

Kammavari Sangham (R) 1952

# K. S. GROUP OF INSTITUTIONS

# K. S. SCHOOL OF ENGINEERING AND MANAGEMENT

Approved by AICTE, New Delhi; Affiliated to VTU, Belagavi, Karnataka; Accredited by NAAC

www.kssem.edu.in

# DEPARTMENT COMPUTER SCIENCE AND ENGINEERING

Date: 17/05/2024

To,

The Principal, KSSEM, Bangalore 560109

Dear Sir,

Sub: Requisition to conduct technical training as a Part of Mini Project for 6<sup>th</sup> semester students under Skill Development Program.

With reference to above subject, we would like to conduct Technical Training on "MERN Stack" for 94 Hours. This course is very essential for our department students. Proposal from Training Provider "STUDY COMRADE PRIVATE LIMITED".

Detailed Proposal about Training & contents are attached with this letter. The detailed budget to conduct this training program are given below.

4 Hours of Skill Development Program on		
AERN Stack by "Study Comrade Private imited" @ Rs 2000/Student	133*2000/Student	
Total	2,66,000/-	
i	mited" @ Rs 2000/Student	

Kindly Approve the said request to conduct this training program successfully.

Thanking you

Yours Sincerely

CSE

HOD

Department of Computer Science Engineering K.S School of Engineering & Management Bangalore-560109



# Proposal for MERN Stack Program at KSSEM Computer Science Department

# Vision:

At KSSEM, we envision empowering students with practical skills and knowledge to excel in the ever-evolving landscape of technology. Our proposed MERN Stack program aims to equip third-year students with comprehensive expertise in full-stack web development using MongoDB, Express.js, React, and Node.js.

Through a hands-on approach, we seek to cultivate a cohort of job-ready professionals who not only possess technical proficiency but also demonstrate the ability to tackle real-world challenges with creativity and innovation.

#### **Curriculum:**

- Introduction to MERN Stack: Foundations of MongoDB, Express.js, React, and Node.js.
- Backend Development: Building RESTful APIs, Authentication & Authorization, Database Management with MongoDB.
- 3. Frontend Development: React Fundamentals, State Management with Redux, UI Design & Development.
- 4. **Full-Stack Integration:** Connecting Backend with Frontend, Deployment Strategies.
- 5. **Advanced Topics**: Real-time Applications with Websockets, Performance Optimization, Security Best Practices.
- 6. Project Management: Version Control with Git, Agile Methodologies.
- 7. Career Development: Resume Building, Interview Preparation, Soft Skills Enhancement.

**Detailed Curriculum:** HTML, CSS, JAVASCRIPT, BOOTSTRAP, REACT JS, POSTGRESQL, MONGODB, EXPRESS JS, NODE JS



# **Duration: 90 Days**

- 1. Front-End Technologies: 45 Days (Along with Mini Project)
- 2. Back-End Technologies: 45 Days (Along with Major Project)

# **List of Projects:**

# 1. Mini Project:

- Task Management System using MERN Stack
- Objective: Students will implement CRUD operations, user authentication, and basic UI design.

### 2. Major Projects:

- · E-commerce Platform:
  - Objective: Students will develop a fully functional e-commerce website with features like product listings, cart management, and secure payment gateways.
- Social Media Application:
  - Objective: Students will build a social media platform with user profiles, post sharing, and real-time notifications.
- Portfolio Website Builder:
  - Objective: Students will create a platform for users to build personalized portfolio websites with customizable templates.

#### NOTE:

- Every Team will receive a unique Mini Project & Major Project.
- 100% Assistance will be provided by team Study Comrade in making the project journey fruitful for the students!
- Study Comrade will also help the students to create their Project Reports as per the requirements of the Computer Science Department.
- Throughout this program students will be completing multiple Tasks along with the projects. Team Study Comrade makes sure that the students maintain proper portfolios through their GitHub & LinkedIn, to attract the Companies!



# **Program Journey:**

## Mini-Project Phase:

 Students will undergo guided tutorials and hands-on sessions to build a Task Management System, focusing on backend and frontend integration.

 Tasks include setting up MongoDB database, developing REST APIs with Express.js, building UI components with React, and deploying the application.

# **Major Projects Phase:**

 Students will form teams and choose from a list of major project ideas or propose their own.

They will follow agile methodologies, with regular sprints, code

reviews, and mentorship.

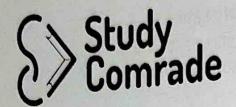
 Tasks include project planning, database design, frontend and backend development, testing, and deployment.

# **Career Readiness Phase:**

- Mock Interviews: Simulated interview sessions to assess technical skills, problem-solving abilities, and communication will be conducted once every 2 weeks!
- Portfolio Building: We will help the students in maintaining their GitHub & LinkedIn profiles up to date with continuous progress!
- Soft Skills Enhancement: Training sessions on communication, teamwork, and presentation skills will be catered after every mock interview session.

#### Tasks & Quizzes:

- Regular Tasks and quizzes will be conducted to reinforce learning objectives and assess students' progress.
- Tasks will include coding exercises, project documentation, and problem-solving tasks. Quizzes will cover theoretical concepts, practical applications, and case studies.



Result: Upon successful completion of the MERN Stack program, students will demonstrate proficiency in:

- Full-stack web development using MERN technologies.
- Building scalable and secure web applications.
- Collaboration and project management in a team environment.
- Effective communication and problem-solving skills.

Moreover, they will possess a robust portfolio showcasing their mini and major projects, enhancing their employability and enabling them to excel in technical interviews with confidence.

We are committed to delivering a transformative learning experience that not only meets but exceeds the expectations of KSSEM and prepares students for successful careers in the tech industry. We look forward to partnering with the Computer Science Department in this endeavor.



# **MERN Stack Curriculum For KSSEM Students**

#### HTML - 5 hours:

Basics of HTML, Elements and Tags, List, Semantic HTML and Forms.

#### CSS - 5 hours:

CSS: Selectors, Types of CSS, and complete styling.

### Bootstrap - 6 hours:

Introduction to Bootstrap for responsive web design.

# JavaScript - 12 hours:

Fundamentals such as variables, data types, functions, and DOM manipulation.

#### React - 14 hours:

Introduction to React, components, JSX, props, and state.
Advanced React: React Router for navigation, forms with controlled components, and react hooks.

#### Redux and Material-UI - 10 hours:

Managing application state with Redux, actions, reducers, and the Redux store.

Material-UI: Styling React components with Material-UI.

### SQL - 6 hours:

Basics of SQL, including querying, CRUD operations, and joins.



MongoDB -10 hours:

Introduction to MongoDB, CRUD operations with MongoDB.

Node.js & Express.js -12 hours:

Introduction to Node.js, setting up a server with Express.js, creating RESTful APIs, and using Mongoose for Node.js.

Advanced Node.js -14 hours:

Authentication with JWT, error handling, and middleware in Express.js. React & Node.js Integration: Building a full-stack application with React frontend and Node.js backend.

### Note:

- 1. The mini-project, as well as the major project, will be undertaken by the students during the sessions, in collaboration with the trainer.
- 2. The Mini Project will be Based on the Frontend Technologies.
- 3. The Major Project will be based on Full STACK Technologies.
- 4. Students will be building their Stunning LinkedIn & GitHub Profiles throughout the Program!
- 5. Once in a While Mock Interviews and Profile Building sessions will be taken!



Subject: Request to release the Funds for MERN STACK Batch!

Greetings of the day sir,

Hello sir, hope you are doing well, we are so happy for the collaboration with you, in upskilling your students with Web Development Technologies. And as promised we will deliver the promised results within the duration with greater impact!

In Continuation with that, we are looking for the funds to move forward in a smoother way sir. Engaging with 4 months of program without receiving any prior funds will be a huge set back for us, as we are a very young startup sir. Multiple resource persons are also involved in the backend, apart from the trainer to complete this program successfully.

As a startup we are ready to invest a good quality of time with the right team with all our efforts to make your students job ready through their Mini project & Major Project within next 4 months!. So please consider this as a humble request from our end sir!

We hope you understand our situation and disburse at least 50% of the funds i.e., 1,33,000/- as a first installment in this week and last installment in the last week of the Program, i.e., 1,33,000/-.

Installment	Amount	
First Week (June, 2024)	₹ 1,33,000	(24
Last Week (September, 2024)	₹1,33,000 { <.	

Note: The Program has already started in the last week of May, 2024!

Thanks & Regards, Shaik Johnny Basha, Founder & CEO,

Study Comrade Private Limited.

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For STUDY COMRADE PYT.LTD.,

DIRECTOR

\*28-83-2/10, KOTHAPETA

# **INVOICE**



Issued by:

STUDY COMRADE PVT LTD. 210 Second floor, GR Queens Amber Apartment, 1st Cross Rd, Arakere Gate, Omkar Nagar, Arekere, Bengaluru, Karnataka 560076

Invoice No: SCIN001

Date Issued: 04 June 2024

Issued to:

K.S. SCHOOL OF ENGINEERING AND MANAGEMENT, No.15, Mallasandra, Off. Kanakapura Road, Bengaluru, India

10	DESCRIPTION	INSTALLMENT NO	NO.OF STUDENTS	SUBTOTAL (RUPEES)
	MERN STACK Program for VI Semester Students of CSE Department, KSSEM	1	133	1,33,000/-
		.1	Roc	25/6
			AND TOTAL	133.000/-

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**Bank Details:** 

Bank Name: CANARA BANK

Name: Study Comrade Private Limited

Account No: 120000921418 IFSC Code: CNRB0006609

Sales Manager, Study Comrade.