

## INTRODUCTION TO .NET

- Domain of .Net
- D.N.A. Architecture
- One Tier
- Two Tier
- Three Tier
- N-Tier

## THE COMMON LANGUAGE RUNTIME (C.L.R.)

- CLR Architecture and Services
- The .Net Intermediate Language (IL)
- Just- In- Time Compilation and CLS
- Disassembling .Net Application to IL
- Strict Type Checking

## .NET FRAMEWORK CLASS LIBRARY

- System Namespace
- System .Object Namespace
- System .Collection Namespace
- System .Type
- Exception

## SYNTAX & DATA TYPES

### LANGUAGE FUNDAMENTAL

- Data type and Control Constructs
- Value and Reference Types
- Declaring and Initializing Variables
- Unicode Characters and Strings
- C.T.S Type
- Implicitly Typed Local Variables
- Conditional Syntax
- C# Operator
- Looping Syntax
- Structure

## ARRAY & STRING

- Arrays in General
- Declaring of different type Arrays
- Initializing Arrays
- Arrays of Objects
- Structure type array
- Using foreach with Arrays

## OOPS CONCEPTS CLASSES

- Encapsulating Attribute
- Class & Object Creation
- Define Constructor
- Type of Constructor
- Define Methods and their Type
- Overloading Methods and Constructor overloading
- Define Property and their Types
- The Memory Allocation with New Keyword

## INHERITANCE

- Implementing Inheritance Hierarchies
- Class Access Modifiers
- Method Overloading, Overriding and Hiding Concepts
- Run time polymorphism
- Abstract and Sealed Class
- Exposing Interface
- Implementation Interface in a Class

- Operator Overloading
- ## EXCEPTION HANDLING
- Means of Error, Bug and Exceptions
  - Role of .Net Exception Handling
  - System Level Exception
  - Event Driven Programming
  - User Defined events and delegates
  - Multicasting with Delegates
  - Anonymous methods
  - Anonymous Methods with events
  - Generic Delegates

## MULTITHREADING

- Understand multithreading process
- The System Threading namespace
- The Thread and Thread Start class
- Thread life cycle
- Thread Safety Concept
- Thread synchronization
- Understanding Thread Pool
- File and Directory Class
- Marshal Classes, File Info and Directory Info
- Path Class
- Drive Info Class
- Stream Object with Files: Stream Reader, Stream Writer

## INTRODUCTION TO ADO.NET

- How ADO.NET works and how it differs from ADO?
- Evolution of ADO to ADO.NET

## ADO.NET AND IT'S ARCHITECTURE

- Connection Object
- Command Object
- Dataset
- Data Reader Object
- Data Adapter Object
- Concurrency and the Disconnected Data Architecture
- Provider

## DATA SET

- Creating Tables in Dataset
- Data Column
- Data Row
- Data Table
- Updating, Inserting and Modification in Data Table
- Saving Changes into Data Base using
- Working With Command and Connection

## DATAGRIDVIEW & DATA BINDING

- Row State Filter and Sort Property
- Update records via a Datagridview
- Insert records via a Datagridview
- Delete records via a Datagridview

## TRANSACTION

- Introduction of Transaction (ACID)
- Transaction Class
- Method and Property
- Commit and Rollback

**Project work is after the completion of the training**

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