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COUNTRYEDU PRIVATE LIMITED

GSTIN : 06AAJCC6151A1Z3 | CIN : U72900HR2021PTC096283

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

2-Months Node.js Development Immersion Internship

Designed by: CountryEdu Private Limited

By CountryEdu Private Limited

(IT Managed Services & EdTech Solutions)

Program Objective :

- Understanding server-side development using Node.js and modern backend technologies
- Developing expertise in JavaScript, asynchronous programming, and backend architecture
- Learning API development, database integration, authentication, and server management
- Building scalable and high-performance backend applications using industry-standard frameworks
- Understanding security, performance optimization, and deployment best practices
- Preparing students for careers in Node.js Development, Backend Engineering, API Development, and Full Stack Development

Program Structure :

- Duration: 8 Weeks (2 Months)
- Mode: Hybrid / Live / Classroom
- Tools Used: Node.js, Express.js, MongoDB, MySQL, Postman, GitHub, VS Code, JWT
- Final Outcome: Backend API & Server Application Project + Internship Certificate

MONTH 1 – NODE.JS DEVELOPMENT FOUNDATION

Week 1: Introduction to Node.js & JavaScript Fundamentals

- Introduction to Backend Development
- Node.js Architecture & Runtime Environment
- JavaScript ES6+ Fundamentals
- Variables, Functions & Scope
- Modules & Package Management using NPM

~ Outcome: Strong foundation in Node.js development and modern JavaScript programming concepts.

Week 2: Express.js & Server Development

- Introduction to Express.js Framework
- Creating Web Servers & Routes
- Middleware Fundamentals
- Request & Response Handling
- RESTful API Architecture Basics

~ Outcome: Ability to build and manage server-side applications using Express.js.

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Week 3: Database Integration & Data Management

- Introduction to MongoDB & MySQL
- Database Design Fundamentals
- CRUD Operations Implementation
- Mongoose ODM Integration
- Data Validation Techniques

~ Outcome: Ability to connect applications with databases and manage data efficiently.

Week 4: Authentication & Authorization

- User Registration & Login Systems
- JWT Authentication
- Password Hashing & Security Practices
- Role-Based Access Control
- Session Management Concepts

~ Outcome: Ability to implement secure authentication and authorization systems in backend applications.

MONTH 2 – ADVANCED NODE.JS DEVELOPMENT

Week 5: REST API Development & Integration

- Advanced REST API Design
- API Versioning & Documentation
- Third-Party API Integration
- File Upload & Media Management
- Error Handling & Validation Techniques

~ Outcome: Ability to develop scalable and well-structured APIs for modern applications.

Week 6: Advanced Backend Development

- Asynchronous Programming & Promises
- Async/Await Best Practices
- Event-Driven Architecture
- Real-Time Applications with Socket.IO
- Backend Performance Optimization

~ Outcome: Ability to build high-performance and real-time backend applications.

Week 7: Testing, Security & Deployment

- Backend Testing Fundamentals
- API Testing with Postman
- Application Security Best Practices
- Environment Configuration Management
- Deployment on Cloud Platforms

~ Outcome: Ability to test, secure, and deploy production-ready backend applications.

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Week 8: Industry Practices & Professional Workflow

- Git & GitHub Version Control
- Agile Development Methodologies
- Project Documentation Standards
- Code Review & Collaboration Practices
- Backend Development Best Practices

~ Outcome: Ability to work in professional development environments following industry standards.

LIVE PROJECT & CAREER READINESS

Major Project Development

Students work on real-world Node.js Development projects such as:

- E-Commerce Backend System
- Authentication & User Management API
- Student Management Portal Backend
- Inventory Management System
- CRM Backend Application
- Real-Time Chat Application

Project Includes:

- Requirement Analysis & Planning
- Database Design & Integration
- API Development & Testing
- Authentication & Security Implementation
- Deployment & Performance Optimization
- Final Project Presentation

~ Outcome: Fully functional industry-level backend application demonstrating API development, database management, authentication, security, and deployment capabilities.

From beginner to job-ready — Become a Node.js Development Professional in 2 Months.