### **PHP Basics**

- Introduction to web Technology
- Introduction to HTML5 and CSS
- PHP introduction
- PHP syntax
- PHP Data Types
- PHP Variables ,Constants and Array
- PHP Operators and Control Statements
  - if else statement
  - else if statement
  - switch case
  - Loops
    - while
    - do while
    - for
    - foreach

#### **PHP Form**

- HTML Form
- Form elements
- HTTP verbs and methods
- File Upload
- Form handling with file upload
- Super global Variables
  - \$\_SERVER,
  - \$ REQUEST,
  - \$\_POST,
  - \$\_GET,
  - \$\_FILES,
  - \$ SESSION,
  - \$\_COOKIE
- Session and Cookie
- Implementation of session and cookie in code

#### **PHP Functions**

- Introduction
- Types:
- Pre-defined /In-built
- User defined/ Custom
- Function parameters (With or without and conditional parameters)
- Arguments by value and reference
- Returning values from a function
- Working with Some useful functions
  - Date and time

- include and require
- Templating using include and require

#### Database

- Introduction To Database
- What is RDBMS technology?
- Understanding Database, Tables, Fields
- Introduction to SQL (Structured Query Language)
- Using Database Management tools (phpMyAdmin/ MySQL Workbench etc.) to handle database
- Creating and managing database
- Selecting Database
- Creating Tables
- Auto Increment and Indexing a columns in tables
- Inserting Data into tables in different ways via query
- Updating Data and Table Structure
- Selecting from table in different ways
- Deleting tables and drop database

### **Advanced PHP**

### **Object Oriented PHP- Constructs**

- Introduction to oop
- Creating and Defining Class in PHP
- Instantiating a class
- Constructors and Destructors
- Class constants
- Attributes and methods
- Member visibility: Access Modifiers / Specifiers
- Inheritance
- Overrides
- OOP Keywords (Class Autoload, Static & Final Keywords)
- Preventing a Class from Inheritance( final keyword)
- Exceptions

# **Object Oriented Implementation And MVC**

- Modules (Modularizing a web Application)
- File structure / Code file organization
- Design pattern and Introduction
- Model / View /Controller Design Pattern implementations

# **Database Operations Advanced Topics**

- Creating Primary, Index and Unique Keys
- Primary Key, Foreign Key Relationship and Mapping
- Maintaining Foreign Key Constraints
- Joins and Types of JOINS with examples
- Prepared Statements
- PHP Data Objects (PDO)
- Transactions
- Patterns in database design

### **PHP Standards**

- Basic Coding Standards (PSR1, PSR2)
- Autoloading standards

#### **Web Services**

- Web Services
- Introduction to RESTFUL Services
- Handling JSON in php

### **JavaScript And JQuery Basic**

- Introduction to JavaScript
- Data types, operators, conditions
- Events, function
- Array and Objects
- jQuery Syntax, Events
- Some ¡Query functions
- jQuery Syntax and Events
- iQuery Effects
- jQuery Selectors and Traversing
- jQuery Custom Functions
- jQuery load, get, post
- jQuery Ajax

# Laravel

# **Installing and setting up Laravel and supporting tools**

Introduction to Laravel

- Concept of Composer
- Install & Use of Composer
- Installing Laravel using composer
- Install & Use of open source distributed version control system GIT
- Concept & Use of GitHub for hosting GIT repositories
- Configuring Laravel
- Project Structure
- Setting up Development and Debugging Tools

# **Laravel Architectural Concept**

- Request Life cycle
- Gives knowledge of how Laravel actually works.
- Facade
- Provides an easy way of accessing application class and libraries.
- Service Providers in Laravel
- Service providers are the central place of all Laravel application bootstrapping.

### **Routing**

- Basic Routing
- Named Routing
- Grouped Routing
- Routing Parameters
- Handling Invalid Routes
- Http Middleware
- Restful Routing

#### **Controllers**

- Introduction
- Basic Controllers
- Restful Resource Controllers
- Controller Routing
- Controller Middleware

### Request

- Handling Request Info.
- Request Inputs

- Form Inputs
- Old Inputs
- Files

# Response

- Attach Headers and Cookie to response
- Response with View
- Response with JSON
- Response with File

### **Database**

- Introduction
- Migration
- Schema Building
- Migration Structure
- Running Migration
- Writing Migration
- Seeding
- Database Configuration
- Running Raw SQL queries

### Model

- Eloquent ORM
- Defining Model
- Retrieving Model
- Insert & Update Model
- Deleting Model
- Eloquent Relationship
- One to One
- One to Many
- Many to Many

#### **View**

- Passing data to view
- Sharing data to all views
- Blade Template Engine

- Introduction
- Template Inheritance
- Displaying Data
- Implement Control Structures

# **Laravel Forms & HTML Component – Laravel Collective**

- Installation
- Generating form
- CSRF Protection
- Form Elements
- Labels
- Text, Text Area, Password & Hidden Fields
- Check-boxes and Radio Buttons
- File Input
- Number Input
- Date Input
- Drop-Down Lists
- Buttons
- Custom Form Macros

#### **Laravel Services**

- Authentication our application
- Authorization using Policies ~ Role based panel access
- Introduction
- Configuring Auth Library
- Creating authentication system using Middleware
- Artisan Console
- Exception Handling and Error Logging
- Mail
- Configuring & sending mail
- Pagination
- Session
- Validation
- Validation approaches
- Validation Rules with associating messages
- Custom Rules with associating custom messages
- Laravel Socialite ~ Registrtion & Login with 3<sup>rd</sup> party (FB, Google, Github etc)
- WebPack ~ Building assets
- Laravel mix

# **Restful API With Laravel**

- Concept of API, why and scope of implementation
  Restful API setup, Basic project
  Tools ~ Postman Tool

# **Project Work:**

• E-commerce Website with Multi-vendor concept.