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<b>Chapter I</b> <b>Data Type</b>	<b>Data Types</b>
	<b>Constants &amp; Variables</b>
	<b>Assignment statement</b>
	<b>priority rules for Arithmetic operations (Operator Precedence)</b>
	<b>Errors</b>
<b>:Chapter II</b> <b>Branching</b>	<b>Branching statement using (If ...Then)</b>
	<b>Branching statement using (If ..Then.. Else)</b>
	<b>Branching statement using (Select ...Case) .</b>
<b>:-Chapter III</b> <b>Lopping &amp; procedure</b>	<b>(For....next) statement</b>
	<b>"The use of "Do while</b>
	<b>Procedure</b>
	<b>Declaration of a Function</b>
<b>:Chapter IV</b> <b>Cyber Bullying</b>	



# Chapter One: Data Types



## 1 Numeric Data Type:

(Integral Numeric Types)	(Non Integral Numeric Types)
(Long – Integer – Short – Byte)	(Decimal – Single – Double)

## 2 Character Data Type :such as

String

Char

## 3 Miscellaneous Data Types :such as

Are those data that do not fall under the Numeric or the character types

Object

Date

Object

### Note:

- ✓ Each classification of Data Type has more than one type.
- ✓ Each data type occupies a storage space in the memory: for example, the integer data type occupies 4 bytes of memory storage.
- ✓ Each data type has a range of values (minimum value and maximum value); for example, the range of values the data type (Byte) starts with '0' and ends with '255'.

## □□ ( variables )

Variables are reserved **places** in computer memory (RAM) declared and determined by its **name** and **type** (Data Type), and its value usually **changes** during the running of the program and the variable can take initial value, then value changes during the running of the program, such as: price of product - the value of the tax - the address of employee etc... All these data can be changed.

### Variables Declaration:

We use the Command (Dim) to declare a variable in VB.NET language, as shown in the following syntax:

**Dim** Variable\_Name **As** Data Type [= Initial Value]

#### Naming constants and variables:

1. Variable names must begin with a letter or underscore (\_).
2. Variable names should not contain symbols or special characters (e.g.: ?, \*, ^, -, +, . etc.).
3. Do not use reserved words (Visual Basic.NET Language Keywords) such as (single, Dim, As).

## □□ ( Constants: )

Constants are **reserved places** in computer memory (**RAM**) declared and determined by its **name** and **type** (Data Type), and its value **doesn't change** during the running of the program... such as the value of pi, or some constants in physics such as the acceleration of gravity, the speed of light, the speed of sound, etc.

### Declaring constant

**Const** Constant name **As** Data Type = Value

**Const**: declaration command about constants.

**Constant\_Name**: the name of the constant.

**Data type**: the type of data stored in the constant.

**Value**: the constant value that stored in the declared constant.

### Examples:

- **Const C\_Name As String = "جمهورية مصر العربية"**
- **Const pi As Single = 22 / 7            OR**
- **Const pi assignle = 3.14**
- **Const BirthDate As Date = #1/25/2011#**

## □ Assignment statement

It is assigning a value to a constant or variable. It is a statement that has two sides (right hand side and left hand side) separated by the assignment operator (=). It takes the value on the right side of the assignment operator (=) and stores it in the variable or constant on the left, as in the following example:

**Area = 5 \* 3**

## Note:

- Run the program by pressing the button (F5) to do (Start Debugging).
- "Me" expresses the current window Form.
- Separate each variable and the other by the concatenation symbol "الجزءية".
- The reserved word (vbCrLf) is used to create a new line.
- Use the symbol (\_) to write on more than one line if the code line is too long so you can organize and facilitate the process of reading the (Code).
- The programmer can use the command (Rem) in writing remarks that can be referred to within the code, it is not compiled.

## Priority rules for Arithmetic operations

1. Applying the process inside the **brackets** from the inside to the outside.
2. Applying the **exponent**.
3. Applying **multiplication** or **division** process from left to right, wherever comes first.
4. Finally, the Application of the **addition** or **subtraction** process from **left to right**, wherever comes first.

## Errors

### 1. Syntax Errors:

- **Dim x As Single**

The variable (X) was declared but there is a mistake in writing the word (Dim)

- **Const x As Single**

The constant (X) was declared but, its value is not assigned during the declaration.

### 2. Logic error:

Logic Error: it happens when we get incorrect results after executing the program because of the wrong formulating arithmetic or logic expressions. **Examples:**

On calculating the area of a circle, we use the following code:

```
Dim Radius As Single Const x
AsSingle = 22/7 Radius =
TextBox1.Text Label2.Text = x +
Radius^2
```

### 3. Runtime error:

And these errors are discovered while running the program, for example when declaring a variable of type Byte and during the program running, a value that is less than or greater than the allowable range is given, i.e. less than (0) or greater than (255) so an error appears during the run, meaning that the value is **out of range**.

## Questions

### 1- Put ( √ ) Or ( X ):

NO.	Question	Answer
1	One of the advantages of VB.NET is dealing with different types of data.	( )
2	One of disadvantage of VB.NET is dealing with different types of data.	( )
3	All the data entered into the VB.NET program language are stored temporarily in the computer memory.	( )
4	All types of data saved in the memory occupy the same storage space.	( )
5	A good programmer is the one who improves the rationalization of storage space in the computer memory.	( )
6	The value of the student's total grades is classified within the integer data types.	( )
7	The value of the student's name is classified in the Miscellaneous data types.	( )
8	The value of the student gender "male" or "female" is classified within the Miscellaneous data types "Boolean".	( )
9	Image of a student can be classified within the character data types.	( )
10	The value of the employee's salary can be classified within non-integer numeric data types.	( )
11	Each data element stored in computer memory occupies a particular storage space and a particular range of values according to its data type.	( )
12	The data element identifies the storage space it occupies in computer memory and knowing the minimum and the maximum for its value.	( )
13	The term variables in vb.net means stores in the computer memory, which has type and name.	( )
14	Declaring a variable in VB.NET means determining its name and data type.	( )
15	The declaration of variables in the language VB.NET helps rationalize the use of the computer memory.	( )
16	Declaration of variables is a matter of formality, because VB.NET languages recognize the variables and determine the type automatically.	( )
17	The following statement "Dim F_name As String" is to declare the name of a variable "String" and type "F_name".	( )
18	The following data element "Dim F_name As String" is to declare the name of a variable "F_name" and type "String."	( )
19	The declaration statement for variables is determined by the variable name and type.	( )
20	The declaration statement for the variables is determined by the name, type and fixed value.	( )
21	"55City" variable name is a considered a wrong variable name because it begins with a number.	( )
22	"55City" is considered a variable correct name.	( )
23	"Name" is considered a correct variable name in event procedure level (enrichment).	( )

24	"Name" is considered a correct variable name in form1 class level (enrichment)	( )
25	"Dim" is used to declare variables.	( )
26	"Dim" is used to declare constants.	( )
27	The command "Const" is used in the declaration of the variables.	( )
28	The command "Const" is used in the declaration of the constants.	( )
29	Constants in VB.NET language are stores of a computer memory which have the name and the value that does not change during the running of the program.	( )
30	Constants in VB.NET language are stores of a computer memory which have name and value can change during the running of the program.	( )
31	The error in the result of any equation is a Syntax Error.	( )
32	The error in the result of any equation is a Logical Error.	( )
33	Error that appears while you run or execute a VB.NET program is called Syntax Error.	( )
34	Error that appears during the execution of VB.NET program is Run time Error.	( )
35	The final value of the variable X after the execution the following equation "X = 3 + 2 * 4" is (11).	( )
36	The final value of the variable X after execution the following equation "X = 3 + 2 * 4" is (20).	( )

## Choose the correct answer

- (1) The value of prices of desktop tools can be classified as... data.
  - a) integer
  - b) non-integer
  - c) miscellaneous
- (2) The value of the names of the subjects can be classified as data.
  - a) miscellaneous
  - b) non-integer
  - c) string
- (3) The type of data element temporarily stored in the computer memory defines:
  - a) storage space and the extent of its value
  - b) Name and storage space
  - c) Storage space and a storage value
- (4) The right syntax to declare Salary variable is .....
  - a) Dim Salary As Integer
  - b) Dim Salary As Byte
  - c) Dim Salary As Decimal
- (5) The right syntax to declare the city variable is .....
  - a) Dim City As String
  - b) Dim City As Byte
  - c) Dim City As Decimal
- (6) The right syntax to declare the variable name F\_Name is .....
  - a) Dim F\_Name As Integer
  - b) Dim F\_Name As String
  - c) Dim F\_Name As Decimal



- (7) The right syntax to declare the variable Gender is .....
- Dim Gender As Decimal
  - Dim Gender As Integer
  - Dim Gender As Boolean
- (8) The right syntax to declare the variable name F\_Name is .....
- Din F\_Name As String
  - Dim F\_Name As String
  - Dim F\_Name As Char
- (9) The error that appears after running a program VB.NET language is called .....
- Syntax Error
  - logical Error
  - Runtime Error
- (10) The error that appears while writing a code in a VB.NET language called.....
- Syntax Error
  - Logical Error
  - Run time Error
- (11) The error in the output result in language VB.NET code is called.....
- Syntax Error
  - Logical Error
  - Run time Error
- (12) The final output of the variable X for equation "X = 3 + 2 \* 4" is .....
- 11
  - 24
  - 20
- (13) The final output of the variable Y for the equation "Y = 16 - 12/4 + 2" is.....
- 3
  - 11
  - 15
- (14) The declaration statement of a variable "Dim X As String", means the declaration about .....
- A variable named X and type of character String.
  - Variable called string and its type X.
  - Unknown variable has no name and its type String.
- (15) The correct statement to declare a non-integer variable named Y is.....
- Dim Y As Decimal
  - Y As Decimal
  - Dim Y = Decimal
- (16) Choose the correct name of the variable "name of the student":
- st\_name
  - st name
  - Name\*\*
- (17) Choose the correct name of the variable "address of the employee":
- 5Cairo
  - E\_Address
  - (Address)

- (18) The names of the following variables are correct in level of class form 1 except: (enrichment)
- a) St\_text                      b)Text                      c)\_st\_text
- (19) On declaration of a mathematical constant  $\pi$  , we use the code .....
- a) Dim Pi As Single  
b)Dim Pi As Single = 3.14  
c)Const Pi As Single = 3.14
- (20) On the declaration of constant gravity acceleration, we use the code.
- a) Dim g As Single  
b)Const g As Single = 9.81  
c)Dim g As Single = 9.81
- (21) The declaration of variable number of family members C\_Family with initial value of 2 is:.....
- a) Dim C\_Family As Single = 2  
b) Const C\_Family As Integer = 2  
c) Dim C\_Family As Integer = 2
- (22) If there is an error in the result of a rectangular area calculation in a program, this error is considered ....
- a) Syntax Error                      b) Logical Error                      c) Run time Error
- (23) The error message that appears when you write the code "Dimension X As Byte", can be classified as .....
- a) Syntax Error                      b) Logical Error                      c) Run time Error
- (24) The final output of the equation "  $Y = 12 - 2 + 4 / 2$  " is .....
- a) 12                      b) 7                      c) 9
- (25) The final output of the equation "  $Y = 12 - (2 + 4) / 2$  " is .....
- a) 12                      b) 7                      c) 9



# Chapter Two: Branching

## □ Branching using "If ... Then. Statement.

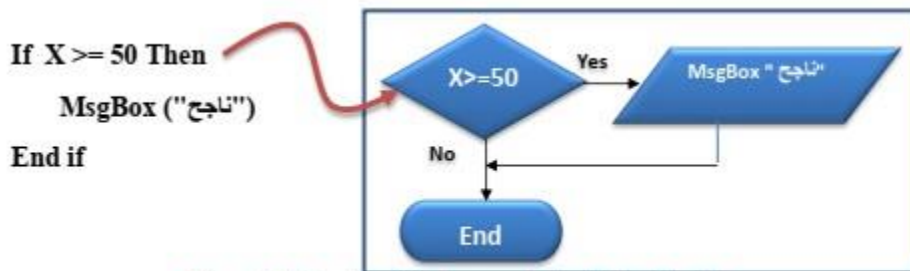
```
If Conditional Expression Then
Code
End If
```

"If..Then" is **conditional or branching statement**, This means that if the **conditional expression is true**, the **code will be carried out**, then you will reach the end of the "If statement",

□□ To clarify what is meant by "conditional expression", we find that it consists of three parts:

- Logical operator preceded by an abstract value a value of a variable or constant
- a result of a mathematical expression

**if this condition is met**, it means that the result of the conditional expression is "**True**" and a Specific code is executed, If the condition **isn't met**, it means that the result of the conditional expression is "**False**" and another code is executed

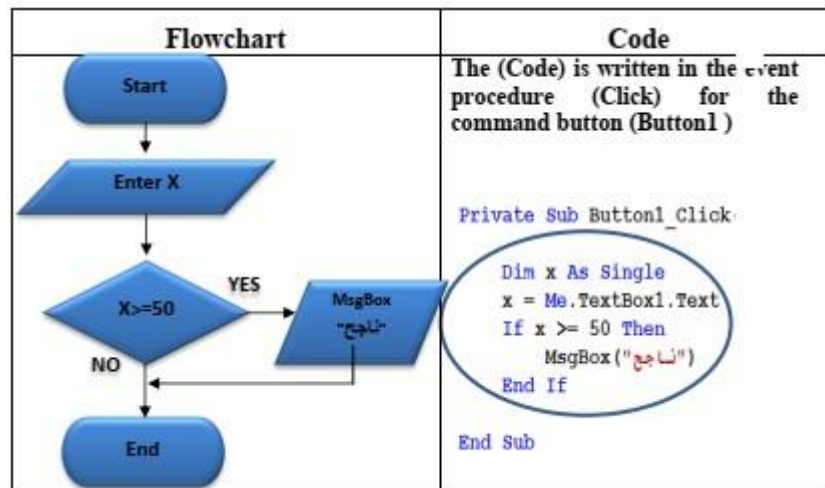


Figure( 2-1) a simplified example for "If...then"

□□ The following table illustrates some examples:

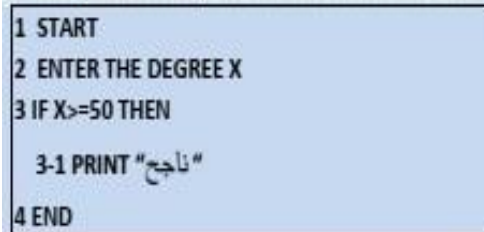
Example of conditional expression	Conditional Expression		
	After logical operator	There are (6) logical expression	Before logical operator
If A > 5 If A < 5 If 5 <> A	Abstracted value	Greater than > less than < Smaller than Or equal to <= Greater than or equal >= equal = Not equal <>	Variable or constant
If B <= A If B >= A	Variable		
If B = A + 3 * 2 If C <> A - 3 * 2 If A^2 = B/C	a value from expression		





### Notice:

We can also use the following (algorithm) in typing program code:



-Run the program by pressing (F5)

-Enter values such as (20,50,75) and click the button (نتيجة) in each time.

### Notice:

When you enter any value less than 50, the MessageBox does not appear because the result of the condition is (False), so the statement after (End if) which is (EndSub) will be executed; to terminate the procedure.

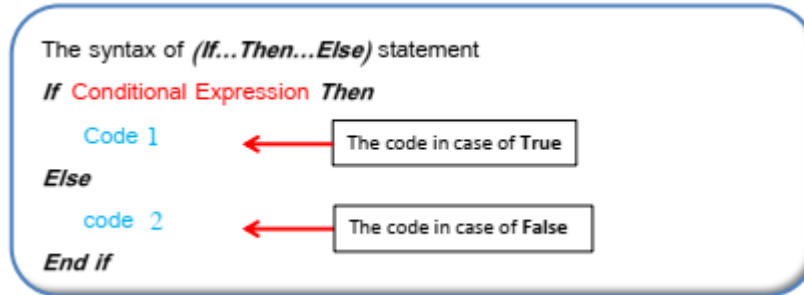
• This (If) statement can be written, in one line without writing (Endif) as follows

```

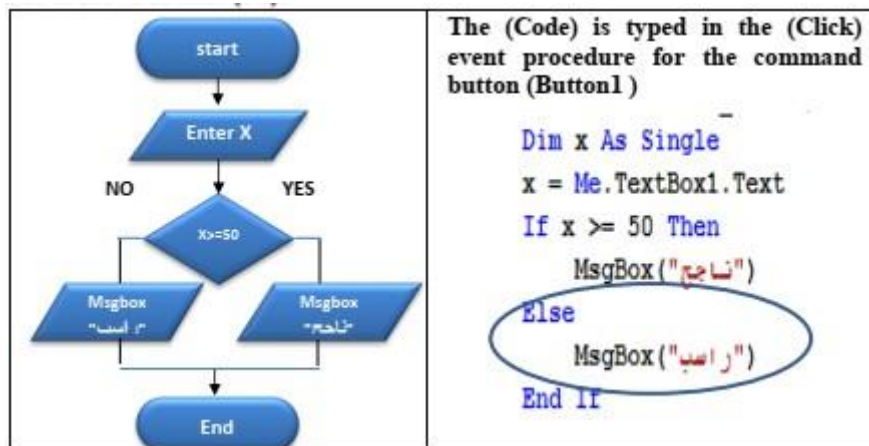
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click
    Dim x As Single
    x = Me.TextBox1.Text
    If x >= 50 Then MsgBox("ناجح")
End Sub
        
```

## ❑ Branching statement using (If..Then..Else)

This **syntax** is used if there is "**Code1**" that will be executed if the result of condition is "**true**", or another code "**Code 2**" is executed if the result of condition is "**False**".



Modify the previous code display the word "راسب" in a (MessageBox); if the degree is less than 50 as shown in table:



### Notice:

1. An (Else) statement contains the block of code (statements that follow Else) which is executed if the result of the conditional expression in the (If) statement is (False).
2. The (If) statement can be written, in one line without writing (End if) as follows:

```

Dim x As Single
x = Me.TextBox1.Text
If x >= 50 Then MsgBox("ناجح") Else MsgBox("راسب")
  
```

← The (If) statement in one line



## ❑ Branching using (Select...Case)

"Select ... Case" statement is used in Branching depends only on the **value of one variable** and there are **many conditions**, which reduces the code and makes it easier and clearer

|| **Example:** Private sub

Button1\_click Dim degree

As single

degree = Me.TextBox1.Text Select

case degree

Case 0 Me.

Label2.Text = "صفر"

Case Is < 0 Me.

Label2.Text = "تحت صفر"

Case Is > 0 Me.

Label2.Text = "فوق صفر" End

Select

Endsub

Select Case Variable

Case value1

code

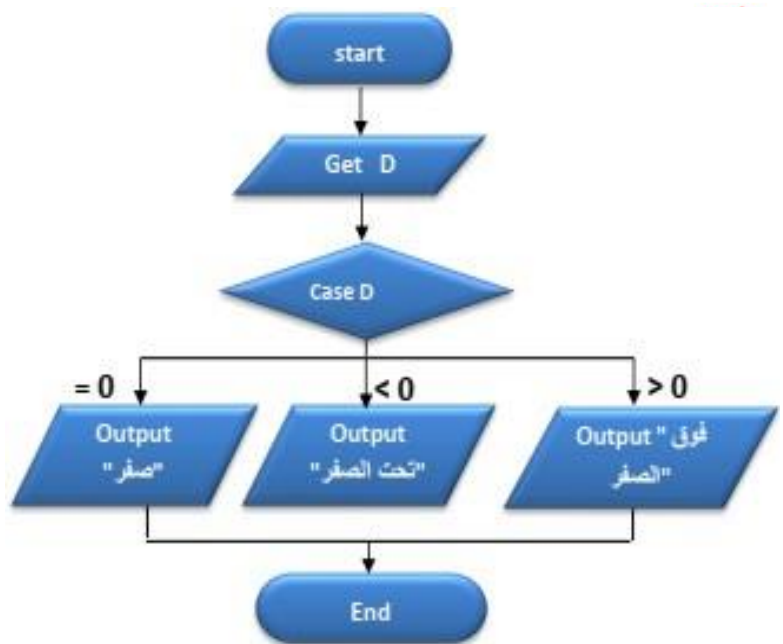
Case value2

code

Case value3

code

Case else



# Questions

**(1) Answer the questions with the help of the following code:**

If X >= 50 Then MsgBox("successful ")

End if

A- MessageBox is shown with the text "successful" when :

..... B- If the value of X equals 50, the result of executing code is.....

..... C. If the value of X equals 62, the result of executing code is .....

**(2) Answer the following questions using the following code line:**

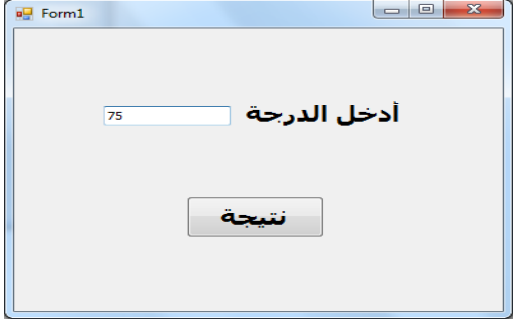
If x<0 Then msgbox (موجب العدد) else msgbox (سالب العدد)

A- Write the conditional expression in the preceding statement:

..... B- The code to be executed when the condition is true is:

..... C- The code to be executed when the condition is false is:

**(3) Answer the following questions with the help of the screen and the code in the table:"**  
**Code screen**

Code	screen
<pre>Private Sub Button1_Click     Dim x As Single     x = Me.TextBox1.Text     If x &gt;= 50 Then         MsgBox ("ناجح")     End If End Sub</pre>	

A-The purpose of the program is: .....

B- The code is executed if the event ..... occurred on control tool.

C-Type of variable X in the code is..... :

D- "Me." In the code refers to..... :

E- We input the value (50) in the text box, the result of the implementation of the code is :  
.....



(4) Complete the following table with the required code, using the general syntax conditional statement "IF .. Then .. Else"

<b>If Conditional Expression Then</b>
<b>Code</b>
<b>Else</b>
<b>Code</b>
<b>End if</b>

So as to show a message box having the word "مصر" if the value of the variable "Country" is equal to the "Egypt" or message box having the word "Egypt" appears:

No	statement	code
1	Conditional expression	.....
2	Result of achieving the condition "True"	.....
3	Result of not achieving the condition "False"	.....

( 5 ) Answer the following questions with the help of the code:

- A. If the value of X = 76, the result of executing the code is:  
.....
- B. If the value of X = 49, the result of executing Code is :  
.....
- C. Rewrite the code of "Block If" to appear on only one line.  
.....

```
Dim x As Single
x = Me.TextBox1.Text
If x >= 50 Then
    MsgBox("ناجح")
Else
    MsgBox("راسب")
End If
```

(6) After studying the code, answer the following questions:

A- Modify the code so that the "الرقم زوجي" text appears in a label "Label2" and "الرقم فردي" text appears in a label "Label2" instead of the message box.

B- Replace the type of variable "N" to be "Integer"

```
Dim N As Long
N = Me.TextBox1.Text
If N Mod 2 = 0 Then
    MsgBox("الرقم زوجي")
Else
    MsgBox("الرقم فردي")
End If
```

(7) The following code receives any number of a TextBox, and stores it in a variable, and

then tests its value. If the number is even or odd, a MessageBox appears showing that.  
Required: Retype the code after discovering the errors and correcting them so that the result of its implementation is right.

```
Dim X As Integer
```

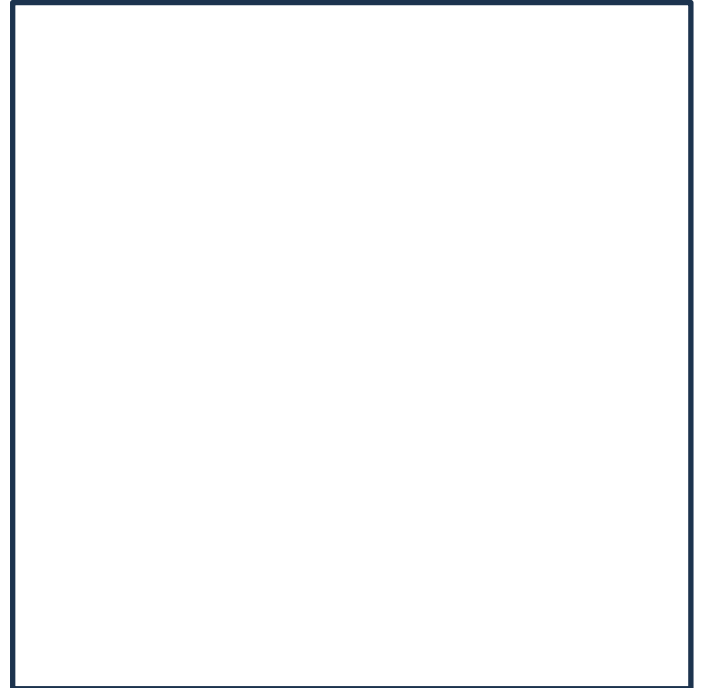
```
N = Me.TextBox1.Text
```

```
If N Mod 2 = 0
```

```
    MsgBox ("الرقم زوجي")
```

```
Else
```

```
    MsgBox ("الرقم فردي")
```



# Chapter Three: Looping and Procedures



In the previous chapter, we have learned how to execute a specific code, based on a conditional expression. In this chapter, you will learn how to **repeat a certain code** for a number of times (which is called Loops) using (**For...Next**) and (**DoWhile...loop**).

## ↳ Using (for.....Next) statement

It is one of the **limited loop** statements used when we want to repeat a code **for specific number of time**.

### General syntax for this statement

For **Variable = Start Value To End Value Step Add Value**

**Code**

**Next [Variable]**

### □□ Where:

**Variable:** is the name which represents the counter and its type must be numeric (integer or decimal).

**Start Value:** is the start value of the counter or the beginning of repetition is a numeric value.

**End Value:** is the value of the end of the counter and the end of the repetition is also a numeric value.

**Add Value:** is the increment value of the counter or value over the counter until it reaches the end value.

**Code:** is command or more to be replicated and be between the beginning of the loop (for) and its end (Next).

### □□ Note:

1. If the value of the increment is positive 1, it can be dispensed with writing Step Add Value, as the default value to increase the counter is **positive 1**.
2. Typing a variable name counter next to "Next" **optional**.



## □□ Exercise:

Design the following form window, to have the numbers from 1: 3 Displayed in the messageBox on pressing the Button “view numbers from 1 to 3

## □□ Implementation steps

(1) Design the form window as in the following figure:



(2) Use the following table to understand the nature of the work program, and study the code with the help of your teacher

Code	Flow Chart
<pre>Private Sub Button1_Click(By Dim M As Integer For M = 1 To 3 MsgBox (M) Next End Sub</pre>	<pre> graph TD     Start([Start]) --&gt; M1[M=1]     M1 --&gt; Decision{M &lt;= 3}     Decision -- True --&gt; Mplus[M=M+1]     Mplus --&gt; MsgBox[/msgbox M/]     MsgBox --&gt; Decision     Decision -- False --&gt; End([End])     </pre>

## □□ Note:

- Run the program by pressing (F5)
- command (Me.TextBox1.Text = "") used to delete the contents of the text box (TextBox).
- symbol “vbCrLf” A string constant used to add carriage returns symbol and newline feed vbCrLf = Visual Basic Carriage Return Line Feed.



➤ **Control start value ,End value and step increment in the (For...Next) statement.**

Example	The code
To display the odd number from 1 to 10	<code>For I=1 to 10 step 2 Me.TextBox1.Text=Me.TextBox1.Text الجزيرة I&amp;vbCrLf Next</code>
To display the even numbers from 2 to 10	<code>For I=2 to 10 step 2 Me.TextBox1.Text=Me.TextBox1.Text الجزيرة I&amp;vbCrLf Next</code>
To display the numbers that can be divided by 3 starting from 3 to 20	<code>For I=3 to 20 step 3 Me.TextBox1.Text=Me.TextBox1.Text الجزيرة I&amp;vbCrLf Next</code>
To display even numbers in descending order from 10 to 1.	<code>For I=10 to 1 step -1 Me.TextBox1.Text=Me.TextBox1.Text الجزيرة I&amp;vbCrLf Next</code>
Display numbers from 1.50 to 0.5 with decremented by 0.05 each time	<code>For I=1.5 to 0.5 step -0.05 Me.TextBox1.Text=Me.TextBox1.Text الجزيرة I&amp;vbCrLf Next</code>
To display the numbers from 1 to the value of B at increasing value of C	<code>For I=1 to B step C Me.TextBox1.Text=Me.TextBox1.Text الجزيرة I&amp;vbCrLf Next</code>

**From the following examples, we conclude that:**

- 1 We can determine the rate of increment of the variable after (Step) and then type a numeric value or numeric variable.
- 2 The rate of increments should be negative if the starting value is greater than the end value (example 4 and 5).
- 3 The starting value, the end value, or the increase rate can be a decimal number; in this case the loop variable type should be defined to accept decimals such as Single type (Example 5).
- 4 The starting value, the end value, or the increase rate can be variable (Example 6).

## Do.....While

The statement '**Do while...loop**' is used to **repeat a specific code for several times of an unknown end**, but based on a specific condition, so they are useful if you do not know the number of iterations emphatically.

The general syntax of this statement is:

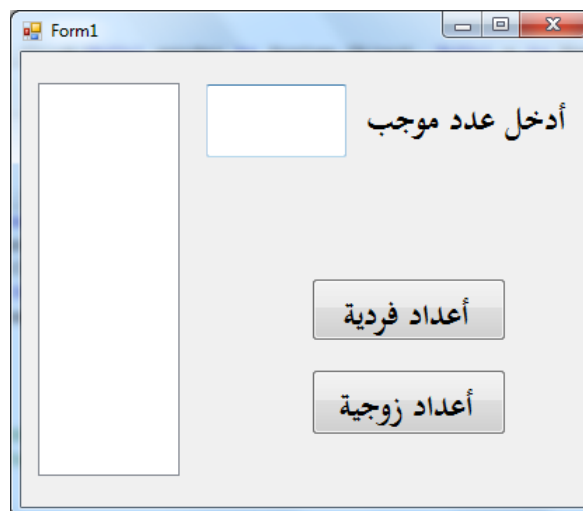
```

Do While Conditional Expression تعبير شرطي
    Code
Loop
    
```

### Note:

The **code** between the beginning of the loop "**Do While**" and its end will be implemented as long as the conditional expression is **true**. If the **condition is not met for any reason**, we **get out of the iterative loop**, and implement the code after the Loop if it exists.

### EXERCISE:



The following programming code for executing an event "Click" related to "odd numbers," button in two methods:

First method	Second method
<pre> Dim N, i As Integer N = TextBox1.Text ListBox1.Items.Clear()  For i = 1 To N Step 2     ListBox1.Items.Add(i) Next                 </pre>	<pre> Dim N, i As Integer N = TextBox1.Text ListBox1.Items.Clear()  i = 1 Do While i &lt;= N     ListBox1.Items.Add(i)     i = i + 2 Loop                 </pre>

# Procedures

A set of commands and instructions under a name, can be recalled by that name, so as to implement them, and create a (Sub) if we have a set of commands that are frequently used in more than one place in the class.

Procedures divided into sub and function.

```
Public Class Form3
    Private Sub Button1_Click(ByVal sender As Object, ByVal e As EventArgs)
    End Sub
    Private Sub Button2_Click(ByVal sender As Object, ByVal e As EventArgs)
    End Sub
End Class
```

Figure (1-3) adding Event Procedures to the Code Window

The general syntax for declaring Sub is:

```
Sub Name (Parameters)
    Code
End Sub
```

Where:

1- "Name" reflects the name of the procedure.

```
Public Class Form1
    Dim total As Integer

    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
        ShowOddOrEven()
    End Sub

    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
        ShowOddOrEven()
    End Sub

    Sub ShowOddOrEven()
        Dim i As Integer
        Label1.Text = ""
        For i = 1 To 10 Step 2
            Label1.Text = Label1.Text & " " & i
        Next
    End Sub
End Class
```

Recalling a (Sub) Procedure

Recalling a (Sub) Procedure

Declaring a (Sub) Procedure

Code executed when you recall the (Sub) procedure

Acti  
Go to

2- **"Parameters"** reflect the values that **were used** inside the procedure code that are used on recalling the procedure

```

Sub ShowOddOrEven(ByVal Start As Integer)
    Dim i As Integer
    Label1.Text = ""
    For i = Start To 10 Step 1
        Label1.Text = Label1.Text & " " & i
    Next
End Sub

```

Declaring a Parameter

Using this Parameter

3- **"Code"** is a set of orders and instructions carried out on recalling the procedure (Sub).

```

Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click
    'عرض الأعداد الفردية من 1 إلى 10
    ShowOddOrEven(1)
End Sub

Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button2.Click
    'عرض الأعداد الزوجية من 1 إلى 10
    ShowOddOrEven(2)
End Sub

```

Setting an Argument value

```

Sub ShowOddOrEven()
    Dim i As Integer
    Label1.Text = ""
    For i = 1 To 10 Step 2
        Label1.Text = Label1.Text & " " & i
    Next
End Sub
End Class

```

Declaring a (Sub) Procedure

Code executed when you recall the (Sub) procedure

**Notice:**

- In the procedure declaration, we can use more than one Parameter.
- When the procedure is recalled, we determine values of the outside procedure recalled (Argument)

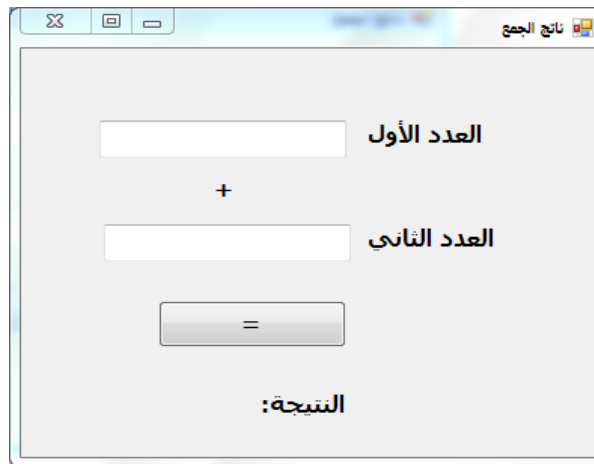
# Function

Function is a set of commands under a particular name that should express its task. It is applied to Parameters and returns a value.

```

Function Name (Parameters) As DataType
Code
Return Value
EndFunction
    
```

- 1- **"Name"** expresses the name of the function.
- 2- **"Datatype"** identifies the type of the returned value of the function.
- 3- **"Parameters"** represents the parameters that will be used in the code.
- 4- **"Code"** is a set of commands and instructions that will be executed on calling the Function.
- 5- **"Value"** is the returned value by the function.



<b>sub</b>	<b>function</b>
1- The declaration name of sub procedure is (sub)	1- The declaration name of function procedure is (function)
<b>2- They both have parameters</b>	
3- Doesn't have return value 4- Ends with end sub	3- Has return value 4- Ends with end function

# Questions

**(1) Answer the questions with the help of the following code:**

- A- The code is executed when you press ..... on control tool.....
- B- "Dim" is used to declare (variable – constant) with type .....
- C- The variable name used in the iterative loop is:.....
- D. The starting value of the iterative loop is ....., the end value is .... and the value of increment is .....
- E. Implementation of the iterative loop stops when the value of variable M reaches . .....
- F- The code that is repeated is. ....

( complete)

```

Private Sub Button1_Click(By
Dim M As Integer
For M = 1 To 3
    MsgBox (M)
Next
End Sub
```

**(2) Answer the following questions with the help of the following code,:**

```

Private Sub But_Repeat_Click (ByVal sender As System.Object,
    Dim m As Integer
    Me.Label1.Text = ""
    For m = 5 To 9 Step 2
        Me.label1.Text = Me.label1.Text & m & vbCrLf
    Next m
    ..... (المطلوب رقم ٧)
    MsgBox ("انتهى البرنامج")
End Sub
```

- (A) The purpose of the code is: .....
- (B) the code is executed when the event ..... occurs on the control tool .....
- (C) to declare the variable m , the command ..... is used.
- (D) The loop statement used is ..... .....
- (E) The code to be repeated is .....
- (F) The purpose of the use of concatenation operator & in a the statement (Me.label1.Text = Me.label1.Text & m) is: .....
- (G) Type the necessary code to display the final value of the variable M after the execution of the iterative loop in a message box: .....

**(3) With the help of the code, answer the following questions:**

```

For I = 1 To B Step C
    Me.TextBox1.Text = Me.TextBox1.Text & I & vbCrLf
Next
```

- A- The purpose of the code:.....
- B- The name of the counter variable..... :
- C- The iterative loop begins with the value.....
- D- The iterative loop ends with the value.....
- E- the value of the increment of counter.....
- F- The purpose of vbCrLf is.....

`ListBox1.Items.Clear()`

<input type="radio"/> اداة تحكم. <input type="radio"/> متغير.	<input type="radio"/> ثابت. <input type="radio"/> خاصية.	<input type="radio"/> وسيلة. <input type="radio"/> خاصية.
--	---	--

No	Put (√) Or (X):	Answer
1	The procedure is a set of commands and instructions that are repeated for specified number of times.	( )
2	The procedure is a set of commands and instructions under a certain name, and when you recall this name, these commands and instruction are implemented.	( )
3	The purpose of the use of procedures is repeating typing a specific code several times in the program.	( )
4	When we have a specific code that we want to be replicated in more than one place in the class, we use the "Function"	( )
5	The group of Commands and instructions that are placed under a name, when we implement them, they return a value. We call this action "procedure".	( )
6	The group of Commands and instructions that are placed under a name, when we implement them, they return a value. We call this action "Function".	( )
7	When we have a specific code that we want to be replicated in more than one place in the class, we use the "Procedure".	( )
8	Parameters are used to receive values from outside the procedure on recalling it.	( )
9	When you recall a procedure with the name <b>Taxes (0.05)</b> , the value between the brackets is called Argument.	( )
10	When you call a procedure with the name <b>Taxes (0.05)</b> , the word taxes is called Argument	( )
11	The declaration of a function starts with (Sub) and ends with (End Sub).	( )
12	The declaration of a function starts with (Function) and ends with (End Function).	( )
13	We resort to the use of the Function if our code results in a value we need.	( )
14	We resort to the use of the Procedure if our code results in a value we need.	( )
15	The Function is a set of commands and instructions with a specific name that can take Parameters, and return a parameter.	( )
16	The Function is a set of commands and instructions with a specific name that can take values, and return a value.	( )
17	The demerit of the language of VB.Net is that it allows he programmer to declare other functions and procedures prepared by him.	( )

# Chapter Four: Cyber bullying



Cyber bullying is a deliberate aggressive behavior from one person to another through electronic modes of communication.

## The forms of cyber bullying:

1. Harassment
2. annoyance
3. embarrassment
4. intimidation
5. threat



## 6. Blackmailing The

## Electronic Media:

Electronic media is a technology used by the electronic aggressor, and they are various including the following:

1. Email.
2. Forums
3. Instant Message.
4. Facebook.
5. Blogger.



## Forms of Cyber Bullying

### 1. Anonymity:

It is the use of aliases to hide an aggressor's identity for impunity.

### 2. Harassment:

It is aggressive messages directed against one or more persons.

### 3. Cyberstalking:

It is a form of electronic harassment where the aggressor frequently traces and chases a particular person in all electronic media.

### 4. Flaming:

It is a publication of hostile and vulgar words against one or more through a media and electronic communication.

### 5. Outing:

It is a dissemination of information about a specific person or more abusively.

### 6. Exclusion:

It is to ignore one or more persons through the electronic media.

### 7. Cyberthreats:

It is an email or message carrying a threat and intimidation to one or more persons.





## How to protect yourself from Cyber bullying?

- 1- Don't share your password with anyone.
- 2- Make a password that is difficult to predict.
- 3- Don't publish (post) any private data.
- 4- Avoid deleting Cyberbullying messages.
- 5- Don't interview anyone you know via the internet.
- 6- Be careful! Don't send any electronic messages when you are angry.
- 7- Inform your parents with what annoys you when you use the internet.
- 8- The download of software from the internet should be done under the supervision of your teacher or your parents.

## Question

Put ( V ) Or ( X ) :

No	Question	Answer
1	Cyber bullying is a deliberately aggressive behaviour, using electronic media for harassment, annoyance, disturbance, intimidation or threatening others .	( )
2	Cyber bullying is done through electronic means, such as social networking sites.	( )
3	Stealthy-mail is considered a form of Cyber bullying.	( )
4	Harassment and the threat are of the most important electronic means used in Cyber bullying.	( )
5	Harassment and blackmailing are forms cyber bullying.	( )
6	Stealing the person's account in the social networking sites or email is one of the risks that we may be exposed to through such media.	( )
7	Social networking sites help to meet new people you like to see to develop social relationships.	( )
8	In line with the rules of safe use. you should put an easy password passage ,for your private e-mail, in order to be able to remember,	( )
9	E-exception means following a particular person in all means of electronic communication.	( )
10	Electronic prosecution is intended to send an e-mail carrying a threat and holiday for one or more persons.	( )

### The second question

No	Situation	Your opinion in the light of the rules of safe use
1	Putting a password that's easy to deduce.	( )
2	Someone published his real name, address and telephone number through the electronic media.	( )
3	Download any available program to you on the internet.	( )
4	React angrily to cyber bullying you may be exposed to on the internet.	( )
5	Delete all messages of threat on networking sites or e-mail.	( )

# Answer Key of the Textbook



## Lesson1

Choose the correct answer			
1	non- integer	15	A variable named X and type of character String
2	حرفية	16	Dim Y As Decimal
3	storag space and the extent of its value	17	st_name
4	Dim Salary As Decimal	18	E_Address
5	Dim City As String	19	Text
6	Dim F_Name As String	20	Const Pi As Single = 3.14
7	Dim Gender As Boolean	21	Const g As Single = 9.81
8	Dim F_Name As String	22	Dim C_Family As Integer = 2
10	Runtime Error	23	Logical Error
11	Syntax Error	24	Syntax Error
12	Logical Error	25	12
13	11	26	9
14	15		

:Put ( √ ) Or ( X )					
1	√	14	√	27	X
2	X	15	√	28	√
3	√	16	X	29	√
4	X	17	X	30	X
5	√	18	√	31	X
6	X	19	√	32	√
7	X	20	X	33	X
8	√	21	√	34	√
9	X	22	X	35	√
10	√	23	√	36	X
11	√	24	X		
12	√	25	√		
13	√	26	X		

## Lesson2

### Frist:

A-X>=50 -

B- successful

c- successful

### Second

msgbox ( العدد سالب ) - ٣ ( العدد موجب ) - ٢ If x<0 Then

### (3)

1- When we enter student's score then the message box "successful" appear if the score is greater than or Equal to 50

2- Click - Button 1

3- Single 4- current Form

### (4)

1- = مصر "country"

28

**2-** = مصر msg box

**3-Egypt = msg box**

**A-** راسب

**B-** ناجح

c- If  $x > 50$  Then msgbox (ناجح) else msgbox (راسب)

**(6)**

```
Dim N As Long
N = Me.TextBox1.Text
If N Mod 2 = 0 Then
    Label2.Text = "الرقم زوجي"
Else
    Label2.Text = "الرقم فردي"
End If
```



**(7)**

```
Dim N As Integer
N = Me.TextBox1.Text
If N Mod 2 = 0 Then
    MsgBox ("الرقم زوجي")
Else
    MsgBox ("الرقم فردي")
End If
```



(5)

:Put (√) Or (X)			
1	X	10	X
2	√	11	X
3	X	12	√
4	X	13	√
5	X	14	X
6	√	15	√
7	√	16	X
8	√	17	X
9	√		

### Lesson4

:Put (√) Or (X)			
√	6	√	1
X	8	√	3
X	9	X	4
X	10	√	5

The second question: Complete the following table explaining your opinion of each of the

Situation Two	<p><input checked="" type="checkbox"/> Sharing personal information may expose a person to fraud or blackmail.</p> <p><input checked="" type="checkbox"/> You should not share your personal data and always protect your privacy.</p>
Situation Two	<p><input checked="" type="checkbox"/> Sharing personal information may expose a person to fraud or blackmail.</p> <p><input checked="" type="checkbox"/> You should not share your personal data and always protect your privacy.</p>
Situation Three	<p><input checked="" type="checkbox"/> Downloading programs from unsafe sources may contain viruses or spyware.</p> <p><input checked="" type="checkbox"/> You should download programs from trusted sources and make sure they are safe.</p>
Situation Four	<p><input checked="" type="checkbox"/> Responding to harmful messages may make the problem worse.</p> <p><input checked="" type="checkbox"/> It is better not to reply and to report the issue to a responsible person or a trusted adult.</p>
Situation Five	<p><input checked="" type="checkbox"/> It is not better to delete harmful messages immediately.</p> <p><input checked="" type="checkbox"/> You should keep the messages as evidence to report them to your parents, school, or authorities.</p>

تطبيق



مذكرات جاهزة للطباعة

لتحميل الملفات التعليمية مجاناً للمعلم والطالب

مذكرات وملازم / مراجعات وملخصات / امتحانات / كتب الوزارة /  
أدلة المعلم / دفاتر التحضير / سجلات مدرسية / أوراق تأسيس

امسح الكود بموبايلك علشان تقدر تثبت التطبيق

وتقدر ف أي وقت تحمّل ال نفسك فيه ببلاش

هيغنيك عن البحث والجروبات والقنوات الكثيرة

