

# **.Net**

## **(Core .Net)**

### **Introduction to .NET**

- Introduction of Language
- Introduction of Web Application
- Platform Dependence , Independence & Portability
- Introduction of .NET Framework
- Introduction of Compiler & MSIL
- Introduction of CLR
- Introduction of CLS, CTS, CLI

### **OOPs Implementation**

- Encapsulation, Abstraction, Class & object
- Relation b/w objects and reference variables
- Method Overloading & Types of Methods
- Description of Memory blocks: Stacks, Heap & Class Area
- Constructors and Destructor & Garbage Collection
- Using Scope & Dispose Method
- Usage of this keyword
- Static Data members, Constructors & methods
- Relation & Implementing Has-A relation
- Implementing Is-A relation using Inheritance
- Method Overriding & Hiding
- Usage of Base keyword
- Static & Dynamic binding
- Runtime polymorphism and generalization
- Abstract classes & methods
- Interfaces and Role based Inheritance
- Usage of sealed, partial, out, ref, pram keyword
- Namespace
- Assembly & GAC
- Property & Indexer
- Windows Application
- Delegates & Event
- Event Handling
- Windows App. Component.
- Object class and its role

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## String Handling

- String class & concept of Immutability
- Pool of String Constants & its use
- Common String operations
- Use of String Builder

## Exception Handling

- Difference b/w exception and error
- Exception Handling & Robustness
- Common Exceptions and Errors
- Try and catch block
- Exception handlers
- throw keyword and its usage
- Role of finally
- Exception Class Methods & properties
- Creating User defined Exceptions

## Multithreading in .NET

- Multitasking and Multithreading
- Process & thread
- States of Thread
- Thread based execution model of .NET Applications
- Implementing User threads
- Thread synchronization
- Inter Thread communication
- Thread Interrupting
- Daemon Threads and their use

## Input Output Streams

- Streams & their advantages over conventional input output
- Reading & writing data byte by byte, line by line, and in one go.
- Redirecting Standard input & output streams
- Serialization & Deserialization
- Serialization Formatter
- Xml Formatter
- Binary Formatter
- Soap Formatter

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- Json Formatter
- File class and File System Interaction
- Zip & Unzip Files

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