TRAINING PROGRAM

**Name: Hemant Mangla**

**Start Date: July 1, 2018**

**Training Objective:**

* Successfully complete training plan in given period with complete understanding of the areas trained in.
* Have a good understanding of the relevant project or project module.

**Mentor: Vivek**

**Co-Mentor: Apoorva**

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| **Training Area** | Duration (in days) |
| 1. **Prerequisites and Orientation** | |
| MS Office (Word, Excel, PPT) | 4 |
| Working With Graphical Tools | 1 |
| 1. **Programming Concepts** | |
| OOPs Concepts | 2 |
| Internet & Networking Fundamentals | 1 |
| Web Development (Mean stack Basic) | 35 |

**Notes:**

* The training schedule can change according to project requirements and mentor directions.

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| **S. No.** | **Module** | **Contents** | **Duration\*** | | **Expected Start Date** | **Expected End Date** |
| **MS Office** | | | | | | |
|  | **MS-WORD** | * Setting Fonts, Colors, Line Spacing and Indentation of Paragraphs * Adding Bullets * Multi-level number formatting * Use of Tables – borders, shading, alignment * Use of Tabs (left, right & center) * Adding Header and Footers * Use Style * Format Painter * Modify Existing Styles * Add Table of Contents * Adding Page Breaks and Section Breaks * Adjusting Page Margins * Drawing Tools * Embedding Excel Sheets in Word | 3.5 days | |  |  |
|  | **MS-EXCEL** | * Adjusting Row Heights & Column widths * Borders * Shading * Header & Footers * Margins * Writing multi-line text in a cell * Giving blank lines in a multi-line text cell * Using formulas available in Excel * Data Sorting * Applying formatting to a range of cells * Creating cell ranges & labeling them * Referencing data from other sheets and other workbooks. |
|  | **MS-PPT** | * Making ppts * Styling ppts |
|  | **Query Session** | * Assignment * Query session | 0.5 day | |  |  |
| **Working With Graphical Tools** | | | | | | |
|  | Editing of Images | Cropping  Optimizing image size  Transparent images  Difference between various image formats  Resize/Flip/Rotate Images | | 1 day |  |  |

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| **OOPs Concepts** | | | | | |
|  | **Introduction** | * OOPS concepts * Inheritance, Abstraction, Encapsulation, Polymorphism * Association, Aggregation, Composition * Abstract class and interfaces * Method Overloading, Operator overloading * Virtual function, pure virtual function | 2 days |  |  |
| **Internet & Networking Fundamentals** | | | | | |
|  | **Networks Introduction** | * What is network * Types of network (based on size and technology) * LAN * WAN * PAN * Wireless * Types of network (based on functions of components) * P2P * Client Server * Hybrid * Types of network (based on topology) * Bus,star,ring,mesh,hybrid * DNS * Network models * TCP/IP Layers and functions * ISO/OSI Layers and functions | 0.25 day |  |  |
|  | **Introduction to Internet Protocols** | * Intranet, Internet, Extranet * Protocols – HTTP, FTP, MIME, CGI, etc. * Cookies | 0.25 day |  |  |
|  | **Client Server Architecture** | * What is Server and Client? * Types of Server * What is Application Server? * Client – Server Architecture | 0.25 day |  |  |
|  | **Query Session** | * Query Session | 0.25 day |  |  |
| **Web Development: Front-End** | | | | | |
|  | **Web** | * Overview of client server architecture | 0.5 days |  |  |
|  | **HTML PROGRAMMING** | * Overview of HTML * Basic HTML Tags and Attributes * Tables and Forms * Frames (Nested Frames) * Cross Browser Compatibility * Overview of DOM * Html 5(New Things) * Assignments | 3 days |  |  |
|  | **STYLE SHEETS** | * Cascading Style Sheets * Cross Browser Compatibility * Cascading Style Sheets Fundamentals * Selectors, Grouping and Nesting * Box Model * Margins and Padding * Borders * Backgrounds * Positioning: Relative, Absolute, Fixed * Floating elements * Layers with z-index * Introduction to CSS3 tags. * Media Queries * Cross Browser Compatibility * Assignment * Overview of CSS preprocessor * Assignments | 2.5 days |  |  |
|  | **CORE JavaScript** | * What is Javascript * How to include Javascript in html * Run Javascript in browser, using console output of browser * Data Types in Javascript * Javascript variable scoping rules * Objects and Properties, How to Get/Set properties of an object, traverse properties of an object * Arrays in Javascript, get/set value in array, traverse an array * Conditional and Control statements in Javascript * Functions in Javascript, understand closures * Hoisting in Javascript * Constructors in Javascript | 4 days |  |  |
|  | **CLIENT SIDE SCRIPTING (JavaScript)** | * Object Hierarchy Model of JavaScript (Overview and Window, document, image, history, location objects) * Array handling * JavaScript Objects – Functions, methods and events. * String manipulation * Scoping in JavaScript * JS Cookies * JS Validation * Cross Browser Compatibility * JavaScript libraries * JQuery * Debugger Tools * Assignments | 4 days |  |  |
|  | **Assessment and Query Session** | * Combined Assignments for HTML/CSS/JS * Query Session | 1 day |  |  |
|  | **JavaScript Framework** | * Difference between JavaScript framework and JavaScript Library * Various JavaScript frameworks * Basics of Angular 2 Js | 1 day |  |  |
|  | **Angular 2/4** | * Architecture * Bootstrapping * Components * Directives: Attribute and Structural * Creating custom directives * Creating and importing modules * Services * Dependency Injection * Component interaction * Pipes * Routing |  |  |  |
|  | **Assessment and Query Session** | * Assignment for Angular 2.0 * Query Session | 2 days |  |  |

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| **Web Development: Back-End** | | | | | |
|  | **Server side** | * Web Server * Overview of Server side processing Language ASP, php, jsp, Nodejs, etc * Basic of server configuration | 2 days |  |  |
|  | **Node Js** | * Overview of Node js * Understanding of NPM * Common NodeJs Module * Server creation * Routing * NodeJs Middleware * Nodejs Framework(Express) * Error Handling * Debugging In Node Js * Assignments | 3.5 days |  |  |
| **Web Development: Database** | | | | | | |
|  | **Database Concepts** | * Tables * Fields * Records * Normalization * Creating Database * Creating and Using Tables * DDL & DML * Table Relationships | 1.5 day |  |  | |
|  | **MySQL** | * Assignments : * SELECT / APPEND / DELETE / UPDATE / MAKE TABLE. * GROUPING / SORTING * Export / Import Data | 1 day |  |  | |
|  | **NoSQL Database** | * Overview of NoSQL database * Mongo * Basic Operation in NoSQL Database | 2 days |  |  |
|  | **Assessment and Query Session** | * Combined Assignments for Node and Mongo DB * Query Session | 2 days |  |  |

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| **Web Development: Versioning & Deployment** | | | | | |
|  | **Versioning** | * What is versioning of code and why this is required? * Introduction of SVN and Git * Assignments | 1 days |  |  |
|  | **Deployments** | * How to deploy project over the web * Various deployment techniques * Deployment automation using task runner(Gulp/Grunt) | 2 days |  |  |
|  | **Packaging/Bundling** | * What is Packaging and why is it required | 1 days |  |  |
|  | **Optimization** | * Various optimization Technique Linting, Minify etc * Combined Assignments Based on Task Runner to Deploy code over web | 1 day |  |  |