



# Web App Fullstack Development (MERN stack)

Course includes HTML, CSS, JavaScript, ReactJS, NodeJS, MongoDB -  
from absolute beginners to industry required advanced



**CODE GEEKS 9JA**  
ENABLING THE NEXT GENERATION ON TECH

# About Code Geeks 9ja

Code Geeks 9ja is a private ICT training center that offers corporate and VIP training services to help individuals master the act of coding the right way in Nigeria. It provides effective private trainings and personified learning experiences that are designed to make individuals the master of software developments rather than becoming just another average developers, and beyond just being a good coder, a top professional at it.

Software development is a very high paying tech career that has caught the eyes of many. However, it is not as easy to learn and master. In fact, statistics show that over 60% of individuals that embrace learning to code either through an IT school or individual tutelage end up abandoning it halfway. This is due to the high complexity of coding and the inability of individuals to be properly mentored and guided.

That is why at Code Geeks 9ja, we provide only A-grade private tutoring and full career mentoring rather than mass trainings. The maximum number of students we train and mentor at a batch is 10, mostly less. Our job starts from instilling proper coding skill set and ethical disciplines that help the trainees become the top professional software engineers they dream of.

It does not stop at the training. Beyond the training period, we become the career coach and help the trainees in gaining maximum experience possible through building production



projects for our clients at Jaflah Software Development Company. This is a must-do for every trainee as it helps them garner on-the-job experiences that are crucial in their career life. While at it, they are given complete help and guidance in solving complex tasks.

Indeed, there is no such training center that offers as much as we do. It is completely personified to the individual's abilities. And we do not leave you until you have mastered the skills and professional etiquettes, built the right mentality, and achieved your career goals.

More than just coding, you learn to work with teams and use project development tools, build the right communication skills, and attention catching portfolios that do not only maximise your experience level but also solidifies your chance of landing top paying jobs within a short period of time.

## Training times:

**Saturdays:** 12pm - 4pm

**Sundays:** 2pm - 6pm

**Wednesdays:** Discussions, insights, and AMA  
(Ask Me Anything) on assignments (9pm - 10pm)

## Tools needed:

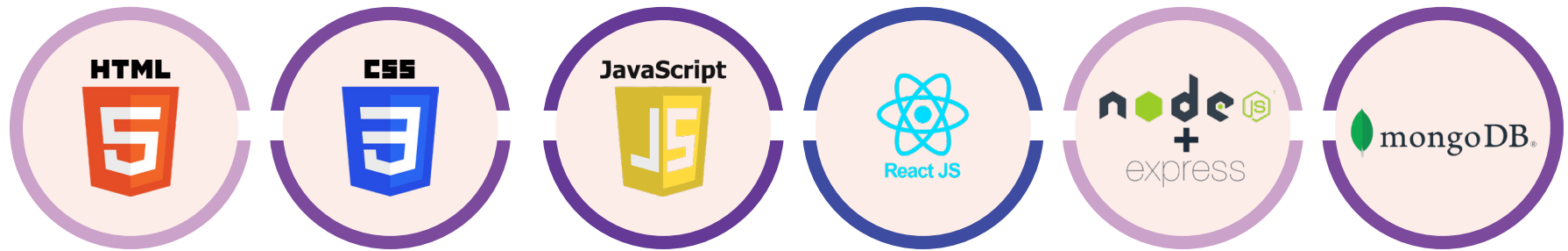
- A laptop or desktop computer
- Internet



# Full Training Roadmap & Course Outline Manual

This development journey will take you across various programming languages, frameworks, and libraries that are needed as you aim to stack yourself with A-grade skill set as a software engineer.

The followings are the languages, libraries, frameworks and tools that the fullstack web app development training will take you through. At the end of the training, you are assured to become an expert user of them:



**FULL TRAINING DURATION: 8 MONTHS**

# Semester One:

# Learning The Stack Languages-Html, Css & Javascript From Beginner To Advanced

**Duration: 4 Months**

## Semester Curriculum

### Week 1

### Full Course & Tools Introduction

- Introducing to software programming
- Careers in software programming
- Understanding software modules, and their roles; frontend, backend, databases and API integrations
- Software development tools, and all that you need throughout the course
- Setting up our development environment
- Introducing the different languages as related to full stack web development
- Introduction to web page layouts
- Mastering the proper way of arranging files right from start
- Building your first website



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Fullstack Web App Development

## Week 2

## HTML for beginners

- Understanding HTML, its structure, and syntax
- Introducing basic HTML elements and their usages
- More HTML elements; working with HTML forms
- Introducing in-line styling
- Understanding the role of comments in programming and the proper way to use them

## Week 3

## Introducing CSS

- Basic HTML elements styling
- Styling an HTML form
- More stylings

## Week 4

## More stylings

- Building web page components with HTML and CSS
- Becoming comfortable with styling

## Week 5

## Getting comfortable with CSS

- Introduction to CSS Flexbox
- Mastering the CSS Flexbox properties

## Week 6

## Responsive design

- Introduction to responsive designs
- Working with media queries

## Week 7

## Project 1

- Building a project with all you have learnt so far

## Week 8

## More on CSS Grid

- Introduction to CSS Grid
- Building widgets with CSS Grid

## Week 9

## JavaScript!!!

- Introduction to JavaScript
- Getting started with Vanilla JavaScript
- Variables in programming
- Basic data types in JavaScript
- Operators

## Week 10

## More JavaScript basics

- Conditional statements and loop in JavaScript
- Understanding functions in programming
- Working with functions
- Using JavaScript basic methods

## Week 11

## Working with Document Object Model (DOM)

- DOM manipulations

## Week 12

## Recap from the semester beginning



## Week 13

## Back to JavaScript

- Events and event handling
- Manipulating the DOM with events

## Week 14

## Arrays

- Introduction to arrays
- Basic array methods in JavaScript
- Advanced array methods

## Week 15

## Objects, JSON and Asynchronous tasks

- Objects and JavaScript Object Notation (JSON)
- Asynchronous tasks

## Week 16

## Project works

- Building projects with all you have learnt so far

## Week 17

## Semester Exam



# Semester Two:

# Mastering ReactJS – The Most In-demand Frontend Development Library

Duration: 2 Months

## Semester Curriculum

Week 18

Introduction to JavaScript frontend library; ReactJS

- Exploring different frontend libraries and frameworks available
- Why ReactJS?
- Creating your first React application
- Understanding and getting used to folder structure in React



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## Week 19

## Components and templates in ReactJS

- Working with components
- Templates in React
- Using dynamic values in components
- Working with multiple components

## Week 20

## Component styling and Props

- Styling your components
- Using props
- Functions as props
- Reusing components
- Conditional component rendering

## Week 21

## Events, state, list and useEffect

- Handling click events
- Using useState
- Outputting lists
- useEffect basics
- Using useEffect dependencies
- Fetching data with useEffect hook
- Handling fetch errors

## Week 22

## Custom hooks, React routes

- Creating, using and reusing custom hooks
- Creating routes,
- Using route parameters
- Handling forms and controlling inputs
- Making post, update and delete requests

## Week 23

## Class Project

## Week 24

## Personal Personal Project Developments

## Week 25

## Semester Exam

# Semester Three: Backend Development with MERN Stack

**Duration: 2 Months**

## Semester Curriculum

**Week 26**

**A: Introduction to MERN stack & NodeJS**

- What is MERN stack and why is it so popular?
- Why NodeJS? Why Node?
- Node Architecture
- How Node Works
- Installing Node
- Your First Node Program



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## Week 26

### B: Working with Node Modules

- Loading, creating and loading a module
- OS module
- File system module
- HTTP module
- Event module and arguments

## Week 27

### A: Working With Node Package Manager (NPM)

- What is package.json
- Installing a Node package
- Using an installed package
- Package semantic versioning
- Dev dependencies
- Working with Node global packages

## Week 27

### B: Building RESTful APIs with Node and Express

- Introducing Express
- Building your first web server with Express
- Introducing Nodemon
- Introducing Environment Variables (env)
- Creating and integrating custom middleware



## Week 28

## Database Integration, HTTP requests

- Using third party middleware
- MongoDB Atlas and Mongoose
- Models and schema
- Mastering the use of MongoDB methods
- Handling HTTP POST and GET requests
- Handling requests with Postman
- Validating request body parameters
- Handling HTTP PUT and DELETE requests
- Working with route parameters

## Week 29

## MVC design, Utilities

- Structuring code into MVC design template
- Writing controller codes
- Utilizing utilities in Node

## Week 30

## Helpers and emailing in Node

- Creating utility helpers
- Sending emails from Node application

**Week 31**

**Building fullstack project**

**Week 32**

**Personal Projects**

**Week 33**

**Final Exam**

**Certifications**





