FRONT END WEB DEVELOPER

COURSE SYLLABUS

WSA | Forward looking IT finishing school

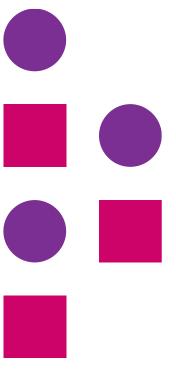## COURSE OBJECTIVES

- Enable participants to develop elegant and responsive Front-end by leveraging latest technologies
- Build strong foundations (ex: Design pattern) 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 project

COURSE FLOW

WSA Front-end Web developer course starts with introducing participants with front-end technologies (ex: HTM5 & CSS3) and makes them develop responsive one page web application. To cater modern day Front-end requirements (ex: responsive design) getting hands-on with latest frameworks (ex: Bootstrap and Angular JS) becomes important. This course deep dives into frameworks to ensure participants implement front end that scales well across PC, mobile and tablet screens.

Throughout the course foundation paradigms (ex: Design patterns) are stressed to ensure participants clearly understand software engineering fundamentals. DISHA sessions are interleaved for resume and interview preparation for placements.

DURATION

2.5 months

PLATFORM

- Linux (Fedora / Mandriva /Ubuntu) or Windows Host system
- Firefox, Chrome Browsers

PREREQUISITES

B.E / B.Tech / M.E / M.Tech / MCA

DELIVERY METHOD

Instructor-lead, Assignments with hands-on exercises backed with assignments and mini projects

MODULE TOPICS

- Single page web application development (HTML5 | CSS3)
- JavaScript for Front-end (JavaScript | jQuery | jQuery-mobile)
- Front-end Frameworks (Bootstrap | Angular JS)
- Foundation paradigms (OOPS | Design Patterns | Object Modelling | JSON | AJAX)
- Backend integration
- DISHA (Resume & Interview prep package)

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Single page web application development

Hyper Text Mark-up Language (HTML5)

Module Objectives:
- Building Strong expertise to develop front end application using HTML5
- Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone

Overview:
This course provides you hands-on experience and exposure to developing HTML5 based single page application for browsers. This course builds strong foundation on HTML5 which will help developer to use HTML5 concepts for building responsive web application.

Platform:
- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Prerequisites:
Academic level web application knowledge

Delivery method:
Instructor lead, hands-on exercises backed with assignments and mini project

Detailed Course Contents:
- Introduction HTML
- HTML Basics
- HTML Elements
- HTML5 Semantic
- HTML Attributes
- HTML Headings
- HTML Paragraph
- HTML Styles
- HTML Formatting
- HTML Quotations
- HTML Computer Code
- HTML Comments & Colours
- HTML CSS, Links and Images
- HTML Lists
- HTML Blocks
- HTML Classes
- HTML Layout
- HTML Responsive
- HTML iframes
- HTML JavaScript
- HTML Head
- HTML Entities and URI Code
- HTML Symbols and XHTML
- HTML Charset and Forms

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Cascading Style Sheets (CSS3)

Module Objectives:
- Building Strong expertise to develop front end application using CSS3
- Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone

Overview:
This course provides you hands-on experience and exposure to developing CSS3 based web application. This course builds strong foundation on CSS3 which will help developer to use CSS3 concepts for building responsive web application.

Platform:
- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Prerequisites:
Academic level web application knowledge

Delivery method:
Instructor lead, hands-on exercises backed with assignments and mini project

Detailed course contents:

- Introduction CSS3
- CSS3 Syntax
- CSS3 How To
- CSS3 Colours
- CSS3 Backgrounds
- CSS3 Boarders
- CSS Padding
- CSS Height/Width
- CSS3 Gradients
- CSS3 Shadows
- CSS3 Text
- CSS3 Fonts
- CSS3 2D Transforms
- CSS3 3D Transforms
- CSS Links
- CSS Lists
- CSS Tables
- CSS Box Model
- CSS Outline
- CSS Display
- CSS Max-width
- CSS Position

- CSS Float
- CSS Inline-block
- CSS Align
- CSS Combinators
- CSS Pseudo-class
- CSS Pseudo-element
- CSS Navigation Bar
- CSS Dropdowns
- CSS Tooltips
- CSS3 Images
- CSS Attr Selectors
- CSS Forms
- CSS Counters
- CSS3 Animations
- CSS3 Buttons
- CSS3 Pagination
- CSS3 Multiple Columns
- CSS3 User Interface
- CSS3 Box Sizing
- CSS3 Filters
- CSS3 Media Queries
- CSS3 Responsive

JavaScript for Front-end

JavaScript

Module Objectives:
- Building Strong expertise to develop front end application using HTML5, CSS3 and JavaScript along with jQuery and AngularJS framework
- Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone

Overview:
This course provides you hands-on experience and exposure to develop JavaScript based web application. This course builds strong foundation of JavaScript which will help developer to apply JavaScript concepts for responsive web frontend and backend development.

Platform:
- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Prerequisites:
Academic level web application knowledge

Delivery method:
Instructor lead, hands-on exercises backed with assignments and mini project

Detailed course contents:
- Introduction to JavaScript
- Java Script Language Basics
- JavaScript Objects
- JavaScript Scope
- JavaScript Events
- JavaScript Strings
- JavaScript Numbers
- JavaScript Math
- JavaScript Arrays
- JavaScript Boolean
- JavaScript Comparisons
- JavaScript Conditions
- JavaScript Switch
- JavaScript Loops
- JavaScript Type Conversion
- JavaScript RegExp
- JavaScript Errors
- JavaScript Debugging
- JavaScript Hoisting
- JavaScript Strict Mode
- JavaScript Functions
- JavaScript Objects
- JavaScript Forms
- JavaScript HTML DOM
- JavaScript BOM

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jQuery

Module Objectives:
- Building Strong expertise to develop front end application using HTML5, CSS3 and JavaScript along with jQuery and AngularJS framework
- Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone

Overview:
This course provides you hands-on experience and exposure to develop jQuery Mobile based responsive web application. It builds strong foundation of jQuery which will help developer to apply concepts for responsive web frontend development.

Platform:
- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Prerequisites:
Academic level web application knowledge

Delivery method:
Instructor lead, hands-on exercises backed with assignments and mini project

Detailed course contents:
- Introduction to jQuery
- jQuery Syntax
- jQuery Selectors
- jQuery Events
- jQuery Effects
- jQuery HTML
- jQuery Traversing
- jQuery AJAX
- jQuery Misc.

jQuery-Mobile

Module Objectives:
- Building Strong expertise to develop front end application using HTML5, CSS3 and JavaScript along with jQuery and AngularJS framework
- Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone

Overview:
This course provides you hands-on experience and exposure to develop jQuery Mobile based responsive web application. This course builds strong foundation of jQuery which will help developer to apply concepts for responsive web frontend development.

Platform:
- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Prerequisites:
Academic level web application knowledge

Delivery method:
Instructor lead, hands-on exercises backed with assignments and mini project

Detailed course contents:
- Introduction to jQuery Mobile
- jQuery Mobile Pages
- jQuery Mobile Transitions
- jQuery Mobile Buttons
- jQuery Mobile Icons
- jQuery Mobile Popups
- jQuery Mobile Toolbars
- jQuery Mobile Navbars
- jQuery Mobile Panels
- jQuery Mobile Collapsibles
- jQuery Mobile Tables
- jQuery Mobile Grids
- jQuery Mobile Lists
- jQuery Mobile Forms
- jQuery Mobile Themes
- jQuery Mobile Events

Front-end Frameworks

Bootstrap

Module Objectives:
- To become proficient in Bootstrap concepts
- To develop a web pages based on Bootstrap

Overview:
This course is targeted for fresh engineers or professional who want to build competency in the Bootstrap Based web development.

Platform:
- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Prerequisites:
Academic level web application knowledge

Delivery method:
Instructor lead, hands-on exercises backed with assignments and mini project

Detailed course contents:
- Introduction to Bootstrap
- Bootstrap Basics
- Bootstrap Grids
- Bootstrap Themes
- Bootstrap CSS
- Bootstrap JS

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Angular JS

Module Objectives:
- Building Strong expertise to develop front end application using Angular JS
- Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone

Overview:
This course provides you strong foundation on AngularJS driven by hands-on experience and exposure to develop responsive web application using MVC design pattern. During the course, you should be able to builds strong background about AngularJS architecture, usage of services and applying AngularJS concept to develop frontend application.

Platform:
- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome Browsers

Prerequisites:
Academic level web application knowledge

Delivery method:
Instructor lead, hands-on exercises backed with assignments and mini project

Detailed course contents:
- Introduction to AngularJS
- AngularJS Expressions
- AngularJS Modules
- AngularJS Data Binding
- AngularJS Scopes
- AngularJS Directives & Events
- AngularJS Controllers
- AngularJS Filters
- AngularJS Services
- AngularJS HTTP
- AngularJS Tables
- AngularJS Select
- Fetching Data from MySQL
- AngularJS Validation
- AngularJS API
- AngularJS Animations
- AngularJS i18n and i10n

Foundation Paradigms

Module Objectives:
- To become proficient in OOPS, Design Patterns and Data Modelling concepts
- At the end of the course candidates will learn the concepts and their practical applications

Overview:
This course is targeted for fresh engineers or professional who want to build competency in the Object-Oriented Programming. We focus on understanding OOPs concepts and its applications.

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Platform:
- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Prerequisites:
Academic level web application knowledge

Delivery method:
Instructor lead, hands-on exercises backed with assignments and mini project

Detailed course contents:
- OOPs
- Design Patterns
- Object Oriented Design
- JSON
- DOM
- AJAX