Introduction to server side programming

Q) Differences between client-side scripting and server side scripting (ASP).

Client side scripting	Server side scripting
1. A client side script is not processed at all by the web server, only by the client.	Server-side script are processed completely on the web server.
2. It is the client's responsibility to execute any and all client side scripts	The client does not recieve any code from server-side scripts.
3. It is not self memory	It is self memory.
4. Its can data any in form any form	Its data only in html form
5. Encoding	decoding
6. Information access need to google for google.	localhost type.
7 This is process faster process	This is process slow process.

8.	It extension .html	It extension .asp
9.	It use static web page for designe	It use dynamic web page for designe
10.	Css is possible to be worked by the user	Sss can't be blocked by the user
11.	Css return in language such as Java Script and VB Script	Sss return in language such as PERL, PHP, ASP.net, JAVA etc
12	It's use both language Java Script and VB	Its use only VB script
13.	It is required of security	Its not required of security.

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Q.2. Explain client server model in detail.

Ans In a client-server model, two computers work together to perform a task.

- A client computer requests some needed information from a server computer.
- The server returns this information and the client acts on it.

For Example:- a map at large mall performs the role of the server.

Note:- A web server is a computer that contains all the web pages for a particular web site and has special software installed to send these web page to web browsers that request them.

The client on the Internet, is a web browser. When you visit a static web page through a web browser, the following steps occur:-

1. The client locates the web server specified by part of the URL
2. The client then request the static web page specified by the second part of the URL
3. The web server sends the contents of particular

files to the contents client in html format

4. The client recieves the html sent by the server and senders it for you. the user

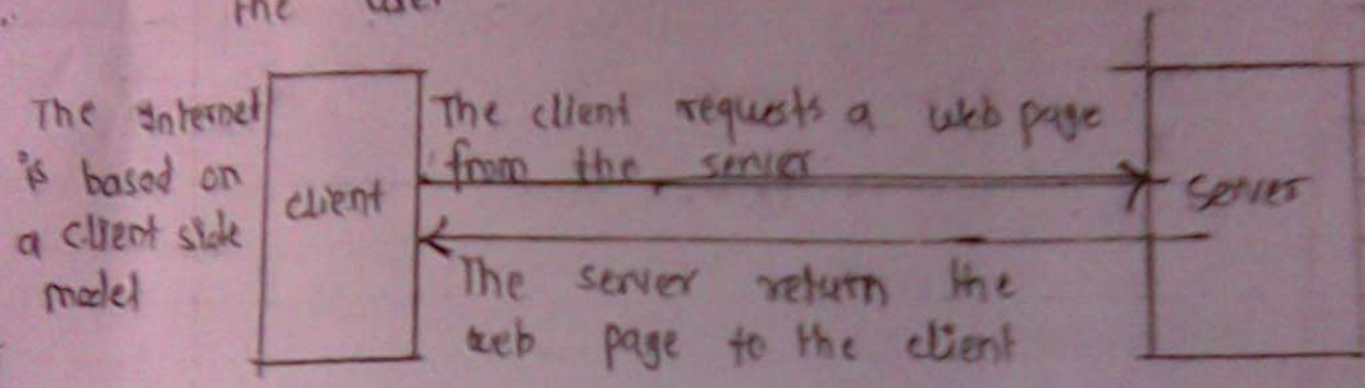


fig:-1 client side model

- Asp page contains a combination of html and programmatic code

- This code, which can be written in many different languages, allows Asp pages to be dynamic; however the web server has to process this programmatic code before sending the html to the client.

- When a web browser requests an Asp page, the following steps occur:-

1. The client locates the web server specified by the first parts of the URL.

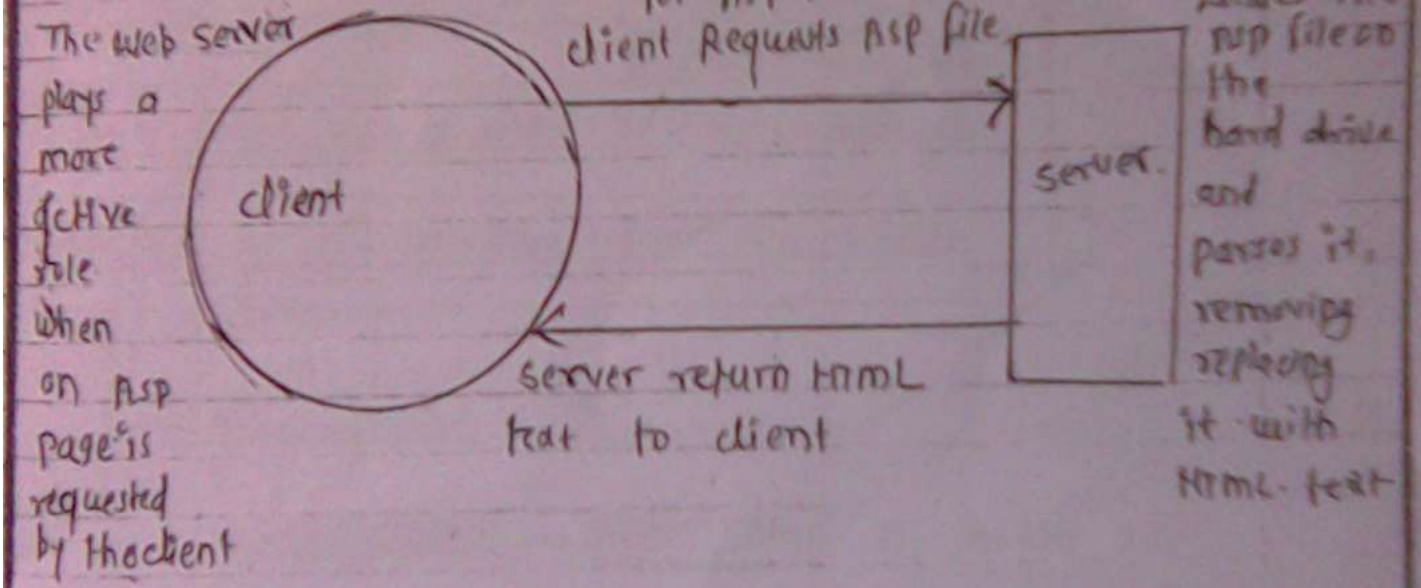
2. The client then requests the Asp page specified by the seond part of the URL.

3. The web server reads the Asp file and process the code.

4. After the Asp page has been completely processed by the web browser server, the output is sent in HTML format to the client.

5. The client recieves the Html sent by the server and renders it for you. the user.

client/server interaction for Asp file



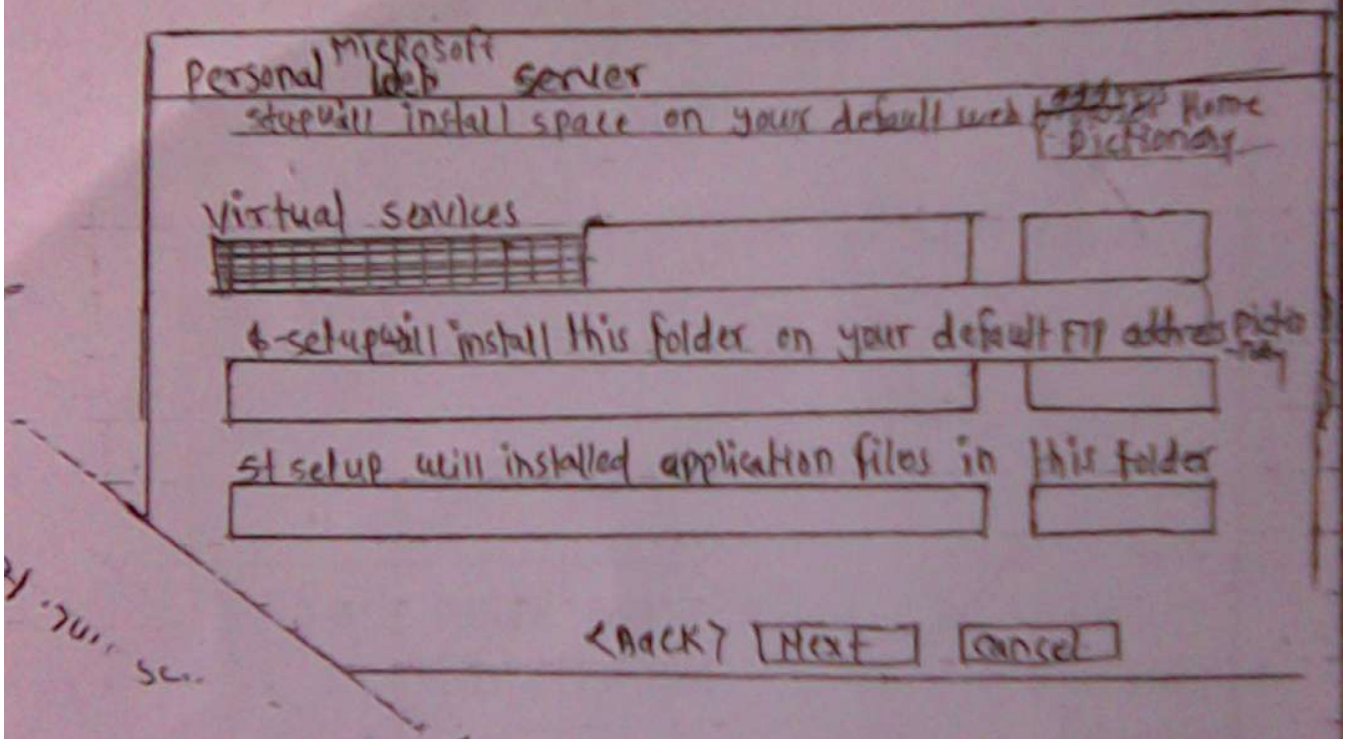
Q 3. Explain personal web server and Internet Information Server (IIS) with Example.

Ans:- when creating a professional web site, it is important that site run on a Computer that has Windows NT Server or window 2000 installed.

- not many people run Windows NT Server or Windows 2000 installed on their personal computers.

For this reason Microsoft created a stripped-down version version of its professional web server.

- This stripped-down version is called personal web server and is intended to run on Microsoft Windows 95 or 98 or,



- When a Information Server (IIS):-

- Internet Information Server (IIS) is microsoft's professional web server.

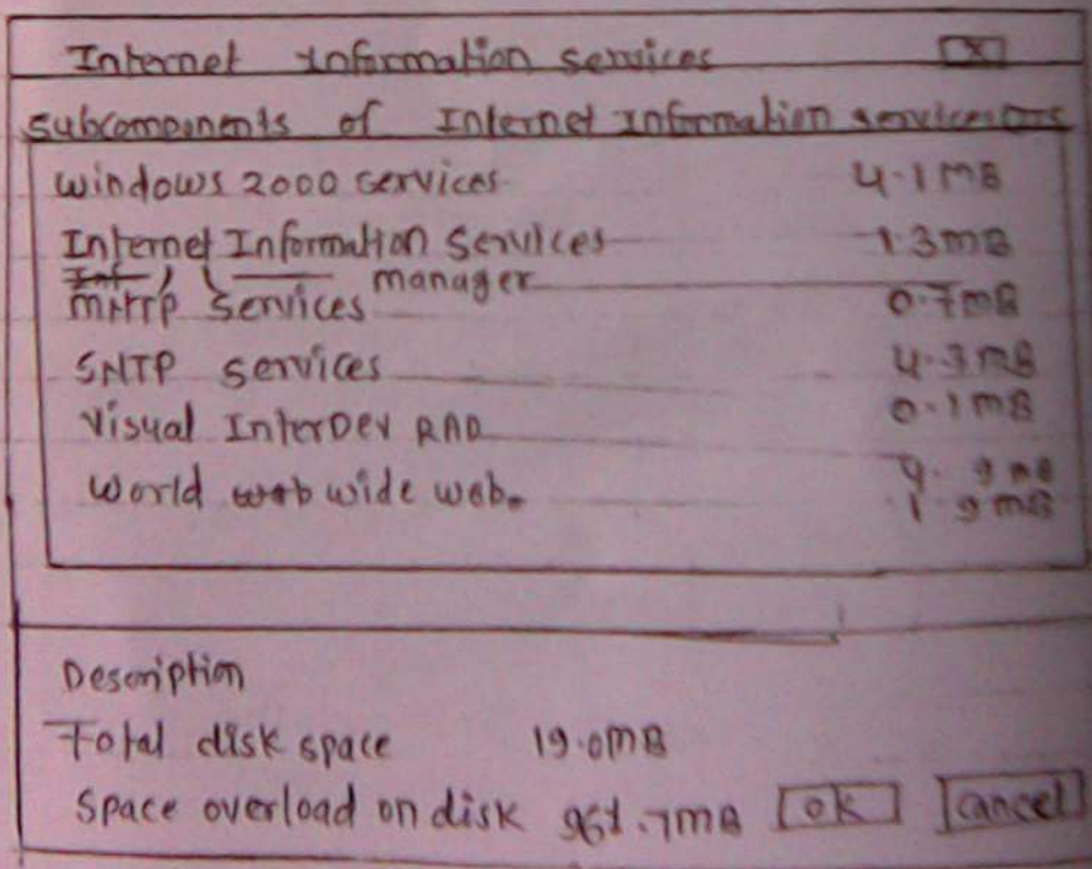
- The latest version of IIS is 5.0 which ships with windows 2000. ASP 3.0 ships with IIS 5.0 and is installed automatically when IIS 5.0 is installed.

- The Internet Information Services (IIS) component contains a number of subcomponents other than the would wide web server, such as an FTP server and SMTP services.

- To decide what IIS components to install, click the Internet Information services (IIS) component in the windows 2000 components wizard and then click the details button.

- The options that you should make surre are selected are common files. Documentation, Internet Information services snap In, and world wide web server.

- If you plan on wing visual InterDev or microsoft Front page to edit you web sites be sure to also install the frontpage 2000 server Extsions.



Unit-2

Introduction to active server pages

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Q-1. Create an Asp page for calculating a Compound Interest.

Ans. Asp pages, like regular HTML web pages, are simply text files on the web server.

- To create an Asp page, all you really need, after you we installed the web server, is a text editor, such as Notepad.

- create our first Asp page using Notepad.

- Start by opening up Notepad (choose start, programs, Accessories, Notepad).

- Create an Asp page that displays the square roots of the numbers between 1 and 10.

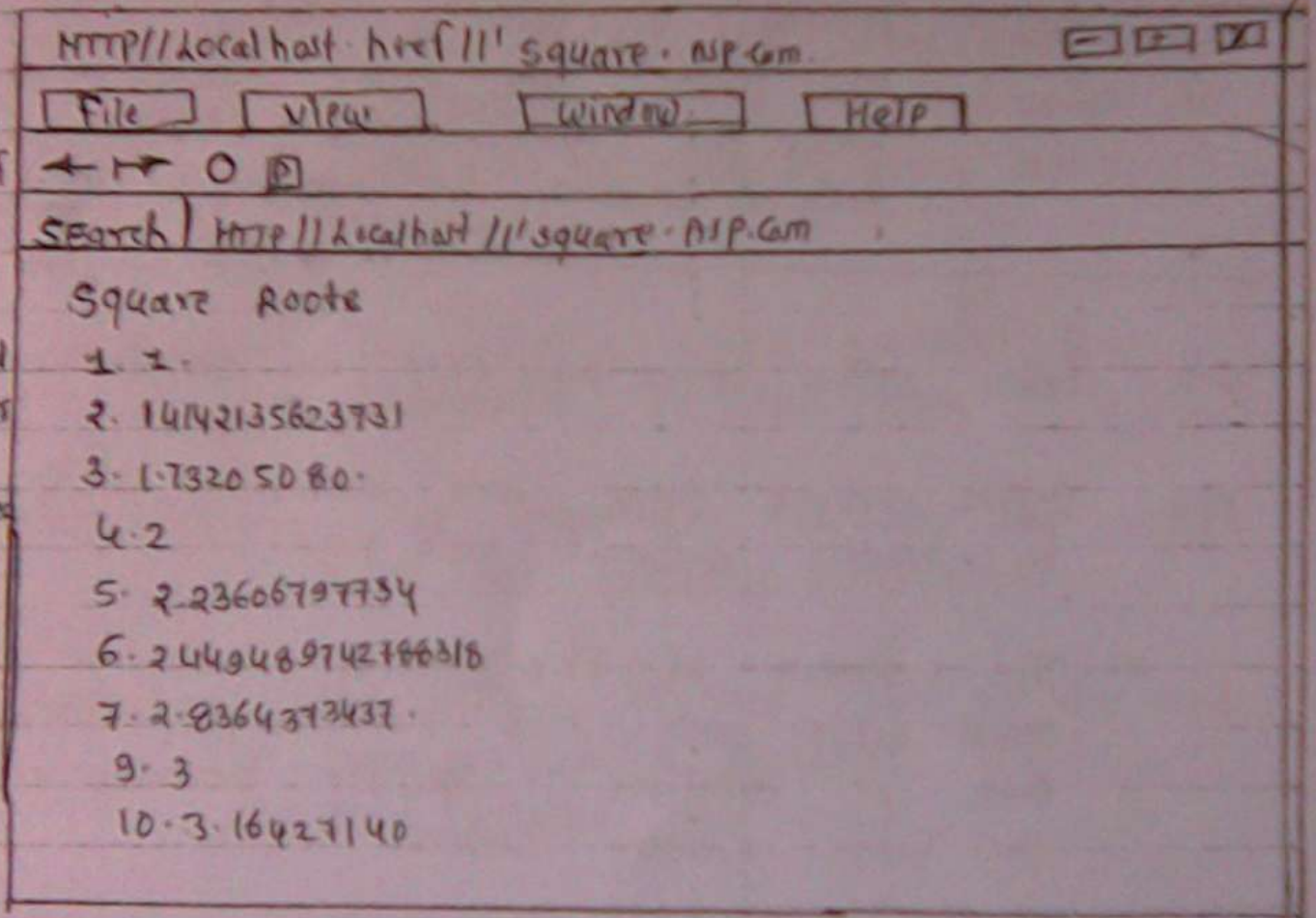
- ~~Part~~ we will discuss the VBScript language throughout the remainder of this week

Scripting:-

```
1: <%@ Language = VBScript %>
2: <% option Explicit %>
3:
4: <HTML>
5: ~~<Body>~~ <BODY>
6: <B> Square Roots </B> <BR>
7: <%
8: Dim iloop ~~= 1 to 10~~
9: For iloop = 1 to 10
```

```
10: Response.Write "iloop=" & Sqr(iloop) & "<BR>"
11: Next
12: %>
13
14: </BODY>
15: </HTML>
```

output:-



The square roots of the first 10 natural numbers are displayed

creating ASP pages using Notepad has advantages-

- Speed:- Notepad is a small, efficient text editor.
- In the next two sections, we will look at how to create ASP pages with more advanced development tools.

- they require more disk space and memory and run slower than Notepad.

2. Easy to use ;- Because Notepad doesn't offer many options.

Disadvantages:- No. web site maintenenance.

- No. Color-coded syntax.
- No. drag and drop web page creation tools:-

Note:- Notepad is commonly used to creating and editing ASP pages, although it lacks the functionality of editors designed specially for ASP development.

Q-2. Define active Server pages (ASP) and Script

Ans. Active Server pages are microsoft's solution to creating dynamic web pages.

- The Explosion of the Internet and the coorld wide web into our everyday lives. web site creation is quickly becoming one of the faster growing sectors.
- ~~over~~ over the past couple of years we have seen some major changes concerning the Internet
- The Internet served as a medium for members of government and education Institions to Communicate.

- The advent of world wide web, the Internet became a multimedia, user-friendly environment.

- Active server pages contain two parts: programmatic code and embedded HTML. The programmatic code can be written in a number of scripting languages.
- There are two types of ASP:-
  1. programmatic code
  2. Embedded HTML.

- A scripting language is a particular syntax used to execute command or a computer.

- A program composed of commands from a particular scripting languages is referred to as a script.

- Some popular web-related scripting languages include VBScript and JavaScript. When creating an ASP page, you can use one of four programming languages:-

VBscript — similar to visual Basics syntax. The most commonly used scripting language for Active server pages.
Jscript — similar to Javascript
perscript:— similar to perl
Python:- A powerful scripting languages commonly used for web development.

- most ASP pages are created using VBScript.
- VBScript has the most English like syntax of the our scripting languages and is similar to visual Basic's syntax, which many web developers have experience with.
- Recall that an ASP page can contain embedded HTML.
- This allows for existing static web pages to be easily converted into dynamic ASP pages.
- Finally an ASP page must contain a .asp Extension.

Note:- Throughout this book we will present Examples using VBScript

---

Q.3 Describe ASP process in details

A look at what you happens when you view an ASP pages.

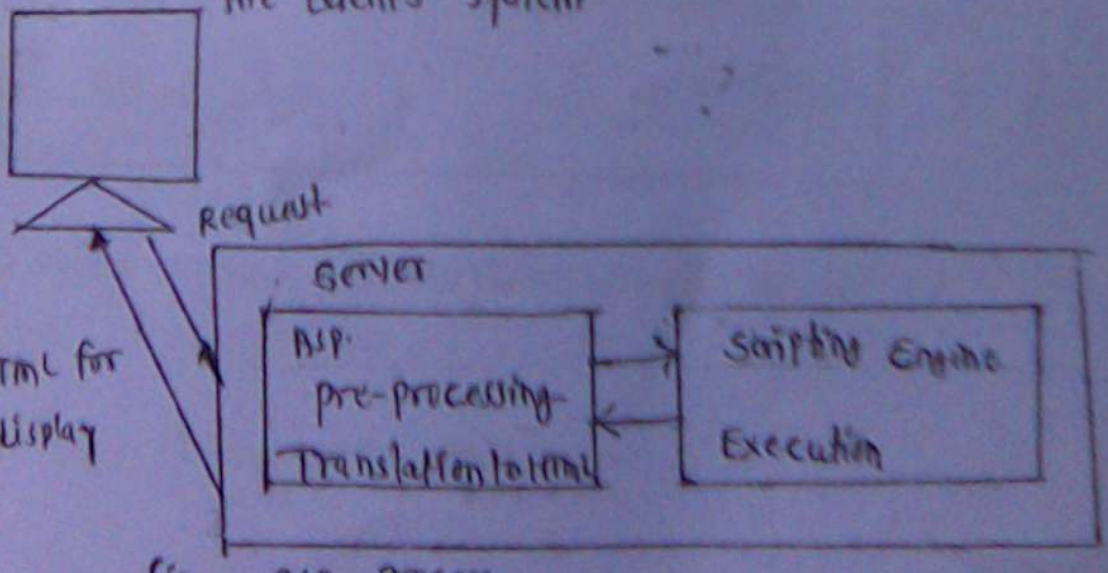


Fig. ASP process

- provides a picture of the process Asp page goes through to send a page to the user.

- There are five stages that we will concern ourselves with at this point

1. Request:— The web browser contacts the server and tells it what pages it wants to see.

2. Preprocessing:— The ASP.dll files does some initial processing on the requested script. At the moment, you do not need to worry about what this processing is.

3. Execution:— The scripting engine executes the instructions in the HTML

4. Translation:— Asp translation translates the results of the execution into HTML

5. Display:— The HTML is sent back to the web browser, which processes the tags and displays the page.

The Asp code is separated from normal Asp code by one of two sets of tags.

<% ... %> simplest use

<script> ... </script> more commonly use

<B> <%

<% Response.write "Hello" %>

</B>

<B> Hello </B>

<%= Response.write "Hello" %>
<%= "Hello" %>

5 & Find all the uses of Response.write in this script
6. Find all the uses of the shortcut alternative to Response.write in this script
7. Convert the shortcut into a Response.write

Q4. What does Response.write do?

- This subject will be covered in greater detail on day 7, "using the Request & Response object".

- For now, you only need to know that Response.write is used to go from ASP on the server to the HTML seen in the user's web browser.

For Example consider the following code:-

```
<B>
<%
 Response.write "Hello"
%>
</B>
```

The next "Hello" is sent to the output stream.

- The result sent to the user is <B>Hello</B>
So in the web browser, the user will see the world word "Hello" printed in bold face.

If the next written <%
Response.write<"Hello"
%>

Scripting Examples:-

Script

```
1: <%@ Languages = VBScript%>
2: <% option Explicit %>
3: <HTML>
4: <Body>
5:   I can count to live!
6:   <%
7:     Response.write"<BR>1"
8:     Response.write"<BR>2"
9:     Response.write"<BR>3"
10:    Response.write"<BR>4"
11:    Response.write"<BR>5"
12:  %>
13:  </Body>
14: </HTML>
```

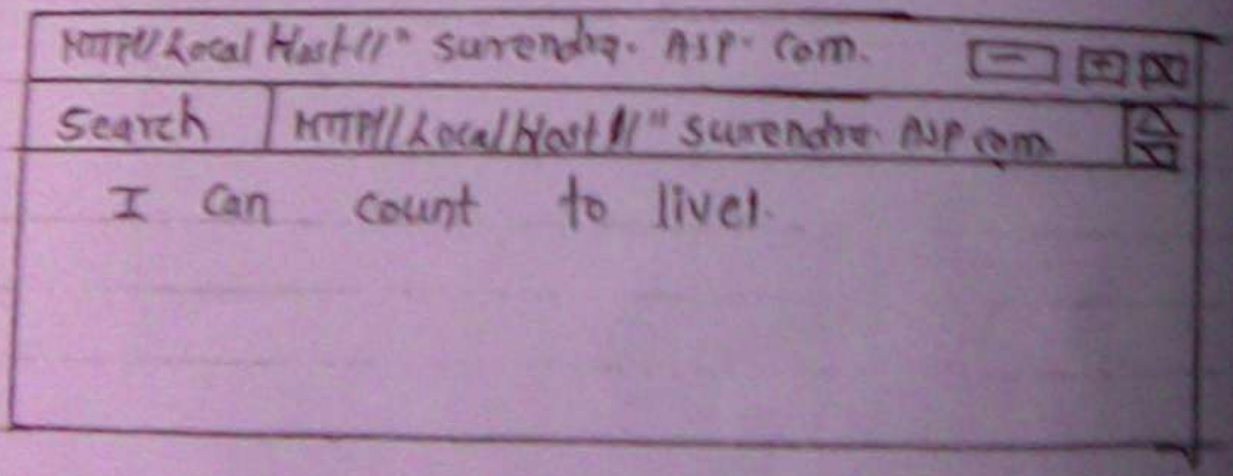


fig. above figure output of Response write object

Introduction to VB Script

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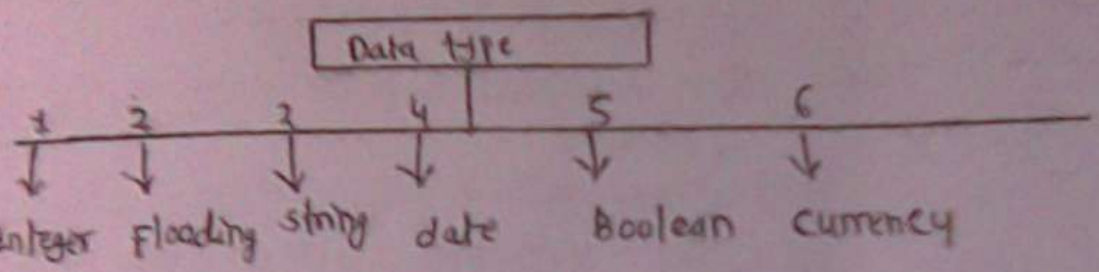
q.1. Explain the operator various data types used in VB script with Example

Ans **Data types:-** There are many different of data that can be store as a variable like Number, word, date, and boolean etc.



FY. The types of data type ——————

1. **Integer:-** Integer is a whole that is a number with no fractional format

For Example:- one, three, nine, ten

- two other type of data are related to the integer byte and long
- A long can store a large range of Number then the integer
- a byte store a very few.

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2. Floating point Number:- This Number has a decimal or a fractional portion.

Example:- 1.5, 2.5 etc.

(b) Single and double data Types:-

Single and double data Types are associated with floating point Number.

Double requirefiuich as much memory as single

3. Strings:- A string can whole any sequence of letter, Number, and symbol. String are different from code.

- Variable Numbers and by putting then between "My Name is surendra".

4. Date:- A Nine feature VB soipt it can a date or a time hence it handle the data Function correctly.

- A date variable can whole either a date a VB Script data function.

5. Boolean:- Boolean Variable may whole hold a value of either trues or fales.

- This variable are generally used when a dicision should taken.
- This is done with control structure.

6. Currency:- A single precision word, fine: Number for storing a monitoring value but VB script provided a special data types formally that work with several special VB Script function.

- The function used is formate currency which allow you to customize currency value are display.

---

q. *2 DeExplain Declaration of VB Variable

Ans
- In VB Script it is not necessary to specify integer, real, character, whatever. we create a variable.
- In VB Script all variable are declare using a keyword dim (dim my variable 1,2,3)
- Here the first line dedared my variable without specifying that my variable is a integer Number.
- It is not necessary to it would be as safe table to simply use the second line this type of declaration is called implicit

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* Declaration use option of implicit

VB script require explicit declaration of one or more variable the below program the following program attested allustrat the concept of explicit declaration variable.

Scripting

```
<%@ language = VB Script %>
<% option explicit %>
<% my first Variable = 2 >
<HTML>
<Body>
```

The Variable named "my first Variable has a value at

```
<% Response. write (my first Variable) %>
</body>
</HTML>
```

9.3 Con Explain constants?

Ans: A constant is letter like a variable in that you give it name an stored data in it

- VB—Script have a constants has a several constants built into it
- Some of constant are VB Empty an it value is zero.

- This is types four variable that has not been used yet.

2 VB null data type in defining a value is null.

3 VB long :- for long data type VB single for single data types

4. VB double:- For double data types

5. VB currency:- For currency data types

6. VB string data:- For string data types.

7. VB object:- For object data types

8 VB Boolean:- For boolean data types

9. VB error:- For error data types

10. VB access object:- For access data object

11 VB decimal:- For decimal data types.

12 VB byte:- For VB byte data type

9.4. Program For demonstruction of Assignment operator

Ans 1: <%@ Language = VB Script %>

```
2: <% option explicit %>
3: <%  Dim strname, iAge
4: %>
5: <HTML>
6: <Body>
7: <%
8: Response.write ("Before assignmenting a value
   strName hai value")
9: Response.write (strname)
10: %>
11: <BR>
12: <%
13: strname = "Jume"
14: iAge = 21
15: Response.write ("Now strname has value")
16: Response.write (strName)
17: %>
18: <BR>
19: <%
20: Response.write ("New inge has value")
21: Response.write (iAge)
22: %>
23: </Body>
24: </HTML>
```

- Line three declares the two variable we will use as HTRname and iH.
- Line 8 and line 9 write a massge that demastrated the value that HTRname has

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before we use the assignment operator to set it.

- line 13 and 14 set the value to the two variable.
- line 15 and 16 so the new value given to HRT HTRname.
- line 20 and 21 display the new value given to page.

---

q.5 What is short Notes ~~cookies~~ mathematical operator?

Ans HithL :- Here we put value input variable VB Script methmatical operats includes

- additions, subtraction, Negations, multiplexcation division and exponentiation, integer division, modulars and shing concation both.

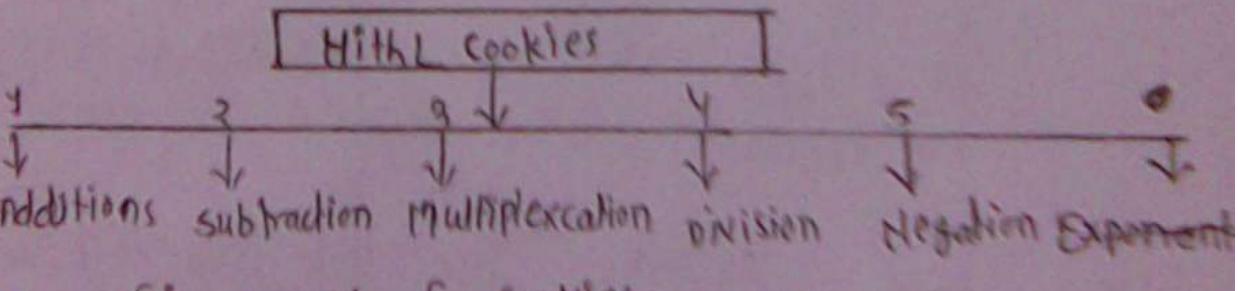

fig types of cookies

1. Addition :- Takes the from argument + argument

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were each argument may be Number a Numbe Numerial Variable or other Numerial expression.

```
<%
  dim i some equal to 3+5
%>
```

- This is one of simiplest case were both argument are number.
- when the code is run the variable i some ends with a value of 8.

2. <u>substraction</u>:- The substraction work like addition, taking the form argument, argument. In the following code we are standard the value of i count of the code is finished.

```
<%. Dim iCount
    ! Count =3
    ! Count = i
    ! count = iCount -2
    %>
```

The value which will be get.

3. <u>Multiplexcation</u> The multiplexcation should be represented by asterik multiplication follow the same from as the other options is covered think about the expression three

asterisk 5+2

If we perform the result is 17

3x(5+2)

If we put three parenthesis after the result we get 21

4. division:- VB script have two different kind of division.

(1) Last integer division:- 5/3=1. in the integer division the value return will be why in modular 5%3 =2

(2) Exponention in VB:-

The Exponention operator in VB represented by Correct 3^3 = 27

5. Negation:- Negation is operation that Covers a positive number to converts a Negative Number and voice etc.

- It is equivalent to multiple by one.

Negation is denoded wify the same symbols- dash (-) Comma(,) str subtraction.

q. 6 Explain the Logical Operators?

Ans Logical operators are also called Comparision operators there are and or denote, exclusive, Equivalent and Implecation.

operator	True when	false when
A AND B	A and B both true	Either A or B is false
A OR B	one of A or B is true	Both A and B are false
N OT A	A is false	A is true
A XOR B	A or B is true but not	Both true or false
A Eqv. B	Both false or both true	one is false or other is true.
A Imp B	A is false or B is true	A is and true B is false.

Logical operator are usually put to gether with Comparision operator in the same line.

Example:— (3<4) AND (4<5)

True Evaluation to true.

Comparision operator :— or (Relational operator)

as
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Operator	True when	false when
A=B	A and B are the Same	A and B are different
A>B	A Large than B	A same as or smaller than B.
A<B	A smaller than B	A same as or bigger then B ~~A bigger then B~~
A>=B	A bigger than or same as B	A bigger than B
A<=B	A smaller than or same as B	A bigger than B
A<>B	A and B different	A smaller than B / A and B same.

3 > 4 false 3<3 false
5 > 4 True 2<7 9 True
4 >=3 ~~True~~

The comparision operators make comparision between two argument and evaluates the following are.

the above are comparision operator

unit - 3

VB Script control structures

control structures:- A control structure is a programming structure that allow you program to make decision best on the information it is given.

- It is given A program also follows the same sequence of steps:-

would not be very useful the system carry out the instructions from the talk to the bottop bottom.

Control structure gives the program the kind of flexeability and you need then for pages.

Types of controls:-

- There are three centre measure types of controls structure that programmer uses.

- They allow control you over if, then main and how many times the ⊙ certains instruction are executeded.

1. Condition Logic:- control Logic allowed you to specify A sequence of event to happen if certains circumstances are Example in word process. if you click on the file and then New you are

probability presented several options so to want you create.

- depending which one of the user are presented with different interface phase, different options, and so on.

2. **Loop logic:-** Loop logic allows to write code that will be executed multiple times.

- If we want our code to executed twice we want you must time its.

3. **Branching logic:-** Branching logic closely related other two kinds of control structure.

- It involves leaving the normal follow of program to executed new sequence of step.

* Condition logic controls-

Condition logic test a condition or a series of condition on then based on result. choose what code should be executed

1. **If Then statement:-** The If then statement

one of the most commonly used Controls Structures. It takes the form If condition then
Code blocks;
End If

Condition is Boolean expressions then condition evaluates to two true.

- The to action statement carry-out and then what evercome after and end If is carry out.
- If condition evaluates to false the action statement are skipped. and only but after a end if carry out.

Scripting:— Program

```
1: <%@language = VBScript %>
2: <% option Explicit %>
3: <HTML> <Body>
4: <Body>
5: <%
6: Dim iheader, strLetterGrade
7: iGrade = 85
8: If iGrade >= 90 Then
9: StrLetterGrade = "A"
10: End if
11: if (iGrade >=80) AND (iGrade<90) then
12: strLetterGrade = B
13: End if
14: if (iGrader >= 70) AND
```

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```
15: (iGrade<80) Then
16: strLetterHeader = "C"
17: End if
18: If (iGrade >= 60) AND
19: (iGrade < 70) Then
20: strLeftGrade = "D"
21: End if
22: If (iGrade < 60) then
23: strLetter Grade = "E"
24: End if
25: Response.write("The numerical grade is
    " & iGrade)
26: Response.write("and the letter grade is
    " & strLetter Grade)
27: %>
28: </Body>
29: </HTML>
```

2. If then Else:

- It is sometimes a segment of code that execute only sometimes If then et the condition phase then we can add and else statement in the code down.

If Condition then
Code Block 1
Else

Scripting program:-

```
1: <%@ Language = VBScript %>
2: <% option explicit %>
3: <html>
4: <Body>
5: <%
6: Dim iheader, strLetterGrade
7: If iGrade >= 90 Then
8: strLetterGrade = "A"
9:   Else
10:  If iGrade >= 80 then
11:  strLetterGrade = "B"
12:    Else
13:  If iGrade >= 70 then
14:  strLetterGrade = "C"
15:    Else
16:  If iGrade >= 60 then
17:  strLetterGrade = "D"
19:    Else
19:    strLetterGrade = "F"
20:    End of
21:    End of
22:    End of
```

③ Nested If:-

In nested if
Code block 1 is executed
Nested if is condition is true

If condition 1 and condition 2 is executed code block 2 is executed regardless

Code Block 3 is executed condition one is true and condition 2 is false.

- Code Block 4 is executed if condition one is false regardless condition true

Structure:-

```
If Condition then
  Code Block1
  If condition2 then
    Code Block2
    Else
      Code Block3
      end if
    Else
      Else
      Code Block4
      End if.
```

4. Select case statements:-

- Select case allows you to specify a sequence of code Block, one of these ways will be carry-out depending on the value and a or numerical data or string expressions.

- The syntaxs look like this:-

```
Select Case Expression
  Case Value 1 If
```

Code for when expression equals Value 1
Case Value2
Code for when Expression equals value2
Case value N
Code for when Expression equals valuen
End Select

Scripting Programs:

```
1: <%@language = vBScript %>
2: <% option Explicit %>
3: <html>
4: <body>
5: <%
6: Dim Stroperation, string value1, sng value2
7: sng value1 = 5
8: sing value2 = 2
9: Stroperation = "multiply"
10: select case, stroperation
11: Case "Add"
12: Response.write(sng value1 + sng value2)
13: Case "substract"
14: Case "multiply"
15: Response.write("-" * "-")
16: Case "Divide"
17: Response.write("-" / "-")
18: end Select
19: %>
20: </body>
21: </html>
```

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5 Looping logic control

Loppin looping logic control executed a block of code repeatly onn until certain Condition are while Need are while certain condition are true.

(a) do loop statement: do loop to tax one of the two form the fust first do while loop executed a Block of code when certain ondition are true the second until loop executed a Block of code until a certain Condition is meet

(b) ~~Do~~ do loop while loop:-

The do while loop tost the following form

structure:- Do while condition
Code Block
loop:

The code Block is executed as long as Condition as true

- If Condition is false the first time a on encounter do loop does not executed.

Senpp

scripting program:-

```
1: <%@ language = VBScript %>
2: <% option Explicit %>
3: <HTML>
4: <Body>
5: <%
6: Dim iCount
7: iCount = 1
8: Do while iCount <= 10
9: Response.write (iCount)
10: %>
11: <BR>
12: <%
13: iCount = iCount + 1
14: Loop
15: %>
16: </Body>
17: </HTML>
```

(c) do until loop:- do until statement is art do while loop Statement with only difference with until Loop is that in the loop execute until the condition become true, not false. any thing that one of the do un the do loop can do, the other can do also

- the only difference is wether the condition is return positively or negatively

• The following are countings to 10 Script program demostrating

Scripting program:-

```
1: <%@ language = VB Script %>
2: <% option explicit %>
3: < html>
4: < Body>
5: <%
6: Dim icount
7: icount = 1
8: DO until icount > 10
9: Response.write (icount)
10: %>
11: <BR>
12: <%
13: icount = icount+1
14: Loop
15: %>
16: <%
17: </Body>
18: </html>
```

② * While - Weend:-

Program Scripting:-

```
1: <%@ language = VB script %>
2: <% option explicit %>
3: < html>
4: < body>
```

```
5: <%
6: Dim icount
7: icount = 1
8: while icount <= 10
9: Response.write(icount)
10: %>
11: <BR>
12: <% icount = icount + 1
13: wend
14: %>
15: <html> <body>
16: </body> </html>
```

- while-wend statement are the same as the do-while loop.
- The syntax is included because it is more familier to some programmer.
- The while statement replaces the word the do, while and wend replaces the loop statement.
- The while-wend statement work exactly the do while loop

---

(4) For next statement:- The for next statement loop when the no. of times the code should execute is known before the code begin.

- It execute code block specific no of times while incrementing a counter it takes a following formate.

For counter variable = start-value to stop-value step- value

code block
Next

- The counter variable is a numeric variable that keep tracks of which time through the loop your are on start-value is the first value that counter variable takes.

- The first time through the loop, counter variable has a value of startValue.

- The next-time through, it takes a value of start-value + step-value.

- Assuming that step value is positive the loop keep executing until counter variable is grater then stop value.

- Each time through counter variable is increased by step-value.

Simple program:-

```
1: <% @language = VBscript %>
2: <%option explicit %>
3: <HTML>
4: <body>
5: <%
6: inumber = 6
7: ifactorial = 1
8: for icounter = 1 to inumber
9: ifactorial = ifactorial * icounter
10: Next
11: %>
12: </HTML>
13: </body>
```

6

8 For Each-Next statement:—

- The for each...Next construct is used to iterate through each element in a group.
- Suppose that you had an array of names and you wanted to print each name to the screen.
- One way would be to use the for-next and a counter.