

Year: B. Tech III (Semester VI)

Subject Name: DotNet Technology
Type of course: Professional Elective course
Prerequisite: Object Oriented Programming

Subject Code: BTIT14606

Teaching and Examination Scheme:

Teaching Scheme				Theory Marks			Practical Marks		Total
L	T	P	C	TEE	CA1	CA2	TEP	CA3	
3	0	2	4	60	25	15	30	20	150

CA1: Continuous Assessment (assignments / projects / open book tests / closed book tests) CA2: Sincerity in attending classes / class tests / timely submissions of assignments / self-learning attitude / solving advanced problems TEE: Term End Examination TEP: Term End Practical Exam (Performance and viva on practical skills learned in course) CA3: Regular submission of Lab work / Quality of work submitted / Active participation in lab sessions / viva on practical skills learned in course.

Contents:

Sr. No.	Contents	Total Hrs
1.	Introduction to .NET Framework .NET framework, Microsoft Intermediate Language, Common Language Runtime, Namespaces, Common Language Implementation, Garbage Collection	04
2.	C# Basics Constructor and Destructor, Function and Operator Overloading, Inheritance, Modifiers - Property and Indexers, Create and use Console Applications, Generating Console Output, Processing Console Input	05
3.	C#.NET C# Features, Creating C#.NET Projects, Classes and Inheritance, Exploring the Base Class Library, Debugging and Error Handling, Data Types, String Manipulation ,Collections	06
4.	ADO.NET ADO.NET vs. classic ADO, Benefits of ADO.NET, Datasets, Data Binding: Introducing Data Source Controls , Reading and Write Data Using the SqlDataSource Control	07
5.	Windows Forms and Controls	06

	The Windows Forms Model, Creating Windows Forms, Forms Properties and Events, Windows Form Controls, Menus, Dialogs	
6.	ASP.NET Introduction to ASP.NET, HTML and Rich Server Controls, Overview of ASP.NET Validation Controls, Using the Simple Validations, Using the Complex Validators, Accessing Data using ADO.NET	06
7.	Managing State Preserving State in Web Applications, Page-Level State, Cookies, Session State ,Storing Objects in Session State, Configuring Session State, Storing Session State in SQL Server, Using Cookieless Session IDs, Application State Overview of List-Bound Controls, GridView Control	07
8.	Creating and Consuming Web Services The Motivation for XML Web Services, Creating an XML Web Service with Visual Studio, Designing XML Web Services, Creating Web Service Consumers	04

Suggested Specification table with Marks (Theory): (For B. Tech only)

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
15	15	15	10	--	5

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (Revised Bloom's Taxonomy)

Reference Books:

Sr No.	Title of book /article	Author(s)	Publisher and details like ISBN
1	Professional C# .Net	Christian Nagel	Wrox
2	ASP.NET Complete Reference	Matthew Macdonald and Robert Standefer	TMH
3	C# The Basics	Vijay Mukhi	BPB

Note: Students should refer to the latest editions of books

Course Outcomes (CO):

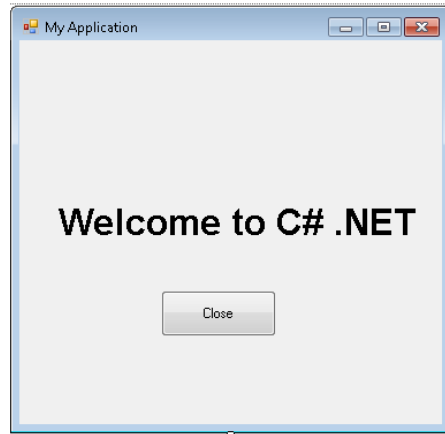
Sr. No.	CO statements	Marks % weightage
CO-1	Understand the concept of .NET framework and its basic notions	15%
CO-2	State the functionalities of C# by creating-debugging applications and using ADO.NET for binding the data	20%
CO-3	Use the Windows form model for creating the forms and using various form controls, properties and methods	20%
CO-4	Develop applications using ASP.NET using different controls and preserving states using various state management techniques	30%
CO-5	Describe the importance of creating and using XML web services	15%

List of Open learning website:

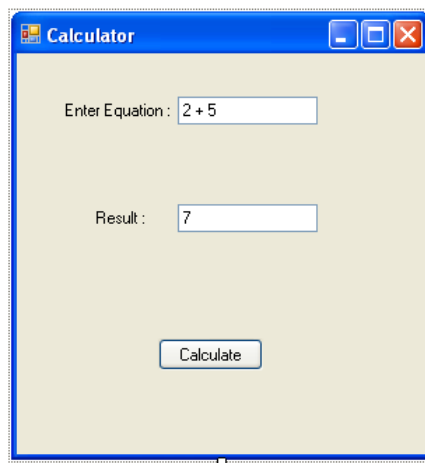
- www.c-sharpcorner.com
- www.csharp-station.com/Tutorial.aspx
- <https://www.tutorialspoint.com/asp.net/index.htm>
- https://www.w3schools.com/asp/asp_introduction.asp
- <https://www.javatpoint.com/net-framework>

List of Experiments:

1. Develop an Application that, when executed, displays the window shown in fig. below. The Application should be terminated when the user clicks the button Close. Name this project as “My Application”.



2. Develop a console application to display Fibonacci Series. Take first two numbers from the user.
3. Develop a Calculator in C#.NET windows application which includes following operations:
 - Addition
 - Subtraction
 - Multiplication
 - Division



4. Perform all String Manipulation Functions using C#.
5. Develop the application that consists of the menu system of Notepad. When the user choose any menu-command, the only a message-box should appear on the screen indicating that the menu-

command is clicked. For example, if the user chooses File | Open, then a message-box should appear on the screen with the message: “You did choose File | Open”.

6. Write program which used to change case of textbox1 to the various case as defined. Convert string into another case as selected by user.



String Case Conversion Practical

Enter String:

Answer:

Uppercase
 Lowercase
 Titlecase / Propercase
 Togglecase

Example

Input: inDia iS greAt

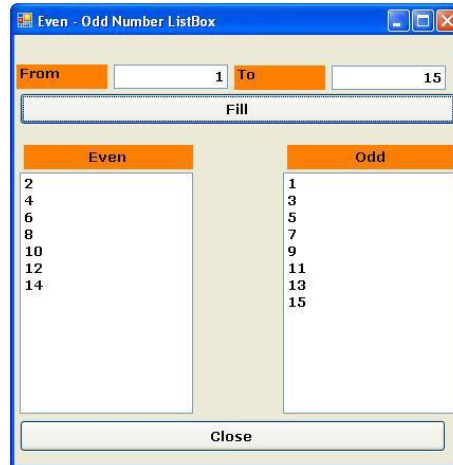
Uppercase: INDIA IS GREAT

Lowercase: india is great

Propercase: India Is Great

Togglecase: iNDIA Is GREaT

7. Write a program which used to add/print even-odd numbers into two different list boxes from user define range of values.



8. Create a web application in ASP.NET that displays your college information on the page. The page contains a button that, when clicked, asks for a confirmation for closing the web page. Pressing yes closes the web page and pressing cancel does nothing.
9. Create an ASP.NET web application that takes multiline input comments from the user. When the comments change, they are to be displayed on a label. (Do not use any Submit buttons)
10. Design a web application that allows users to select their favorite sports as well as their favorite color using CheckBoxList and RadioButton controls. Display all the selected options on a label by clicking on a Link button.
11. Create a registration form that takes user data like first name, last name, user name, password, gender, age, address etc as input. Apply validations so that users cannot leave any field empty and age should be between 18 to 30 only.
12. Create a web form for a firm that accepts user inputs for date of joining, salary, date of confirmation and post. Put appropriate validations to allow for proper joining and confirmation dates. Also, salary should be in proper currency format. If the salary is less than 400 USD, display the post of a user as a junior programmer in a label.
13. Create a web application that takes user's first name, Last name, user ID, Date of birth (using calendar control), city (list box), state(combo box), country (combo box), hobbies (check box), favorite sports (checkbox), gender (radio button) as input. Insert all values in a database. Allow user to update or delete the information. Search the record for particular user using the user ID.