Full Stack Web development
with React
and Nodejs

Overview

Learn the most in-demand skills and become a full stack web developer using the best tools and technologies out there - MERN. By the end of this course you will gain mastery over NodeJS, React-JS and advanced HTML & CSS by working on several projects. You may add these projects to your CV to get those coveted shortlists for desired web development roles, once you go abroad.

Highlights:

80+ hours of learning content and 50+ assignments

6 months duration and 9 months validity

11 industry-recognized projects

Pre-requisites:

Good knowledge of programming fundamentals and their implementation

Course Outcome:

This course will make you eligible for the job roles like Front end web developer, Back end web developer, Web application developer, Design and layout analyst, Senior web analyst.

Key Highlights:

Mentor
Support

Course Pause
Feature

Certificate
of Completion

Course
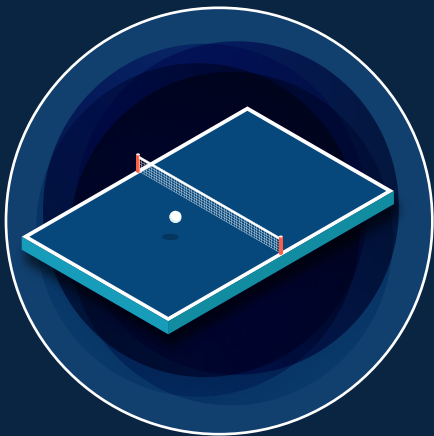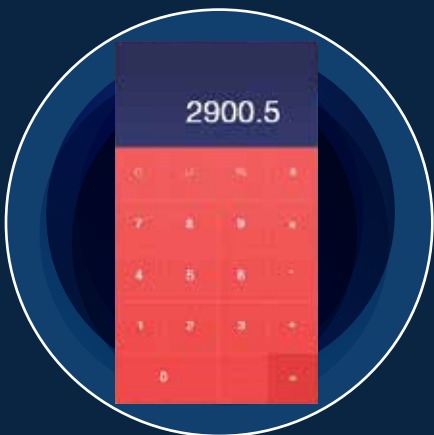Extension

Projects

Static Blog

Build the UI of a basic blog using HTML.

Ping Pong Game

Build a vintage game, ping pong, using vanilla Javascript.

Mini Calculator

Build a calculator web app with Javascript as the core and style it with CSS.

Music Player

Build and style a music player like Spotify /Youtube Music using HTML and CSS.

Chatting Engine

Build a basic chat engine using sockets, which enables the users to chat with each other on the website

Social Media Website

Create a social media website with popular features like post, comment etc using Node.js, Mongo DB and more

Mini Contact List

Understand how the backend works and create a contact list by storing the data in a DB

Todo List App

Build a todo list app using Node.js and express.js

Shopping Cart

Build the basic functionality of the shopping cart as you see in Amazon and Flipkart

iPod

Build a clone of iPod nano 5th gen

Movies App

Search any movie and store it as your favourite

Tools and techniques

FRONTEND MODULE:

TOPIC	SUB-TOPICS	DETAILS
GETTING STARTED WITH BASICS	History of Web	Understanding how and who built the web
	Client server architecture	General architecture used by websites
	What happens when you visit a website	Learning what happens behind the scenes while opening a website

TOPIC	SUB-TOPICS	DETAILS
INTRODUCTION TO HTML	HTML structure	How to create the structure of a web page
	Tags in HTML	Learning about various tags in HTML like <a>, etc

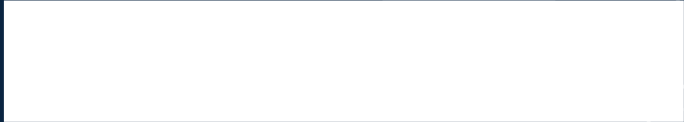| TOPIC	SUB-TOPICS	DETAILS
MORE ON HTML	More tags	Practice creating HTML with more tags
	Block v/s Inline elements	Understand the difference between inline and block HTML elements
	Table	Learn to create tables in HTML
FORMS	Form	What is an HTML form
	Form fields	Discussing various form elements like <input>, <textarea> etc
INTRO TO CSS	CSS Introduction	What is CSS and how to use it in HTML
	Blog page	Building and styling the blog project
STYLING WITH CSS	CSS units	Learning about various CSS units used to style HTML elements
	CSS box model	Understanding the CSS box model

TOPIC	SUB-TOPICS	DETAILS
STARTING WITH RESUME PROJECT	Starting the project	Start building the Resume project by creating the HTML structure
FLEX	Intro to Flex	Learning what flex is and how it works
	Flex properties	Discovering various flex properties used to style HTML elements
	Using flex in Resume	Utilising flex to style the Resume project
COMPLETING RESUME	Pseudo elements	What are pseudo elements and where to use them
	Finishing up	Finish building the Resume project

TOPIC	SUB-TOPICS	DETAILS
RESPONSIVE DESIGNS	Media queries	What is responsive design and how to use media queries to build a responsive web app that works with multiple devices
ANIMATIONS AND 3D SPACE	Animation properties	Basics of CSS animation and how to animate HTML elements using animate.css
BOOTSTRAP	Frontend frameworks	What are frontend frameworks and how to use one
BOOTSTRAP	Grid system	Learning about grid system of bootstrap
BOOTSTRAP	Bootstrap components	Using various other boot-strap elements like Navbar, Jumbotron etc

TOPIC	SUB-TOPICS	DETAILS
MAJOR PROJECT	Assignment	Build a music player project with your newly gained skill set
STARTING WITH JAVASCRIPT	Intro to JS	What is JS and history of JS
	Variables, operators, loops	Learning the basics of the language
JAVASCRIPT: FUNCTIONS AND ARRAYS	Scope	Understanding scope in JS
	Hoisting	What is hoisting and its application.
	Functions expressions v/s Function declaration	Difference between function expression and declaration
	Arrays and its usage	What are arrays and using array functions like splice, slice etc.

TOPIC	SUB-TOPICS	DETAILS
OBJECTS AND TIMING EVENTS	Intro to Objects	What are objects, how to create them and using different notations to access object's data
	Object functions	Learn to iterate over objects, delete object properties, creating nested objects
UNDERSTANDING DOM	DOM	Understanding DOM, what it is, how to access elements from the DOM
	Events	How to manipulate DOM events in JS
CALCULATOR PROJECT	Assignment	Creating a mini calculator with basic functionality
MINI PROJECTS USING JAVASCRIPT	let v/s var	Learning different ways to create variable
	Catch me if you can	Build a game using vanilla Javascript

TOPIC	SUB-TOPICS	DETAILS
CLOSURES	Revision	Revising some old concepts like Scope, window object etc
	IIFE	What are immediately invoked function expressions
	Closures	What are closures and its application
	Arrow functions	Learning about arrow functions and bindings in arrow functions

CONSTRUCTORS AND PROTOTYPES	"this" keyword	How does the "this" keyword works in JS
	Prototypes	Discussing what are prototypes in JS, why do we use them and its application
	Class	Learning about using classes in JS and how to deal with class inheritance in JS

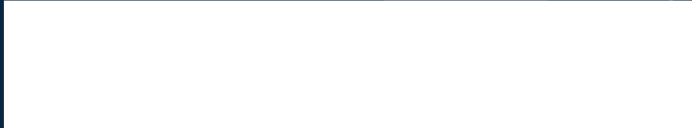| TOPIC	SUB-TOPICS	DETAILS
PROJECT: PING PONG GAME	Assignment	Building the famous ping pong game with Javascript
JQUERY	Intro to jQuery	What is jQuery and what is the need for it
	Event handling in jQuery	Handling various JS events with jQuery and exploring the library
AJAX	Intro to AJAX	What are async requests, what is API and JSON
	Ajax requests with jQuery	Making ajax requests with jQuery and handling errors

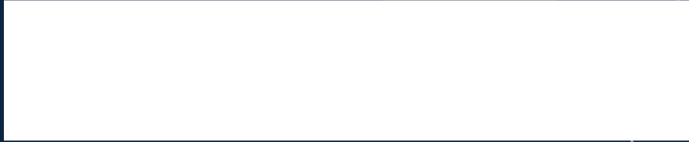| TOPIC	SUB-TOPICS	DETAILS
PROMISES	Intro to promises	What is a promise, how do we use promises and chaining promises
GIT	Intro to Git	What is git and why it's helpful
	Branches	Discussing what are prototypes in JS, why do we use them and its application
	Git workflow	Understanding push, commits, pull requests and using git for teams and individual

REACT MODULE:

TOPIC	SUB-TOPICS	DETAILS
INTRO TO REACT	SPAs v/s MPAs	Difference between Single page apps and Multi page apps
	React philosophy	What is React's philosophy?
	React v/s others	Why React stands out from other JS libraries and frameworks
HELLO WORLD	Using React	Ways to start using React in a project
	Babel	Using babel and understanding how it works with React
	Conditional rendering	Rendering different components based on different conditions
MINI PROJECT: STARTING THE PROJECT	Introduction to the project	Introduction to Cart and its working
	Adding CSS	Styling the cart using CSS
	Using state	Adding state to Cart

TOPIC	SUB-TOPICS	DETAILS
MINI PROJECT: MANAGING STATE	More on React state	React state in depth
MINI PROJECT: FINISHING UP	Rendering lists	How to render list of items
	Props	What are props and how do we work with them
	Delete, adding Navbar, total products count	Building more functionalities of cart
FIREBASE: MINI PROJECT EXTENDED I	Introduction to Firebase	Understanding what is firebase and how it actually works
	Component lifecycle	Learning about lifecycle of a React component
	Firebase setup	Setting up firebase and adding it to the project

TOPIC	SUB-TOPICS	DETAILS
FIREBASE: MINI PROJECT EXTENDED II	CRUD with Firebase	Learning how to create, read, update and delete data from firebase
	Querying data	Querying data from firebase
MINI PROJECT	iPod	Assignment project, building a vintage iPod
INTRO TO REDUX	All about Redux	What is redux, why and when do we use it
	Setting up the project	Setting up the Movie search project
	Adding UI	Start adding components to the project

TOPIC	SUB-TOPICS	DETAILS
REDUX: ACTIONS, REDUCERS, STORE	Reducers	What are reducers and creating reducers for the app
	Actions	What are actions, dispatching actions, creating actions for the app
	Store	What is store, subscribing to the store and adding store to the project
REDUX CONTINUED	Currying	Understanding the currying concept in Javascript
	Combining Reducers	How to combine reducers to make the app more efficient
	Middleware	Learning about middle-wares and using some with Redux
	Thunk	Using thunk to make async calls to an API

TOPIC	SUB-TOPICS	DETAILS
REACT AND REDUX	Context API	What is the context API and how to use it
	HOC	Learning about Higher order components in React
	Connect() with Redux	Diving deep into how connect() works in Redux and using react and redux together
MAJOR PROJECT: SETUP AND INTRO	Project setup	Setting up the social media project
	PropTypes	Using PropTypes for props validation
MAJOR PROJECT: ROUTING AND AUTH	React router	Adding react router to the project to handle different routes
	Auth in SPA	Understanding how auth works for SPAs
	Form handling	Ways to handle form in React
	User login	Building the user login functionality

TOPIC	SUB-TOPICS	DETAILS
MAJOR PROJECT: USER PROFILE	Settings page, editing a user, add user as a friend	Building various functionalities of the social media app
MAJOR PROJECT: SEARCH AND CHAT	Searching users	Adding functionality to search users
	Building the chat box	Creating the chat using sockets
REACT HOOKS	useEffect, useState and other hooks	What are hooks, why do we use them and various React hooks out there

BACKEND MODULE:

TOPIC	SUB-TOPICS	DETAILS
NODE.JS : THE BEGINNING	Intro to Node	Introduction to the course, hello world with nodejs
	Setting up	Setting up tools and the project
NODE.JS : WRITING OUR FIRST SERVER	Intro to servers	What are servers and how one can use them
	Setting up node server	Beginning the project by setting up the very first node server
	Nodemon	Introducing nodemon to monitor changes made to the server
MY FIRST EXPRESS APP :: A LIST OF CONTACTS	MVC	MVC architecture for our server
	Express	What are frameworks, using express with node
	Ejs	What are template engines, setting up and working with Ejs

TOPIC	SUB-TOPICS	DETAILS
MY FIRST EXPRESS APP :: CONTINUED	Creating the contact list	Building the contact list, sending data to server, parsing the data
	Middleware	What is a middleware and how to use one
	Query parameters	Using query parameters in our app for deleting contact
MY FIRST EXPRESS APP :: INTRO TO DATABASES	Intro to Databases	What are databases, SQL and NoSQL databases
	MongoDB	What is MongoDB, how to use it and setting up MongoDB for the project
	DB operations	CRUD operations for MongoDB
BEGINNING THE MAJOR PROJECT 1	Directory structure and setup	Setting up the MVC directory structure, router and ejs setup
	Controllers	Creating controllers and router for handling incoming requests to the server

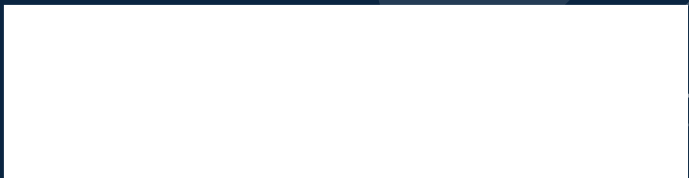| TOPIC	SUB-TOPICS	DETAILS
MAJOR PROJECT - 1	Assignment	Build a Todo list app using Nodejs and MongoDB
BEGINNING THE MAJOR PROJECT - 2	Partials, Layouts	Understanding and creating Partials and layouts in views
	Static files	Setting up static file access
	Mongoose	Linking MongoDB using Mongoose
MANUAL AUTHENTICATION	User schema	Setting up user schema for out app
	Cookies	What are cookies and how to use them in the app
	User sign up and sign in	Build user sign in and sign up flow and learn how to authenticate users manually

TOPIC	SUB-TOPICS	DETAILS
AUTHENTICATION USING PASSPORT JS	Intro to passportjs	What is passportjs, setting up passportjs for the project
	MongoStore setup	Setting up MongoStore for session cookies
SASS	Intro to SASS	Introducing SASS, setting up SASS for our project
DATABASE RELATIONS (POSTS, COMMENTS)	DB relations	Explaining 1:1, 1:M and M:M DB relations
	Relationship for Post and Comments	Understanding the relationship between Post and Comments, creating schemas for both
	SQL storage	Learning storage in SQL databases

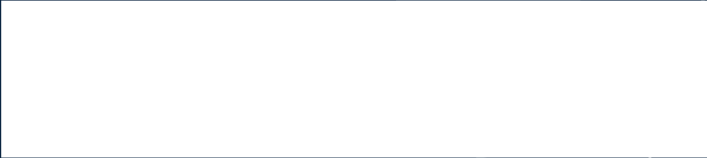| TOPIC	SUB-TOPICS	DETAILS
DELETING AND UPDATING OBJECTS IN DATABASE + DISTRIBUTING VIEWS	Deleting Posts/Comments/Users	Understanding how deletion works with Posts and Comments
	User profile	Working on user profile and updating SCSS for other pages
ASYNC AWAIT + ERROR HANDLING	Async await	What is async await and converting our code to async await
	Flash messages	How to create flash messages, using Noty to show flash messages
CONVERTING TO AJAX	Using AJAX	Learn how to use AJAX for post creation, deleting post etc

TOPIC	SUB-TOPICS	DETAILS
FILE UPLOAD	Intro to file upload	Learning how to handle file uploads
	Multer	Using multer to handle profile picture upload in the project
APIS (MAKING APIS AND JWT AUTHENTICATION)	Intro to APIs	What are APIs and why do we use them
	JWT	Understand what is JWT, how does authentication and authorization works, build some APIs for the same
SOCIAL AUTHENTICATION (MINI LECTURE)	Social auth with Google	What is social authentication and how does it actually works
	Using passport for Google auth	Setting up passport for google social auth

TOPIC	SUB-TOPICS	DETAILS
PARALLEL JOBS + MAILER	Nodemailer	Intro to mailers, setting up Nodemailer for sending emails
	Sending mails	Learn how to setup and send emails for your project
	Delayed jobs	Understand what are delayed jobs and how they can be helpful using the Kue library
FRIENDS + LIKES	Polymorphic relation	Intro to a new DB relationship i.e. Polymorphic relations
	Making friends	Using Polymorphic relationship to create add a friend functionality
CHATTING ENGINE	Sockets	What are sockets and how to use them
	Socket.io	Setting up Socket.io and using it to send messages

TOPIC	SUB-TOPICS	DETAILS
GULP :: GETTING DEPLOYMENT READY	Introduction to production environments	Learn how to create a production environment for the project using environment variables
	Gulp	What is gulp, using gulp to automate certain tasks
DEPLOYMENT	AWS	Learning how to deploy apps on AWS, SSH to set up the server, understand and setup Nginx
BEGINNING THE MAJOR PROJECT - 2	Starting to build a new project	Setting up to build the major project assignment
MAJOR PROJECT	Assignment	Build the major project

TOPIC	SUB-TOPICS	DETAILS
ANGULAR	All about Angular	Intro to frontend frameworks, creating a basic app
REACT	All about React	Intro to React and building basic components
VUE	All about Vue	Intro to React and building basic components