Practical –IV (Lab Based on Dot NET)

Slot No.	Title of Experiment/ Practical
	1. C# Language Basics
1	a. Write a C# program to read a string from the user and create a new string from this string by shuffling the positions of the first and last characters. b. Write a C# program to read 'n' digit integer (for ex. 123, 1234, 12345 etc) and print the sum of all digits.
2	a. Write a program to check whether the number is Palindrome or not (Using Recursion and without using Recursion). b. Write a C# program that read number from the user and calculate square root. Handle the exception if number is negative.
	2. Delegates & Exceptional Handling (Practice programs-Optional)
3	Implement 2 tier exception handling. a. Create class library MyOperations having following functions Write a MyCustomException class which has Error code and error message. MyOperations Class library has functions which captures exceptions like DivideByZeroException and IndexOutOfRangeException exception. Every time an exception is caught, instance of MyCustomException is created with user defined error codes and error messages. b. Write console-based application to invoke MyOperations class functionality. In case of exceptions, print custom exception details with Error code and Error description.
4	Write a program to demonstrate College fest event handling. • Write a form-based application accepting number of people visiting fest • Implement college as event publisher publishing CollegeFest as event • Decorators and caterers are interests in handing this event. o Catering charges per plate are Rs200. o Basic decoration expenses are basic Rs10000 plus 10rs per student. • Display total catering and decoration bill as event response.
	3. Object Oriented Programming: Inheritance, Abstract classes and interfaces
5	Write a console-based program • To implement OOPS concept like virtual, override and new concept. • The class may have public, private and static constructor. • Implementing any interface is mandatory

	Note: Implement any one of the programs such as –Employee class, Person Class etc given in teaching session and shared on group
4. Windows Form Application Development ((Use Appropriate controls and event handlers)	
6	a. Create a Form for the T-Shirt Ordering Calculator: • Allow user to enter in a number of T-shirts to buy • Allow user to choose Small (Rs. 125) , Medium (Rs. 175) or Large (Rs. 250) • Allow user to enter in a promocode of "TRUEBLUE" for a 10% discount • Apply 9% GST on final order price • Display Final Price b. Implement a Simple Calculator
7	a. Create an UI for Railway Reservation (Booking) Form b. Create UI for Hospital OPD Registration Form
5. File Handling Concepts	
8	a. Write a program to read and write and append the text file contents. b. Write a program to read and write contents of binary file. c. Write program to demonstrate usage of DirectoryInfo and FileInfo classes to get the file and directory information from the given path.
6. XML	
9	a. Write a program to o Read all xml nodes o Read single xml node o Insert new XML node o Update the xml file with the newly inserted node.
7. Working with Databases (CRUD operations)	
10	a. Write a program to perform Create, Update, and Delete operations on Microsoft SQL Server Database using ADO.Net classes.
8. LINQ	
11	a. Write a program to demonstrate LINQ to array. b. Write a program to demonstrate LINQ to XML. c. Write a program to demonstrate LINQ to SQL. d. Write a program to demonstrate LINQ to collection.