

# **MYSURU TRAINERS AND DEVELOPERS**

**Corporate Training**

**Freelance Development**

**End-To-End Training Solutions**

**Placement Training, Internship & Projects**

## Index:

1. Day wise Topics
  2. Detailed Session wise topics
  3. Pre-Requisites
  4. Important Points and Deliveries
- 

### 1. Day wise Topics

- Day 1:
  - HTML CSS 0.25 days
  - Bootstarp 0.25 days
  - JS and ES6 0.25 days
  - React Components, Hooks, and Router 0.25 days
- Day 2:
  - MongoDB learning 0.5 days
  - Mongo CRUD operations in Node using Mongoose 0.5 days
- Day 3:
  - Express Cors 0.25 days
  - Express Router 0.25 days
  - Express BackEnd App (Mongo CRUD operations in Express using Mongoose) 0.25 days
  - Test BackEnd App using Thunder Client/Postman 0.25 days
- Day 4:
  - React FrontEnd App 0.5 days
  - Express BackEnd with Security (JWT-based Authentication) 0.25 days
  - React FrontEnd App with Security 0.25 days
- Day 5:
  - Revision / Doubt Clearning / Q & A 1 hour
  - Students must solve one case study 4.5 hours
  - Final Assessment 0.5 hour

## 2. Detailed Session wise topics

PLEASE FOLLOW THE BELOW DAY-WISE SCHEDULE

### Day1:

- HTML and Bootstrap
  - Bootstrap elements must be used.
  - All examples must use only Bootstrap CSS
  - One Example with Modern HTML5 elements.
- Example Programs:
  - As it is put in the git repo
  - Add 2 numbers
  - Cart program
- Java Script:
  - JS simple programs (Must run the programs using node CLI)
  - map, filter, and reduce functions of JS
  - JS concepts like Big Arrow function, promise object, async-await
- React JS:
  - Create a React App using Vite (Explain the Count button logic and the CSS used for the button)
  - Create a simple Component and Run the App
  - Create Parent-Child Components example
  - Create 2 Pages(components) and explain the use of Routes
  - Run the JS programs using node CLI

### Day2:

- MongoDB learning
  - Use of MongoDB Shell
  - Create DB, collections, CRUD Operations
  - Important methods of MongoDB
- Important Topics Of MongoDB (Explain these with simple examples)
  - Data Modeling and Datatypes in MongoDB
  - CRUD Operations
  - Indexes
  - Aggregation Framework
  - Replication and Sharding

- ExpressJS and Mongoose:
  - Example1: Create Backend code for DB connectivity. Use only the code required to connect and Disconnect DB
  - Explain Configuration code
  - Explain creating the Mongoose Model (Explain the Mongoose datatypes and any 2 constraints)
  - Explain the need for CORS (Middleware)

### Day3:

- ExpressJS and Mongoose for CRUD Operations
  - Implement the Controllers
    - Explain the Express Router
    - Explain the Promise/ async-await / call-back functions
    - Express Cors
    - Test the CRUD operations Backend App using Postman and Thunder Client
- ReactJS:
  - Explain Hooks
  - Explain JWT-based Authentication

### Day4: Complete the App (FrontEnd-BackEnd-Database)

- ReactJS and App Completion
  - ReactJS and App Completion
  - Explain the use of Axios
  - React Examples using Hooks
  - JWT based Authentication
  - Completion of App
- FrontEnd Design
  - Help students to build the FrontEnd Design using [app.diagrams.net](https://app.diagrams.net)
  - Create a team of 2 students
  - Assign the teams to build basic Documentation

### Day5:

- The student team will Implement an App for CRUD operations with Authentication on the Model given by the trainers (CASE STUDY)
- Revision / Doubt Clearing / Q & A
- Final Assessment and Closure

### 3. Pre-Requisites:

- Trainer GitHub Repo should be ready, and your Repo should be updated on a daily basis.
- Training must be conducted using vs\_code and command line to run projects
- Use emmet extension in vs\_code for html and css
- Use Thunder client to test the back end App
- Also, train the students to use Postman
- Make the students update their Repo on a daily basis.
- Daily assessment must be given at 4:00 pm (test will be of 10 minutes) 4:10 to 4:25 trainer must discuss the answers for the questions.
- From 4:25 to 4:30 the co-ordinator will take feedback from the students.

### 4. Important Points and Deliveries:

- Through GitHub usage
- Material for every technology (HTML, CSS, Bootstrap, JS, ES6, React, Node, and Express, Mongoose, MongoDB) via GitHub Repo
- Daily Assessment of 10 MCQs
- Last day final assessment of 20 Qs
- Last-Day Case Study Development by Participants
- FrontEnd Design using Draw.io

### 5. References:

- Bootstrap reference: <https://www.youtube.com/watch?v=-qfEOE4vtxE>

### **MYSURU TRAINERS AND DEVELOPERS**

#185, Vithala Nilaya, Srirampura,  
Pampapati road, Mysuru 570023

Landmark: Near Pedestrian bridge, New AshokaPuram railway station, Mysuru

Contact: 701 9595 085 | WhatsApp: 9480 27 3090\

