

FULL-STACK WEB AND SOFTWARE DEVELOPMENT COURSE

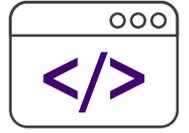
6-Month Course



► Industry Expert Faculty ► Well-Structured Curriculum ► Live Online Sessions



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Digitally Transforming Organisations



And 1000+ Organisations

About the Course

Software development is at the heart of today's digital world, powering everything from mobile applications to enterprise solutions. As businesses continue to digitise operations, skilled developers are in high demand to design, build, and maintain innovative, user-friendly systems. Full-stack development is especially valuable, as it combines expertise across both front-end and back-end technologies.

The Full-Stack Web and Software Development Course by Digital Regenesys is a 6-month, multi-level programme designed to equip learners with end-to-end development skills. The course is structured across three levels – Basic, Intermediate, and Advanced – covering fundamental programming concepts before advancing to complex frameworks, databases, and deployment practices.

Through expert-led sessions and project-based learning, participants will explore essential areas such as web development, database design, APIs, cloud integration, and agile practices. The course blends theoretical knowledge with hands-on application to ensure learners can confidently create functional, scalable, and secure software solutions.

Join a collaborative learning journey with experienced facilitators and industry specialists, and gain the technical and problem-solving skills to thrive in the fast-evolving software development landscape.



Course Benefits



Gain practical experience through hands-on projects that simulate real-world scenarios, with each project deployed and documented to showcase on GitHub, resumes, and during interviews.

Build a complete skill set covering frontend, backend, and full-stack integration using the modern MERN stack, along with essential tools like Git, Postman, and MongoDB Atlas.



Learn deployment practices using industry platforms such as Vercel, Netlify, Render, and MongoDB Atlas to make your applications production-ready.

Progress through a structured curriculum designed in levels-Basic (Frontend), Intermediate (Backend), and Advanced (Full Stack)-for step-by-step skill development.



Strengthen your career profile with resume building, LinkedIn optimisation, GitHub portfolio creation, and mock interview preparation.

Complete a capstone SaaS-style project with authentication, roles, and dashboards, while also participating in peer code reviews, live demos, and community learning-graduating with 4-6 fully built projects to present to employers.



Who Is This Course For ?

College Students (CS/IT): *Practical skills, projects for resumes, and a job-ready portfolio.*

Career Switchers: *Foundational and practical knowledge, portfolio building, and job preparation.*

Self-Taught Developers: *A guided learning path, mentorship, real projects, and deployment skills.*

Recent Graduates: *Real-world project experience, GitHub proof of work, and interview preparation.*

Freelancers & Entrepreneurs: *End-to-end app development skills, deployment experience, and full-stack expertise.*

Bootcamp Graduates: *Deeper project work, real-world application, and confidence in implementation.*

Underrepresented Tech Talent: *Access to practical, industry-aligned training with a portfolio-first approach.*

High School Graduates: *A strong head start in web development with project-based learning.*

Curriculum Structure

Introductory Level

2 Months

Total Sessions : 16

Introduction to Web Development, HTML Basics, CSS Fundamentals, Layout Systems, Responsive Design, CSS Best Practices, JavaScript Fundamentals I, JavaScript Fundamentals II, DOM Manipulation, Git & GitHub, Intro to React, React State & Props, React Events & Conditional, Render Project Build: React Portfolio Deployment, Demo + Review

Intermediate Level

2 Months

Total Sessions : 16

Backend Basics Express.js, Setup REST, API Basics, Routing & Middleware, MongoDB Introduction, Mongoose & Models, CRUD Operations, Authentication I, Authentication II, File Uploads, Error Handling, Environment & Config, Project Build I, Testing APIs, Deployment Demo + Review

Advanced Level

2 Months

Total Sessions : 16

Full Stack Overview, Frontend-Backend Connection, Authentication Flow, Protected Routes, State Management, Advanced Forms, Role-Based Access Control, File Upload Integration, Real-Time Features

Curriculum Overview

Full-stack and Software Development - Introductory Level

01 **Introduction to Web Development**
Duration : 2 Hrs
Overview of full stack, tools, workflow

02 **HTML Basics**
Duration : 2 Hrs
Structure, tags, forms, semantic HTML

03 **CSS Fundamentals**
Duration : 2 Hrs
Box model, selectors, fonts, spacing

04 **Layout Systems**
Duration : 2 Hrs
Flexbox & Grid

05 **Responsive Design**
Duration : 2 Hrs
Media queries, mobile-first approach

06 **CSS Best Practices**
Duration : 2 Hrs
BEM naming, component-based styling

07 **JavaScript Fundamentals I**
Duration : 2 Hrs
Variables, data types, functions

08 **JavaScript Fundamentals II**
Duration : 2 Hrs
Loops, arrays, objects, conditionals

09 **DOM Manipulation**
Duration : 2 Hrs
Selecting and modifying elements

10 **Git & GitHub**
Duration : 2 Hrs
Version control, commits, repos

11 **Introduction to React**
Duration : 2 Hrs
What are React, JSX, and components

12 **React State & Props**
Duration : 2 Hrs
Passing data to the use State hook

13 **React Events & Conditional Render**
Duration : 2 Hrs
Handling input, basic interactivity

14 **Project Build: React Portfolio**
Duration : 2 Hrs
Build a personal portfolio using React

15 **Deployment**
Duration : 2 Hrs
Deploy with Vercel or Netlify

16 **Final Review & Demo**
Duration : 2 Hrs
Present projects, feedback, Q&A

Full-stack and Software Development - Intermediate Level

01 **Backend Basics**
Duration : 2 Hrs
Node.js, npm, server setup

02 **Express.js Setup**
Duration : 2 Hrs
Routes, Express structure

03 **REST API Basics**
Duration : 2 Hrs
GET, POST, PUT, DELETE

04 **Routing & Middleware**
Duration : 2 Hrs
Params, query, middleware

05

MongoDB Introduction

Duration : 2 Hrs

NoSQL concepts, Atlas setup

06

Mongoose & Models

Duration : 2 Hrs

Schema, validation

07

CRUD Operations

Duration : 2 Hrs

Full data handling

08

Authentication I

Duration : 2 Hrs

Hashing, signup/login

09

Authentication II

Duration : 2 Hrs

JWT, session handling

10

File Uploads

Duration : 2 Hrs

PMulter, file system basics

11

Error Handling

Duration : 2 Hrs

Global error middleware

12

Environment & Config

Duration : 2 Hrs

.env, configs, security tips

13

Project Build I

Duration : 2 Hrs

Build blog API

14

Testing APIs

Duration : 2 Hrs

Postman, Supertest basics

15

Deployment

Duration : 2 Hrs

Render/Railway setup

16

Demo + Review

Duration : 2 Hrs

Project showcase & recap

Full-stack and Software Development - Advanced Level

01

Full Stack Overview

Duration : 2 Hrs

Architecture & tech flow

02

Frontend-Backend Connection

Duration : 2 Hrs

Axios, fetch, APIs in React

03

Authentication Flow

Duration : 2 Hrs

Token handling, localStorage

04

Protected Routes

Duration : 2 Hrs

React Router + auth logic

05

State Management

Duration : 2 Hrs

Context API or Redux Toolkit

06

Advanced Forms

Duration : 2 Hrs

React Hook Form + Yup

07

Role-Based Access Control

Duration : 2 Hrs

Admin/user dashboard setup

08

File Upload Integration

Duration : 2 Hrs

Images/files in full stack apps

09

Real-Time Features (Optional)

Duration : 2 Hrs

WebSockets, live data basics

10

Project Planning

Duration : 2 Hrs

Choose and design capstone app

10

Project Build I (Frontend)

Duration : 2 Hrs

UI development & components

12

Project Build II (Backend)

Duration : 2 Hrs

API routes, DB models

13

Testing Full Stack App

Duration : 2 Hrs

Unit tests (React & Express)

14

Deployment Full Stack App

Duration : 2 Hrs

Frontend (Vercel), Backend (Render)

15

Final Touches

Duration : 2 Hrs

TDocs, UI polish, README

16

Final Demo + Review

Duration : 2 Hrs

Present full project, job tips



On Completion of the Course, Participants Can

01

Design and build full-stack applications by applying core principles of front-end and back-end development across real-world scenarios.

02

Create responsive, user-friendly interfaces using semantic HTML, CSS (Flexbox, Grid), media queries, and component-based styling practices.

03

Write efficient and scalable code in JavaScript, handling variables, functions, loops, arrays, objects, and conditionals for dynamic interactivity

04

Develop and manage APIs and servers with Node.js and Express, implementing routes, middleware, and CRUD operations to connect client and server.

05

Work with databases effectively by applying NoSQL concepts, schema design, validation, and data handling using tools like MongoDB Atlas

06

Implement secure authentication and authorisation using hashing, JWT, sessions, and environment-based configurations for user management

07

Build and test production-ready applications with tools like React, Redux/Context API, React Hook Form, Yup, Postman, and Supertest.

08

Deploy and showcase projects using platforms such as Vercel, Netlify, and Render, supported by proper documentation, UI polish, and presentation.



Key Highlights



Every concept is reinforced through real-world projects, ensuring practical application and industry relevance.



Learners build and deploy full-stack applications to showcase on GitHub, resumes, and in interviews.



Projects are deployed on platforms like Vercel, Netlify, and, simulating real product launches.



The course covers frontend, backend, databases, and integration for a complete developer skill set.



Resume building, LinkedIn optimisation, mock interviews, and job preparation strategies are included.



A final capstone project mimics a real-world SaaS application with authentication, dashboards, and user flows.

Career Opportunities

01

Web Developer

02

DevOps Engineer

03

Software Engineer

04

Data Engineer

05

Cloud Engineer

06

Game Developer

07

Full Stack Developer

08

Back-end Developer/
Front-end Developer



Tools Covered in This Course (All Levels)



VS Code



Git



GitHub



Postman



Chrome DevTools



Figma

Frontend Tools (FSD - Introductory)



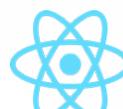
HTML5



CSS3



JavaScript (ES6+)



React



React Router



React Hook Form



Yup



Tailwind CSS
(or regular CSS)



Netlify / Vercel

Backend Tools (FSD: Intermediate)



Node.js

Express JS

Express.js

MongoDB

MongoDB

MongoDB Atlas

MongoDB Atlas



Mongoose



bcrypt.js

JWT

jsonwebtoken (JWT)



Multer



dotenv



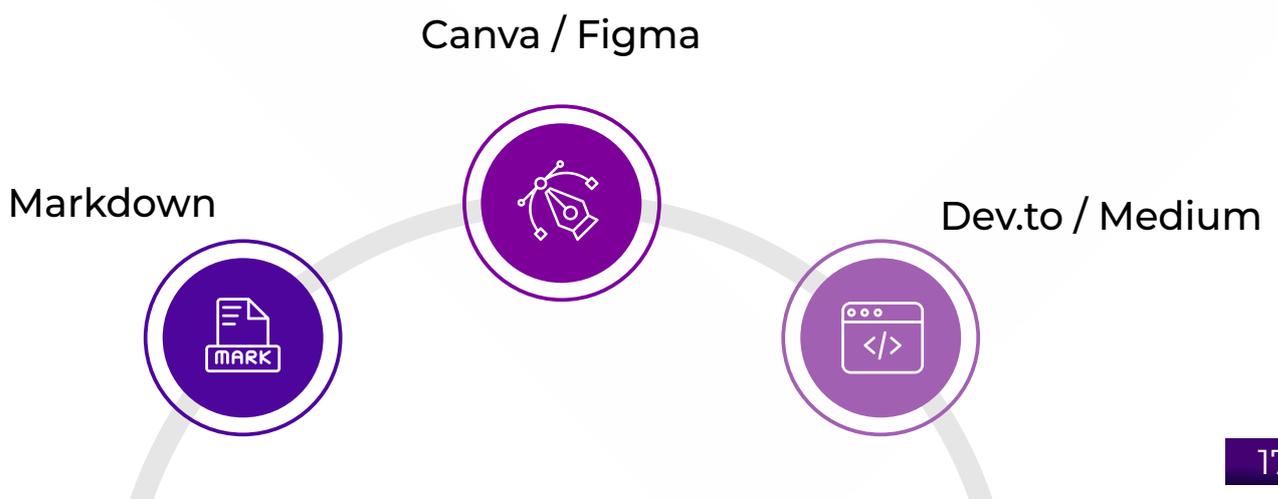
Railway

Render / Railway

Full Stack Tools (FSD: Advanced)

- ◆ *MERN Stack*
- ◆ *Axios*
- ◆ *Context API / Redux Toolkit*
- ◆ *Jest / Supertest (optional)*
- ◆ *GitHub Actions (optional)*
- ◆ *WebSocket / Socket.io (optional)*
- ◆ *Vercel (Frontend) + Render (Backend)*

Optional / Bonus Tools (for Capstone Projects or Career Prep)



Sample Certificate



Course Fee

India	South Africa	Nigeria	USA	Kenya	Uganda
₹170,000	R34,000	₦1,841,700	\$1,897	Ksh229,840	UGX4,427,100

Tanzania	Botswana	Namibia	Zimbabwe	Zambia	Mauritius
TSh3,554,500	P30,088	\$30,600	ZWG46,364	ZMW42,270	MURs94,972

Our Global Network

We Have Students Thriving in Over 180 countries, Supported By Our Offices In Eleven Key Locations Worldwide!



Contact Us

South Africa:

165 west Street, Sandton, Johannesburg
South Africa, 2031

Kenya:

1203, 12th Floor, GTC Office Tower
Intersection of Waiyaki Way, Chiromo

Tanzania:

2nd Floor, Ocean Residence Building, Plot
418, Toure Drive, Masaki, Dar Es Salaam,

Botswana:

9W24+J7P, iTowers North, CBD, Gaborone,
Botswana

Zimbabwe:

Eight2Five, Fourth Floor, Three Anchor House,
Jason Moyo Avenue, CBD, Harare, Zimbabwe

Nigeria:

8th Floor, Churchgate Tower 2 PC 31
Victoria Island, Nigeria

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Sector 30 A, Vashi, Navi Mumbai, India, 400705

Uganda:

2nd Floor, Wing A Mirembe Business Center
Plot 46, Lugogo Bypass, Kampala P.O. Box 75391

Zambia:

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Katima Mulilo Rd, Lusaka 10101, Zambia

Mauritius:

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Business Park, Moka, Mauritius