Frontend Web Programming & Development

A **Frontend Developer** architects and develops web pages and applications using web technologies (i.e., HTML, CSS, DOM, and JavaScript) as well as using latest JavaScript framework like Vue JS, React JS or Nuxt JS to craft out intuitive and mobile responsive web application.

Course Objectives

The Course enable participants to develop a complete frontend web application from the scratch that includes Data-exchange with API integration in just 5 Months.

Build strong foundations (ex: OOPS) in entry level engineers thereby making them job ready as per industry requirements. Enable them to learn new technologies by applying foundation paradigms.

By the end of the program participants will be become an industry-ready engineer who can be readily deployed in a full web development project.

Course Outcome

The expected learning outcome for each student participating in the Frontend Application Development Course are listed below.

1. Student should have a complete overview of web technologies as it applies in the industry today.

2. Student should be able to develop intuitive frontend pages using HTML, CSS, & JavaScript's based on design developed on FIGMA or XD.

3. Student should develop the skills to convert frontend pages written in HTML and CSS into reactive Frontend Frameworks e.g Vue JS or React JS.

4. Student should develop understanding of REST API

5. Student should be able to consume exposed API on apps written with a frontend reactive framework e.g Vue JS.

6. Student Should be able to feature in any Web Application development project after learning the industry base concept involved in a project by taking part in the project outline for the course with intensive guide from an industry mentor. Some key concept to learn during this phase will be

    -   Understanding Product Requirement Elicitation.
    -   Web Application Structure, Architecture & Workflow.
    -   Version Control.
    -   Testing.
    -   Hosting & Continuous Integration & Deployment (CI & CD).

Course Flow

This is a 5 Months based course whereas a student you will spend 3 Months of intensive training learning the overall Web concepts, engage in Practical Programming Exercise, Labs, Case study and Assignments.

After that you will spend 2 Months on Project Based Learning where you will learn the fundamentals of participating in a real-life project.

Prerequisite

This program requires no prerequisite courses. It's designed for beginners learning from scratch. Our goal is to help you go from 0% to 100% and learn enough to do more.

Delivery Methods

This Program Consist of Classes, Mentorship, Workshops, Modularized lessons managed by Learning Management System with Assignments, Lab exercise, Practical case study, Downloadable study resources and Video lectures to fully engage the student.

Student will be involved in practical lab Exercise and Assignment after each key concept is taught, the lab work shall be in the form of practical with guide from instructors, each assignment and lab work shall be used as part of performance and assessment grading.

Modules

1. **Module 1 -** Web Fundamentals (Web Design, HMTL5, CSS, Bootstrap, JavaScript, GIT)
2. **Module 2 -** Frontend Frameworks (VueJS or Nuxt JS)
3. **Module 3 -** Data Exchange (HTTPS, REST API, API Integration)
4. **Final Project**

Course Syllabus

1. **Module 1 -** Web Fundamentals

   Module Objectives
   Building Strong expertise to develop front end application using HTML5 & CSS.
   Become proficient in Bootstrap concepts.
   Building Strong expertise to develop front end application using JavaScript along with
   JavaScript frameworks e.g Vue JS.
   Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone.

   Course Content

   Lesson 1 – Introduction to Web Design – UI/UX
   Lesson 2 – HTML & CSS
   Lesson 3 – JavaScript
   Lesson 4 – Bootstrap

2. **Module 2 -** Frontend Frameworks

   Module Objectives
   Building Strong expertise to develop front end application using Vue JS or Nuxt JS
   Gain Hands on Experience to implement MVC and responsive design to scale well across
   PC, tablet and Mobile Phone.

   Course Content

   Lesson 1 – Introduction to JavaScript Frameworks
   Lesson 2 – Vue JS / Nuxt JS

3. **Module 3 -** Data Exchange

   Module Objectives

Building strong expertise in REST API
Understand the Implementation and use cases of APIs
Connect application frontends to server backends using APIs

Course Content

Lesson 1 – Introduction to Data Exchange Protocol
Lesson 2 – REST API
Lesson 3 – API Integration

4. Final Projects

Module Objectives
Some of the learning outcome for the final projects are,

- ✓ Understanding Product Requirement Elicitation
- ✓ Web Application Structure, Architecture & Workflow
- ✓ Web API Integration
- ✓ Version Control
- ✓ Testing
- ✓ Hosting & Continuous Integration & Deployment (CI & CD)