

# **MAHAJAN COMPUTERS**

## **Syllabus of .Net**

**Note: Each Lecture is of two and half hours duraion.**

### **Lecture I :**

The basics of web development : Html Forms & executing them under visual studio 2008. Server side programming vs. client side programming.

Introduction to .net framework: languages under it,CLR (common Language Runtime), The .net class library.

HTML forms vs. server (web) controls , examples of web controls,XHTML basics.

Creating a simple web application, the web form mark up ,the page directive,the code-behind class,Adding event handlers.

### **Phases 2,3,4,5,6,7,8,9,10 are for comprehensive knowledge of c#**

**Lecture 2,3:** Basics of c# , concept of namespaces ,command line arguments,multiple main methods, literals , variables , data types ,constant variables, scope, boxing & unboxing , type conversions ,operator precedence & associativity , decision making & branching,iteration techniques , foreach statement.

\_Methods in C#,pass by value vs. reference, the output parameters ,Variable argument list,method overloading. Array handling , I-d arrays , multi-dimensional arrays,variable size array, System.array class , ArrayList class, some string methods, mutable strings , array of strings. Using structures & enumerations.

**Lecture 4:** OOPs,The concept of classes & objects,accessing class members ,constructors & their overloading ,static members,static constructors , private constructors ,copy constructors, destructors, use of this keyword , readonly members, properties & indexes.

**Lecture 5,6:** inheritance,defining a subclass,visibility controls,overriding of methods, sub class constructors behaviour, multilevel & hierarchical inheritance , Abstarct classes, Sealed classes & sealed methods, POLYMORPHISM.

### **Lecture 7:**

Interfaces , defining an interface, the concept of implementing interfaces , extending an interface,inheritance Vs. interfaces, distinction between abstract classes & interfaces.

### **Lecture 8,9:**

The concept & utility , overloadable & non overloadable operators , overloading binary operators , unary operators overloading.  
Concept of delegates , delegate declaration, delegate methods ,instantiation, invoking delegates , multicasting , the concept of events & their usage.  
The Console class of C#, Console input & output , Formatting of numbers , Exception handling , Exception Hierarchy , catch statements , finally statement , nested try blocks , manual throwing of exceptions.

## **Following all phases offer deep & detailed Grasp on ASP .net**

### **Lecture 10,11:**

Web form fundamentals : HTML server controls, translating an HTML page to asp .net page , adding linked images , setting styles ,what is view state , the HTML control classes,the page class, sending a new page to the user , the web.config file , customsettings in the web.config, WAT ( web administration tool)

Basic web control classes , Label , Button , checkbox, textbox,RadioButton ,Hyperlink , LinkButton,ImageButton , Image , ListBox, DropDownList ,CheckBoxList, RadioButtonList, BulletedList , Panel ,Table , TabelRow,TableCell

The web control tags, Colors , Fonts,Focus, List Controls – multiple select list controls , the BulletedList control.

PostBack events , the Page life cycle.

### **Lecture12,13:**

State Management : the state problem discussion , the ViewState collection , security issue , preserving memory variables , technique to store custom objects.

Transferring information between pages : Cross-page posting , the query string.

COOKIES handling with programming.

Session State : Session tracking , using session state , timeout.

#### Lecture 14 :

Validation techniques : The validator controls, server-side validations, Client-side validations , manual validation , validating with regular expressions , validation groups.

Rich controls : Formatting the Calendar , Restricting dates.

Styles : CSS (cascading style sheets) , a basic inline style , creating a style sheet .

Master Page : master page & content page , connectivity between master pages & content page , advanced master pages : Table based layouts , code in master page.

#### Lecture 15,16,17 :

ADO .net ( Database programming) : SQL server , working with databases in visual studio 2008, using sqlcmd command line tool.

SQL basics : update , insert ,delete etc. sql commands.

Data namespaces , the Data Provider classes.

Direct data access : creating a connection , the DataReader roll.

Data Binding : Single value data binding , data binding with properties ,using code .

Repeated-value data binding : Data binding with simple list controls , Multiple binding , using the DataValueField property,Data binding with ADO .net , Creating a record editor , The grid view.

#### Lecture 18:

Role of XML in .net , configuration files , XHTML , ADO .net data access , attributes , comments , the XML classes : XML TextWriter , TextReader , Reading an XML document , Searching an XML document , What is Ajax , pros & cons , asp .net Ajax Toolkit , application.