Aisomex
CONSULTANCY SERVICES PVT LTD

MODULE 1

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05	Integrating jQuery UI & 3rd Party jQuery Plugins
06	Responsive, Mobile-First Development using Bootstrap 4 Framework
07	Project 1: Responsive Static Website

MODULE 2

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MODULE 3

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MODULE 4

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19	Domain Registration, Web Hosting, cPanel & WHM
20	Search Engine Optimization & Marketing (SEO & SEM)
21	Introduction to Node.js, Express & Socket.IO
22	Introduction to Google Cloud Platform

TOOLS USED

Sublime Text	Easy PHP	Live Reload	Postman
Console2	PHPMyAdmin	FileZilla	GIT
Browser Dev Tools	HeidiSQL	Composer	NPM

BASIC INFORMATION

Batch Start Date	Batch Schedule
Daily Theory Hours	Daily Practical Hours
Course Fees	For More Information

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01. Introduction to Web Development

- History and future of internet, web development and IT field in general
- What are HTML, CSS, Web Scripts, SQL, CMS and Frameworks
- Introduction to various tools and resources for web developers

02. Hyper Text Markup Language: HTML 5

- HTML syntax and introduction
- HTML tags: doctype, html, head, title, meta, link, script, body, br, hr, b, strong, i, em, u, strike, sup, sub, big, small, li, ul li, ol li, p, center, font, img, a href, table, thead, tbody, tr, th, td, etc.
- HTML attributes: color, size, width, align, src, title, alt, height, width, etc.
- HTML form tags: form, input type text, input type password, input type radio, input type checkbox, input type file, input type hidden, select, textarea, label, input type button / submit / reset, etc.
- HTML form attributes: action, method, accept, enctype, id, name, value, size, maxlength, checked, selected, rows, cols, etc.
- Miscellaneous topics: use of "label for", radio button grouping, control array, etc.
- HTML 5 tags: nav, section, article, aside, header, footer, mark, figure, figcaption, details, summary, etc.
- HTML 5 input types: color, date, time, email, number, range, url, pattern, required, step, etc.

03. Cascading Style Sheet: CSS 3

- CSS syntax, introduction & types (internal, external & inline)
- CSS basic properties: font, text, color, background, border, margin, padding, list, display, cursor, etc.
- CSS classes, pseudo classes & DIV tags with position properties (absolute, relative, etc.)
- Miscellaneous topics: auto margin, overflow, z-index, important keyword, opacity, min & max heights, etc.
- CSS 3 properties: border-radius, box-shadow, text-shadow, text-overflow, resize, transitions, etc.
- Creating your own basic level CSS template
- Working with advanced web templates

04. Client Side Scripting using JavaScript & jQuery Framework

- JS syntax & introduction
- JS foundation: variables, operators, control & looping statements, dialogue boxes, functions, etc.
- JS built-in objects: string, array, math, date, etc.
- JS DOM and document selectors
- JS events: mouse, keyboard, input, form, etc.
- Introduction to JSON (JavaScript Object Notation)
- jQuery syntax & introduction
- jQuery core concepts: selectors, events, attributes & methods

05. Integrating jQuery UI & 3rd Party jQuery Plugins

- jQuery plugin introduction
- Expert topic: what are options, events & methods of an jQuery plugin
- jQuery UI prerequisites: themes, custom themes, standard download & custom download
- jQuery UI plugins: accordion, autocomplete, datepicker, dialog, progressbar, slider, tabs, tooltips, etc.
- 3rd party jQuery plugins: jQ-Validation, jEasyUI, LightBox, DataTables, Owl Carousel, Transit, Hotkeys, Choosen, Select2, ShareButton, CK Editor, etc.

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06. Responsive, Mobile-First Development using BootStrap 4 Framework

- Introduction to responsive design and its importance
- BootStrap prerequisites: viewport meta, box-sizing, normalize.css, container, device sizes, etc.
- Introduction to BootStrap-4's new grid system & media objects
- BootStrap CSS: headings, paragraphs, lists, tables, forms, address, blockquote, etc.
- BootStrap components: alert, badges, buttons, button group, card, carousel, collapse, dropdowns, forms, input groups, jumbotron, list groups, modal, navs, navbar, pagination, popovers, progress, tooltips, etc.
- BootStrap utility classes: borders, floats, clearfix, close icon, colors, display, image, visibility, position, responsive embed, sizing, spacing, typography, alignment, etc.

07. Project 1: Responsive Static Website

- Creating multi page responsive static websites from scratch
- Creating "Music Download" website having following pages: home, register, login, contact, about, history, FAQ, albums list, album details, user profile, etc.
- Adding bootstrap plugins to this website: carousel, popovers, modal, accordion, etc.

08. Database Fundamentals & MySQL

- Introduction to data, database, tables, rows, columns, data types & DBMS
- Introduction to RDBMS: E. F. Codd's rules, primary key, foreign key, constraints, etc.
- Designing a relational database using ACID properties & Normalization
- Case study: designing a hospital's OPD database

09. Advanced Structured Query Language: SQL

- SQL queries: insert, select, update, delete, truncate, rename, etc.
- SQL column operations: pseudo columns, arithmetic operations on columns, scalar/group functions, etc.
- SQL clauses: distinct, where, and, or, not, in, like, between, order by, limit, etc.
- Expert topic: sub-queries, joins, group by & having

10. PHP Foundation, Advanced & OOP

- Client vs. server side scripting languages
- PHP history, introduction, syntax & limitations
- PHP foundation: variables, operators, control & looping statements, array, functions, etc.
- PHP inbuilt functions:

Math	String Explode	Array Randomization
Date	String Encrypt Decrypt	Array Replacement
File & Path Info	Array Basic	Array Padding
String ASCII	Array Keys & Values	Array Slice
String Basic	Array Searching	Array List
String Letter Case	Array Sorting	Array Callbacks
String Trim & Pad	Array Stack	Array Range
String Formatting	Array Combine & Merge	
String HTML Handling	Array Re-Arrangement	

- OOP in PHP: class, objects, access specifies, constructors and inheritance
- Expert topic: magic methods, namespaces & class auto loading mechanism of PHP

- Server side validation of form data using PHP Post request
- Passing data between pages via hyperlinks and PHP Get request
- Single & multiple file upload in PHP
- Introduction to PHP Sessions & Cookies and its use cases
- Kick starting a PHP project with web template and include system
- Advanced database connectivity using PHP Data Objects (PDO)
- Using wrapper class for data validation, file upload, PDO operations, etc.

11. Project 2: CRUD Operations Demo Website

- Database design of an employee management system
- Creating a responsive template and implementing file includes system for sidebar, navigation, footer, etc.
- Design & coding of dashboard, departments CRUD, cities CRUD and employee CRUD
- Adding functionalities like paging system, advanced search, report generation/printing and admin login

12. Introduction to MVC (Model-View-Controller) Architecture

- Need of MVC architecture and how it works
- Difference between CMS & a Framework
- Comparison of various PHP MVC Frameworks

13. MVC Web Development Using Laravel Framework

- Things to know before starting with Laravel: OOP, namespace, rest api, object passing, composer, etc.
- Laravel Installation using composer
- Understanding basic configurations like encryption key, pretty URLs, virtual host, .env config file, etc.
- Laravel foundation:

Artisan	Managing Web-Template	Helpers & Packages
Routing	Managing Assets	Authentication
Views & View Composer	Main Layouts & Sections	Dependency Injection
Query Builder	Passing Data to Views	Repositories
Eloquent & Relationships	Blade Syntax	Service Container
Tinker	CSRF & Forms Validation	Service Provider
Controllers	Form Requests Class	Observer Model & Events
Middleware	Session & Flash Data	Miscellaneous Topics

14. Project 3: Foundation MVC Project - Video Sharing Portal

- Creating a web portal from scratch with following features

Registration, Login, Logout	Flag Inappropriate Videos
Forgot Password	Thumbs Up & Down on a Videos
Post Login Upload Video	0 to 5 Star Rating on a Video
Visitor Feedback Form	Download & View Counters
Browse Categories & Sub-Categories	Advanced Search
Browse Videos by Categories	Top Uploaders List
Play Online & Download Videos	Recently Viewed List
View Details & Write Comment on a Video	Category Wise Latest Videos List
Add Video to Favorites List	My Favorites, Uploads, & Comments List

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User Profile Page	Admin: Categories CRUD
Friend Request	Admin: Videos, Users [C]RUD
Private Messages to other Users	Admin: Verify Uploaded Videos
Admin: Authentication	Admin: Verify Flagged Videos
Admin: Dash Board with Website Statistics	Admin: View & Reply to Feedbacks

15. New & Advanced Features of Web Development

- Practical implementation of following advanced features

Advanced Ajax & JSON	File & Directory Operations in PHP
jQuery UI Drag, Drop & Sorting	Advanced PHP GD Library
DropZone Ajax File Uploads	Creating Custom Captcha
Ajax Based Infinite Scroll Bar	Google Re-Captcha Integration
Import Data from .XLS	Google Translate Integration
Export Data as CSV	Implementing Shopping Cart
FaceBook Login & Social Plugins Integration	Processing Online Payments
Programmatically Creating PDF	Integrating Google Analytics
Programmatically Creating ZIP	Google Maps & Geo-Coding
Programmatically Sending SMS	Google Charts & amCharts
Programmatically Sending SMTP Email	.htaccess File & Mod-ReWrite Rules
Programmatically Generating DB Backups	Using PHP DOM-Document for Data Grabbing
Adding Runtime Controls via jQuery	Currency Conversion using API
Resize & Crop Uploaded Images	Quotes, News & Weather Updates using API

16. Project 4: Advanced MVC Project

- For successful completion of training, a trainee must exhaustively work on at least one final project
- Final project definition & features list would be provided according to skill level of the candidate

17. GIT: Revision Control System

- Download, installation & initial user configuration of GIT software
- Understanding repository, branch, staging area, commit, tag, etc.
- Basic commands: init, clone, add, merge, commit, push, pull, status, remote, checkout, branch, etc.
- Working with GIT hosting websites like GitHub.com, BitBucket.org, etc.

18. Building Web Sites using WordPress CMS

- Introduction to CMS in general
- WordPress installation & initial configuration
- Features of WordPress: media, pages, categories, tags, posts, comments, users, etc.
- Customizing WordPress: themes, widgets, menus, plugins, shortcods, etc.
- Advanced plugins: jetpack, akismet, wp-optimize, lazy-load, social icons, contact form 7, related posts, etc.

19. Domain Registration, Web Hosting, cPanel & WHM

- Domain names perquisites: DNS, TLD, ICANN, name servers, etc.
- Types of web hosting: shared, vps, dedicated, cloud & hybrid
- Parameters of web hosting: disk space, bandwidth, add-on domains, database & email limitations, etc.
- Managing your web hosting using cPanel & WHM panels

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20. Search Engine Optimization & Marketing (SEO & SEM)

- Introduction to, need of & difference between SEO & SEM
- SEO perquisites: original content, valid markup, headings, titles, meta, alt, structured data schemas, etc.
- Fundamentals of SEO: page rank, search engine rankings, sitemaps, robots.txt, high quality back-links, keyword analysis, competition analysis, black-hat vs. white-hat, etc.
- SEO Tools: google webmaster tools, smallseotools.com, ahrefs.com, moz.com, etc.
- Fundamentals of SEM: google adwords & adsense, keyword research, creating & managing ad campaign, best practices, etc.

21. Introduction to Node.js, Express & Socket.IO

- Node.js & NPM introduction & installation
- Introduction to Node.js client, server, routing, callbacks, event loop and emitter
- Introduction to Express Framework
- Introduction to Socket.IO

22. Introduction to Google Cloud Platform

- Understanding: Cloud, SAAS, PAAS, IAAS, etc.
- Overview of Google cloud solutions
- Introduction to App Engine, Cloud Storage, Clouse SQL & Cloud CDN
- Deploying PHP website on Google Cloud using App Engine & Cloud SQL

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