

MC321 MIDDLE WARE TECHNOLOGIES LAB**Objective of the Course:**

These lab experiments are designed to make various software components or applications to connect with each other. This lab offers experiments on C#, CORBA, ORB lets, ADO.NET. After the successful course completion students will be able to call Java Object service from remote places, and get familiar with ADO.NET to connect data base using .NET and access advanced web services using SOAP protocol.

Communication: Create a server that accepts the requests from client and client displays the server system information

File transfer: Create a server that asks for a password, then opens a file and sends the file over the network connection. Create a client that connects to this server, gives the appropriate password, then captures and saves the file.

Calculator: Create a remote server that implements a calculator with basic functionalities like addition, subtraction, division, multiplication and client, which uses the remote calculator.

Stockmarket: Create a remote stock server that accepts the company name and gives the share value. Stock client that retrieves the company share value and displays by giving the company name.

Phone book server: Create a remote phone book server that maintains names and phone numbers. Phone book client should provide a user interface that allows the user to scroll through entries, add a new entry, modify an existing entry and delete an existing entry. The client and the server should provide proper error handling.

Working with callbacks and delegates in C#: Demonstrates the use of delegates, callbacks, and synchronous and asynchronous method invocation, including how Microsoft .NET Framework classes provide explicit asynchronous support using the BeginXXXX and EndXXXX naming conventions and how you can make use of this support in your own code.

Code access security with C#: Demonstrates the use of .NET Framework Code Access Security, in which code can have permissions independent of the person executing the code.

Creating a COM+ component with C#: Demonstrates how to create a COM+ component, that takes advantage of Transaction management service within COM+, then assign a strong name to the assembly, register the assembly in the Global Assembly Cache, and register the component with COM+.

Creating a Windows Service with C#: Demonstrates how to create a Microsoft Windows Service that uses a File System Watcher object to monitor a specific directory for changes in files.

Read and Write Images to a SQL Server Database with C#: Demonstrates how to upload images into SQL Server by using standard HTML upload methods and then insert each image as a byte array into SQL Server.

Partitioning an Application into Multiple Assemblies with C#: Understand why it can be beneficial to create separate modules for an application download, and then demonstrates how to do so with C#.

Using Reflection in C#: Demonstrate how to gather information on various types included in any assembly by using the System.Reflection namespace and some main .NET base classes.

Sending Mail with SmtMail and C#: Uses a simple Web form to demonstrate how to use the SmtMail class in the .NET Framework.

Perform String Manipulation with the String Builder and String Classes and C#: Demonstrates some basic string manipulation using both the String Builder and String classes. Reading and Writing XML Documents with the Xml Text Reader and Xml Text Writer Class and C#: Demonstrate how to retrieve information from an existing XML document and how to create a new XML document

Text Books:

1. Client/Server programming with Java and CORBA Robert Orfali and DanHarkey, John Wiley & Sons, SPD 2nd Edition.
2. Java Programming with CORBA 3rd Edition, G. Brose, A Vogel and K. Duddy, Wiley-dreamtech, India John wiley and sons.

Reference Books:

1. C# and the .NET Platform Andrew Troelsen, Apress Wiley-dreamtech, India Pvt.Ltd.;