Q)Cube of a number;

```
using  System;
public  class  Exercise5
{    public  static  void  Main()
  {      int  i,ctr;
          Console.Write("\n\n");
        Console.Write("Display  the  cube  of  the  number:\n");
        Console.Write("--------------------------------- \n\n");
        Console.Write("Input  number  of  terms  :  ");
        ctr=  Convert.ToInt32(Console.ReadLine());
        for(i=1;i<=ctr;i++)
        {     Console.Write("Number  is  :  {0}  and  cube  of  the  {1}  is  :{2}  \n",i,i,  (i*i*i));
        }
  } }
```

Q) methods for storing state information in asp.net.

ASP.NET provides us with 2 ways to manage the state of an application. It is basically divided into the 2 categories:

Client Side State Management.

Server Side State Management.

Client Side State Management

It is a way in which the information which is being added by the user or the information about the interaction happened between the user and the server is stored on the client's machine or in the page itself. The server resources (e.g. server's memory) is not at all utilized during the process.

This management technique basically makes use of the following:

View State, Hidden Fields, Query String, Cookies, View State:

View State can be used to maintain the State at a page level. The term "Page Level" means that the information is being stored for a specific page and until that specific page is active (i.e. the page which is being currently viewed by the user). Once the user is re-directed or goes to some other page, the information stored in the View State gets lost.

Q)asp.net validation control

RequiredFieldValidator Control

The RequiredFieldValidator control ensures that the required field is not empty. It is generally tied to a text box to force input into the text box.

```
<asp:RequiredFieldValidator ID="rfvcandidate"
  runat="server" ControlToValidate ="ddlcandidate"
  ErrorMessage="Please choose a candidate"
  InitialValue="Please choose a candidate">
  </asp:RequiredFieldValidator>
```

RangeValidator Control

The RangeValidator control verifies that the input value falls within a predetermined range.

```
<asp:RangeValidator ID="rvclass" runat="server" ControlToValidate="txtclass"
  ErrorMessage="Enter your class (6 - 12)" MaximumValue="12"
  MinimumValue="6" Type="Integer">
  </asp:RangeValidator>
```

CompareValidator Control

The CompareValidator control compares a value in one control with a fixed value or a value in another control.

```
<asp:CompareValidator ID="CompareValidator1" runat="server"
  ErrorMessage="CompareValidator">
</asp:CompareValidator>
```

Q)the elements of .net frame work

Components and their Description

(1) Common Language Runtime or CLR

It performs memory management, exception handling, debugging, security checking, thread execution, code execution, code safety, verification, and compilation. The code that is directly managed by the CLR is called the managed code. When the managed code is compiled, the compiler converts the source code into a CPU

independent intermediate language (IL) code. A Just In Time(JIT) compiler compiles the IL code into native code, which is CPU specific.
(2) .Net Framework Class Library
It contains a huge library of reusable types. classes, interfaces, structures, and enumerated values, which are collectively called types.
(3) Common Language Specification
It contains the specifications for the .Net supported languages and implementation of language integration.
(4) Common Type System
It provides guidelines for declaring, using, and managing types at runtime, and cross-language communication.
(5) Metadata and Assemblies
Metadata is the binary information describing the program, which is either stored in a portable executable file (PE) or in the memory. Assembly is a logical unit consisting of the assembly manifest, type metadata, IL code, and a set of resources like image files.
(6) Windows Forms
Windows Forms contain the graphical representation of any window displayed in the application.
(7) ASP.NET and ASP.NET AJAX
ASP.NET is the web development model and AJAX is an extension of ASP.NET for developing and implementing AJAX functionality. ASP.NET AJAX contains the components that allow the developer to update data on a website without a complete reload of the page.
(8) ADO.NET
It is the technology used for working with data and databases. It provides access to data sources like SQL server, OLE DB, XML etc. The ADO.NET allows connection to data sources for retrieving, manipulating, and updating data.

Q)the structure of asp.net web app
Application Structure
The structure of an ASP.NET application consists of a site or virtual directory in IIS and at least one ASP.NET page or web service. Optionally, each ASP.NET application may have:
A single global.asax file, located in the root of the application.
One or more web.config files. There can be only one web.config file per directory or subdirectory in the application.
One or more User Control files bearing the .ascx extension.
One or more class files, either for ASP.NET code-behinds or for assemblies used in your application.
A /bin directory containing .NET assemblies you wish to use in your application. Assemblies in the /bin directory are automatically made available to your application.
ASP.NET Web Applications created in Visual Studio .NET should contain Solution and Project-related files (.sln, .suo, .vbproj, and .csproj, for example), a dynamic

Q)tree view navigation control
The TreeView Control
• The TreeView Control is used for logically displaying the data in a hierarchical structure , similar to Windows explorer. You can use this control when you need to display the navigation menu for displaying the files and folders. You can display an XML document and database records in a tree structure. To work with the TreeView Control at runtime, you can programmatically accessthe TreeView Web server control.
• The TreeView Web server control is used to create tree-based hierarchical structure, set properties, populate nodes, and so on. The TreeView Control consists of the TreeView container and TreeNode properties .There can be multiple nodes in the tree view structure, which can be nested. The TreeNode property has a Text property that displays the text for the node.
• In addition to the Text property, there is also an Expanded property for TreeNode, which is used to expand and collapse the nodes. The default value of this property is False. If you set it to True, the control will be displayed in the expanded view every time it is loaded. You can access the TreeView control directly from the Navigation tab in the Toolbox.
• You can add the Treeview control to your web page simply by either double clicking the TreeView control in the Toolbox or by dragging the control from the Toolbox to the design view of the Dfefault.aspx page, which is the default page of your web site.
• You can also add the TreeView control by adding the following code snippet in the <form> element of your web page