
- Using in-memory storage to access data

SESSION 11: INTRODUCTION TO REST APIS

- What are REST APIs
- Understanding the different HTTP Verbs and where to use them
- Setting up Routing
- Middleware and Error Handling
- Creating a Mock REST API

SESSION 12: INTRODUCTION TO DATABASES

- Understanding Databases
- Bird's Eye View of different Databases
- Introduction to MongoDB
- Introduction to PostgreSQL
- Introduction to sqlite3

SESSION 13: INTRODUCTION TO SESSION HANDLING

- What is User Session?
- Using a Session middleware
- Handling Sessions and Authentication
- Using NodeMailer to send out Emails
- Multifactor Authentication

SESSION 14: SETTING UP OUR OWN REST API

- Using GET method to list and fetch a record
- Using POST method to create a record
- Using PUT & PATCH methods to update a record
- Using DELETE method to delete single and multiple records
- Access Control Allow Origin and CORS 6. Other interesting HTTP Verbs

SESSION 15: CONNECTING OUR REST API TO FRONTEND

- Introduction to AJAX calls
- Using Fetch
- Using Axios and understanding difference between fetch and Axios
- Creating & implementing Service Calls
- Consuming service calls and updating components

SESSION 16: STYLING AND COMPONENTISATION

- Implementing Routers
- Creating multiple pages
- Using Partial
- Adding Bootstrap Styles
- Creating Components and using in Pages
- Migrating Class Components to Functional Components
- Using Hooks
- useState and useEffect

SESSION 17: BUILDING THE HOME PAGE

SESSION 18: BUILDING THE PROFILE & POSTS PAGE WITH CRUD

SESSION 19: DEPLOYING AND HOSTING THE APP

- Introduction to Deployment
- Introduction to CI & CD pipelines
- Looking at different deployment methods
- Deploying using GitHub Pages (React JS)
- Deploying using Netlify (Node JS)
- Other deployment methods

SESSION 20: HEADS UP FOR TYPESCRIPT & GRAPHQL

- Basics of TypeScript
- Where and how to use them?
- Basics of GraphQL
- Use-cases of GraphQL
- Related technologies and next steps