VIII. Resources required

Sr. No.	Name of Resource	Specification	Quantity	Remarks
1	Hardware: Computer System	Computer (i3-i5 preferable), RAM minimum 2 GB and onwards	As per batch size	For all Experiments
2	Operating system	Windows 7 or Later Version/LINUX version 5.0 or Later Version		
3	Software	Microsoft Visual Studio 2012 or later.		

IX. Precautions

1. Check the basic hardware and software requirement.
2. Use only licensed software
3. Follow the instructions as given in the instruction guide of the product.

Sr. No.	Name of Resource	Specification
1	Computer System with broad specifications	i3 . Ram 2gB
2	Software	Visual Studio 2017
3	Any other resource used	

X. Resources used

Visual studio 2017

XI. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Differentiate between VB.Net & VB.
2. How many languages are supported by .Net Framework?

(Space for answers)

Scanned by CamScanner

Scanned with CamScanner

①

VB	VB.NET
① VB is backward Compatible	① VB.NET is not backward Compatible
② Interpreted	② Compiler Language
③ Compiler language Exception handling by on error Goto:-	③ Exception handling by Try & Catch
④ Cannot develop multi throws application	④ Can develop multi throws application

②

C# C++
VB J.Script
Standard ML SmallTalk
Scheme Python
ADL Cobol
Component Physical
Ligel Mercury
Perl

This language are supported by .NET framework.

Scanned by CamScanner

Scanned with CamScanner

XII. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Illustrate the use of Just in Time compiler in VB.net
2. Define user defined namespaces and write procedures.
3. Write the various system requirements for Installation of VB.Net

(Space for answers)

1>

The just in time compiler is an important element of CLF, which leads MSIF an target machine for execution. The MSIF is stored in .NET assimbilus after the developer has compiled the code written in any .Net Complaint Programming language such as visual Basic & C++

2>

They allow to create a system to arrange your code each namespace has a name, and in divider to generate that the names of different namespace are different procedure int a piece of code in a large program. It is a unit of code enclosed either between the sub and end sub statement are also function or sub function statement.

Scanned by CamScanner

Scanned with CamScanner

(5) Processor : 2.8 GHz Intel Pentium Processor

RAM : 512 MB

Display : 800 x 600 256 Colour

Memory : 1.5 GB

As various system requirement for installation of VB.NET.

Scanned by CamScanner

Scanned with CamScanner

... will be flagged as an error with the note, "Color is ambiguous" and .NET will point out that both namespaces contain an object with that name. This kind of error is called a "name collision."

This is the real reason for "namespaces" and it's also the way namespaces are used in other technologies (such as XML). Namespaces make it possible to use the same object name, such as Color, when the name fits and still keep things organized. You could define a Color object in your own code and keep it distinct from the ones in .NET (or the code of other programmers).

```
Namespace MyColor
  Public Class Color
    Sub Color()
      ' Do something
    End Sub
  End Class
End Namespace
```

You can also use the Color object somewhere else in your program like this:

```
Dim c As New MyColor.Color
c.Color()
```

Before getting into some of the other features, be aware that every project is contained in a namespace. VB.NET uses the name of your project (WindowsApplication1 for a standard forms application if you don't change it) as the default namespace.

VIII. Resources required (Additional)

.....Windoco 10 - i3 processor 4 G.B RAM.....

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

.....Visual Studio 2017.....

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using user defined and existing namespaces in VB.Net.

```
Namespace ProjectNou
    Namespace Formular1
        Class GroupOp
        Public Event CalculopCByVal
                    Byval y As Integer)
```


Scanned by CamScanner

Scanned with CamScanner

```
Public Function Diff (Byval a AS Integer, Byval b AS Integer)
AS Integer
        Return a-b
End Function
Public Function prod (Byval a AS Integer, By val b AS Integer)
AS long
        Return a+b
End Function
End NameSpace
Class Groupop
Public Function Adun (Byval a AS Integer, Byval b AS Integer)
AS Integer
        Return a+b
End Function
Public Function Imp (By val a AS Integer, Byval b AS Integer)
AS Double
        Return a/b
End Function
End class
End Namespace
module module1
    Sub main()
        Dim calc AS Namespace App. project NOU . Groupop
        Calc = New Namespace App. project NOU. Groupop
        MsgBox ("4+6" & calc.Adun(4,6))
        Dim calcunou AS Namespace App. project NOU. Formular1. Grupop
        Msg Box ("4+6" & calcunou -prod (4,6))
    End sub
End module.
```

XII. Results (Output of the Program)

.....

.....

.....

.....

Scanned by CamScanner

Scanned with CamScanner

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Differentiate between namespace & assembly
2. Compare between option strict & option explicit

(Space for answers)

1)

NameSpace	Assembly
① A namespace provides a fundamental unit of logical code grouping	① An assembly provides a fundamental unit of physical code grouping
② It is a collection of names	② It is output unit
③ They form the logical boundary for a group of classes	③ Assemblies contain MSIL code

2)

Option Strict: VB.NET generally allows implicity conversion of any a datatype to any other data types. Data loss can occur when the value of one data types is converted to a dat type with less precision or smaller capacity, however a runtime error occur message will occur if data will be lost in such a conversion.

Scanned by CamScanner

Scanned with CamScanner

Option explicit : When option explicit appears in a file, must explicitly declare all variables using the Dim, Private, Public, or Dim Statement. If you attemp to use an undeclared variable name an error occurs at compile time.

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. List namespaces in VB.net?
2. Write a program to implement the namespace Student in your VB.net Application.

(Space for answers)

Scanned by CamScanner

Scanned with CamScanner

1>

① classes of objects
② modules
③ Integers
④ Delegates
⑤ Enumeration

2> Namespace College
Namespace Students
import Systems
Class Add Students
Public Function S-methods()
Console.writeline ("Adding Student to College using S-method")
End Function
End Class
End Namespace
End Namespace

Scanned by CamScanner

Scanned with CamScanner

Types of Icons:-

MEMBER	ICON
Asterisk	Information Icon
Information	Information Icon
Error	Error Icon
Hand	Error Icon
Stop	Error Icon
Exclamation	Exclamation Icon
Warning	Exclamation Icon
Question	Question Icon
None	Will not display any icon

Types of Buttons:-

MEMBER	DESCRIPTION
AbortRetryIgnore	Abort, Retry, and Ignore buttons
OK	an OK button
OKCancel	OK and Cancel buttons
RetryCancel	Retry and Cancel buttons
YesNo	Yes and No buttons
YesNoCancel	Yes, No, and Cancel buttons

VIII. Resources required (Additional)

window 10
i3 processor
4GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using MessageBox & Arithmetic Expressions.

→ Module Operator
Sub main()
Dim a As Integer = 21
Dim b As Integer = 20

Scanned by CamScanner

Scanned with CamScanner

```
Dim p As Integer
Dim c As Integer
Dim d As Integer
c = a+b
Console.WriteLine(" Line 1. value of c is {0}".c)
c = a-b
Console.WriteLine(" Line 2. value of c is {0}".c)
c = a*b
Console.WriteLine(" Line3. value of c is {0}".c)
c = a/b
Console.WriteLine(" Line 4. value of c is {0}".c)
c = a\b
Console.WriteLine(" Line 5. value of c is {0}".c)
c = a mod b
Console.WriteLine(" Line 6. value of c is {0}".c)
c = b^p
Console.WriteLine(" Line 7. value of c is {0}".c)
Console.ReadLine()
End Sub
End Module
```

XII. Results (Output of the Program)

Line 1 : Value of c is 21
Line 2 : Value of c is 11
Line 3 : Value of c is 2.0
Line 4 : value of c is 2.1
Line 5 : Value of c is
Line 6 : Value of c is
Line 7 : Value of c is

Scanned by CamScanner

Scanned with CamScanner

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO:

1. Write the difference between MsgBox() & ErrorProvider Control.
2. Describe any four types of MsgBox() window

(Space for answers)

2)

Buttons: Message Box can have Standard ok or Cancel buttons or they can have a 'yes' 'NO' Cancel " Configuration or a number of derivation may one primary button Scheme can be used for message box.

Icons: A message box may have no icons, or may have one you shouldn't specify a message box to have multiple icons. The different icons according to MS.Gen

Modality: finally the message box can be defined as being model, modeless or System model, by using another identifier and only works of parent window handle was specified ~~@~~ variable " other optio-

Indirect Dialogue Boxes: When defining a dialogue box indirectly we need to fill about a structure, and pass function in place of a resources identifier.

Scanned by CamScanner

Scanned with CamScanner

MsgBox()	Error provides control
1) Message box is denoted as the MsgBox() it has the records of all the recorded message in the system	1] An error provided control generecly create with error a wrong update made
2) It has made easier for keeping records in case of accounts	2] It has mad easier to detect the error in records
3) Msg box is displayed by the user itself	3] It is used to specify name of Error provides control
4) Syntax:- MsgBox(prept [butter] [title], [helpfile] [context]	4] Systax:- Error provider1.Set Error (control-name, "Error message")

Scanned by CamScanner

Scanned with CamScanner

V. **Exercise (Teacher must assign separate exercise to group of 3-4 student)**

1. Implement the program to generate result of any arithmetic operation using MsgBox ().
2. Write a program using InputBox(), MsgBox() & perform various arithmetic expression.

(Space for answers)

```
Sub btn_Addition_Click()
End Sub
Dim x As Integer,
Dim z As Integer
x = 2
z = 3
msgBox (x + z)
vbOK only,
"Addition Operator"
Click on Save button


We InputBox to get input
Sub EnterNumber()

Dim num as Integer
num = InputBox ("Enter number under 500 :",
                "Enter numeric data");

num = num * 2
msgBox ("The number multiplied by two
        is " & num)

End Sub
```


Scanned by CamScanner

Scanned with CamScanner

Practical No 4: Implement a program for If-else control structures in VB.NET.

I. Practical Significance

Dive into VB .NET's control structures and learn how to control the order of events in your programs. Study the basics of the If and If-else statements.

II. Relevant Program Outcomes (POs)

- **Basic knowledge:** Apply knowledge of mathematics and engineering as it applies to the field of computer software and hardware.
- **Discipline knowledge:** To apply knowledge of computer engineering field to solve core and applied engineering problems.
- **Experiments and practice:** Able to plan and perform experiments and practices with its results to solve computer engineering problems.
- **Engineering tools:** Formulate and solve problems related to computer engineering field using appropriate techniques/tools.

III. Competency and Practical skills

This practical expects to develop the following skills in the student.

Develop VB.NET programs to solve computer group related problems.

1. Write a VB.NET program to use of if-else statements.
2. Compile Debug/Save the 'VB.NET' program.

IV. Relevant Course Outcome(s)

- Develop GUI Application using Form Controls and its events

V. Practical Outcome (PrOs)

- Develop programs to demonstrate use of *IF*, *IF-else* Control structures in VB.net.

VI. Relevant Affective domain related Outcome(s)

1. Follow safety practice
2. Follow ethical practices

VII. Minimum Theoretical Background

It is conditonal statement which executes a group of statements depending on the value of an expression.

```
If condition [ Then]
        [ statements]
[ ElseIf  condition  [ Then ]
        [ statements ] ]
[ Else
        [ elsestatements ] ]
End If
```

VIII. Resources required (Additional)

window 10
i3 processor
4 GB RAM

Scanned by CamScanner

Scanned with CamScanner

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

.....

.....Visual Studio 2017.....

.....

.....

.....

XI. Program Code(Teacher must assign a separate program to a group of 3-4 students)

Write a program using if-else statement.

```
module decisions
    Sub main()
      local variable definition
  Dim a As Integer = 10
    '' check the boolean condition.
   IF (a=10) Then
      'IF condition is true then print the
 Console.writeline ("value of a is 10");
   Else IF (a=20) Then
    ' IF else if condition is true.
   Console.writeline ("value of a is 30")
   Else
      'If none of the condition is true.
 Console.writeline ("None of the value is matching");
   EndIF
   Console.writeline ("Exact value of a is:{0}", a)
      Console Readline()
      End Sub
   End module.
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the Program)

value of a is 10

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Implement the program for finding greatest of three numbers.
2. Implement the program using if-else statement to find the number is even or odd.

(Space for answers)

```
Function Is add (number as integer) as
boolean
Dim t Num as Integer
ENUM = right (number, 1)
if ENUM = 0 or ENUM = 2 or ENUM = 40.
ENUM = 6 or ENUM 8 or ENUM = 40, ENUM = 6
or ENUM = 8 or ENUM = 10 then
    Isadd = False
else
    Isadd = true
endif
end Function
```

2]

```
Function Isadd (number as integer) as boolean
Dim tNum as integer
if t Num = 0 or t Num = 2 or tNum = 4 or
tNum = 6 or tNum = 8 or t Num = 10 then
Is odd = False
else
Isadd = true
end if
end function
```


Scanned by CamScanner

Scanned with CamScanner

```
        a = -1.0
        If (i > 0) Then
            If (a > 0) Then
                Console.WriteLine("Here I am !!!!")
            Else
                Console.WriteLine("No here I am ??")
                Console.WriteLine("Actually here I am ??")
            End If
        End If
        Console.ReadKey()
    End Sub
End Module
```

(Space for answers)

Q. 1. ~~here~~

2. Here I am !!!
Actually here I am ??

1)
```
Public Class Percentage
    Private Sub Button1_Click (ByVal Sender
    As System.Object, ByVal e As System.
    EventArgs)
    Handles Button1.Click
    Dim Percentage As Integer
    Percentage = 80
    if (percentage > 75) Then
        Console.WriteLine ("Distinction")
    Elseif (percentage > 60 && Percentage < 75) Then
        Console.WriteLine ("first class")
    Elseif (Percentage > 40 && Percentage < 60) Then
        Console.WriteLine ("Second class")
    Else
        Console.WriteLine ("fail")
    End If
    End Sub
End Class
```


Scanned by CamScanner

Scanned with CamScanner

VIII. Resources required (Additional)

window10
i3 pocessor
4GB RAM

IX. Precautions.

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

visual studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using Select Case statement in VB.Net.

```
module decisions
  Sub main()
  'local variable definition
  Dim grade AS char
    grade = "B"
  Select grade
case"A"
   console.writeline ("Excellent :")
case "B" , "C"
   Console. writeline ("well done")
case" D"
   Console - writeline ("your passed");
case "F"
   console - writeline ("Better try again")
case Else
   Console. writeline ("Invalid grade")
  End select
console. writeline(" your grade is {0}", grade)
   End sub
End module
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the Program)

well done
your grade is B

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

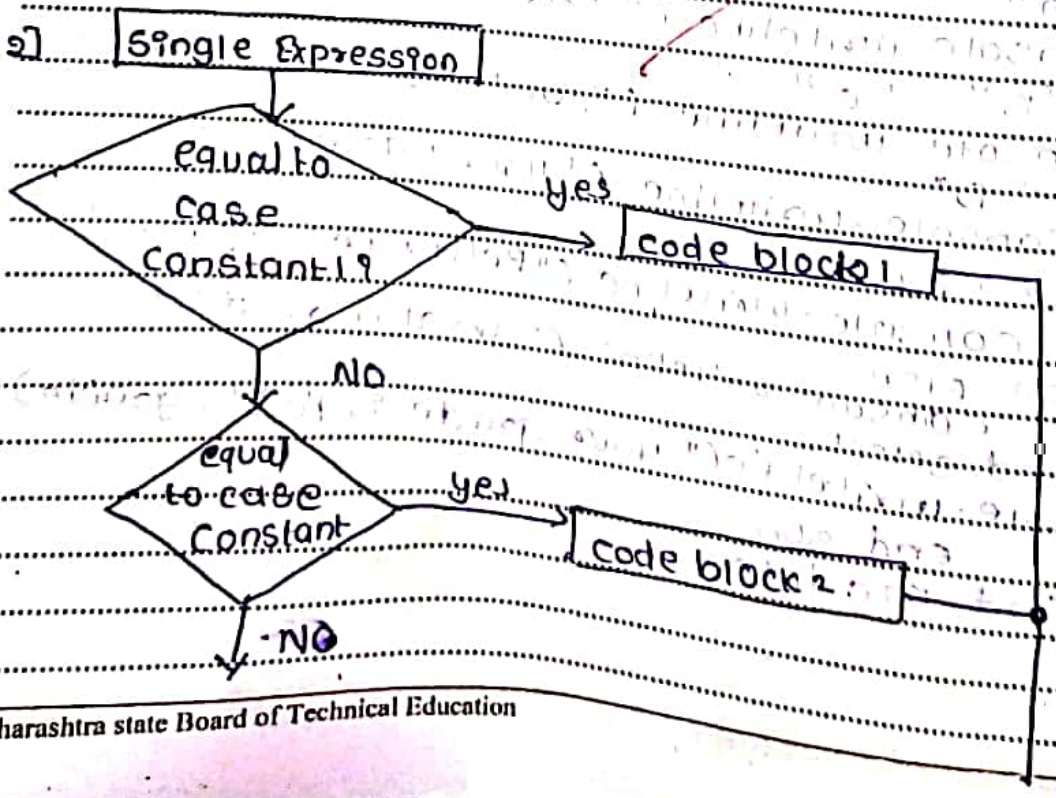
1. Write the use of Select Case statement
2. Draw the flowchart for nested Select Case statement

(Space for answers)

1>

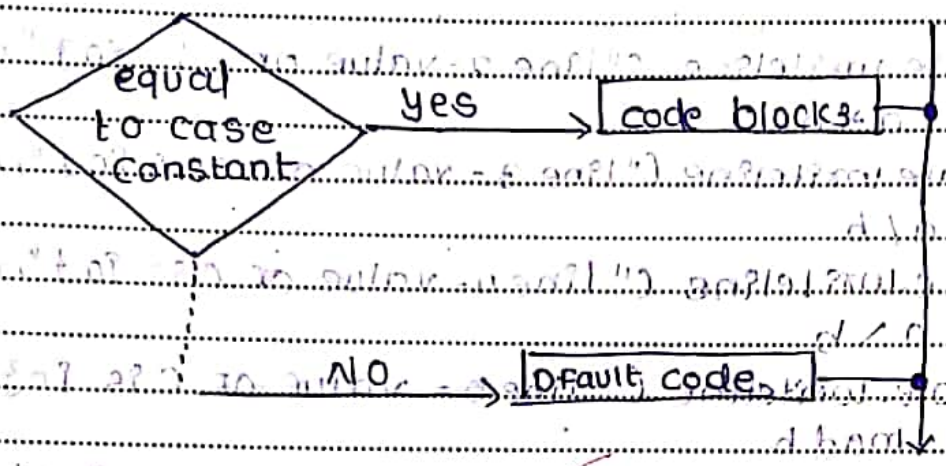
A Select Case Statement allows a Variabe to be tested for equality against a list of value. Each value is called a case, and the variable being switched on its checked for each selected case. Hence evaluates an expression only one at the top of the control of the structure

2]



Scanned by CamScanner

Scanned with CamScanner



XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Implement a program using Select Case Statement to count the number of Vowels in A to Z alphabets.
2. Develop a program for performing arithmetic operations.

(Space for answers)

```
Module operators
    Sub Main()
    Dim a As Integer = 21
    Dim b As Integer = 10
    Dim e As Integer = 2
    Dim c As Integer
    Dim d As Integer
    c = a+b
Console.writeline("line 1 - value of c is {0}", c)
    c = a-b
```


Scanned by CamScanner

Scanned with CamScanner

```
Console.WriteLine ("line 2- value of c is {0}", c)
    c = a * b
Console.WriteLine ("line 3- value of c is {0}", c)
    d = a / b
Console.WriteLine ("line 4- value of c is {0}", c)
    c = a \ b
Console.WriteLine ("line 5 = value of c is {0}", c)
    c = a mod b
Console.WriteLine ("line 6 = value of c is {0}", c)
    c = b ^ p
Console.WriteLine ("line 7 - value of c is {0}", c)
Console.Readline()
End Sub
End Module
```

1) public class Form1

```
private Sub Button1_Click (By val Sender) As
System.Object • Byval As System.Event Args
    Handles Button.Click
    Dim ch As char
    ch = Text Box1.Text
    Select case ch
    Case "A", "E", "I", "O", "U"
    ~~messag~~ message Box.show (ch + " is vowel And
                upper case")
    Case "a", "e", "i", "o", "u"
    message Box.show (ch + " is vowel and
                lower case")
    Case Else
    message Box.show (ch + " is not vowel")
    End select
    End Sub
    End Class
```


Scanned by CamScanner

Scanned with CamScanner

Till the given condition is true. User can terminate the loop by using Exit While statement.

Syntax:

```
While condition
    Statements
    Exit While
    Statements
End While
```

VIII. Resources required (Additional)

window 10
i3 processor
2 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using While & Do loop statements in VB.Net.

```
module loops
 sub main()
 local variable definition
Dim a As Integer=10
    do loop execution

DO
Console.writeline("value of a: {0}; a)
    a = a+1
    loop while (a<20)
    Console.Readline()
    End sub
    End module.
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (output of the program)

value of a:10
value of a:11
value of a:12
value of a:13
value of a: 14
value of a:15
value of a : 16
value of a : 17
value of a : 18
value of a: 19

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Differentiate between Do & While loop statements in VB.Net
2. Give the syntax of While & Do loop statements in VB.Net

(Space for answers)

Do loop	While loop
The Do loop in VB Net runs at once ii) The user can exit the loop by writing the statement Exit Do	The while loop in VB.Net allows the user to excute the statement or block of statement ii) Till the given condition on is true user can terminate the loop by using Exit while

Scanned by CamScanner

Scanned with CamScanner

2] i] Syntax for while loop

```
while condition
    statements
Exit while
statements
End while
```

ii] Syntax for Do loop

```
Do
    [statements]
    [continue Do]
    [statements]
loop [ while \ until ] condition
```

Scanned by CamScanner

Scanned with CamScanner

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Write a program using While statement to print the prime numbers between 1-100
2. Write a program using While statement to print even-odd numbers between 1-50

(Space for answers)

1) private sub Cmdprime_Click()
Dim p, n, i As Integer
p=1
print " prime Numbers are:"
For n=1 To 100
For i=2 To n-1
If n mod i=0 Then
Exit For
Else
p=1
End If
Next
If p=1 Then
print n
End If
Next
Endsub

Scanned by CamScanner

Scanned with CamScanner

```
Dim check AS Integer
Dim num AS Integer
For num = 2 to 50
Check = 1
For i = 2 To math.Sqrt(num)
  If num mod i = 0 then
      Check = 0
  Exit For
  End If
  Next
    If Check = 1 Then
  ListBox1 = Items.Add(num)
  Else
      Check = 1
  End If
      Next
  End Sub
```


Scanned by CamScanner

Scanned with CamScanner

For Each loop in VB.Net

For each loop statement is used to access every single element in an array and also group of elements from

Syntax:

```
For Each [Item] In [Group]
        [loopBody]
Next [Item]
```

Item: The Item in the group

Group: The group containing similar items

LoopBody: The code you want to execute within For Each Loop

VIII. Resources required (Additional)

Window 10
i3 processor
4 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using For & For Each statement.

```
Dim lst As New list (of String)
    from ("abc", "def", "ghi")
    Iterate through the list
For Each item As String In lst
    Debug.write (item & " ")
Next
    Debug.writeline(" ")
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the Program)

abc
dEF
ghi

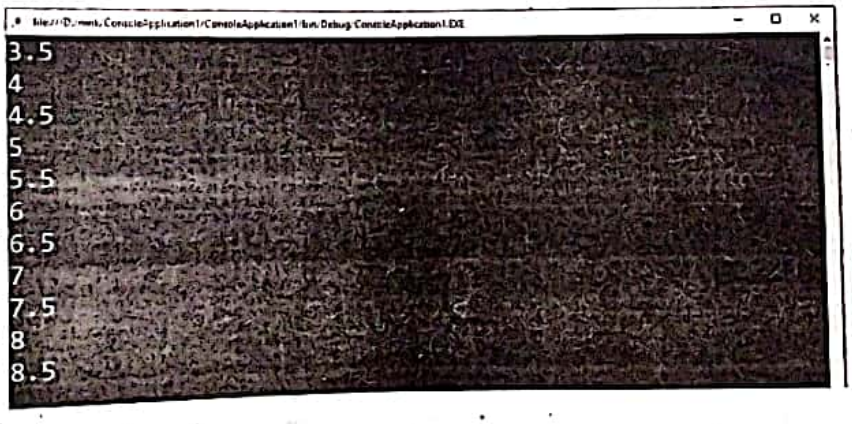
XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Write the output of the following code?

```
Module Module1
    Sub Main ()
        For i = 0 To -10 Step -1
            onsole. WriteLine(i)
        Next
        Console.ReadKey()
    End Sub
End Module
```

2. Write a program to generate the following output



(Space for answers)

1. 'onsole' is not declared. It may be inaccessible due to its protection level.

0	-7
-1	-8
-2	-9
-3	-10
-4	
-5	
-6	

Scanned by CamScanner

Scanned with CamScanner

(2)

```
Module Module1
    Sub main()
        for i = 3.5 To 8.5 +0.5
            Console.writeline(i)
        Next
        Console.Read Key()
    End Sub
End Module
```


Scanned by CamScanner

Scanned with CamScanner

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Write the situations where For Each loop statements can be implemented.
2. Write a program using For Next loop statement to find the Armstrong numbers between 1 to 500(153 is Armstrong number $1^3+5^3+3^3=153$)

(Space for answers)

1) If we want to repeat the statement in loop specific manner number of times to for loop is ideal
ii) It uses For & next statement

2)
```
module Find_ArmNum
    Sub main()
Dim r, sum, t, max, min, As Integer
min=1
Max=500
Console.writeline (" Armstring Number are:")
        while min <=max
            t=min
            Sum=0
            while t >0
        r=t mod 10
        Sum t = math.pow(r,3)
            t= t \10
```


Scanned by CamScanner

Scanned with CamScanner

```
End while
    IF Sum = min Then
Console.writeline (min To String())
End IF
min + = 1
End while
    Console. Readline()
End Sub
End module
```


Scanned by CamScanner

Scanned with CamScanner

VIII. Resources required (Additional)

windows 10
i.3 processor
4 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a Program to demonstrate the use of Button, Textbox & Label.

```
→ Public class form1
Private Sub btn Compute_Click (By Val Sender As
    System.object. By Value As System.Event Args)
Handle btn Compute.Click
    text total.Text = Ex^Val(Num1.text) + Val(txtNum2.Text)
End Sub
End Class
→ first number = 2
  second number = 2
```

used

Designed / name:

Label1 : first number
Label2 : second number
Label 3 : Total

textbox 1 :
textbox 2 :
textbox 3 :
button 1 : Compute

Scanned by CamScanner

Scanned with CamScanner

Results (output of the program)

First number: 1
Second number: 2
Total : 12
[Compute]

I. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Write the use of Tab Index property of the control
2. Write a code to generate the button at runtime in VB.Net

(Space for answers)

Tab index: Gets/Sets the tab order of this control in its container.
• Tab index Property is used to display and the set the tab rate for individual control
• If we set the table index property to an integer representing the position of the control within the tab order of the form.
• The tab index property set or setting the value of the tab index attribute of an element.

7 Private Sub button Create Button Click (By val Sender As System.object, By Val e As System.Event Args) Handle Button Create Button.Click

Dim btn As New Button
btn.Name = "Dynamic Button"
btn.Size = New Size (148, 23)
btn.Location = New point (53, 39
btn.Text = "click M"
Group Box : Controls.Add (btn)
Add Handler btn Click Address of Dynamic Button Click
End Sub

Scanned by CamScanner

Scanned with CamScanner

```
Private Sub Dynamic Textbox Click
Message Box. Show ("This is the
                dynamic Button")
End Sub
```

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Write a program to perform the arithmetic operations using controls label, button & textbox
2. Write a program to change the background color of the form when user clicks on different button.

(Space for answers)

1)
```
Private Sub Button1.Click (By Val Sender As
System.Object ,By Value As System.EventArgs)
Handle Button1.Click

Dim num1, num2, num3, difference, product,
quotient As Single

num1 = TextBox1.text
num2 = TextBox2.text
```


Scanned by CamScanner

Scanned with CamScanner

```
Sum = num1 + num2
difference = num1 - num2
Product = num1 * num2
quotient = num1 / num2

Label1.Text = Sum
Label2.Text = difference
Label3.Text = Product
Label4.Text = quotient

End Sub
```

7)

```
Private SubButton1.Click(By Val Sender As
System.Object, By Val e As System.EventArgs)
Handle Button1.Click
Dim rgb1, rgb2, rgb3 As Integer

rgb1 = TextBox1.Text
rgb2 = TextBox2.Text
rgb3 = TextBox3.Text

Me.BackColor = Color.FromArgb(rgb1,
rgb2, rgb3)

End Sub
```

Scanned by CamScanner

Scanned with CamScanner

VIII. Resources required (Additional)

windows 10
i3 processor
4GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

visual studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program to demonstrate the use of Checkbox & Radio button

```
Public class Form1
Private SubButton1.click(By val sender AS System.Object,
        value AS System.Event Args) Handle Button1.Click
  IF RadioButton1.Checked.True then
   message Box.Show ("you are under 101")
  Else IF RadioButton2.checked = True Then
      message Box.Show ("you are over 101")
   End IF
   IF CheckBox Checked = True then
      message Box.Show ("you like poeter, new")
   End IF
      IF CheckBox.2 Checked = True Then
        massage Box.show ("what the hell")
   End IF
   IF Check.Box.Checked = True then.
      massageBox Show the simpose more is a
                 compirary dude")
   End IF
   End Sub
   End class
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (output of the program)

you are under10
what the hell

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Write a program using Radio button to change the bulb state ON/OFF (Use two images one for ON state and another for Off State)
2. Differentiate between Radio button and Checkbox Control

(Space for answers)

Radio Button	check box
It enables the way to select a single option from a group of choice when pair a with other	It represents a windows check box
The appearance of the control automatically change when the controles chiaced	Appearance of the control automatically change when the check box is selected
check alignsere the location of the check box portion of the radio button	check Algging state the horizontal and vertical alignment of the checks mark on the check box
It is used to provide a set of multually excutive option.	It allows the used to set the false or you / no type optional

Scanned by CamScanner

Scanned with CamScanner

```
private Sub RadioButton1_checked changed (sender
    As object e As Event Args) Handle Radio Button1
                checked changed
    Me.ForeColor = Color.Red
    End Sub
private Sub RadioButton2_checked changed (sender
    As object e As Event Args) Handle RadioButton
    2.checked changed

    me.Fore color = color Green
    End Sub
private Sub Radio Button 3.checked changed (sender
    As object e As Event Args) Handle Radio Button 3
    .checked Changed

    Me.Forecolor = color.Blue
    End sub
    End class
```

Scanned by CamScanner

Scanned with CamScanner

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program to demonstrate the use of List Box & Combo Box Control.

```
ListBox (Add)
Private Sub Button1_Click (sender As Object, e As EventArgs) Handles
Button1.Click
ListBox1.Items.Add("Nokia")
End Sub
Private Sub Button1_Click (sender As Object, e As EventArgs)
Handles Button1.Click
Dim myitem
myitem = InputBox ("Enter your Item")
ListBox1.Items.Add (myitem)
End Sub
(Remove)
Private Sub Button2_Click (sender As Object, e As EventArgs)
Handles Button2.Click
ListBox1.Items.Remove ("Ipad")
End Sub
Private Sub Button3_Click (sender As Object, e As EventArgs)
Handles Button2.Click
ListBox1.Items.Clear()
End Sub
```

ListBox (Add)	(Remove)
Iphone	Iphone
Ipad	Samsung Galary
Samsung Galary	HTC
HTC	Nokia
Nokia	

Scanned by CamScanner

Scanned with CamScanner

XII. Results (output of the program)

.....

.....

.....

.....

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Write a program to select multiple subjects using list box control.
2. Write a program to select colleges using single combo box.

(Space for answers)

```
1. public class Form1
    Private Sub Form1_load (sender AS object e
    AS EventArgs) Handle MyBase.load
    Set the Caption bar text of the form
    Me.Text ="tutorialspont.com"
    list Box1.Items.Add ("canada")
    list Box1.Items.Add ("USA")
    list Box1.Items.Add ("U.K")
    list Box1.Items.Add ("Japan")
    list Box1.Items.Add ("Russia")
    list Box1.Items.Add ("China")
    End Sub
    Private Sub button1_Click (sender AS object e AS
    EventArgs) Handles Button1.Click
    MyBox ("you have selected + disBox1.SelectedItem
    to String ") End Sub
    private Sub list Box1.SelectedIndex changed (sende
    AS object e AS EventArgs) Handles lisBox1.selected
    Index changed) label2.text = listBox1.
    SelectedItem.ISString()
    End Sub End class
2) public class Form1
    private Sub Form1.load (sender AS object e AS
    Event Args) Handles MyBase.load
    me.text = " tutorials point.com"
```


Scanned by CamScanner

Scanned with CamScanner

```
End Sub
private Sub Button1_Click (sender As object, e As event Args)
handles Button1.Click
If ComboBox1.selectedIndex > 1 then
Dim Sender as Integer
Sender = combobox1.selectedItem
Dim sitem As object
Sitem = CommboBox1.selectedItem
ListBox1.Items.Add (sitem)
End If
End Sub

private Sub Button2_Click (sender As object, e As Event Args)
Handles Button2.Click
ComboBox1.Items.clear()
ComboBox1.Item.Add (" Shivajirao S. Jondhale ")
ComboBox1.Item.Add (" ARMIET ")
ComboBox1.Item.Add ("JIT ")
ComboBox1.Items.Add (" D.Y. Patil ")
ComboBox1.Text = " Select From "
End Sub
```

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Differentiate between list box & combo box.
2. Implement a program for student registration which will allow the student to register for multiple subjects for single semester using List & Combo box.

(Space for answers)

1. ListBox	Combobox
① we can Select multiple option from test list	① we can select only one option from list

Scanned by CamScanner

Scanned with CamScanner

2) we can't add, edit, info at runtime	2] we can add, edit, info at runtime
3] we have both drop up & drop down to list	3) we have only drop down facility
4] we can use check box within list box	4] we can't use checkbox with combo controlbox
5] occupies more space but shows more then one value	5] occupies less space but shown only one values possibility

Scanned by CamScanner

Scanned with CamScanner

Properties of the Picture Box Control

1. Image
2. ImageLocation
3. InitialImage
4. SizeMode
5. TabIndex
6. Text

VIII. Resources required (Additional)

windows 10
i3 processor
2 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

visual studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using Toolbar, Form & Panel Control.

Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the Program)

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. List the control which is used to set the icons on the Toolbar Control
2. Differentiate between Form & Panel Control in VB.Net

(Space for answers)

1) Tool Strip control
Tool Strip Container Control
Tool Strip panel Control
Tool Strip progressBox Control
Tool Strip StatusLabel control
Tool tip Component
Track Bar control
Treeview Control

2) Form	Panel Control
① A Form can be placed with a title	① A panel Control can't be placed with a title
② The form can't display the scroll bar.	② The panel control can display the scroll bar
③ form is a light weight Component	③ panel is a heavy weight Component.

Scanned by CamScanner

Scanned with CamScanner

4) Only limited number of controls can be placed within one group box	4) Any number of controls can be placed within the panel

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Write a program using picture box control to load an image at run time
2. Write a program to demonstrate the use of Panel Control in VB.Net

(Space for answers)

```
1) public class form1
    private subform1_load
AS object, e A (Even Args) Handels
    my Boxe load
Set the caption box text of the form.
    me.Text = "tutorialspoint.com"
        End sub
private Sub Button1_Click
AS object e AS Event Args t handels
        Button1.Click
picture Box1. clientSize = New
        Size (300, 300)
        picture Box1. Size mode =
picture Box Size mode. StrechImage
```


Scanned by CamScanner

Scanned with CamScanner

```
End Sub
End class
Design view

e) private Sub Form2s_Load (Byval sender As
System.Object, Byval e As System.EventArgs)
Handles my Base.load
'Change back color of panel
panel1.Backcolor = color Red
'Set forms' Transparency key to the same
color as panel's back color
me.Transparency key = color Red
to 'Me' keyword provide a way to refer
to the current instance or class that is
the instance in which code is
running
End Sub
```


Scanned by CamScanner

Scanned with CamScanner

VIII. Resources required (Additional)

window 10
i3 processor
2 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using Tab control.

```
Public class Form1
Private Sub btnexit_Click(ByVal sender As
    System.object ByVal e As System.EventArgs)
Handles btnexit.Click
If lblvisible.Text = "True" Then
lblvisible.Visible = False
Else
lblvisible.Visible = True
End If
End Sub
End class
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the program)

?

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Write a procedure to display the icons on the Toolbar Control.
2. Differentiate between Form & Panel Control in VB.Net

(Space for answers)

1. 1. Select the Toolbox control
2. In the properties windows, click the button property to select it and click the ellipses button to open the toolbox button collection editor
3. Use the Add and Remove buttons to add & remove buttons from the toolBar control
4. Configure the properties of the individual buttons in the properties window that appears in the pane on the right side of the editor.

Scanned by CamScanner

Scanned with CamScanner

2)

Form	panel control
① A Form can be placed with a title	① A panel control can't be placed with a title
② The Form cannot display the scroll bar	② The panel control can display the scroll bar
③ Form is a light weight component	③ panel is a heavy weight component
④ only limited number of controls can be placed within the group bar	④ Any number of controls can be placed within the panel

Scanned by CamScanner

Scanned with CamScanner

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Write a program to display the traffic signal using timer control
2. Write a program to demonstrate the use of Tab Control in VB.Net

(Space for answers)

```
public ClassForm
Dim tmrlight As System.Traffic.Timer
New System.Timer()
Dim isCurrent As Light Status
    light status = Red
private Enumlight Status
    Red=1
    Yellow=2
    Green=3
End Enum
private Sub Form1_Load handles
    tmrlight.Interval = 5000
add Handle tmrlight.Elapsed Address
    Change light
Set light (light Status.Red)
End Sub
```


Scanned by CamScanner

Scanned with CamScanner

6. Public Function Split (input As String) As String()

Expression	Description
[abc]	Find any character between the brackets
[^abc]	Find any character NOT between the brackets
[0-9]	Find any character between the brackets (any digit)
[^0-9]	Find any character NOT between the brackets (any non-digit)
(x|y)	Find any of the alternatives specified

VIII. Resources required (Additional)

Windows
i3 processor
2 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program to perform validation using ErrorProvider & Regular Expression.

Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the Program)

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO

1. Enlist the different types of constructs used for regular expression..
2. Write a program code perform the date Validation using ErrorProvider Control

(Space for answers)

1] character escapes
2] charalter classes
3] Anchors
4] Grouping constracts
5] Quantifiers
6] Substitutions
7] Alternation constructs

Scanned by CamScanner

Scanned with CamScanner

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Write a Program using ErrorProivider for username & password authentication
2. Write a Program using ErrorProvider control to validate the Mobile Number and Email ID in GUI application

(Space for answers)

1) Dim con As New oledb.OleDbConnection
Dim dbprovider As String
Dim dbsource As String
Dim ds As New Dataset
Dim da As New OleDb.OleDbDataAdapter
Dim Sql As String
Dim usrname1, pswrd1, usertype As String
Dim namrows, encdec As Integer
private sub Button1 Click (sender As Object, e As Event Args) Handles Button1.Click
If txtb=uname.Text= username1 and txtbpsw =psw1 then
If usrtype ="admin" then
Score.Show()
Score.btn_delete.Enable=False
Score btn_update.Enable=False
Score Button2_Enabled=False
Score Button1.Enabled=False

Scanned by CamScanner

Scanned with CamScanner

```
ElseIF txtb-uname.Text =usernamel and txtb-passd.Text
    =" Then msg Box ("Enter password")
ElseIF txtb-uname.Text=" "And txtb -psd.Text = pssd1 then
    Msg Box ("Enter username")
ElseIF txtb-uname .Text =usernamel and tttb.pwd
    Text <> pswd1 then
    msg Box ("Invalid password")
ElseIF txtb-uname-Text <> usernamel and txtb-pwd
    Text = pswd1 then
    msyBox ("Invalid username")
Else
    msgBox ("invalid usertype")
End IF
Else
    msg Box(" Invalid usernam & or Password")
End IF
End Sub
```


Scanned by CamScanner

Scanned with CamScanner

2. Parameters by Reference: The values passed by parameters to the sub procedure are preceded by the keyword ByRef.

VIII. Resources required (Additional)

window10
i3 processor
2 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a Program using sub procedure & parameterized sub procedures.

```
module mySub
 Sub calculate pay(By Ref hours AS Double, By Ref
    wage AS Decimal)
   Dim pay AS Double
   pay = hours * wage
console.writeline("Total pay: £0.co}", pay)
  End Sub
  Sub main()
    Calculatepay (25,10)
    Calculatepay (40,20)
    Calculatepay (30, 27,5)
     Console.Readline()
     End Sub
     End module.
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the Program)

Total pay :- ₹ 250.00

Total pay :- ₹ 800.00

Total pay :- ₹ 825.00

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO

1. Differentiate between ByVal & ByRef keyword in parameter passing of Sub Procedure.
2. Write any procedure using recursion.

(Space for answers)

2) limiting conditions
memory usage
Efficiency
mutual Recursion
calling with parenthese
Testing

1. Byval :- If you want to pass the value of the variable use the Byval syntax By passing the value of the variable instead of a reference to the variable any changes to the variable made by code in the Substraction or function will not be passed back to the main code this is the default passing meschanism when you don't decode the parameters by

Scanned by CamScanner

Scanned with CamScanner

using By val
By Ref: If you want to change the value or the variable in the substrace or function and pass the revesed value Back to the main cader use the By Ref Syntax. this passes the reffere to the variable and allows to values to be changed and passed back to the main cad.

Scanned by CamScanner

Scanned with CamScanner

XIV. **Exercise (Teacher must assign separate exercise to group of 3-4 student)**

1. Develop a program to calculate the Fibonacci series of given number.
2. Develop a program to print the reverse of any number using Sub Procedure.

(Space for answers)

1)

```
private Sub Command1_Click()
Dim x, y, n, i, sum As Integer
n = Val(Text1.Text)
x = 0
y = 1
print x
print y
For i = 3 Tan
sum = x + y
print sum
    x = y
    y = sum
    y = sum
    Next i
End Sub
```


Scanned by CamScanner

Scanned with CamScanner

2) module reverse

```
sub main()
    Dim n, r AS Integer
    Console.writeline("Enter a number")
    n=CInt(Console.Readline())
    while n<>0
        r=n mod 10
        Console.write(r)
        n\=10
    End while
    End Sub
End module
```


Scanned by CamScanner

Scanned with CamScanner

- **Modifiers:** specify the access level of the function; possible values are: Public, Private, Protected, Friend, Protected Friend and information regarding overloading, overriding, sharing, and shadowing.
- **FunctionName:** indicates the name of the function
- **ParameterList:** specifies the list of the parameters
- **ReturnType:** specifies the data type of the variable the function returns

VIII. Resources required (Additional)

Windows 10
i3 processor
2GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using simple function & parameterized function.

```
Function Find max (Byval num1 AS Integer,
    Byval num2 AS Integer) AS Integer
  Dim result AS Integer
  IF (num1 > num2) Then
      result = num1
  Else
      result = num1
  Else
      result = num2
  End IF
  Find max = result
End Function
    Sub main()
  Dim a AS Integer = 100
  Dim b AS Integer = 200
  Dim res AS Integer
res = Find max (a, b)
Console.WriteLine("max
value is: {0}", res)
Console.ReadLine()
End Sub
End module
```


Scanned by CamScanner

Scanned with CamScanner

XII Results (Output of the Program)

max value Rs : 200

XIII Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Function return a value is (True / False).
2. Find error in following code.

```
Function FindMax(ByVal num1 As Integer, ByVal num2 As Integer) As

    Dim result As Integer
    If (num1 > num2) Then
        result = num1
    Else
        result = num2
    End If
    FindMax = result
End sub
```

(Space for answers)

1) False

2. 1] 'End Function' expected
   2] Type expected | Statement cannot appear within a
   3] Method body. End ConsoleApp5 assumed

Scanned by CamScanner

Scanned with CamScanner

2)
```
Dim num1, num2 As Integer
Dim result As Integer
Dim (num1 > num2) Then
        result = num1
Else
        result = num2
EndIF
        findMax = result
        Console.Readkey()
End sub
```


Scanned by CamScanner

Scanned with CamScanner

XIV Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Write a program to identify maximum number using parameterized function. (Use a two Textbox for input a integer number and display output in Message Box)
2. Implement a program for recursion using a function.

(Space for answers)

2)
```
module module1
    function Recursive (By val value AS
    Integer By Ref Count AS Integer) AS
        Integer
    console writeline ("Recursive ({0}, {1})",
        value, count)
    count = count + 1
    If value >= 100 Then
        Return value
    End If
    Return recursive (value * 2, count)
    End function
    Sub main()
    Dim count AS Integer = 0
    Dim total AS Integer = Recursive (5, count)
    console.writeline ("Total = {0}", total)
    Console.writeline ("count = {0}", count)
    End Sub
End module
```


Scanned by CamScanner

Scanned with CamScanner

1)

```
function findMax (ByVal num1 As Integer,
    ByVal num2 As Integer) As Integer.
Dim result As Integer
    If (num1 > num2) Then
        result = num1
Else
        result = num2
End If
        findMax = result
End function
    Sub Main()
    Dim a As Integer = 100
    Dim b As Integer = 200
    Dim res As Integer
    res = findMax(a,b)
    Console.WriteLine("Max Value is = {0}", res)
    Console.ReadLine()
    End Sub
End Module
```


Scanned by CamScanner

Scanned with CamScanner

```
End Class
Sub main()
   Dim Object As Name_of_class=New Name_of_Class()
End sub
End Module
```

VIII. Resources required (Additional)

windows 10
i3 processor
2 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write program using the concept of class & object in VB.Net

```
module Mybox
 class Box
 Public length AS Double
 Public breadth AS Double
 Public height AS Double
 End class
 Sub main()
Dim Box1 AS Box = NewBox()
Dim Box2 AS Box = New Box()
Dim Volume AS Double = 0.0
Box1.height = 5.0
Box1.length = 6.0
Box1.breadth = 7.0
Box2.height = 10.0
Box2.length = 12.0
Box2.breadth = 13.0
volume = Box1.height.Box1.length * Box1.breadth
Console.writeline("volume of {0}", volume
volume = Box2.height *Box2.le * Box2.breadth
Console.writeline("volume of Bo "{0}", volume)
Console.Readkey()
End Sub
End module.
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the Program)

volume of Box 1: 2010

volume of Box 2: 1560

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Find Output in following code.

```
Class Example

Private _value As Integer
        Public Sub New()
        _value = 2
End Sub

Public Function Value() As Integer
        Return _value * 2
        End Function
End Class

Module Module1
        Sub Main()
                Dim x As Example = New Example()
                Console.WriteLine(x.Value())
        End Sub
End Module
```

2. Find error in following code.

```
Module Module1
        Sub Main()
                Dim b As B = New B(5)
                B=Display()

                Dim c As C = New C(5)
                C=Display()
```


Scanned by CamScanner

Scanned with CamScanner

End Sub
End Module

(Space for answers)

(2) Display is not declared
Type 'B' is not defined
Type 'C' is not defined

Scanned by CamScanner
Scanned with CamScanner

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Write a program to identify Volume of Box class, with three data members, length, breadth and height
2. Implement a program to accept values from combobox and display average of this in message box using a class.

(Space for answers)

```
2) public class Form1
private Sub Form1_Load (sender AS object , e
    AS Event Args) Handles myBase.Load
    me.Text = " tutorialspoint.com"
End Sub
private Sub Button1_Click (sender AS object e,
        AS Event Args) Handles Button1.Click
If ComboBox1.selected Index > -1 Then
    Dim Sindex AS Integer
    Sindex = comboBox1.selected Index
    Dim Sitem - AS object
    Sitem = ComboBox1.selected Item
    ListBox1.Items.Add (Sitem)
    End If
    End Sub.
private Sub Button2_Click (sender AS Object, e AS
```


Scanned by CamScanner

Scanned with CamScanner

```
        Event Args) Handles Button2.Click
        ComboBox1.Item.Clear()
        ComboBox2.Item.Add("safety")
        ComboBox3.Item.Add("security")
    End Sub
    private Sub Button3_Click (sender AS object,
            e AS EventArgs)
        ComboBox 1.Sorted = True
    End Sub
private Sub Button4_Clicke (sender AS object,
            e AS Event Args)
        ComboBox 1.Items.Clear()
    End Sub
private Sub Bo ComboBox1.selected Index Changed
            (sender AS object, e AS EventArgs)
    Handles lstBox1 Selected Index.Changed
    lable 1.Text = combo Box.selected Item.
                To Strg
    End sub
End class
```


Scanned by CamScanner

Scanned with CamScanner

A **destructor** has the name **Finalize** and it can neither return a value nor can it take any parameters. Destructor can be very useful for releasing resources before coming out of the program like closing files, releasing memories, etc. Destructors cannot be inherited or overloaded.

Example of Destructor

```
Class classname
        Public sub New()
                [Statement]
        End Sub
        Protected overrides sub Finalize ()
                [statement]
        End sub
        sub main()
                Dim Object1   As Classname=New Classname()
        End sub
End Class
```

VIII. Resources required (Additional)

Window 10
13 processor
2 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program to demonstrate the use of constructor & destructor

```
Imports System.Console
module module1
  sub main()
  Dim Can AS New constructor (20)
   writeline (Con.showAge())
  Read()
  End sub
End module.
```


Scanned by CamScanner

Scanned with CamScanner

```
Public class Constructor
  Public Age AS Integer
Public SUB New (Byval x AS Integer)
    Age = x
    End Sub

Public Function showAge() AS Integer
    Return Age
  End Function
  End Class
    Sub main()
    Dim Obj AS new Destroy()
    End Sub
  Public class Destroy
    protected overrides sub Finalize()
      write ("VB.NET")
        Read()
      End Sub
    End class
```

XII. Results (Output of the Program)

VB.NET

Scanned by CamScanner

Scanned with CamScanner

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Find output of following code.

```
Imports System.Console
Module Module1
        Sub Main()
                Dim con As New Constructor(20)
                WriteLine(con.ShowAge())
                Read()
        End Sub
End Module

Public Class Constructor
        Public Age As Integer=40
        Public Sub New(ByVal x As Integer)
        End Sub
        Public Function ShowAge() As Integer
        Return Age
        End Function
End Class
```

2. Find error in following code.

```
Imports System.Console
Module Module1
    Sub Main()
            Dim obj As New Destroy()
    End Sub
End Module

Public Class Destroy
    Protected Overrides Finalize()
            Write("VB.NET")
            Read()
    End Sub
End Class
```

(Space for answers)

2. ① Declaration expected
② Declaration expected

① output is 40

Scanned by CamScanner

Scanned with CamScanner

XIV. **Exercise (Teacher must assign separate exercise to group of 3-4 student)**

1. Implement a program to display any message at run time. (Using a constructor).
2. Implement a program to calculate area of circle using parameterized constructor.

(Space for answers)

```
1) module module1
    Class line
      private l AS Double
  public Sub New()
  Console.write ("object is being Created")
    End Sub
  public Sub setlength (Byval len AS Double)
      l = len
    End Sub
  public Function get length () AS Double
  Return l
  End Function
  End Class
      Sub main()
  Dim L AS Line = New line()
      L.setlength (6.0)
  Console.write ("lenght of line {0}", L.get
                                  length())
    Console.Read Key ()
  End Sub
    End module

O/p: object is being created
     length of line 6
```


Scanned by CamScanner

Scanned with CamScanner

2)
```
module module1
    class Area
    private r AS Double
    public Sub New (Byval temp AS Double)
        r = temp
        End Sub
public Function getArea () AS Double
    Return math.PI * math.pow(r,2)
End Function
End class
Sub main()
Dim a AS New Area (5.0)
Console.write ("Area of circle:{0}",
            a.get Area())
Console.ReadKey()
End sub
End module
```

O/P

Area of circle 78.5398

Scanned by CamScanner

Scanned with CamScanner

VIII. Resources required (Additional)

Windows10
i3 processor
2GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using concept of Inheritance.

```
Public Class NewPerson
    Inherits person
mustoverride overrides public Readonly
                                Property
    ClassName () as String
  Get
    class Name= " New person"
    End Get
    End property
        Overrides sub Speack()
    Console. writeline (" my name is " &
                    (-SFirstname & " " &
                        (- SlastName)
    Console .writeline (" and I am a new
                    person")

    End sub
    End public
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the Program)

My name is Rohit wag
Prathama Bhar and I am a
new person

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Write an output of following class.

```
Public class Booksale
    sub New()
            Console.WriteLine("My Base Class")
    End sub
End class

Public class studentbooksale
    Inherits Booksale
    Sub New()
            MyBase.New()
            Console.WriteLine("My child Class")
    End sub
End class
```

2. Find out Error in following code..

```
Public Class Person

    Public FirstName As String
    Public LastName As String
    Public DateOfBirth As Date
    Public Gender As String

    Public ReadOnly Property FullName() As String
            Get
                    Return FirstName & " " & LastName
            End Get
    End Property

End Class

Public Class Customer=>Inherits Person
    Public CustomerID As String
```


Scanned by CamScanner

Scanned with CamScanner

```
Public CustomerType As String
End Class
```

(Space for answers)

(2) (1) End of statement expected
'class' statement must end with a matching 'End class'.
'End Sub' must be preceded by a matching 'sub'.

(1) Output :-
My Base Class
My child class

Scanned by CamScanner

Scanned with CamScanner

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Implement a Program for inheritance where Student is Child class and faculty is Base class.(Take Appropriate variables in Base and child class)

(Space for answers)

```
Public Class Student
    Public hin, mar, eng, tot, avg As Integer
    Public Sub getmarks()
    hin = InputBox("Enter marks of hindi")
    mar = InputBox("Enter marks of marathi")
    eng = InputBox("Enter marks of english")
    End Sub
End Class
```


Scanned by CamScanner

Scanned with CamScanner

```
Public Class result
    Inherits Student
    Public Sub calcs
        tot = hin + mar + eng
        avg = tot / 3
        MsgBox("Total Marks: " & tot "Average:"
                & avg)
    End Sub
End Class

Public Class form1
    Private Sub Button1_Click(ByVal Sender
        As System.object, ByVal e As
        System.EventArgs)
        Handles Button1.Click
        Dim obj As New Result
        obj.getmarks()
        obj.calcs
    End Sub
End class
```


Scanned by CamScanner

Scanned with CamScanner

```
End Class

Class c2
        Inherits c1
        Shared Sub main()
                Dim o As New c2()
        o.hi()
        End Sub
        Overrides Sub hi()
                console.writeline("New and Improved method hi")
        End Sub
End Class
```

VIII. Resources required (Additional)

Windows 10
i3 processor
2GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program to implement the concept of method overloading & overriding

```
public class sample2
    private-x AS Double
    private-y AS Double

public property x() AS Double
    Get
      Return-x
    End Get
      Set (By val value AS Double)
            - x= value
      End set
    End property
```


Scanned by CamScanner

Scanned with CamScanner

```
public property y() As Double
Get
    Return -y
End Get
set (By val value As Double)
        -y = value
End set
End property
public sub setvalues(By val a As Double, By val b As
    Double)
  -x = a
  - y = b
End sub
public sub setvalues (By val a As Double)
    -x = a
    -y = a
End sub
Public Function Getproduct() As Double
    Return -x * -y
End Function
End class
    Dim obj As new Sample2
    obj-x = 5
    obj-y = 30
    message.show ("product=" & obj-Getproduct()
    Dim obj2 As New Sample2
    obj2-set values (10, 20)
message Box show("product=" & obj2: Get
    Product())
```

XII. Results (Output of the Program)

product = 150
product = 200

Scanned by CamScanner

Scanned with CamScanner

Note: Below given are few sample questions for ... more such questions so as to ensure the achievement of identified CO.

1. Find output of following code.

```
Imports System
Module Module1
    Class overload
        Dim r As Double
        Public Overloads Sub area(ByVal r)
            Console.Write("Area of the Circle :")
            Console.WriteLine(1 /3)*3.14 * r*r * r)
        End Sub
        Dim length As Integer
        Dim width As Integer
        Public Overloads Sub area(ByVal length, ByVal width)
            Console.Write(" Area of the Rectangle :")
            Console.WriteLine(length * width)
        End Sub
    End Class
    Sub Main()
        Dim r As New overload()
        r.area(3.1)
        r.area(4, 5)
    End Sub
End Module
```

2. Implement windows application for employee details using overriding methods

(Space for answers)

```
e) class person
    public Name As String
    public Address As String
    public City As String
    public State As string
    public ZIP As String
Overridable sub print()
    Console.writeline (Name)
    Console.writeline (Address)
    Console.writeline (City & ", " & State &
        & ZIP)
    End sub
End class
```


Scanned by CamScanner

Scanned with CamScanner

```
Class Employee
    Inherits person
    overrides sub print()
        Console.writeline(Name)
        Console.writeline(address)
        Console.writeline(City & " " & State & "-" & ZIP)
        Console.writeline("Salary" & Salary)
    End sub
    public Salary AS Integer
End class
```

1)

Area of the circle

3.1812466667

Area of the Rectangle

20.

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

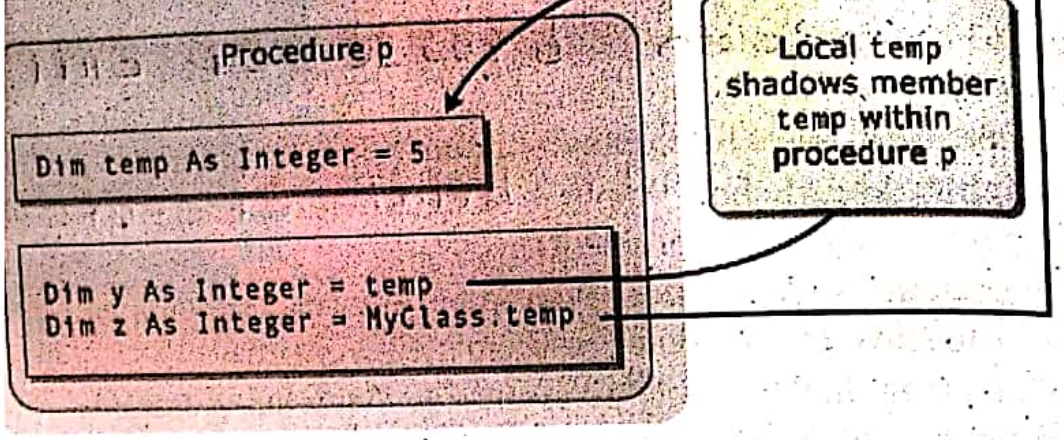
1. Implement a windows application for show string concatenation using overload method.

(Space for answers)

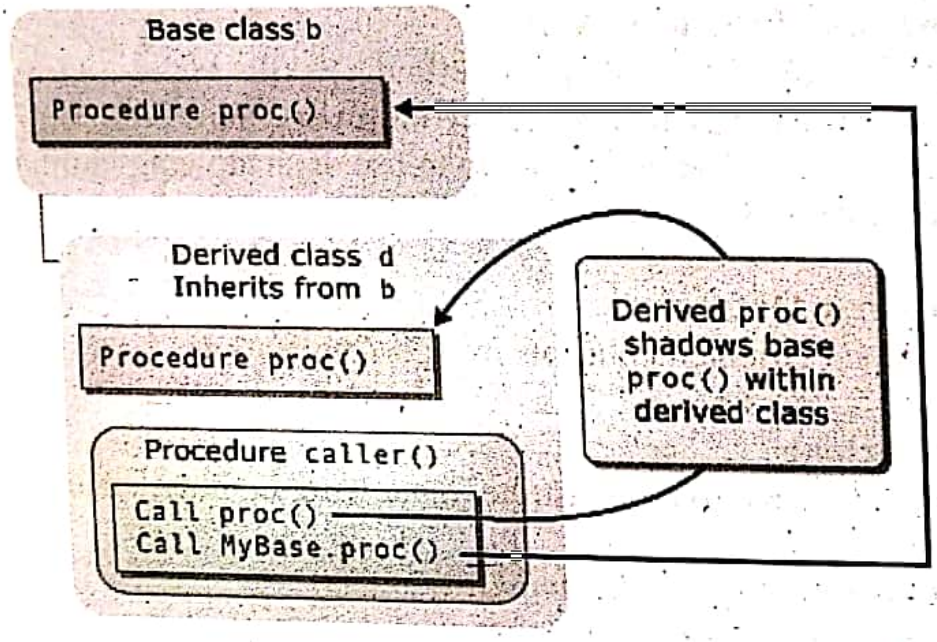
```
Public class CalArea
    Dim res As Integer
    public Sub Area(By Val r As Integer)
        res = 3.14 *r*r
        Console.writeline("circle Area=" & res)
    End sub

public Sub Area(By Val l as Integer, By Val
            b As Integer)
        res = l * b
    Console.writeline("Rectangle Area :" & res)
    End Sub
    End class

public class Demoplay
    Sub main()
        Dim a As New CalArea()
            a.Area(5)
            a.Area(3,4)
            Console.Readline()
    End Sub
    End Class
```


Scanned by CamScanner

Scanned with CamScanner



of Through Inheritance



urces required (Additional)

Windows 10
i3 processor
2 GB RAM

:cautions

Save the program in specific directory / folder.
Follow safety practices.

Scanned by CamScanner
Scanned with CamScanner

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program to using shadowing in inheritance.

```
Public class firstclass
  Public sub display()
    msgBox (" This is Firstclass")
  End sub
End class
Public class secondclass
    Inherits firstclass
  Private shadows sub display()
      msgBox (" This is second class")
End class

Public class third class
      Inherits second class
  Public shadows sub display()
      msg Box (" This is Thirdclass")
  End sub
End class
module callDisplay
  Dim first As New Firstclass
  Dim second As New secondclass
  Dim Third As New Third class
  Public sub call Display procedures()
      first.display()
      second.display()
      Third.display()
  End sub
End module.
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the Program)

This is first class

This is second class

This is Third class

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Write output of following code

```
Class Shadow
    Shared x As Integer = 1
    Shared Sub Main()
        Dim x As Integer = 10
        Console.WriteLine("main: x" & x)
        Console.WriteLine("main sahdow x:" & Shadow.x)
    End Sub
End Class
```

2. Write output of following code

```
Public Class Form2
    Dim x As Integer = 10
    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e A
    System.EventArgs) Handles Button1.Click
        Dim x As Integer = 30
        MsgBox(x)
    End Sub
End Class
```

(Space for answers)

Scanned by CamScanner

Scanned with CamScanner

1>

main : x = 10

main shadow x : = 1

2>

30

Scanned by CamScanner

Scanned with CamScanner

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Implement the concept of shadowing through inheritance in a console application.

(Space for answers)

→

```
Imports System
  Class Base
    Sub F()
    End Sub
    Sub F(ByVal i As Integer)
    End Sub
    Sub G()
    End Sub
    Sub G(ByVal i As Integer)
    End Sub
  End class

  Class Derived
      Inherits Base
      'only hides F(Integer) overloads
          Sub F(ByVal i As Integer)
      End Sub
      'Hides G() and G(Integer). Shadows
          Sub G(By Val i As Integer)
      End Sub
  End class
```


Scanned by CamScanner

Scanned with CamScanner

Module Test.

```
Sub main()
    Dim x As Derived = New Derived()
    x.f() ' Calls Base F()
    x.G() ' Error: No Such method.
End Sub End module
```


Scanned by CamScanner

Scanned with CamScanner

VIII. Resources required (Additional)

Windows 10
i3 processor
2 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write any program using Exception handling.

```
module exceptionprog
 Sub division (Byval num1 AS Integer, Byval num2 AS
                Integer)
   Dim result AS Integer
    Try
     result = num1 \ num2
     catch e AS DivideByZeroException
     Console.writeline ("Exception Caught: {0}",e)
    Finally
      Console.writeline ("Result : {0}", result)
      End Try
      End Sub
    Sub main()
        division (25,0)
        Console.Readkey()
      End Sub
      End module
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the Program)

Exception caught: System.DivideByZeroException
at
Result=0

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Write output of following code.

```
Module Module1
    Sub Main()
        Try
            Throw New Exception("Mega-error")
        Catch ex As Exception
            Console.WriteLine(ex.Message)
        End Try
    End Sub
End Module
```

2. Write output of following code.

```
Module Module1
    Sub Main()
        Try
            ' Try to divide by zero.
            Dim value As Integer = 1 / Integer.Parse("0")
            ' This statement is sadly not reached.
            Console.WriteLine("Hi")
        Catch ex As Exception
            ' Display the message.
            Console.WriteLine(ex.Message)
        End Try
    End Sub
End Module
```

(Space for answers)

Scanned by CamScanner

Scanned with CamScanner

1) Mega-error

2) Hill

Scanned by CamScanner

Scanned with CamScanner

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Write a program for student registration using exception handling.

(Space for answers)

```
1 public class Form1
  private sub btnclick_Click (By val sender As
    System.object Byval e As System.Event Arg s)
    Handles btnclick.Click
  Dim number1, number2, div As Integer
    number1 = val (TextBox1.Text)
    number2 = val (Text Box2.Text)
    div = number1 / number2
    msgBox ("Division is" & div)
  Catch ex As OverFlowException
    Console.writeline ("Division of {0} by
      zero ", number1)
  End Try
  End Sub
  End Class
```


Scanned by CamScanner

Scanned with CamScanner

```
Dim Con as SqlConnection
Con=New SqlConnection("server=.; user id=sa; password=sa;
database=student")
```

Command

```
Dim cmd As OleDbCommand
cmd=New OleDbCommand("select * from student", con)
Dim cmd As SqlCommand
cmd=New SqlCommand("select * from student",con)
```

DataReader

```
Dim dr As OleDbDataReader
Dr=cmd.ExecuteReader
Dim dr As SqlDataReader
Dr=cmd.ExecuteReader
```

DataSet

```
Dim dataset As New DataSet()
Da.fill(dataset, "table1")
```

DataGrid

```
DataGridView1.DataSource = ds.Tables(0)
```

VIII. Resources required (Additional)

Window10
i3 processor
4 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio2017
MS ACESS

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using ADO.Net to connect to the database.

Scanned by CamScanner

Scanned with CamScanner

e) Here is how to create a connection to a ms Access Database

① open the ODBC icon in your control panel

② Choose the system DSN tab

③ Click on Add in the System DSN tab

④ Select the microsoft Access Driver

⑤ In the next screen, select to locate the database

⑥ Give the database a Data source name (DSN)

⑦ Click OK.

Scanned by CamScanner

Scanned with CamScanner

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Design the windows application that will dispaly the content of a table in MS-Access database on DataGrid control using data adapter.

(Space for answers)

```
1) public class form1
        public sub New()
            Initialize component()
            Bind Grid()
    End sub
    private sub Bind Grid()
        Dim constring AS String
        Using con AS New Sql Connection
    (constring)
        Using cmd AS New Sql Command
    ("SELECT * From Customers", con)
        Cmd.CommandType = CommandType.Text
        Using sda AS New Sql DataAdapter(cmd)
    Using dt AS New Datatable()
        Sda.Fill (dt)
    data Grid.View1.DataSource = dt
```


Scanned by CamScanner

Scanned with CamScanner

```
            End using
        End using
    End using
End using
    End sub
End class
```

Scanned by CamScanner

Scanned with CamScanner

windows 10
i3 processor
2 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using data adapter to connect to the database.

```
using OleDbDataAdapter;
Private void OleDbDataAdapter_Click(object sender,
                                    System.EventArgs e)
{
String connectionString = @"provider=microsoft.Jet.
                                    OLEDB.4.0", +
                "Data source = c:/northwind.mdb";
String SQL = "SELECT * FROM orders";
OleDbconnection conn = new OleDbconnection (connection
                                    String);
Conn.open();
OleDbDataAdapter adapter = new OleDbDataAdapter();
adapter.Select command = new OleDbDatacommand (SQL,
                                    conn);

DataSet ds = newDataset("orders");
adapter.Fill(ds);
data Grid1.Datasource = ds.DefaultviewManager;
}
```


Scanned by CamScanner

Scanned with CamScanner

XII. Results (Output of the Program)

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Find error in following code

```
Dim adp As SqlDataAdapter = New SqlDataAdapter("select * from Customers",
connection)
Dim ds As DataSet = New DataSet()
Fill(ds)
```

2. Write a data adapter syntax using a MS-Access code with a student table.

(Space for answers)

```
Imports OleDbDataAdapter
private subOleDbDataAdapter_Click (By val sender
                As Object, By val Arg SAS
                System.Event)
'Create a connection object
Dim connection String As string = "provider=
microsoft.Jet.OLEDB.4.0;" + "Data Source=c:/
northwind.mdb"
Dim SQL AS String = "SELECT * FROM orders"
Dim conn AS OleDbconnection = new OleDbconn-
ection (connectionstring)
'open the connection
connopen()
'create an OledbDataAdapter object Dim adapter
AS OleDbDataAdapter = New OleDbDataAdapter()
adapter OleDbDataAdapter()
New OleDbcomm and (SQL, conn)
'create Data Set object
```


Scanned by CamScanner

Scanned with CamScanner

```
Dim ds As Dataset = New Dataset("orders")
'call DataAdapter's Fill method to Fill data from the
'Data Adapter to the Dataset adapter.Fill(ds)
'Bind dataset to a DataGrid control
dataGrid1.DataSource=
ds.DefaultViewManager
End Sub
```

1) Dim con AS Sql connection = New Sql connection
("Data Source = PC II-PC \kim;
Initial catalog = mydbas; User ID = Sa;
password = 123")
Dim sqlstr AS String = "select * From
Supplier"
Dim adp AS SqlDataAdapter = New SqlDataAdapter
(sqlstr, con)
Dim dt As New New DataTable adp.Fill
(dt)

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. **Design a window application (in MS-Access which have navigation (Next, First, Previous, Last).**
2. **Develop a window application that will contain multiple tables in a single dataset.**

(Space for answers)

1. First Button

```
private void btnFirst_click(object sender,EventArgs e)
{
if ds.Tables[0].Rows.Count>0
{
i=0;
textBox1.Text=ds.Tables[0].Rows[i]["ID"].ToString();
textBox2.Text=ds.Tables[0].Rows[i]["empname"].ToString
textBox3.Text=ds.Tables[0].Rows[i]["salary"].ToString();
}
```

Scanned by CamScanner

Scanned with CamScanner

```
NextButton:- private void btnnext_Click (object sender,
                                          EventArgs e)
{
if (i<ds.Tables[0].Rows.count-1)
textBox1.Text=ds.Tables[0].Row[i]["ID"].To String();
textBox2 : Text=ds.Tables[0].Row[i]["empname"].To String
                                                    ();
textBox3.Text=ds.Tables[0].Rows[i]["Salary"].To String
                                                    ();
}
Last Button:- private void btnlast_Click (object sender
                                          EventArgs e)
{
i=ds.Tables[0].Rows.count-1;
textBox1.Text=ds.Tables[0].Row[i]["ID"].To String();
textBox2.Text=ds.Tables[0].Row[i]["empname"].To String();
textBox3.Text=ds.Tables[0].Row[i]["salary"].To String();
}
previous Button:- private void btnprevious_Click (object
                                          sender, EventArgs e)
{
if (i==ds.Tables[0].Rows.count-1||i==0)
{
i--;
textBox1.Text=ds.Tables[0].Row[i]["ID"].To String();
textBox2.Text=ds.Tables[0].Row[i]["empname"].To String();
textBox3.Text=ds.Tables[0].Row[i]["salary"].to String();
}
else
{
// No records to seemore
}
}
```


Scanned by CamScanner

Scanned with CamScanner

"", con);

- **A Command object exposes several execute methods like:**
  1. **ExecuteScaler()**
     Executes the query, and returns the first column of the first row in the result set returned by the query. Extra columns or rows are ignored.
     dr = cmd.ExecuteScaler();
  2. **ExecuteReader()**
     Display all columns and all rows at client-side environment. In other words, we can say that they display datatables client-side.
     dr = cmd.ExecuteReader();
  3. **ExecuteNonQuery()**
     Something is done by the database but nothing is returned by the database.
     dr = cmd.ExecuteNonQuery();

VIII. Resources required (Additional)

Window 10
i3 processor
4 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program to insert the data & retrieve the data from database.

```
Private Sub Button1_Click (Byval
Sender As System.Object, Byvale
As System.EventArgs) Handles
Button1.Click
Con = New
MySqlConnection ("Server = localhost
; User id = root; database = property"
Dim rd As MySqlDataReader
Try
```


Scanned by CamScanner

Scanned with CamScanner

```
con.open()
Dim qr AS String
qr= "INSERT INTO
property. login (FullNames, IdNO, PhoNeNo,
Gender) VALUES("&
Text Box1. Text & "','"&
Text Box2. Text & "','"&
Text Box3. Text & "','"&
Text Box6 .Text & "')"
mysql command (qr, con)
cmd=Ne
rd=
Cmd. ExecuteScalar
msgBox ("saved")
catch ex AS Exception
message Box. Show(ex.message)
End Try
con.Dispose()
End Sub
```

XII. Results (Output of the Program)

.....

.....

.....

.....

.....

.....

.....

Scanned by CamScanner

Scanned with CamScanner

XIII. **Practical Related Questions**

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Write syntax of command object execute method.

(Space for answers)

Syntax:-

Objcmd.parameters.Item(0)

objcmd.(0)

To execute a query without using a command object, pass a query string to the Execute method of a connection object or to the open method of a recordSet object

syntax

Set

Obj command = server. create object ("ADODB command")

Method.

① cancel:- cancel an execution of a method

② create parameter = creates a new parameter object

Scanned by CamScanner

Scanned with CamScanner

(5) Execute :- Execute the query SQL Statement or procedure in the commandText property

```
dim cnn as connection
dim cmd as command
dim cmd2 as command
dim str1 as string
dim str2 as string

cnn.open
cmd.connection = cnn
cmd.command = str1
cmd.execute
cmd2.connection = cnn
cmd2.command = str2
cnn.close
```

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Write working of each line in the following code

```
Dim strQuery As String = "select Name, ContentType, Data from tblFiles where id=@id"
Dim cmd As SqlCommand = New SqlCommand(strQuery)
cmd.Parameters.Add("@id", SqlDbType.Int).Value = 1
Dim dt As DataTable = GetData(cmd)
If dt IsNot Nothing Then
    download(dt)
End If
```

2. Design a simple Windowsform for accepting the details of Employee. Using the connected architecture of ADO.NET, perform the following operations:

Scanned by CamScanner

Scanned with CamScanner

- Insert record.
- Search record.
- Update record.
- Delete record.

(Space for answers)

① Insert record

```
(md = new Sql Command ("INSERT
    Employee (EMP_ID, EMP_Name)
values ("+aa+", "+bb+")", con);
```

② Search record

```
cmd = new Sql Command ("search *
    From employee",
```

③ Update record

```
Sql command cmd = new Sql Command
                    ("update
    Employee set
EMPID "+aa+", EMP_Name = "+bb+"
    WHERE EMP_ID "+aa+", con);
```

④ DELETE record

```
Emd = new Sql command ("DELETE FROM
Employee where
EMPID = "+aa+", con);
```

Scanned by CamScanner

Scanned with CamScanner

```
② Import System.Data.OleDb
  public class form
    Dim MyDA OleDbDataAdapter
    Dim MyDataset AS Dataset
  private Sub form1 load (Byval sender AS System
    object Byval AS System EventArgs) Handles
    MyBase.Load
    Dim con AS OleDbconnection = New OleDbconnection
  ("provider= Microsoft.Jet.Oledb.4.0, data source
  =(Data bi ectory \my DB.mdb')
    Dim cmd AS OleDbcommand = New OleDb command
    ("SELECT * FROM Table1" con) con.open()
    MyDA = New OleDataAdapter (cmd)
    Automatically generate deletecommand update.
    command and Insert command for DataAdapter
    object
    Dim builder AS OleDbCommandBuilder = New
      OleDbcommandBuilder (MyDA)
      MyDataset = New Dataset()
    MyDA.Fill (My Data Set" My Table)
    Data Grid view1.Datasource = MyDataset.Tables
    ("MyTable") Default view
      Con.Close()
      Con.Nothing
    End Sub
    Save data back into database
    private sub Button1_Click (By val Sender
          AS System object By val e AS
          System.Event Args) Handles
      Button1.Click
      me.validate()
    me.MyDA.Update(Me.Mydataset.Table("my Table"))
      Me.MyDataset.AcceptChanges()
      end sub
      End class
```


Scanned by CamScanner

Scanned with CamScanner

VIII. Resources required (Additional)

windows 10
i3 processor
4 GB RAM

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program using data binding in VB.Net

```
Import System.Data
Imports System.Data.OleDb
Public Class Form1
private conn AS ~~Form~~1 OleDbConnection
 private adpt AS OleDbDataAdapter
 Private cmdbld A SOleDbcommand Builder
 private myDS AS Dataset
 private SqlStr AS String
 privat Sub Form1_load (Byval sender AS System.object
                 Byval e AS System.EventArgs) Handles
                 MyBase.load
 Dim conStr AS string="provider=microsoft.Jet.OLEDB
                 .4.0 Data source=D:\
                 employee File.mdb"
  conn = new OleDb connection (connStr)
  conn.open()
  My DS=New Dataset()
  Sql Str= SELECT * From emp"
  adpt = New OleDbData Adapter (Sql Str, conn)
  adpt. select command command Text = sqlStr
  cmbld= New OleDbcommand Builder (adpt)
  adpt. Fill (my DS, "emp")
  comboBox 1. Data Source =my DS.Tables(0)
  comboBox 1. Display member = "ename"
  End Sub
  End Class
```


Scanned by CamScanner

Scanned with CamScanner

8

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Write a syntax of simple binding for text box.
2. Write a syntax of complex binding for combo box.

(Space for answers)

1.

```
Me.txtCustomerID.DataBindings.
Add(New System.Windows.Forms.Binding
("Text", Me.DataSet11,
"Customers.CustomerID"))
Metext.CompanyName.DataBindings.Add(New
System.Windows.Forms.Binding("Text", Me.Dataset11,
"Customers.CompanyName"))
Me.txt.ContactName.DataBinding
("Text", Me.Dataset11,
"Customers.ContactName"))
```

2.

```
private sub
CmbRegion_selectedIndexchang
e(sender, eventargs) Handles
CmbRegion.SelectedIndex changed
Dim pm AS propertyManager=
DirectCast(Me.BindingContext(M
e.BizObj(MRC_ProductMaster));
System.Windows.Forms.property manager)
pm.End CurrentEdit()
endsub.
```

Scanned by CamScanner

Scanned with CamScanner

XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Design a window application for student name and college name using a simple data binding use appropriate database.
2. Design a window application for bank customer record & display it using Complex data binding use appropriate database.

(Space for answers)

1) private table AS New DataTable()
private sub ShowDetails Button_Click(
Byval sender AS System.object,
Byval e AS System.EventArgs)

Scanned by CamScanner

Scanned with CamScanner

```
Handles showDetailsButton.Click
Try
DataGrid1.DataSource = table
OleDbDataAdapter1.SelectCommand.
                    CommandText =
    "select * from Artists where"
& "Sales >= " & SalesAboveBox.Text
table.Clear()
OleDbDataAdapter1.Fill(table)
catch exceptionObject As Exception
messageBox.show(exceptionObject
                    message
End try
End Sub
```

2)

```
Private table As New DataTable()
private Sub BankButton_Click(ByVal
                    sender As
System.object, ByVal e As System.
                    EventArgs())
        Handle BankButton.Click
Try
    Dim CommandBuilder As New
OleDb.CommandBuilder(OleDbDate
                    Adapter1)
OleDbDataAdapter1.update(table)
Catch exceptionObject As Exception
messageBox.show(exception
                    Object.message)
End Try

End Sub
```


Scanned by CamScanner

Scanned with CamScanner

VIII. Resources required (Additional)

window 10
4 GB RAM
I3 processor

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

visual studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program to navigate in the database.

```
Imports System.Data Sql Client
  public class Form1
Inherits
System.window.forms.Form
Dim strconnection AS String = "Data source=
  \SDOTNET; Integrated Security= SSPI; Initial
  Catalog = FinAccounting"
  Dim Mycon AS Sql Connection
  Dim myadapter AS Dataset
Dim strsqluser Select AS String = " SELECT * FROM
  ACCOUNTS Table "
Dim My command AS Sql Command
private SubForm1 load (By val Sender AS object,
  By val e AS system. EventArgs) Handles
    My Base.load
  Dim i, j AS integer
   mycon = New
  Sql connection (strconnection) Mycon.open()
     My adapter = New
  Sql Data Adapter (Strsqluser- Select Mycon)
   My account dataset = New Dataset()
    My addapter fill (Myaccountdataset
      "ACCOUNTS Table")
  My account dataset. Tables ("ACCOUNTS Table")
      For i = 0 TO (j-1)                  Rows count()
  MsgBox (My account dataset, Table
                                  S("ACCOUNT Tables") Row(i)(1))
    Next
  End Sub
```


Scanned by CamScanner

Scanned with CamScanner

XIII. Practical Related Questions

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. Write a method to count Rows in table.

(Space for answers)

1. COUNT() Function The SQL COUNT() Function returns the number of rows in a table satisfying the criteria specified in the WHERE Clause

It sets the number of rows or non Null column values. COUNT() returns 0 if there were no matching rows

Scanned by CamScanner

Scanned with CamScanner

(Space for answers)

a] 1] Data menu → Add data sources
2] you will get following window
3] Select database and click Next
4] Select New connection
set data source and database file name
5] Click OK
6] Select Next → Next
7] Select Tables option and click Finish
Data source is added
8] To see the data source:- datamenu →
show data sources
9] Now drag required fields on the form
10] Run the program

2] First Button

```
private void btnfirst_Click (object sender EventArgs e)
{ if (ds.Tables[0].Rows.count>0){
i=0;
textBox1.Text=ds.Tables[0].Rows[i]["id"].ToString()
textBox2.Text=ds.Tables[0].Rows[i]["Stud name"].ToString()
textBox3.Text=ds.Tables[0].Rows[i]["fd"].ToString()
}}
```

Next Button:- private void btnnext_Click (object sender EventArgs e) {
if (i<ds.Tables[0].Rows.count-1)?
textBox1.Text = ds.Table[0].Row[i]["id"].to String()
textBox2.Text=ds.Table[0].Row[i]["Student].to String()
tex Box3.Text ds.Table[0] Rows[i]["Salary"].To String()
}

last Button:- private void btnlast_Click (object sender EventArgs e)
{ i=ds.Tables[0].Rows.count-1;
textBox1.Text=ds Tables[0] Row[i]["ID"].To String();
textBox2.Text=ds Tables[0].Row[i]["Student"].To String
textBox3.Text=ds.Table[0] Row[i]["Salary"].To String()
}

Scanned by CamScanner

Scanned with CamScanner

Previous Button: private void btnprevious_Click
(object sender EventArgs e)
{
if (i==ds.Tables[0].Rows.Count-1) i=0;
i--;
textBox1.Text=ds.Tables[0].Row[i][ID].ToString();
textBox2.Text=ds.Tables[0].Row[i][student].ToString();
textBox3.Text=ds.Tables[0].Row[i][salary].ToString();
else
}
}

XV. References / Suggestions for further Reading

1. https://www.dotnetheaven.com/article/record-searching-navigation-in-vb.net(20/07/2018)
2. https://www.homeandlearn.co.uk/NET/nets12p7.html(20/07/2018)

XVI. Assessment Scheme

Performance Indicators		Weightage
Process related(15 Marks)		**30%**
1.	Debugging ability	20%
2.	Follow ethical practices.	10%
Product related (35 Marks)		**70%**
3.	Correctness of Program codes	25%
4.	Quality of input/output messaging and output formatting	25%
5.	Timely Submission of report	10%
6.	Answer to sample questions	10%
Total (50 Marks)		**100%**

List of Students /Team Members

1. .....
2. .....
3. .....
4. .....

Marks Obtained			Dated signature of Teacher
Process Related (15)	**Product Related (35)**	**Total (50)**	
13	29	42	

Scanned by CamScanner

Scanned with CamScanner

Practical No.32: Develop An Executable File and Deploy It.

Practical Significance:

I. The process of setting up executable file to order system is called deployment. To deploy an application, you create another type of project called an installer. An installer consists of two files named Setup.exe and Setup.msi.

Relevant Program Outcomes (POs)

II.
- **Discipline knowledge:** Apply Computer Programming knowledge to solve the computer group related problems.
- **Experiments and practice:** Plan to perform experiments and practices to use the results to solve the computer group related problems.
- **Engineering tools:** Apply relevant Computer programming / technologies and tools with an understanding of the limitations.
- **Communication:** Communicate effectively in oral and written form.

Competency and Practical Skills

This practical expects to develop the following skills in the student.

Develop VB.NET programs to solve computer group related problems.

1. Write a program for creating a executable file and deploy it.
2. Compile/Debug/Save the 'VB.NET' program.

Relevant Course Outcomes

- Use Data Binding in GUI Application.

Practical Outcome

- Create Executable file of VB.Net Application and deploy it to other computer.

Relevant Affective domain related Outcome(s)

1. Follow safety measures.
2. Follow ethical practices.

Minimum Theoretical Background

The process of setting up executable file to order system is called deployment. This appendix uses the term Setup project to refer to a specific type of project supported by Visual Studio. The Setup project bundles all of the elements of an application so that it can be distributed to another computer.

The end user's computer is called the target computer. The end user typically runs the installer (the file named Setup.exe) that you created to install your application on their computer.

Resources required (Additional)

Window 10
i3 processor
4 GB RAM

Scanned by CamScanner

Scanned with CamScanner

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program to create the executable & deploy the file.

```
Static void main()
{
Application.EnableVisualStyles();
Application.SetCompatibleTextRendering(false);
Process[] process = Process.GetProcessByName
        (Application.
        Product); //prevent multiple instance
if (process.Length>
 {
  MessageBox.Show("Application Name? is already
        refer This instance will now Close",
        (Applicat Name)",
    MessageBoxButton.Ok;
    MessageBoxIcon.Information);
    Application.Exit();
  }
  else{
    Application.Run(new <InitialForm>());
  }
}
```


Scanned by CamScanner

Scanned with CamScanner

IX. Precautions

1. Save the program in specific directory / folder.
2. Follow safety practices.

X. Resources used (Additional)

Visual Studio 2017

XI. Program Code: (Teacher must assign separate program statement to group of 3-4 student)

Write a program to create the executable & deploy the file.

```
Static void main()
{
Application.EnableVisualStyles();
Application.SetCompatibleTextRenderingDefault
                                    (false);
Process[] process = process.GetProcessByName
                                    (Application.
    Product); // prevent multiple instance
if (process.Length>
{
  messageBox.Show("Application Name? is already
        refer This instance will now Clos",
        (Applicat-Name)",
    messageBoxButton.Ok;
    messageBoxIcon.Information);
    Application.Exit();
}
else{
    Application.Run(new <InitialForm>());
}
}
```


Scanned by CamScanner

Scanned with CamScanner

Results (Output of the Program)

- **Practical Related Questions**

Note: Below given are few sample questions for reference. Teacher must design more such questions so as to ensure the achievement of identified CO.

1. List type of setup files
2. Write steps to create setup file.

(Space for answers)

① AIF Audio Interchange File Format
② AU Basic ~~multi~~ Audio
③ AVI multimedia Audio / video
④ BAT PC batch File
⑤ BMP window Bitmap
⑥ CVS Canvas
⑦ DBF dbase II
⑧ DIF Data Interchange Formate
⑨ EPS Encapsulated pattscript
⑩ EXE PC Application

Scanned by CamScanner

Scanned with CamScanner

Ans:-

1- Step 1:- Create the C# windows From Application
Click File, Then Select New, then Select
project choose the visual C# node in
the project types tree, then Select
windows Forms Application

2- Step 2:- Create the Installer For the application
Click File, then Click New, then Click
project

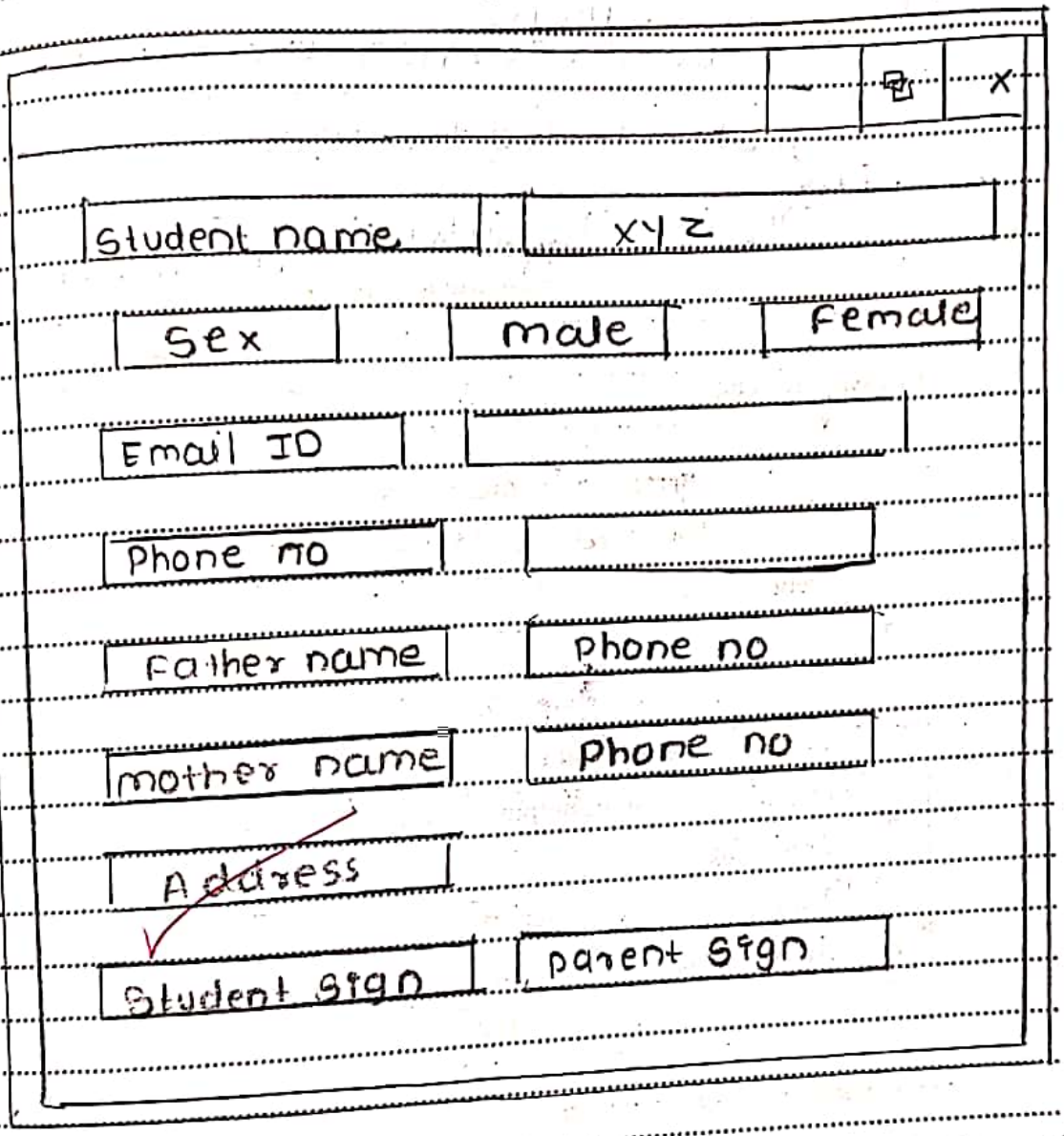
XIV. Exercise (Teacher must assign separate exercise to group of 3-4 student)

1. Create a MySetup.exe file using student registration project (Create Student Registration windows application)
2. Deploy college admission form.

(Space for answers)

Scanned by CamScanner

Scanned with CamScanner




```
1. Private Sub register (Byval SqlQuery AS String)
    Try
        'OPENING THE CONNECTION
        con.open()
        'HOLDS THE DATA TO BE EXECUTED
        with cmd
            connection = con
            commandText = SqlQuery
        End with
        'EXECUTE THE DATA
        result = cmd.ExecuteNonQuery
```


Scanned by CamScanner
Scanned with CamScanner

CHECKING IF THE DATA HAS BEEN EXECUTED OR NOT.
IF result > 0 Then
msgBox("User has bee registered.")
Else
msgBox("Failed to register the user")
End IF
con.closes() catch ex As Exception
msgBox(ex.message)
End Try
End Sub

XV. References / Suggestions for further Reading

1. https://www.dotnetheaven.com/article/deploying-from-visual-studio-using-vb.net(20/07/2018)

XVI. Assessment Scheme

Performance Indicators		Weightage
Process related(15 Marks)		**30%**
1.	Debugging ability	20%
2.	Follow ethical practices.	10%
Product related (35 Marks)		**70%**
3.	Correctness of Program codes	25%
4.	Quality of input/output messaging and output formatting	25%
5.	Timely Submission of report	10%
6.	Answer to sample questions	10%
Total (50 Marks)		**100%**

List of Students /Team Members

1. .....
2. .....
3. .....
4. .....

Marks Obtained			Dated Signature Of Teacher
Process Related (15)	Product Related (35)	Total (50)	
14	29	43	

Scanned by CamScanner

Scanned with CamScanner