# ***Syllabus of .Net Course( C# & ASP) for 4 month***

1. An Introduction to C#
   - What is .NET?
   - What is the CLR?
   - The FCL
   - Primitive Types
   - Namespaces
   - Statements and Expressions
   - Operators
2. Classes and Objects
   - Constructors
   - Reference Types
   - Object Oriented Programming
   - Inheritance
   - Access Modifiers
   - Abstract Classes
   - Virtual Members
   - Static Classes
   - Sealed Classes
   - Partial Classes
3. C# - Types
   - Reference Types
   - Value Types
   - The struct
   - Testing Reference Types
   - Testing Value Types
   - Passing Parameters
   - Strings
   - Boxing
   - The enum
   - Defining Types
   - Interfaces
   - Arrays
   - Assemblies
4. C# - Events, Properties, and Methods
   - Methods
   - Method Overloading
   - Fields
   - Properties
   - Events
   - Events - Delegates
   - Events - Subscribing
   - Events - Publishing
   - Indexers

- Operator Overloading
- Conversion Operators

5. C# - Flow Control and Exceptions
   - Branching
   - Switching
   - Looping
   - Using foreach
   - Jumping
   - Returning and Yielding
   - Throwing Exceptions
   - Built-in Exceptions
   - Handling Exceptions
   - Chaining Catch Blocks
   - Finally
   - Re-throwing Exceptions
   - Custom Exceptions
6. C# and the CLR
   - Garbage Collection
   - Threads
   - Async
   - Parallel
   - Reflection
   - Attributes
   - Custom Attributes
   - COM Interop
   - PInvoke
7. C# and Generics
   - Why Generics?
   - Building Collections Without Generics
   - Generic Collections
   - Generic Parameters
   - Generic Constraints
   - Generic Methods
   - The default Keyword
   - Generic Interfaces
   - Generic Delegates
   - Variance
8. C# and LINQ
   - Extension Methods
   - Extensions and Lambdas
   - Lambdas and Funcs
   - Funcs and Expressions
9. C# and the DLR
   - Why Dynamic?
   - Using Dynamic Types
   - Excel Automation
   - The DLR
   - ExpandoObject

- DynamicObject
- Calling Ruby

10. Object Oriented Programming with C#
    - Primitive Procedural Preoccupations
    - The Big Encapsulation
    - Little Abstractions
    - The Inheritance Check
    - A Clean Interface
    - Directional Dependencies
11. Functional Programming with C#
    - Prime Abstraction
    - A Higher Calling
    - Lazy Code
    - Timing and Retries
    - Partial Application and Currying
    - Asynch and Parallel
    - Multithreding
12. Exploring the .NET Framework
    - File I/O
    - Resource management with try/finally/using
    - Using XML serialization
    - Introducing assembly resolution
    - Deploying dependent assembly probing
    - Using a config file to control probing
    - ArrayList
    - Hashtable
    - SortedList
    - Stack and Queue
13. Windows Form
    - Introduction to Windows Form
    - Form Controls
    - User Define Controls
14. ADO.NET
    - Connected Architecture
    - Disconnected Architecture
    - Working with Transaction
15. Windows Presentation Foundation(WPF)
    - Windows Application using WPF
    - Data Binding
    - Data Template
    - Styles
    - Commands
16. ASP.NET
    - Web Application using ASP.NET
    - ASP.NET Architecture
    - Control-based Programming
    - User Interface Elements
    - Deployment

- Web Sites, Applications, and Virtual Directories in IIS
- ASP.NET Diagnostics and Health Monitoring

17. ASP.NET Working With Data
    - Data Binding
    - State Management
    - Validation
    - Caching
18. ASP.NET 3.5 Security
    - IIS 6 & IIS7 URL Authorization
    - Forms authentication
    - Role-based authorization
    - Trimming site maps with roles
    - Config file encryption
    - ASP.NET Membership
    - Resources and Internationalization
19. ASP.NET 3.5 Advanced Topics
    - HTTP Pipeline
    - Custom Controls
    - Web Parts
    - Web Services
20. ASP.NET AJAX
    - ASP.NET Ajax Introduction
    - ASP.NET Ajax Server Controls
    - ASP.NET Ajax Server Data
    - ASP.NET Ajax Client-side Library
    - ASP.NET Ajax Control Toolkit
21. ASP.NET MVC
    - Web Application using MVC Pattern
    - Razor View
    - Controller
    - Model
22. Entity Framework
    - Introducing the Entity Framework
    - Code First Approach
23. Windows Communication Foundation(WCF)
    - WCF Configuration
    - Hosting WCF Services in Windows Services
    - Hosting WCF Services in IIS
    - Building RESTful services with WCF
24. Windows Workflow Foundation(WF)
    - Introducing Windows Workflow Foundation
    - Programming workflows in WF
    - Writing custom activites in WF