

Lab	Type	Practical			
1		<p><b><u>To implement concept of Class and Object, Constructors, Inheritance</u></b></p> <ol style="list-style-type: none"> <li>Write a program to create a class named <b>Candidate</b> with ID, Name, Age, Weight and Height as data members &amp; also create a member functions like GetCandidateDetails() and DisplayCandidateDetails().</li> <li>Write a program to create a class <b>Staff</b> having data members as Name, Department, Designation, Experience &amp; Salary. Accept this data for 5 different staffs and display only names &amp; salary of those staff who are HOD.</li> <li>Write a program to Create a class <b>Bank_Account</b> with Account_No, Email, User_Name, Account_Type and Account_Balance as data members. Also create a Member function GetAccountDetails() &amp; DisplayAccountDetails().</li> <li>Write a program with following specifications: Class Name: <b>Student</b> Data Members: Enrollment_No, Student_Name, Semester, CPI and SPI Get Students Details using constructor and DisplayStudentDetails() using member function.</li> <li>Write a program to calculate area of a Rectangle using constructor.</li> <li>Write a program for implementing single inheritance which creates one class <b>Account_Details</b> for getting account information and another class <b>Interest</b> for calculating and displaying total interest from the data inserted from account details.</li> <li>Write a program to Define a class <b>Salary</b> which will contain member variable Basic, TA, DA, HRA. Write a program using Constructor with default values for DA and HRA and calculate the salary of employee.</li> <li>Write a program to Define a class <b>Distance</b> have data members dist1, dist2, dist3. Initialize the two data members using constructor and store their addition in third data member using function and display addition.</li> <li>Create a class <b>Furniture</b> with material ,price as data members. Create another class <b>Table</b> with Height , surface_area as data members. Write a program to implement single inheritance.</li> <li>Program to implement the following multiple inheritance using interface</li> </ol> <table border="1"> <tr> <td>Interface: Gross Method- Gross_sal()</td><td>Class : Salary Data Members - HRA, TA,DA Methods - Disp_sal()</td><td>Class : Employee Data Members - Name Methods - basic_sal()</td></tr> </table>	Interface: Gross Method- Gross_sal()	Class : Salary Data Members - HRA, TA,DA Methods - Disp_sal()	Class : Employee Data Members - Name Methods - basic_sal()
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2		<p><b><u>Implement concept of Exception Handling, Interface, Abstraction, String Functions</u></b></p> <ol style="list-style-type: none"> <li>1. Write a program to Create a divide by zero exception and handle it.</li> <li>2. Write a program that reads 5 numbers from user. Demonstrate concept of IndexOutOfRangeException Exception.</li> <li>3. Write a program to create an <b>abstract class Sum</b> having abstract methods SumOfTwo(int a, int b) and SumOfThree(int a, int b,int c). Create another class <b>Calculate</b> which extends the abstract class and implements the abstract methods.</li> <li>4. Write a program to create <b>interface Calculate</b>. In this interface we have two member functions Addition() and Subtraction(). Implements this interface in another class named Result.</li> <li>5. Write program showing use of common methods of String class.</li> <li>6. Write a program to Replace lower case characters to upper case and Vice-versa.</li> <li>7. Write a program to create interface named <b>Shape</b>. In this interface, we have three methods Circle(), Triangle() and Square() which calculates area of Circle, Triangle and Square respectively. Implement Shape interface.</li> <li>8. Write a program to accept a number from the user and throw an exception if the number is not an even number.</li> <li>9. Write a program to find the longest word in a string.</li> <li>10. Write a program to change the case of entered character.</li> </ol>
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3		<p><b><u>Write program using Method Overloading, Method Overriding &amp; Delegate</u></b></p> <p><b>A</b> 1. Write a program using method overloading by changing datatype of arguments to perform addition of two integer numbers and two float numbers.</p> <p><b>A</b> 2. Write a program using method overloading by changing number of arguments to calculate area of square and rectangle.</p> <p><b>A</b> 3. Create a class named RBI with calculateInterest() method. Create another classes HDFC, SBI, ICICI which overrides calculateInterest() method.</p> <p><b>B</b> 4. Write a program to return the factorial from the method using delegate.</p> <p><b>B</b> 5. Create a class Hospital with HospitalDetails() method. Create another classes Apollo, Wockhardt, Gokul_Superspeciality which overrides HospitalDetails() method.</p> <p><b>C</b> 6. Write a programs to Find Area of Square, Rectangle and Circle using Method Overloading.</p> <p><b>C</b> 7. Write a program to create a delegate called TrafficDel and a class called TrafficSignal with the following delegate methods.  Public static void Yellow()  {  Console.WriteLine("Yellow Light Signal To Get Ready");  }  Public static void Green()  {  Console.WriteLine("Green Light Signal To Go");  }  Public static void Red()  {  Console.WriteLine("Red Light Signal To Stop");  }  </p> <p><b>C</b> 8. Write a program to create a delegate calculator to demonstrate the example of generic delegate.</p>
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4		<p><b><u>To demonstrate concept of Collection Classes</u></b></p> <p><b>A</b> 1. Create an ArrayList for StudentName and perform following operations:  a. Add() - To Add new student in list  b. Remove() - To Remove Student with specified index  c. RemoveRange() - To Remove student with specified range.  d. Clear() - To clear all the student from the list</p> <p><b>A</b> 2. Create a List for StudentName and perform following operations:  a. Add() - To Add new student in list  b. Remove() - To Remove Student with specified index  c. RemoveRange() - To Remove student with specified range.  d. Clear() - To clear all the student from the list</p> <p><b>B</b> 3. Create a Stack which takes integer values and perform following operations:  a. Push() - To Add new item in stack  b. Pop() - To Remove item from the stack  c. Peek() – To Return the top item from the stack.  d. Contains() - To Checks whether an item exists in the stack or not.  e. Clear() - To clear items from stack</p> <p><b>C</b> 4. Create a Queue which takes integer values and perform following operations:  a. Enqueue() - Adds an item into the queue.  b. Dequeue() - Returns an item from the beginning of the queue and removes it from the queue.  c. Peek() - Returns an first item from the queue without removing it.  d. Contains() - Checks whether an item is in the queue or not  e. Clear() - Removes all the items from the queue</p>
5		<p><b><u>To setup project environment and create a simple calculator</u></b></p> <p><b>A</b> Introduction to IDE, how to create project of .net core, how to add controllers, action methods and views.</p> <p><b>A</b> How to add NuGet package references?</p> <p><b>B</b> Project Creation &amp; View Creations (Home, AboutUs,ContactUs)</p> <p><b>C</b> Create Simple Calculator</p>

6		<b><u>Demonstrate concept of Razor Syntax by displaying student details</u></b>
	A	Prepare a page which displays student details and his/her semester wise SPI in table format.
	B	Prepare semester wise SPI table data in controller file and store it in ViewBag. Display the data to view page using foreach loop.
	C	Print Table of 5 using Razor Syntax.
7		<b><u>Implementation of concept of View, Controllers and Action Methods</u></b>
	A	Prepare employee page which displays employee details in table format. Create employee model class for it and use List collection class object to pass data from controller to view.
	A	Add delete functionality in table page.
	A	Add functionality to insert a record.
	A	Add functionality to update a record.
	B	Update on Specific Fields.
	C	Delete Many Using Multiple.
8		<b><u>Implementation of Routing</u></b>
	A	Create a project and add Home, About, Contact Us views.
	A	Appropriate routing between these pages. Use bootstrap for better design. (use conventional routing)
	B	Add attribute routing in above practical along with optional parameters and apply ignore route templates functionality.
	C	Routing in Personal Website (CV)
9		<b><u>Create Database and prepare stored procedures for Select command</u></b>
	A	Create Database : StudentMaster also Create all tables SelectAll and SelectByPK stored procedures
	B	Create Custom Parameter Procedures
	C	Create Procedures with Null & Compulsory Parameters
10		<b><u>Prepare stored procedure for Insert, Update and Delete command</u></b>
	A	Create all tables Insert, Update and Delete stored procedures
	B	Create Custom Parameter Procedures
	C	Create Procedures with Null & Compulsory Parameters

11	<p><b>A</b></p> <p><b>B</b></p> <p><b>C</b></p>	<p><b><u>Demonstrate concept of layout page</u></b></p> <p>Single page bootstrap theme conversion using View pages and Layout page.</p> <p>Also convert admin theme for the project with required pages. [Use Nice Admin Template]</p> <p>Custom Template Theme Conversion</p>
12	<p><b>A</b></p> <p><b>A</b></p>	<p><b><u>Hands on practice to standard HTML helpers and strongly typed HTML helpers by creating student registration form</u></b></p> <p>Student registration form using Standard html helpers. (StudentName, Branch, Semester, Birthdate, Mobile, Email, Address, City, Hobbies, Gender)</p> <p>Student registration form using Strongly typed html helpers. (StudentName, Branch, Semester, Birthdate, Mobile, Email, Address, City, Hobbies, Gender)</p>
13	<p><b>A</b></p> <p><b>B</b></p>	<p><b><u>Hands on practice to standard HTML helpers and strongly typed HTML helpers along with data annotations.</u></b></p> <p>Employee Add Form using Both Helpers. Add appropriate data annotations.</p> <p>Admission Form using Strongly typed html helpers. Also add appropriate data annotations.</p>
14	<p><b>A</b></p> <p><b>B</b></p> <p><b>C</b></p>	<p><b><u>Perform file upload operation</u></b></p> <p>Perform file upload operation and display the uploaded file.</p> <p>Perform multiple file upload operation and display it.</p> <p>Perform Drag &amp; Drop Multiple file upload.</p>
15	<p><b>A</b></p> <p><b>B</b></p> <p><b>C</b></p>	<p><b><u>Create a project and implement area</u></b></p> <p>Create a new asp.net core project with MVC Template.</p> <p>Create appropriate MVC Areas for Country, State, City, Branch, and Student</p> <p>Create Employee Area &amp; CRUD operations with Routing</p>
16	<p><b>A</b></p> <p><b>B</b></p>	<p><b><u>Create design for view pages</u></b></p> <p>Design List Page &amp; Add/Edit Pages. [For LOC_Country, LOC_State, LOC_City]</p> <p>Design for Student Registration Form CRUD using theme</p>

17	<b>A</b> <b>B</b>	<b><u>Implement attribute routing between view pages</u></b>  Apply Attribute Routing in whole Project Apply Conventional Routing
18	<b>A</b>	<b><u>Database connectivity and Implementation of read operation</u></b>  Create Database connectivity and Display data (All Records) for LOC_CountryList.cshtml, LOC_StateList.cshtml, LOC_CityList.cshtml view pages
19	<b>A</b>	<b><u>Create a model class to implement concept of data annotation</u></b>  Implement data annotation on all the model classes.
20	<b>A</b>	<b><u>Implementation of Delete functionality</u></b>  Implement Delete functionality for LOC_Country, LOC_State, LOC_City with prompt Are you sure you want to delete record?
21	<b>A</b>	<b><u>Perform Server side validation</u></b>  Apply server side validations with proper message.
22	<b>A</b>	<b><u>Implementation of Insert functionality</u></b>  Implement Insert functionality for LOC_Country, LOC_State, LOC_City view pages with required validations
23	<b>A</b>	<b><u>Implementation of Update functionality</u></b>  Implement Update functionality for LOC_Country, LOC_State, LOC_City view pages.
24	<b>A</b>	<b><u>Demonstrate concept of session</u></b>  Implement Session functionality in your project. [Add Login and Sign Up]
25	<b>A</b>	<b><u>Implementation of Search functionality</u></b>  Implement Search functionality for all the list pages

26	A	<p><b><u>Implement functionality to change user profile</u></b></p> <p>Implement functionality by which user can change their profile.</p>
27	A	<p><b><u>Implementation of Cascade dropdown functionality</u></b></p> <p>Implement functionality to fill state wise city using cascade dropdown functionality.</p>
28	A A	<p><b><u>Dashboard design and Export excel functionality</u></b></p> <p>Display Different counts &amp; Statistics using Temporary Table and Temporary variables.</p> <p>Add a button by which user can export table data to excel.</p>
29	A	<p><b><u>Implement functionality to Delete many records using single click</u></b></p> <p>Add checkboxes in table as column. User can delete multiple selected records.</p>
30	A	<p><b><u>Demonstrate concept of URL encryption and decryption</u></b></p> <p>Perform URL Encryption and Decryption using standard encryption decryption algorithm.</p>