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COUNTRYEDU PRIVATE LIMITED

GSTIN : 06AAJCC6151A1Z3 | CIN : U72900HR2021PTC096283

Email : query@countryedu.com, grievances@countryedu.com

MERN Full Stack Development Immersion Internship

Designed by: CountryEdu Private Limited

By CountryEdu Private Limited

(IT Managed Services & EdTech Solutions)

Program Objective :

To transform students into job-ready MERN Full Stack Developers capable of:

- Building complete modern web applications using MongoDB, Express.js, React.js, and Node.js
- Understanding frontend, backend, database, and API integration workflows
- Developing responsive user interfaces and scalable backend systems
- Gaining hands-on experience in full stack project development and deployment
- Learning industry-standard coding practices, Git workflows, and debugging techniques
- Preparing students for careers in MERN Stack Development and Software Engineering

Program Structure :

- Duration: 12 Weeks (3 Months)
- Mode: Hybrid / Live / Classroom
- Tools Used: HTML5, CSS3, JavaScript, React.js, Node.js, Express.js, MongoDB, GitHub, VS Code, Postman
- Learning Model: Project-Based Learning Model
- Final Outcome: Ability to build and deploy complete MERN stack web applications + Internship Certificate

MONTH 1 – FRONTEND DEVELOPMENT FUNDAMENTALS

Week 1: Introduction to Web Development

- Introduction to MERN Stack Development
- Understanding Websites & Web Applications
- HTML Basics & Webpage Structure
- Forms, Tables & Media Elements
- Introduction to CSS
- Setting Up Development Environment
- ~ Outcome: Strong foundation in web development and webpage structure creation

Week 2: CSS & Responsive Web Design

- CSS Styling Fundamentals
- Box Model & Positioning
- Flexbox & CSS Grid
- Bootstrap Framework
- Responsive Web Design
- UI/UX Design Basics
- ~ Outcome: Ability to design responsive and visually appealing web pages

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Week 3: JavaScript Fundamentals

- Introduction to JavaScript
- Variables & Data Types
- Functions & Loops
- DOM Manipulation
- Events & Interactivity
- Form Validation Basics
- ~ Outcome: Ability to create interactive and dynamic web applications

Week 4: React.js Fundamentals

- Introduction to React.js
- Components & JSX
- Props & State
- Event Handling
- React Hooks Basics
- Creating Reusable UI Components
- ~ Outcome: Ability to build modern frontend applications using React.js

MONTH 2 – BACKEND DEVELOPMENT & DATABASE MANAGEMENT

Week 5: Backend Development with Node.js & Express.js

- Introduction to Node.js
- Express.js Fundamentals
- Creating Web Servers
- Routing & Middleware
- REST API Basics
- API Testing using Postman

~ Outcome: Ability to build backend servers and RESTful APIs

Week 6: MongoDB & Database Integration

- Introduction to MongoDB
- CRUD Operations
- Mongoose ODM
- Database Schema Design
- Connecting Backend with MongoDB
- Data Modeling Basics
- ~ Outcome: Ability to manage and integrate MongoDB databases with backend applications

Week 7: MERN Stack Integration

- Connecting React with Backend APIs
- Authentication & Authorization
- JWT Authentication
- State Management Basics
- Error Handling Techniques
- Full MERN Workflow
- ~ Outcome: Ability to connect frontend, backend, and database systems professionally

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Week 8: GitHub & Deployment

- Git & GitHub Workflow
- Version Control Basics
- Debugging & Testing
- Environment Variables
- Deployment using Netlify, Vercel & Render
- MERN Stack Optimization Techniques
- ~ Outcome: Ability to professionally manage and deploy MERN stack applications

MONTH 3 – LIVE PROJECT & CAREER READINESS

Week 9–10: MERN Stack Project Development

Students work on real-world MERN Stack Projects such as:

- E-Commerce Web Application
- Blogging Platform
- Food Ordering Website
- Student Management System
- Task Management Application
- Admin Dashboard System

Project Includes:

- Requirement Analysis
- UI & Database Planning
- Frontend & Backend Development
- API Integration & Testing
- Final Project Presentation

~ Outcome: Ability to build complete real-world MERN stack applications

Week 11: Deployment & Professional Workflow

- Full Stack Application Deployment
- Hosting & Domain Basics
- Environment Configuration
- Project Documentation
- Portfolio Development
- GitHub Project Management

~ Outcome: Ability to professionally deploy and present MERN stack projects online

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Week 12: Interview & Career Preparation

- MERN Stack Technical Interview Preparation
- Resume & LinkedIn Optimization
- Mock Interviews
- Coding Challenges
- Freelancing & Internship Guidance
- Career Pathways (MERN Stack Developer, Full Stack Developer, React Developer, Node.js Developer)

~ Outcome: Placement-ready MERN Stack Developer with practical project experience

Key Skills Developed

- HTML5, CSS3 & JavaScript
- React.js Development
- Node.js & Express.js
- MongoDB Database Management
- REST API Development
- Authentication & Security
- Git & GitHub Workflow
- MERN Stack Deployment

Target Roles After Completion

- MERN Stack Developer
- Full Stack Developer
- React Developer
- Node.js Developer
- Web Application Developer
- Freelance MERN Developer

Why This Program is Industry-Ready

- ✓ 100% Project-Based Learning
- ✓ Real-world MERN Stack Application Development
- ✓ Frontend + Backend + Database Exposure
- ✓ Industry-standard Development Practices
- ✓ Portfolio & Career Preparation Included

From Beginner to Professional — Become a MERN Full Stack Development Expert in 3 Months.