

Course Overview and topics

1. Fullstack Development Course with React and Node.js

Introduction

- What is fullstack development and why is it important?
- The architecture and components of a fullstack web application
- The benefits and challenges of fullstack development
- The skills and tools required for fullstack development

Frontend Development with React

- What is frontend development and why is it essential for web applications?
- How to use HTML, CSS, and JavaScript for frontend development
- How to use React for creating dynamic and interactive user interfaces
- How to use JSX, components, props, state, hooks, and routing in React
- How to use Bootstrap, Material UI, or other UI frameworks for styling and layout in React

Backend Development with Node.js

- What is backend development and why is it necessary for web applications?
- How to use Node.js for creating scalable and efficient server-side applications
- How to use Express for creating RESTful APIs in Node.js
- How to use MongoDB, Mongoose, or other databases for storing and retrieving data in Node.js
- How to use Passport, JWT, or other authentication and authorization methods in Node.js

Fullstack Integration and Deployment

- How to integrate the frontend and backend of a fullstack web application
- How to use Axios, Fetch, or other methods for making HTTP requests from the frontend to the backend
- How to use CORS, Proxy, or other methods for enabling cross-origin communication between the frontend and the backend
- How to use Heroku, Netlify, or other platforms for deploying and hosting a fullstack web application

- How to use GitHub, GitLab, or other tools for version control and collaboration in fullstack development

Conclusion

- A summary of the main topics covered in the course
- A review of the key concepts and best practices of fullstack development

A list of additional resources and references for further learning

2. DevOps Course

Introduction

- What is devops and why is it important?
- The devops lifecycle and principles
- The benefits and challenges of devops
- The skills and tools required for devops

Version Control

- What is version control and why is it essential for devops?
- How to use Git for version control
- How to collaborate with others using GitHub
- How to manage branches, merges, conflicts, and pull requests

Continuous Integration and Continuous Delivery (CI/CD)

- What is CI/CD and how does it enable devops?
- How to use Jenkins for CI/CD
- How to create and configure pipelines, jobs, and stages
- How to automate testing, building, and deploying code

Infrastructure as code with Terraform

- What is infrastructure as code and why is it necessary for devops?
- How to use Terraform for infrastructure provisioning
- How to write and execute terraform in CI/CD

Configuration Management

- What is configuration management and why is it necessary for devops?
- How to use Ansible for configuration management
- How to write and execute playbooks, roles, and tasks
- How to manage inventory, variables, and modules

Containerization

- What is containerization and how does it support devops?
- How to use Docker for containerization
- How to create and run Docker images and containers
- How to use Docker Compose for multi-container applications

Orchestration

- What is orchestration and how does it scale devops?
- How to use Kubernetes for orchestration
- How to create and manage pods, services, deployments, and ingresses
- How to use Helm for Kubernetes package management

Monitoring and Logging

- What is monitoring and logging and why are they crucial for devops?
- How to use Prometheus for monitoring
- How to create and visualize metrics, alerts, and dashboards
- How to use ELK Stack for logging
- How to collect, store, analyze, and visualize logs

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3. Agile / Scrum Course

- Agility overview
- Scrum in nutshell
- Kanban in nutshell
- Product ownership
- Estimation techniques

4. PLM Course

- PLM basics
- Business Administration
- Customization/Configurations
- Data Model/Database
- Development/deployment Setup
- Server-Side Customization.

