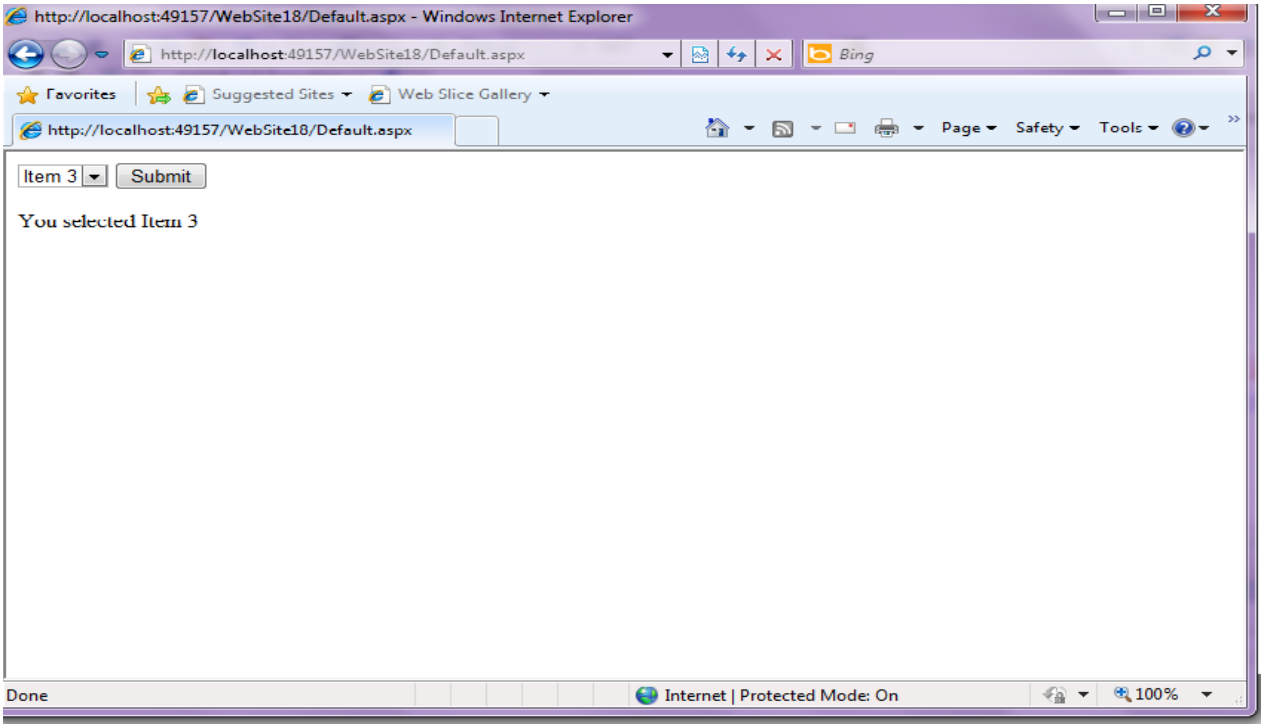
St.Aloysius Institute of Technology Jabalpur

.Net Viva Questions and Answer for BE –IV(CSE,EX,CE) Semester

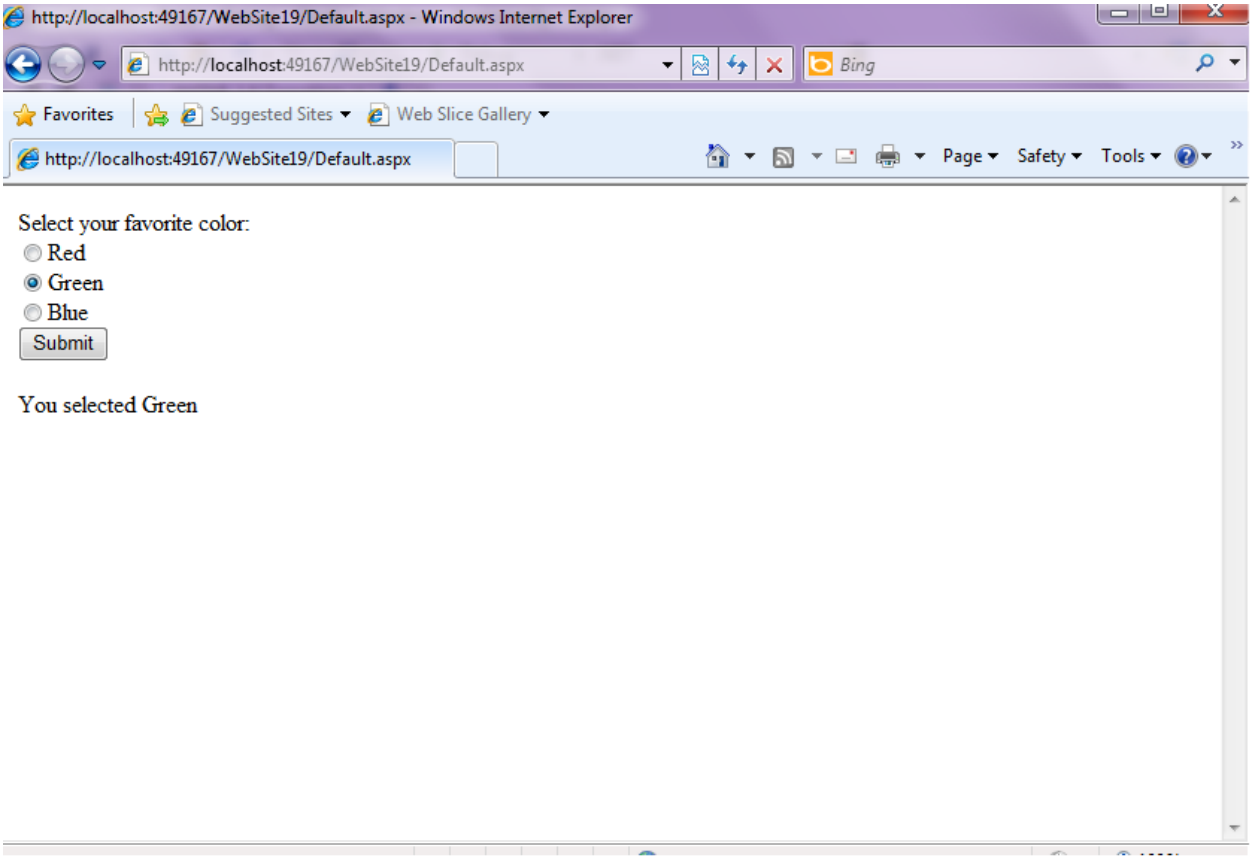
Object) working with page using asp.net

```
<script  runat="server">
Sub submit(sender As Object, e As EventArgs)
   mess.Text="You selected " & drop1.SelectedItem.Text
End Sub
</script>
<html>
<body>
<form runat="server">
<asp:DropDownList id="drop1" runat="server">
<asp:ListItem>Item 1</asp:ListItem>
<asp:ListItem>Item 2</asp:ListItem>
<asp:ListItem>Item 3</asp:ListItem>
<asp:ListItem>Item 4</asp:ListItem>
<asp:ListItem>Item 5</asp:ListItem>
<asp:ListItem>Item 6</asp:ListItem>
</asp:DropDownList>
<asp:Button Text="Submit" OnClick="submit" runat="server"/>
<p><asp:label id="mess" runat="server"/></p>
</form>
</body>
</html>
```


http://localhost:49157/WebSite18/Default.aspx - Windows Internet Explorer
http://localhost:49157/WebSite18/Default.aspx
Bing
Favorites
Suggested Sites
Web Slice Gallery
http://localhost:49157/WebSite18/Default.aspx
Page
Safety
Tools
Item 3
Submit
You selected Item 3
Done
Internet | Protected Mode: On
100%

q)object: working with forms using asp.net

```
<script  runat="server">
Sub submit(Sender As Object, e As EventArgs)
if red.Checked then
   Label1.Text="You selected " & red.Text
elseIf green.Checked then
   Label1.Text="You selected " & green.Text
elseIf blue.Checked then
   Label1.Text="You selected " & blue.Text
end if
End Sub
</script>
<html>
<body>
<form runat="server">
Select your favorite color:
<br />
<asp:RadioButton id="red" Text="Red" Checked="True"
GroupName="colors" runat="server"/>
<br />
<asp:RadioButton id="green" Text="Green"
GroupName="colors" runat="server"/>
<br />
<asp:RadioButton id="blue" Text="Blue"
GroupName="colors" runat="server"/>
<br />
<asp:Button text="Submit" OnClick="submit" runat="server"/>
<p><asp:Label id="Label1" runat="server"/></p>
</form>
</body>
</html>
```

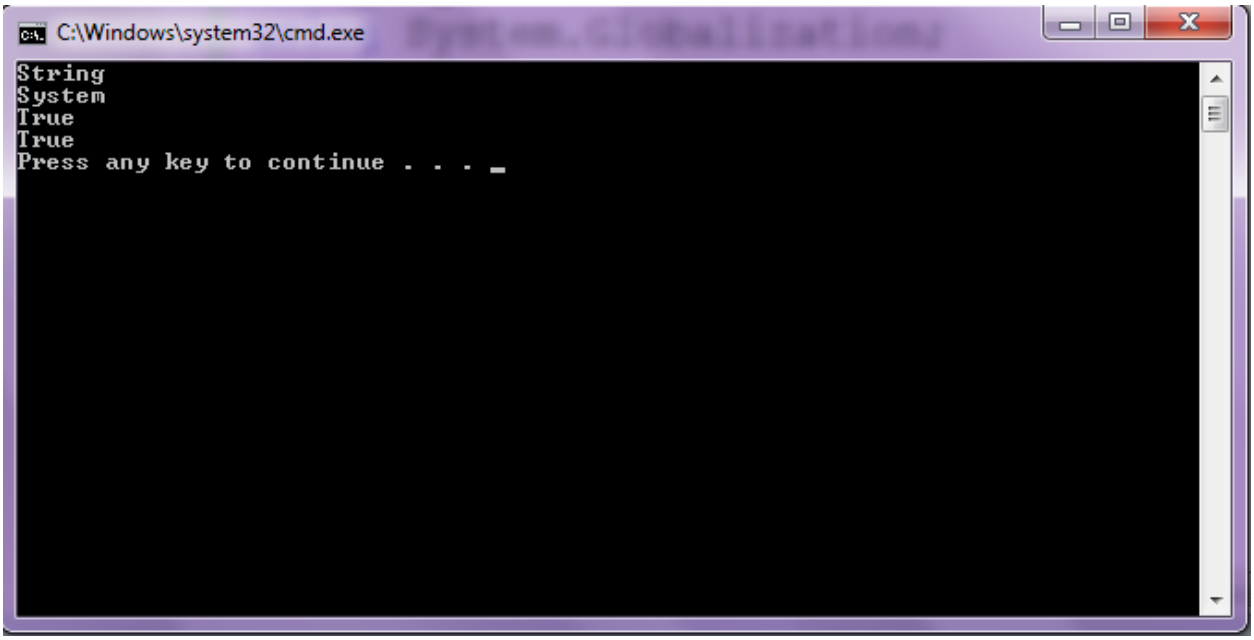

http://localhost:49167/WebSite19/Default.aspx - Windows Internet Explorer
http://localhost:49167/WebSite19/Default.aspx
Bing
Favorites
Suggested Sites
Web Slice Gallery
http://localhost:49167/WebSite19/Default.aspx
Page
Safety
Tools
Select your favorite color:
Red
Green
Blue
Submit
You selected Green

q)Reading and Writing XML documents with XML Textreader/Writer class in C#

```
using System;
using System.Xml;

class MainClass
{
    static void Main(string[] args)
    {

XmlTextWriter writer = new XmlTextWriter("C:\\xmlWriterTest.xml", null);
        writer.WriteStartDocument();

        // Write first element
        writer.WriteStartElement("root");
        writer.WriteStartElement("r", "RECORD", "urn:record");

        // Ends the document.
        writer.WriteEndDocument();

        writer.Close();

        return;
    }
}
```

q)object:using reflection in c#

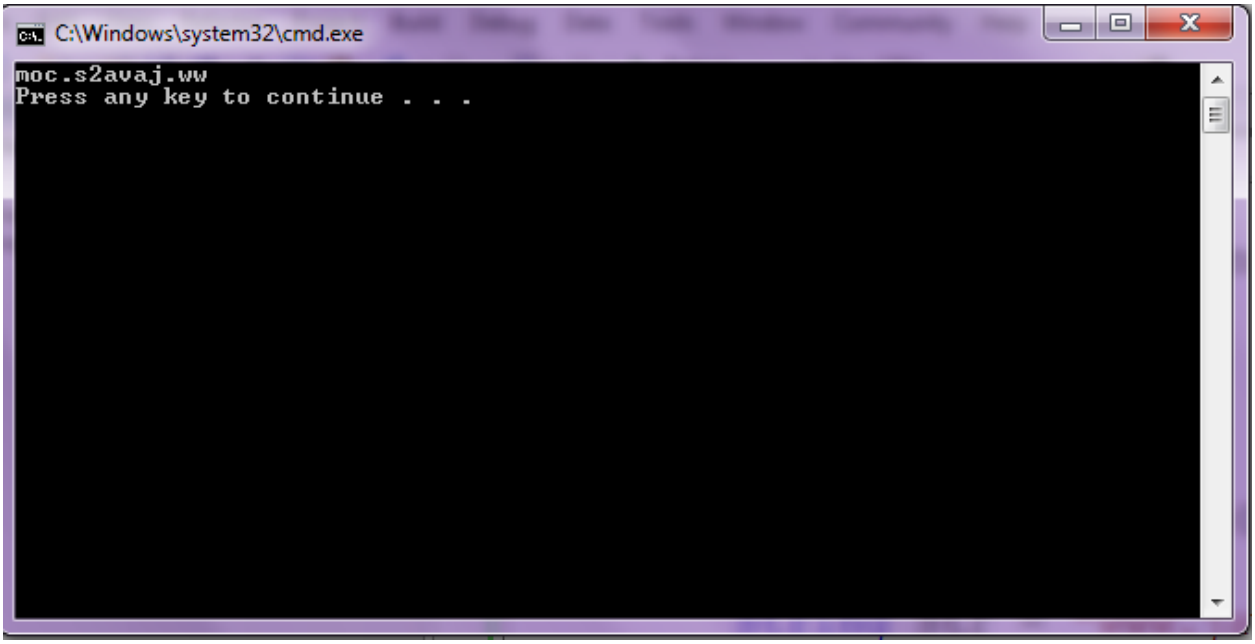
```
using System;
using System.Collections.Generic;
using System.Globalization;
using System.IO;
using System.Text;


public class MainClass
{
    public static void Main()
    {
        string s = "A string";
        Type t = s.GetType();
        Console.WriteLine(t.Name);
        Console.WriteLine(t.Namespace);
        Console.WriteLine(t.IsPublic);
        Console.WriteLine(t == typeof(string));
    }

}
```


C:\Windows\system32\cmd.exe
String
System
True
True
Press any key to continue . . .

q)object performing manipulation using string and string builder class

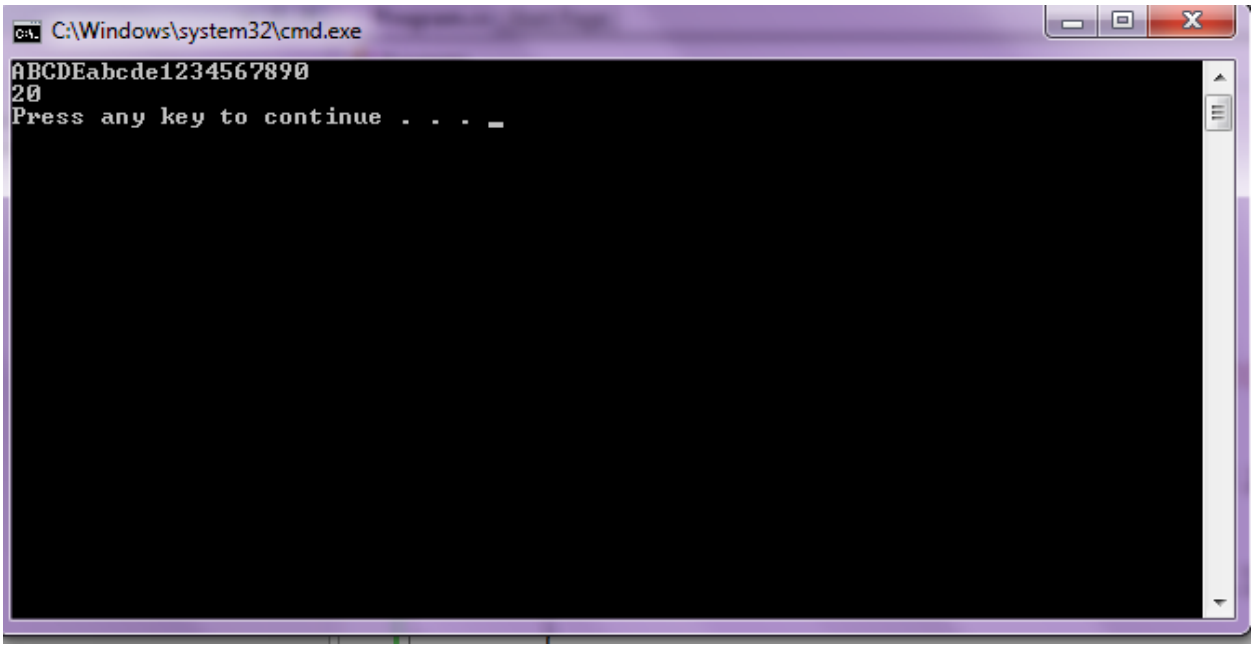
part A

```
using System;
using System.Text;

class MainClass
{
    public static void Main()
    {
        string str = "www.java2s.com";

        StringBuilder revStr = new StringBuilder();

        for (int count = str.Length - 1; count > 0; count--)
        {
            revStr.Append(str[count]);
        }

        Console.WriteLine(revStr);
    }
}
```


C:\Windows\system32\cmd.exe
moc.s2avaj.ww
Press any key to continue . . .

part B

```
using System;

class MainClass {
  public static void Main() {
    string str1 = "ABCDEabcde1234567890";

    Console.WriteLine(str1);

    Console.WriteLine( str1.Length);
  }
}
```


C:\Windows\system32\cmd.exe
ABCDEabcde1234567890
20
Press any key to continue . . .

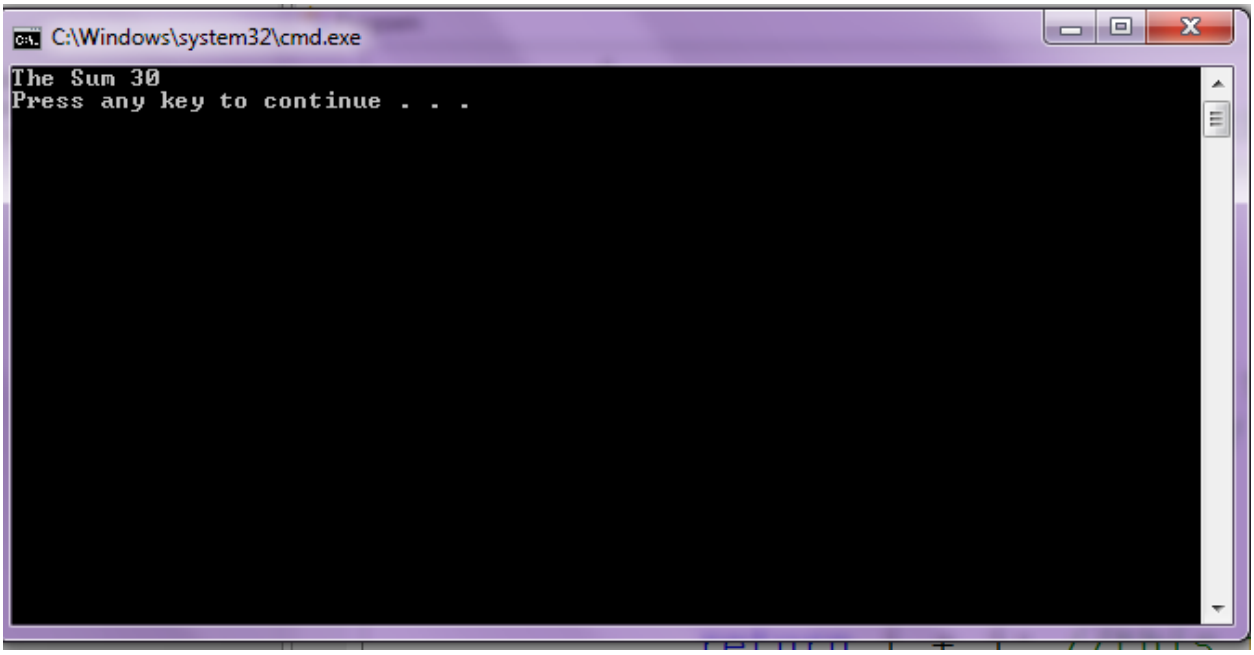
q)object :creating com component using c

```
using System;
namespace CompCS
{
public class csAddComp1
{
private int i=0,j=0;
public int varI
{
get { return i; } //this is property get for varI
set { i=value; } //this is property set for varI
}
public int varJ
{
get { return j; } // this is property get for varJ
set { j=value; } // this is property set for varJ
}
public int Sum()
{
return i+j; //this returns the sum of two variables
}
} //end of class
} //end of namespace
```

Client Program

```
using System;
using CompCS;
class clAddComp1
{
public static void Main()
{
csAddComp1 addComp= new csAddComp1();
addComp.varI=10; //property set for varI
addComp.varJ=20; //property set for varJ
Console.WriteLine("The Sum : {0}",addComp.Sum());
} //end of Main
} // end of Class
```

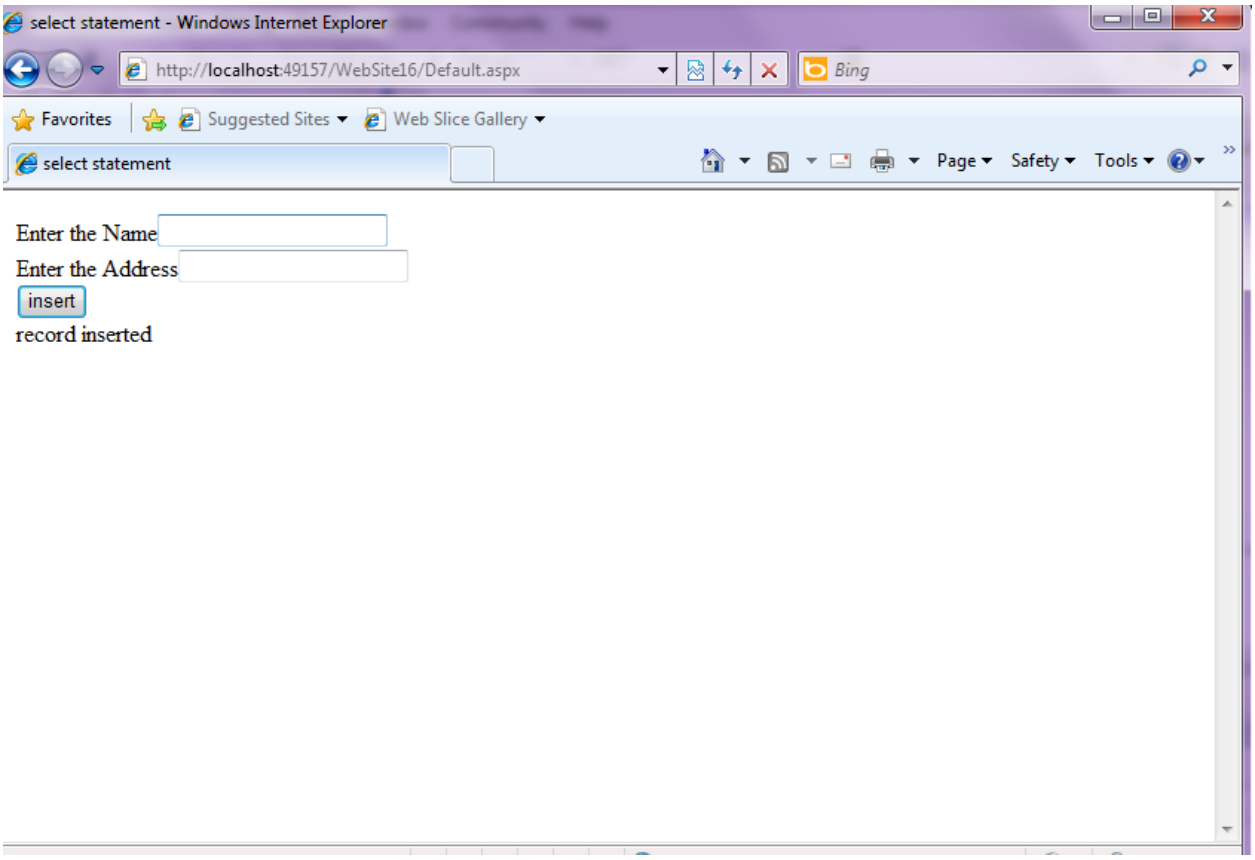
Program Output :



q) object : data source access using ado.net

```
<%@import namespace="System.data.oledb" %>

<script  runat="server">

sub insert1(s as object,e as eventargs)

dim con as oledbconnection

dim com as oledbcommand

con=new oledbconnection("provider=microsoft.jet.oledb.4.0;data source="&
server.mappath("student.mdb"))

con.open()

dim a,b as String

a=t1.text

b=t2.text

com=new oledbcommand("insert into stud values('"& a &"','"& b &"')",con)

com.executenonquery()

        con.Close()

        MsgBox("record is inserted")

        t1.Text = ""

        t2.Text = ""

        t1.Focus()

end sub

</script>

<html>

<head runat="server">

<title>select statement</title>

</head>

<body>

<form id="form1" runat="server">
```

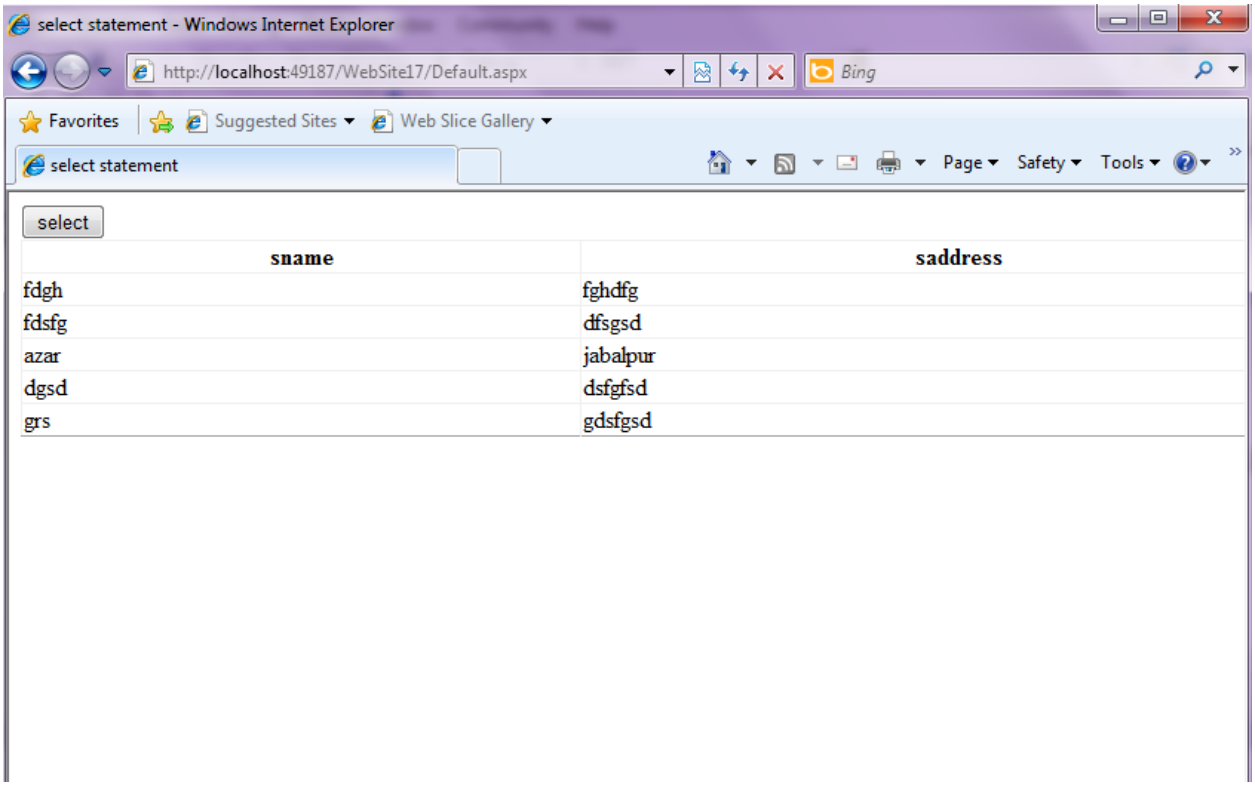
```
Enter the Name<asp:textbox id="t1" runat="server"/><br/>

Enter the Address<asp:textbox id="t2" runat="server"/><br/>

<asp:button id="b1" text="insert" onclick="insert1" runat="server"/><br/>

<asp:label id="lb1" runat="server"/>

</form>

</body>

</html>
```


select statement - Windows Internet Explorer
http://localhost:49157/WebSite16/Default.aspx
Bing
Favorites
Suggested Sites
Web Slice Gallery
select statement
Page
Safety
Tools
Enter the Name
Enter the Address
insert
record inserted

q) object :working with data reader,transaction

```
<%@import namespace="System.data.oledb" %>

<script runat="server">

    Sub select1(ByVal s As Object, ByVal e As EventArgs)

        Dim str, query As String

        Dim con As oledbconnection

        Dim da As oledbdataadapter

        Dim ds As data.dataset

        str = "provider=microsoft.jet.oledb.4.0;data source="&
server.mappath("student.mdb")

        con = New oledbconnection(str)

        query = "select * from stud"

        da = New oledbdataadapter(query, con)

        ds = New data.dataset

        da.fill(ds, str)

        gv1.datasource = ds

        gv1.databind()

    End Sub

</script>

<html>

<head runat="server">

<title>select statement</title>

</head>

<body>

<form id="form1" runat="server">

<asp:button id="b2" text="select" onclick="select1" runat="server"/>
```

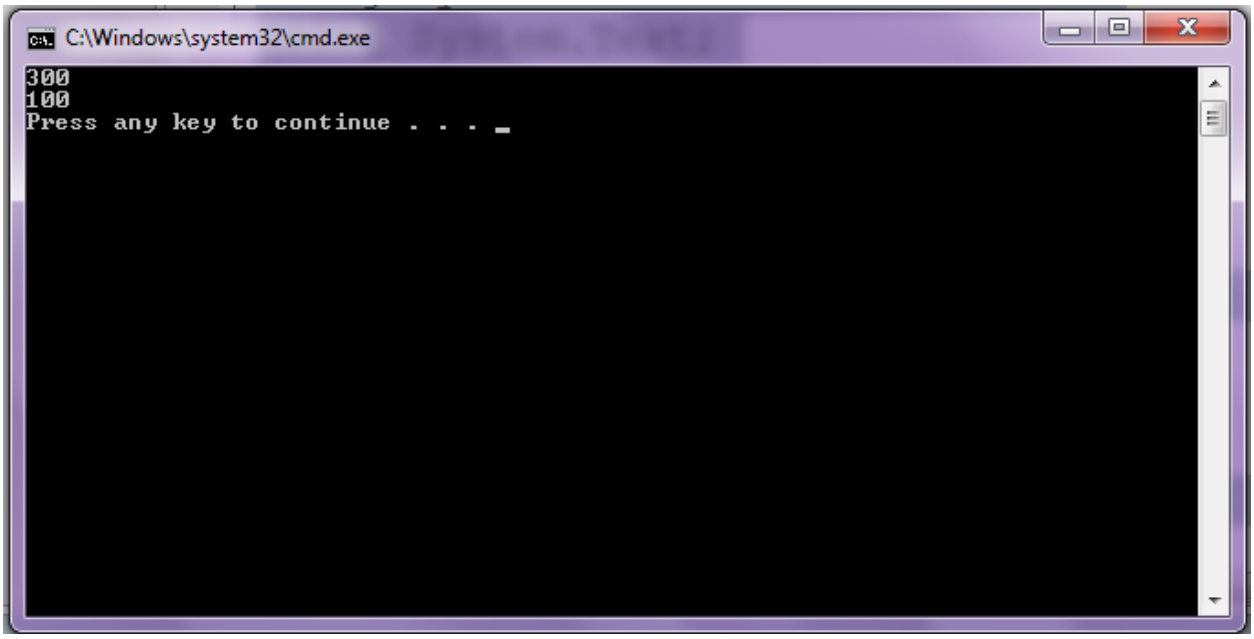
```
<asp:gridview id="gv1" runat="server"/>

</form>

</body>

</html>
```



sname	saddress
fdgh	fghdfg
fdsfg	dfsgsd
azar	jabalpur
dgsd	dsfgfsd
grs	gdsfgsd

q) **write a program in c sharp to implement delegate**

```
using System;
using System.Collections.Generic;
using System.Text;

delegate int arith(int x,int y);
class dem
{
    public static int add(int x,int y)
    {
        return(x+y);
    }
    public static int sub(int x,int y)
    {
        return(x-y);
    }
}
class Program
{
    public static void Main(string[] s)
    {
        arith a1 = new arith(dem.add);
        arith a2 = new arith(dem.sub);

        Console.WriteLine(a1(100, 200));
        Console.WriteLine(a2(200, 100));


    }
}
```


C:\Windows\system32\cmd.exe
300
100
Press any key to continue . . .

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What is .NET?

.NET is a software development platform, similar to Java. At its core is a virtual machine that turns intermediate language (IL) into machine code.

What is an IL?

What is MSIL or CIL, What is JIT?

(IL)Intermediate Language is also known as MSIL (Microsoft Intermediate Language) or CIL(Common Intermediate Language). All .NET source code is compiled to IL. IL is then converted to machine code at the point where the software is installed, or at run-time by a Just-In-Time(JIT) compiler

What is a CLR?

Full form of CLR is Common Language Runtime .All Languages have runtime and it is the responsibility of the runtime to take care of the code execution of the program.

Following are the

responsibilities of CLR

• **Garbage Collection: -** CLR automatically manages memory thus eliminating

memory leaks.

• **Code Access Security**: - CAS grants rights to program depending on the security configuration of the machine. Example the program has rights to edit or create anew file but the security configuration of machine does not allow the program to delete a file..

• **Code Verification**: - It prevents the source code to perform illegal operation such as accessing

invalid memory locations etc.

What is C#?

C# is a new language designed by Microsoft to work with the .NET framework. C# is a simple, modern, object oriented, and type-safe programming language derived from C and C++

What does 'managed' mean in the .NET context?

Managed *code*: The .NET framework provides several core run-time services to the programs that run within it - for example exception handling and security. For these services to work, the code must provide a minimum level of information to the runtime. Such code is called managed code.

Managed *data*: This is data that is allocated and freed by the .NET runtime's garbage collector.

What is reflection?

All .NET compilers produce metadata about the types defined in the modulesthey produce. This metadata is packaged along with the module (modules in turn are packaged together in assemblies), and can be accessed by a mechanism called **reflection**.

What is an assembly?

An assembly is sometimes described as a logical .EXE or .DLL, and can be an *application* (with a main entry point) or a *library*. An assembly consists of one or more files (dlls, exes, html files etc), and represents a group of resources, type definitions, and implementations of those types

What is a delegate?

A strongly typed function pointer

What is boxing?

Encapsulating a copy of a value type in an object**.**

How would you describe encapsulation?

The separation of interface and implementation

What is COM, COM+ and DCOM ?

COM (Component Object Model) A standard that is used to forcommunication between OS and the softwares. COM is used to create reusable software components

What is boxing and unboxing ?

Implicit (manual) conversion of value type to reference type of a variable is known as BOXING, for example integer to object type conversion. Conversion of Boxed type variable back to value type is called as UnBoxing.

How do you inherit from a class in C#?

Place a colon and then the name of the base class. Notice that it's double colon in C++.

What does the keyword virtual mean in the method definition?

The method can be over-ridden.

How's method overriding different from overloading?

When overriding, you change the method behavior for a derived class. Overloading simply involves having a method with the same name within the class.

What's the difference between System.String and System.StringBuilder classes?

System.String is immutable, System.StringBuilder was designed with the purpose of having a mutable string where a variety of operations can be performed.

System.String?

StringBuilder is more efficient in cases where there is a large amount of string manipulation. Strings are immutable,so each time it's being operated on, a new instance is created.

What's an abstract class?

A class that cannot be instantiated. An abstract class is a class that must be inherited and have the methods overridden

What's an interface?

It's an abstract class with public abstract methods all of which must be implemented in the inherited classes

What is the use of JIT ?

JIT (Just - In - Time) is a compiler which converts MSIL code to Native Code (ie.. CPU-specific code that runs on the same computer architecture).

What is the difference between string and String ?

No difference

What is manifest?

It is the metadata that describes the assemblies.

What are class access modifiers ?

Access modifiers are keywords used to specify the declared accessibility of a member or a type.This section introduces the four access modifiers:· Public - Access is not restricted.· Protected - Access is limited to the containing class or types derived from the containing class.· Internal - Access is limited to the current assembly.· Protected inertnal - Access is limited to the current assembly or typesderived · from the containing class.· Private - Access is limited to the containing type

What is namespaces?.

Namespace is a logical naming scheme for group related types.Some class types that logically belong together they can be put into a common namespace.

ADO.NET architecture?

ADO.NET architecture is “Data Provider”. Data Provider provides

access to data source (SQL SERVER, ACCESS, ORACLE).

• Connection

• Command object (This is the responsible object to use stored procedures)

• Data Adapter (This object acts as a bridge between data store and dataset)

• Data reader (This object reads data from data store in forward only mode).

• Dataset object represents disconnected and cached data.

What is difference between dataset and data reader?

Following are some major differences between dataset and data reader:-

• Data Reader provides forward-only and read-only access to data, while the Dataset object can hold more than one table (in other words more than one row set) from

the same data source as well as the relationships between them.

• Dataset is a disconnected architecture while data reader is connected architecture.

• Dataset can persist contents while data reader cannot persist contents, they are

forward only.

What are major difference between classic ADO and ADO.NET?

Following are some major differences between both :-

• In ADO we have recordset and in ADO.NET we have dataset.

• In recordset we can only have one table. If we want to accommodate more than one tables

we need to do inner join and fill the recordset. Dataset can have multiple tables.

• All data persist in XML as compared to classic ADO where data persisted in Binary format

also.

What is the use of connection object?

They are used to connect a data to a Command object.

• An OleDbConnection object is used with an OLE-DB provider

• A SqlConnection object uses Tabular Data Services (TDS) with MS SQL Server

What is the use of command objects?

They are used to connect connection object to Data reader or dataset. Following are the methods

provided by command object:-

• **ExecuteNonQuery: -** Returns an Integer indicating the number of rows affected by the query.

• **ExecuteReader: -** Executes the command defined in the Command Text property

against the connection defined in the Connection property. Returns a "reader" object

that is connected to the resulting row set within the database, allowing the

rows to be retrieved.

• **ExecuteScalar: -** Executes the command defined in the Command Text property against the connection defined in the Connection property. Returns only single value (effectively the first column of the first row of the resulting row set any other returned columns and rows are discarded. It is fast and efficient when only a "singleton" value is required

What is the use of data adapter?

These objects connect one or more Command objects to a Dataset object. They provide logic that would get data from the data store and populates the tables in the Dataset, or pushes the changes in the Dataset back into the data store.

• An OleDbDataAdapter object is used with an OLE-DB provider

• A SqlDataAdapter object uses Tabular Data Services with MS SQL Server.

What are basic methods of Data adapter?

There are three most commonly used methods of Data adapter:-

Fill: - Executes the Select Command to fill the Dataset object with data from the data source. It an also be used to update (refresh) an existing table in a Dataset with changes made to the data in the original data source if there is a primary key in the table in the Dataset.

FillSchema :- Uses the SelectCommand to extract just the schema for a table from the data source, and creates an empty table in the DataSet object with all the corresponding constraints.

Update:- Calls the respective InsertCommand, UpdateCommand, or DeleteCommand for each

inserted, updated,or deleted row in the DataSet so as to update the original data source with the

changes made to the content of the DataSet. This is a little like the UpdateBatch method provided

by the ADO Recordset object, but in the DataSet it can be used to update more than one table.

What is Dataset object?

The Dataset provides the basis for disconnected storage and manipulation of relational data. We

fill it from a data store, work with it while disconnected from that data store, then reconnect and

flush changes back to the data store if required.

What are the various objects in Dataset?

Dataset has a collection of Data Table object within the Tables collection. Each Data Table object

contains a collection of Data Row objects and a collection of Data Column objects. There are also

collections for the primary keys, constraints, and default values used in this table, which is called

as constraint collection, and the parent and child relationships between the tables. Finally, there is a Default View object for each table. This is used to create a Data View object based on the table,so that the data can be searched, filtered, or otherwise manipulated while displaying the data.

What are web services

webservices are the applications that runs on the webserver and communicate with other applications.it uses a series of protocols to respond to different requests

What is ASP.NET?

ASP.NET is a server side scripting technology that enables scripts (embedded in web pages) to be executed by an Internet server.

- ASP.NET is a Microsoft Technology
- ASP stands for Active Server Pages
- ASP.NET is a program that runs inside IIS

What is an ASP.NET File?

- An ASP.NET file is just the same as an HTML file
- An ASP.NET file can contain HTML, XML, and scripts
- Scripts in an ASP.NET file are executed on the server
- An ASP.NET file has the file extension ".aspx"

How Does ASP.NET Work?

- When a browser requests an HTML file, the server returns the file
- When a browser requests an ASP.NET file, IIS passes the request to the ASP.NET engine on the server
- The ASP.NET engine reads the file, line by line, and executes the scripts in the file
- Finally, the ASP.NET file is returned to the browser as plain HTML

What is .NET Framework

The .NET Framework is an environment for building, deploying, and running Web applications and Web Services.

The Microsoft .NET Framework was developed to solve this problem.

.NET Frameworks keywords:

- Easier and quicker programming
- Reduced amount of code
- Declarative programming model
- Richer server control hierarchy with events
- Larger class library
- Better support for development tools

The .NET Framework consists of 3 main parts:

Programming languages:

- C# (Pronounced C sharp)
- Visual Basic (VB .NET)
- J# (Pronounced J sharp)

Server technologies and client technologies:

- ASP .NET (Active Server Pages)
- Windows Forms (Windows desktop solutions)
- Compact Framework (PDA / Mobile solutions)

Development environments:

- Visual Studio .NET (VS .NET)
- Visual Web Developer

ASP.NET - Server Controls

ASP.NET has solved the "spaghetti-code" problem described above with server controls.

Server controls are tags that are understood by the server.

There are three kinds of server controls:

- HTML Server Controls - Traditional HTML tags
- Web Server Controls - New ASP.NET tags
- Validation Server Controls - For input validation