



## 6 Months Training Module in .Net

Visual Studio Version: 2008

.net Framework: 3.5

Database: SQL Server 2005

### Module 1-Total Days-20

#### Introduction to .net framework:

- ◇ History of .net
- ◇ .net framework
- ◇ .net version
- ◇ Features/advantages of .net
- ◇ Architecture of .net framework
- ◇ CLR/CTS
- ◇ Namespaces

#### Programming in C#:

- ◇ Programming structure
- ◇ Variables/Constants
- ◇ Datatypes
- ◇ Various operators
- ◇ Type conversion
- ◇ Decision Making & branching
- ◇ Decision Making & looping

#### Methods in C#:

- ◇ Introduction to Methods
- ◇ Argument passing mechanism
- ◇ Pass by value
- ◇ Pass by reference
- ◇ Output parameters
- ◇ Arrays
- ◇ Manipulating strings
- ◇ Structures

## OOPS Principle:

- ◇ Basic principles of OOPS
- ◇ Class & Object
- ◇ Access modifiers
- ◇ Constructors & destructors
- ◇ Static members
- ◇ Property procedures
- ◇ this reference

## Inheritance & Polymorphism:

- ◇ Inheritance & polymorphism
- ◇ Overloading methods
- ◇ Hiding methods
- ◇ Abstract class
- ◇ Abstract methods
- ◇ Sealed class
- ◇ Multiple inheritance
- ◇ Interfaces

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## Module 2-Total Days-30

### Windows Programming:

- ◇ Introduction to IDE
- ◇ Introduction to Window Forms
- ◇ Various controls
- ◇ Invoking properties, methods & events in window forms

### Dialog Boxes, Menus & Toolbar

- ◇ Dialog Boxes
- ◇ Menus & Toolbar

## SDI & MDI application

- ◇ SDI forms
- ◇ MDI forms

## Class Libraries

- ◇ Creating & using classes
- ◇ Creating & Using class libraries

## Creating Components

- ◇ Creating User controls
- ◇ Accessing User Controls
- ◇ Composite controls



## ADO.net

- ◇ Introduction to ADO.net
- ◇ Architecture of ADO.net
- ◇ Accessing data through connection oriented and connectionless approach
- ◇ Accessing data with datareader
- ◇ Manipulating data using ADO.net
- ◇ Using data adapters
- ◇ Using DataSet
- ◇ Datagridview control

## Exception Handling & Debugging in C#

- ◇ Exception Handling
- ◇ Debugging Mechanism

## Crystal Reports

- ◇ Creating Crystal Reports
- ◇ Invoking reports on window forms

## Setup & Deployment

- ◇ Deploying a window application
- ◇ Assembly Overview



## Module 3-Total Days-15

- ◇ Features of MS-SQL server
- ◇ SQL-DDL,DML,DCL

### Using Select Statement

- ◇ Use the SELECT statement with logical operators
- ◇ Use wildcards
- ◇ Use the IS NULL and IS NOT NULL keywords
- ◇ Use the ORDER BY clause
- ◇ Use the TOP keyword
- ◇ Use the DISTINCT keyword
- ◇ Use aggregate functions in queries
- ◇ Group result sets
- ◇ Use the COMPUTE and COMPUTE BY clause

### Using functions

- ◇ String functions
- ◇ Mathematical functions
- ◇ Datetime functions

### Using JOINS

- ◇ Inner Join
- ◇ Outer Join
- ◇ Self Join
- ◇ Equi Join
- ◇ Natural Join
- ◇ Cross Join

## Using Subqueries

- ◇ Creating subqueries
- ◇ Use subqueries with the IN clause
- ◇ Use subqueries with the EXISTS clause
- ◇ Use nested subqueries
- ◇ Use correlated subqueries

## Databases

- ◇ Creating database
- ◇ Viewing database
- ◇ Deleting database
- ◇ Renaming database

## Database Tables

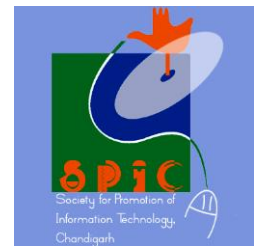
- ◇ Create tables
- ◇ Insert rows into tables
- ◇ Delete tables
- ◇ Altering tables
- ◇ Create user-defined datatype
- ◇ List various types of data integrity
- ◇ Add the following constraints to tables:
  - PRIMARY KEY
  - UNIQUE
  - FOREIGN KEY
  - CHECK
  - DEFAULT

## DML Statement

- ◇ Maintain data in a table by using
  - INSERT statement
  - UPDATE statement
  - DELETE statement
- ◇ Truncate a table

## Implementing Views & Batches

- ◇ Create, alter, drop, and rename views
- ◇ Update data using views
- ◇ Declare variables
- ◇ Print messages
- ◇ Use comments



- ◇ Use conditional statements
- ◇ Use the iteration statements

## Implementing Stored Procedures

- ◇ Create a stored procedure
- ◇ Execute a stored procedure
- ◇ Pass parameters to a stored procedure
- ◇ Modify a stored procedure
- ◇ Drop a stored procedure



## Module 4-Minor Project(Window Based)-Total Days-10

### Module 5-Total Days-25

#### Overview of ASP.net

- ◇ Features of ASP.net
- ◇ Creating an ASP.net web application
- ◇ Create, build and view an ASP.net web form

#### Using Controls

- ◇ Using Server controls
- ◇ Using Client controls

#### Using Navigation Controls

- ◇ Using TreeView control
- ◇ Using Menu Control

#### Adding code to ASP.net web form

- ◇ Using code behind pages
- ◇ Adding event procedures to web server controls
- ◇ Using page events

## Adding functionality to a Web application

- ◇ Creating Page\_Load event procedure
- ◇ Creating Click event procedure

## Validating User Input

- ◇ Overview of user input validation
- ◇ Using validation controls
- ◇ Page validation
- ◇ RequiredFieldValidator control
- ◇ ValidationSummary control
- ◇ CompareValidator control
- ◇ RegularExpressionValidator control
- ◇ RangeValidator control



## Using Master Files

- ◇ Creating Master pages
- ◇ Applying styles to web pages
- ◇ Applying templates
- ◇ Using Skin files

## Creating User Controls

- ◇ Creating web user controls
- ◇ Adding web user controls to an ASP.net web forms

## ADO.net

- ◇ Connecting with database using ADO.net
- ◇ Connected & Disconnected approach
- ◇ Using stored procedure in ASP.net application

## Using Data Controls

- ◇ DataGrid control
- ◇ DetailsView
- ◇ FormView
- ◇ Repeater control
- ◇ DataList control

## Managing State

- ◇ Application & State Management

- ◇ Application variables
- ◇ Session variables
- ◇ Cookies



## Tracing in Web Application

- ◇ Understanding Tracing
- ◇ Implementing Tracing

### Module 6-Total Days-60

Major Project(Window based/Web based)

Note: 10 Days are reserved for Assignment/Module Tests/Presentations.