***Course Syllabus***

***Basic Front-End Development***

***HTML / CSS / JavaScript***

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| --- | --- | --- | --- |
| ***Front-End Developer Training Content*** | ***Lectures*** | ***Exercises*** |  |
| Introduction to Web programming | 12 |  |  |
| IDE (Notepad++, Visual Studio Code) | 2 | 4 |  |
| HTML | 8 | 16 |  |
| CSS | 8 | 16 |  |
| Code Repositories & VCS Git | 2 | 0 |  |
| JavaScript | 28 | 56 |  |
| TypeScript / JQuery | 8 | 16 |  |
| Code Review Process, Code Refactoring | 4 | 8 |  |
| Unit Testing, TDD | 4 | 8 |  |
| ***Grand TOTAL*** | ***76*** | ***124*** | **200** |
| ***End of course*** |  | | ***Final Exam*** |

***Course outline:***

***IDE (Visual Studio Code, Notepad++)***

Visual Studio Code

* Introducing Visual Studio Code
* Getting Started with Visual Studio Code
* Intellisense
* Refactoring
* Debugging

Notepad++

* Introduction to Notepad++
* Initial Settings
* Keyboard Shortcuts
* Browsing Shortcuts

***HTML***

HTML / HTML5

* Introduction of different Web Technology
* Introduction to HTML
* HTML Documents
* Structural elements of HTML documents
* Formatting HTML Documents
* Managing images in HTML
* Hypertext and Link in HTML Documents
* Special effects in HTML documents
* Multimedia
* Managing forms
* HTML Summary
* HTML5 New Elements
* HTML5 Video & DOM
* HTML5 Audio
* HTML5 Canvas vs. SVG
* HTML5 Geolocation
* HTML5 Web Storage
* HTML5 Tags

***CSS***

* CSS Properties, Selectors, Style Declaration Types
* Colors, Backgrounds, Text and Fonts
* Images, Links, Tables and List
* Borders, Padding, Margin
* Cursor, Dimension, Scrollbars, Visibility and Positioning
* Pseudo class & Elements, @Rules( import, font-face, charset)
* Filters, Media Types, Printing and Layouts

FTP Management

* Setting up FTP Server (Live)
* Uploading and downloading FTP contents
* Summary

Deployment

* Deploying application on Web Server

***Code Repositories & VCS Git***

* Install GIT & create a GitHub account
* Local GIT repository
* Adding files to the repository
* Staging environment & commit
* Branches

***JavaScript***

***Introduction to JavaScript***

* Introduction to client side scripting
* Introduction and history of JavaScript
* Syntax Basics
* Code Structure

***JavaScript Language***

* Statements
* Commands
* Types of Data
* JS Variables
* JS Operators
* JS Comparisons
* Statements vs Expressions
* JS Conditional Statements
* JS Loops
* JS Arrays
* JS Events

***Words, Numbers, and Dates***

* JS Objects
* Objects and Functions
* JS User Defined Functions
* JS Strings
* String operations
* Patterns in Strings
* Numbers
* Dates and Times

***JavaScript Implementations***

* Modifying Web Pages
* JS Document Object Model
* JS Browser Object Model
* Introduction to JavaScript Libraries
* Selecting Page Elements
* Adding Content to a Page
* Setting and Reading Tag Attributes
* Reading, Setting, and Removing HTML Attributes
* Creative Headlines
* Acting on Each Element in a Selection
* Automatic Pull Quotes

***Action/Reaction***

* Events
* Using Events with Functions
* Event Management

***Images***

* Swapping Images
* Rollover Images
* jQuery Effects
* Photo Gallery with Effects
* Advanced Gallery with jQuery lightbox
* Animated Slideshows with Cycle

***Navigation***

* Link Basics
* External Links
* New Windows
* Pages in a Window on the Page
* Bigger Links
* Animated Navigation Menus

***Web Forms***

* Introduction to Forms
* Adding Smarts to Forms
* Form Validation

***Ajax, Communication with the Web Server***

* Ajax Basics
* JSON
* Global environment & Global Object
* Execution Context
* Variable Scope & Scope Chain
* REST API

***TypeScript***

* Getting Started with TypeScript
* Typing, Variables and Functions
* Classes and Interfaces
* Modules

***jQuery***

* Introduction
* Selectors
* jQuery and DOM
* jQuery and Events
* jQuery and Ajax
* jQuery UI

***Code Review Process, Code Refactoring***

* Code Reviewing
* Code Refactoring

***Unit Testing***

* Basics of Unit Testing
* Tools and Frameworks
* Core Techniques for GOOD Unit Tests
* Good Unit Tests Ask for Quality Code
* The Unit Test Code
* The Three Pillars of GOOD Unit Tests
* Automated Test Types