

PHP COURSE OUTLINE

COURSE

Advance level PHP Course. This course covers Fundamentals of HTML, CSS, JavaScript, SQL and programming in PHP. Also covers advanced-level PHP web development and PHP's interfacing to relational databases, with a particular study of MySQL.

INTRODUCTION TO HTML & PHP

- Introduction to PHP as a general scripting language
- Web Development using PHP
- Basic Concepts: Web Servers, Server-Side Scripting, File Transfer and other internet protocols
- Installing and configuring Apache/MySQL/PHP/FileZilla using XAMPP
- Development Environment, Using Web/Database/FileTransfer services using Clients
- FileZilla, PHPMyAdmin
- Create a basic PHP Script
- Markup Languages
- Introduction to HTML
- Basic HTML Syntax, valid markup and clean code
- HTML Tags: Tables, Formatting
- HTML Forms, Input types and their properties
- Creating forms with PHP
- Using the form GET method
- Using the form POST method
- Pass PHP variables via the URL
- Obtaining data from forms through variables
- Using hidden fields
- Use PHP to generate HTTP headers

CLIENT-SIDE

- HTML
- CSS
- JavaScript
- Ajax(Asynchronous JavaScript And XML)

HTML

- Structure(html, head, title, body)
- Anchor, image, table, div/span, paragraph
- Comments, DOCTYPE, DTDs
- Symbols: By name, By number
- Formatting: H1-H6, br, hr, b, i, u, big, small, font, code, var, strong, em, pre, blockquote, center, sub/sup
- Color: names, values(Hex/RGB)
- List: ul, ol, li
- Table: row, cell, border, cellpadding, cellspacing, bgcolor, align, valign, colspan/rowspan, caption
- Form: form, input, select, option, optgroup, textarea, checkbox, radio buttons, text, password, hidden, submit, method(GET/POST), action, fieldset, legend, label, button
- Frames: iframe, noframes

CSS

- Introduction to Stylesheets
- Style based layout
- CSS Selectors: element, class, id
- Selectors grouping
- Inline/Internal/External Stylesheets
- Div/Span

BOX MODEL

- Dimensions: width, height, min-width, min-height, max width, max-height
- Margin & Padding
- Border: border-color, border-style, border-width
- Font: family, size, style, variant, weight
- Text: color, text-align, text-decoration, text-transform, letter-spacing, word-spacing, line-height, indent, white-space
- Background: color, image, position, repeat, attachment
- List: list-style, list-style-type, list-style-position, list-style-image

- Display
- Float
- Clear
- Cursor(auto/default/ pointer /crosshair/help/move/text/wait)
- Visibility

CSS-ADVANCE

- Units(% , in, cm, mm, em, px, pt)
- Opacity

POSITIONING

- overflow(visible/hidden/scroll/auto)
- Vertical-align (baseline/sub/super/top/text-top/middle/bottom/text-bottom/length, %)
- z-index
- position(relative/absolute/static)
- top, bottom, left, right
- clip

MEDIA

- @media(all/screen/print/handheld/projection/tv)

PSEUDO CLASSES

- Link: link, visited, hover, active
- first-child
- focus
- last-child

PSEUDO ELEMENTS

- first-line
- first-letter

JAVASCRIPT

- Introduction to JavaScript
- Where to place in HTML
- Comments in JavaScript

- Variables
- Operators(Assignment/Comparison/Logical/Arithmetic)
- Flow Control: IF...Else, switch, loops(for/while), break/continue
- Functions
- Popup boxes: alert, confirm, prompt
- Document object and HTML elements in JavaScript
- Events: body(onload, onunload), form(onblur, onchange, onfocus, onreset, onselect, onsubmit), onclick, ondblclick, onmouseover
- Form Validation

JAVASCRIPT OBJECT

- Introduction to Objects in JavaScript
- String
- Date
- Array
- Boolean
- Math

JAVASCRIPT ADVANCE

- Form Validations

PHP – VARIABLES AND EXPRESSIONS

- Identifiers
- Data Types
- Text constants, interpolation (strings, arrays, objects), here documents
- Creating Variables
- Variable assignment
- \$_POST, \$_GET, \$_REQUEST
- Variable Scope: Global, \$GLOBALS[],Superglobals
- HTTP environment variables
- Variable References
- Commenting in PHP

PHP – OPERATORS

- Arithmetic & Logical Operators
- Comparison Operators
- Assignment, equality and identity operators
- Error Control Operators
- Operator precedence and associativity

PHP – ARRAYS

- Introduction
- Numeric/Associative Arrays
- Initializing arrays
- Using Foreach loop
- Add/remove elements from arrays
- One-dimensional arrays
- Multi-dimensional arrays
- References to array elements
- Arrays and forms
- Array operators

ARRAY FUNCTIONS

- sort, rsort, asort, arsort, ksort, krsort, natsort, shuffle, array_change_key_case, array_key_exists, array_combine, array_chunk, array_merge, array_search, is_array, array_push, array_unshift, array_pop, array_shift, in_array, array_keys/array_values

PHP – STRING MANIPULATION

- Substring and [] operators
- Case conversion, trimming
- Formatting output data
- Introduction to Regular expressions

STRING FUNCTIONS

- strtolower, strtoupper, strlen, implode, explode, str_replace, trim, rtrim, ltrim, str_ireplace, str_pad, str_repeat, str_split, substr, substr_replace, substr_count, strpos, chr, ord, strtok, addslashes, stripslashes, str_shuffle, htmlentities, htmlspecialchars, nl2br, strip_tags, htmlspecialchars_decode

PHP MATH FUNCTIONS

- abs, Remainder(% operator), pow, sqrt, ceil, floor, round, max, min, rand

PHP – CONDITIONAL TESTS AND EVENTS

- True/False
- If, else and else if
- The ternary (? :) Operator
- Comparing for equality or identity
- The switch / case statement

PHP – FLOW CONTROL

- Loops
- while
- do ... while
- for
- break and continue
- exit/die

PHP – FUNCTIONS

- Purpose of functions, Built-in functions
- Declaring functions
- Functions Arguments
- Default Arguments
- Arguments – Call by Reference
- Return
- Returning References
- Variable Scope (global vs. local)
- Static variables

- Recursion
- Include and Require
- Variable function calls

PHP – SESSIONS

- Introduction
- Start, Store, Retrieve
- Unset and Destroy

SQL – BASIC

- Introduction, Syntax
- Data Types
- Auto-Increment, Index, Unique, Primary
- Select, update, delete, Insert,
- Aggregate functions: count/sum/avg/max/min
- Distinct , Limit, Where, And / Or, Order by, group by, having
- Like, Wildcards(% , _), In, Between
- Special Characters, Escaping(Use of “\”)

SQL – ADVANCED

- Alias
- Joins: Inner, Left, Right, Full
- Create: DB, Table
- Alter

PHP – DATABASES (MYSQL)

- Introduction to MYSQL database.
- Create table through MYSQL database
- Connection/disconnection, log in/log out
- Escaping strings in SQL statements

COMMON ACCESS FUNCTIONS

- `mysql_connect()`, `mysql_close()`, `mysql_select_db()`, `mysql_error()`, `mysql_errno()`, `mysql_query()`, `mysql_fetch_array()`, `mysql_fetch_assoc()`, `mysql_num_rows()`, `mysql_affected_rows()`
- Doing simple SQL queries via PHP
- Building HTML tables using SQL Queries [Assignment]
- Security: Avoiding SQL Injection attacks
- Using database in Web Application and creating a basic login application [Assignment]
- Singn-in/Register [Assignment]
- Restricting users using different access levels [Assignment]

OBJECT ORIENTATION

- Object basics, Introduction to Object Oriented Programming(OOP)
- Classes in PHP
- Methods and Properties in OOP
- Encapsulation: Public, Private, Protected
- Constructors and destructors
- Inheritance
-

OOP RELATED FUNCTIONS

- `class_exists`, `get_class_methods`, `get_class_vars`, `get_declared_classes`, `get_object_vars`, `get_parent_class`, `is_a`, `is_subclass_of`, `method_exists`, `property_exists`

MAGIC FUNCTIONS

- `__constructor`, `__destructor`, `__toString`, `__get`, `__set`, `__autoload`
- Static Calls

- Static Properties
- Scope Resolution Operator (::)
- Accessing Static Properties/Methods
- Reusing and Extending Classes
- Abstract Class
- Interfaces, their implementation and inheritance
- Final Class
- Object Cloning
- Object Serialization/ Unserialization
- Overloading
- Accessing instance data
- Class constants
- Try throw catch Exception handling

PHP – COOKIES

- Introduction, Security Issues and Properties
- Setting, Retrieving cookie
- Expiring/Deleting cookie

FILE SYSTEM ACCESS

FILE SYSTEM RELATED FUNCTIONS

- file_exists, filesize, filetype, basename, dirname, realpath, copy, mkdir, fopen, fclose, feof, fgets, fgetc, fwrite, flock, unlink, file, file_get_contents, file_put_contents
- Opening files
- Reading, writing and deleting Files
- Opening, reading, creating and deleting Directories

- File uploads from the browser/user

PHP – EMAIL

- Sending Emails using PHP

ENVIRONMENT VARIABLES

- Introduction
- Visitor IP address, Referring URLs, User Agent/Browser

WEB HOSTING

- Introduction
- Installing and Running PHP application on remote web host

PROJECT

Creating basic membership web application with Admin Panel using PHP/MySQL

INFORMATICS SYSTEMS & SOLUTIONS ®

<http://www.informatics.pk>

Office 322, 3rd floor, Dubai Plaza, 6th Road, Rawalpindi

info@informatics.pk

0331-537-0101

0333-562-5634