Course Name : .NET Technologies Using C#

Course Type: DSE   Course Credits: 3+ 1 credits

Course objectives:

To get familiarize with Microsoft.Net, C# and ASP.NET technologies, as well as working with variables, data types, standard programming skills & Windows form.

Learning outcomes:

At the end of this course students will be able to
1. Understand the concept of .Net Framework and C# language fundamentals.
 2. Evaluate C# OOPs concept and the .NET framework namespace contents.
 3. Develop the console and GUI applications using C# .Net
 4. Understanding of c# assembly, thread, app domain, serialization and Remoting concept
 5. Set up various navigation techniques for integrating web pages using ASP.NET Controls within the site.
 6. Create the dynamic web page using ASP.NET Controls which interact with databases.
 7. Understand working of XML with web application.

Unit I

Understanding .NET, the .NET framework, Common language runtime, common type system, Evolution of C#, characteristics, difference from C++ and java, Visual studio.NET overview, Overview of C#,syntax,command line arguments, Literals, variables and data types, Operators and expressions, Decision making and branching, Loops in C#

Unit II

Methods in C#, pass by value, pass by reference, handling arrays, manipulating strings-String methods, mutable strings, Structures and enumerations,
Basic OOPs concepts: Inheritance, Polymorphism and Abstraction
 Operator overloading-Overloading Unary and Binary operators. Delegates and events, Managing errors and exceptions, Using try and catch, using finally statements, Multithreading in C#, scheduling a thread, Thread synchronization

Unit III
Basics of Collections, Generics and LINQ
Overview of ADO.NET and its Architecture, Data Readers and Data Adapters, Dataset, Data Tables, and Data Views , Working with SQL Server databases

Unit IV

Windows and Web application development in .NET, Understanding Visual Studio,C# IDE, Basic Window Controls: Text Box, Label, Check Box, List Box, Checked List Box, Radio Buttons, Buttons, Tree View and List View.
Master Pages, Themes, and Skins, Data Binding and Web Controls: GridView, FormView, etc.
State Management: Sessions, Cookies, and ViewState

 Recommended Books

1) ASP. Net 4.5, Covers C# & VB, Kogent Learning, McGraw Hill Edu.
2) C#4.0: The Complete Reference, H. Scheldt, Prentice Hall
3) ASP. Net: The Complete Reference, Matthew Macdonald,Mcgraw Hill Edu

4) Programming in C#: A Primer, E. Balagurusamy, McGraw Hill Edu

Course Name: Lab Course on .NET Technologies

List of Practical
- Write a program to C# to find the smallest single digit factor for a given value.
- Write a program in C# to print a number if it is prime; otherwise display the largest factor of that number.
- Write a program in C# to find the magnitude of a number.
- Write a C# program for addition and multiplication of two matrices.
- Write a C# program to display the digits of an integer in words.
- Write a C# program to which reads a set of strings into the rows a two dimensional array and then prints the string having more number of vowels.
- Write a C# programs to demonstrate the concepts of Structures and Enumerations.
- Write a C# programs to demonstrate the concepts of Constructors and Inheritance.
- Write a C# programs to demonstrate the concepts of Polymorphism.
- Write a C# programs to demonstrate the concepts of Delegates.
- Write a C# programs to demonstrate the concepts of Interfaces
- Write a C# programs to demonstrate the concepts of operator overloading (unary and binary operators)
- Write a C# program to implement the concept of threading, multi-threading.
- Write a C# programs to demonstrate the concepts of try, catch and finally statements for handling exceptions
- Write a C# programs to demonstrate the concepts of Label, Text Box , Check Box, List Box and Button controls.
- Mini project using .NET technologies concepts.