



SUMMER TRAINING PROGRAM 2023

FULL STACK WEB DEVELOPMENT PROGRAM PROGRAM HANDOUT





Name of the Program:

A Full Stack Web Development Program

Details about the program:

What is Full Stack Web Development?

Full Stack development refers to the development of both front ends(client-side), back end(server-side) & Database portions of the web application.

Full Stack web developers have the ability to design complete web applications and websites. Their work varies from frontend to backend and database to debugging of web applications or websites.

So we present you *Webmonk*, a fully researched and well organized, Full Stack Web Development course (Specialization MERN Stack) with instructors working in top MNCs' with more than 3 years of experience in this field.

Our Goal:

The *WebMonk* program will help to equip the learners with the unique skills they need to build database-backed APIs and web applications.

Duration of the course: 3 Months

Syllabus of the Course:-

1. Course Introduction or General introduction about Web Development:

- Who are we?
- What is the course about?
- Peer Introduction, walkthrough, how to ask for suggestions, prerequisites about the course, course overview, and finally tasks-overview.
- What is the MERN stack? It's alternative, it's future & scope



2. HTML

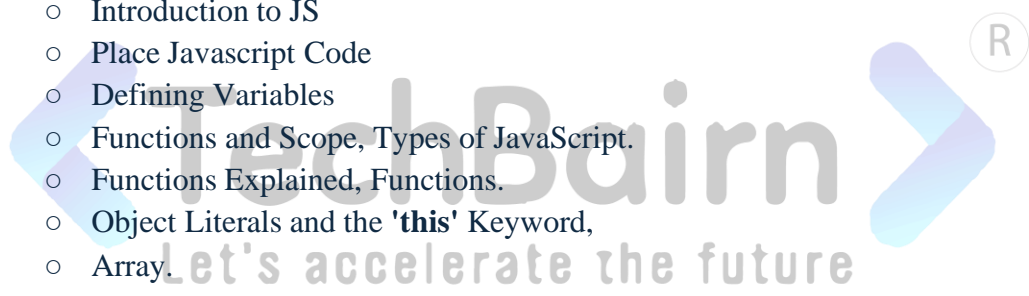
- Introduction about HTML.
- Recommended w3c structure for HTML page.
- Heading fonts(H1-H6), creating a list, attaching links, creating form and tables, adding images.

3. CSS

- What is CSS?
- Selectors, how many types of CSS usage are there?
- Basic Styling, Relative & Absolute.
- Media Query, Responsive Design, Bootstrap.
- Grid & Flex, Position, Box Model.

5. JAVASCRIPT(ES 6+)

- Introduction to JS
- Place Javascript Code
- Defining Variables
- Functions and Scope, Types of JavaScript.
- Functions Explained, Functions.
- Object Literals and the 'this' Keyword,
- Array.
- Objects Events.
- DOM manipulation.
- Local Storage.
- Immediately Invoked Function Expressions (IIFEs).
- fetch API High Order Functions.
- Decorators, Spread, Filter.





- Map, Rest, forEach, reduce, set timeout, Async functions,
- Callback >>> Promises >>> async-await,
- Convert callback to promises.
- Template string/literals

Project 1: Portfolio Responsive Website

6. NODE.JS:

- Simple Server
- Response Types– HTML, JSON
- Routing.
- Introduction on Express
- Make a call from frontend to server
- Express Params and Query String
- Express Middleware
- API Authentication
- JWT token
- Microservice Introduction

Project 2: Tiny URL

Project 3: Express Blogging Application (Backend)

7. DATABASE:

- What is Database?
- Types of Database
- SQL/No-SQL
- What is Mongo, JSON/BSON
- Mongo Structure, Architecture
- Integration, Atlas, What is _id
- CRUD with MongoDB Atlas from CMD
- Operators Mongo Sharding
- Mongo Master-Slave
- ACID.



- Mongo Compass & NoSQL Booster Mongoose
- Schema & Schema Types, Model
- Indexes, Connection to MongoDB
- Document, Sub Document
- Middlewares
- CRUD with Mongoose

Project 4: Express Blogging Application (Backend+Database)

8. REACT:

- Introduction on React
- Component Architecture
- Single Page Application
- Multi-Page Application, Babel.
- Webpack, JSX.
- Components
- Lifecycle methods
- Props & State Class-based components vs Functional components, Refs,
- Component Nesting
- Axios
- SASS Idea
- Redux
- Hooks

Project 5: Express Blogging Application (Fronted+Backend+Database)

Project 6: Not Just Weather App

Project Description:

- Project 1: A form covering most of the aspects of HTML, CSS & Bootstrap.
- Project 2: A responsive Portfolio website showcasing your skills.
- Project 3: Tiny URL.
- Project 4: A full-fledged MERN stack Blogging application which will include features like authentication, authorization, social share sdk etc.



- Project 5: A React weather app with features like custom location, auto fetched location, UI changes depending on weather & time of the day.

Certification Criteria:

- Peer-to-peer interaction.
- Discipline & behaviour.
- Weekly assignments need to submit the repositories of the above projects (result evaluated in 4 days) and live badges will be provided according to the assessment.
- Need to complete and submit a final project in a team of 2 for a discussed project idea from a list of ideas.
- Top 3 teams will be declared based on Code Quality and overall performance.

Activity	Marks
Peer to Peer interaction	10
Discipline & Behaviour	10
Weekly assignments	30
Final Project	50

Internship and Job Opportunities After Program Completion :

After successful completion of the program, students will get internship or full time offers from our 25+ hiring partners. We do in-house recruitment as well.

Contact Details :

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