

Exercise 1

Write a VB program that enters the width and the length of a rectangle; calculates and displays its area and perimeter.

Example:

Enter the width: 5

Enter the length: 10

Area = 50

Perimeter = 30

```
Dim w, l, a, p As Integer
    w = InputBox("Enter the width")
    l = InputBox("Enter the length")

    a = w * l
    p = (w + l) * 2

    MsgBox ("area = " & a)
    MsgBox ("Perimeter = " & p)
```

Exercise 2

What are the outputs of the following program?

```
Dim a, b, c as integer
a=10
b=20
MsgBox("a = " & a)
MsgBox("b = " & b)
c=a+b
MsgBox("c = " & c)
a=a*2
c=a+b
MsgBox(a)
MsgBox(c)
b=a
b=a+1
MsgBox(b)
```

A=10

B=20

C=30

20

40

21

Exercise 3

Write a VB program that enters 2 integer numbers, then displays as a message box for every number its square and its cube.

Example:

| Simple input | Output | | |
|---------------------|---------------|----|-----|
| 5 | 5 | 25 | 125 |
| 3 | 3 | 9 | 27 |

Solution 1

```
Dim a, b As Integer

a = InputBox("Enter a number")
b = InputBox("Enter a number")

MsgBox(a & " " & (a ^ 2) & " " & (a ^ 3))
MsgBox(b & " " & (b ^ 2) & " " & (b ^ 3))
```

Solution 2

```
Dim a, b, s, c As Integer

a = InputBox("Enter a nb")
b = InputBox("enter a nb")

s = a ^ 2
c = a ^ 3

MsgBox(a & " " & s & " " & c)

s = b ^ 2
c = b ^ 3
MsgBox(b & " " & s & " " & c)
```

Exercise 4

What will the value of "X" be after the following code executes?

```
Dim a, b, x as integer
a=5
b=10
a=a+b
x=2*(a-b)
```

Answer: 10

```
Dim x as integer
x=10
x=2*x
x=x+1
```

Answer: 21

```
Dim a, b, x as integer
x=10
a=5
b=5
x=x+a+b    10+5+5
x=x+a+b    20+5+5
```

Answer: 30

Exercise 5

Write a VB program that enters 2 integer numbers; displays their sum if they are the same, otherwise displays the double of their sum.

```
Dim a, b As Integer

a = InputBox("Enter a number")
b = InputBox("Enter a number")

If (a = b) Then
    MsgBox(a + b)
Else
    MsgBox(2 * (a + b))
End If
```

Exercise 6

Write a VB program that enters 2 integer numbers; and then displays the maximum between them.

```
Dim a, b As Integer

a = InputBox("enter a number")
b = InputBox("enter a number")

If (a > b) Then
    MsgBox(a)
Else
    MsgBox(b)
End If
```

Exercise 7

Write a VB program that enters 3 numbers; and then displays the maximum between them.

```
Dim a, b, c As Integer

a = InputBox("enter a number")
b = InputBox("enter a number")
c = InputBox("enter a number")

If (a >= b And a >= c) Then
    MsgBox(a)
ElseIf (b >= a And b >= c) Then
    MsgBox(b)
Else
    MsgBox(c)
End If
```

Exercise 8

Write a VB program that enters an integer number and then displays if it is odd or even.

```
Dim a As Integer

a = InputBox("enter a number")

If (a Mod 2 = 0) Then
    MsgBox (a & " is even")
Else
    MsgBox (a & " is odd")
End If
```

Exercise 9

Write a VB program that enters an integer number and then displays if it is divided by 4 and 5 at the same time or not.

```
Dim a As Integer

a = InputBox("Enter a number")

If (a Mod 4 = 0 and a Mod 5 = 0) Then
    MsgBox("yes it is divided")
Else
    MsgBox("No it is not")
End if
```

Extra problem

Write a VB program that enters 5 integer numbers and then displays for every number if it is odd or even.

```
Dim a, i as integer

For i = 1 To 5 Step 1
    a = InputBox("enter a number")
    If (a Mod 2 = 0) Then
        MsgBox(a & " is even")
    Else
        MsgBox(a & " is odd")
    End If
Next
```

Exercise 10

Write a VB program that displays as a message box the word "SE1" 20 times.

```
Dim i as integer
For i = 1 To 20 Step 1
    MsgBox ("SE1")
NEXT
```

Exercise 11

Write a VB program that displays as a message box the numbers from 1 to 20.

```
Dim i as integer
For i = 1 To 20 Step 1
    MsgBox (i)
NEXT
```

Exercise 12

Write a VB program that displays as a message box the following sequence:

5 10 15 20 25 30 35 40

```
Dim i as integer
For i = 5 To 40 Step 5
    MsgBox (i)
NEXT
```

Exercise 13

Write a VB program that displays as a message box the following sequence:

30 25 20 15 10 5 0

```
Dim i as integer
For i = 30 To 0 Step -5
    MsgBox (i)
NEXT
```

Exercise 14

Write a VB program that enters 20 integer numbers by the user, and displays as a message box the square of every number.

```
Dim i, a As Integer
For i = 1 To 20 Step 1
    a = InputBox("Enter a number")
    MsgBox(a ^ 2)
Next
```


Exercise 15

Write a VB program that enters 10 integer numbers, and then calculates and displays the sum of them.

```
Dim a, i, s as Integer
s = 0

For i = 1 To 10 Step 1
    a = InputBox("Enter a number ")
    s = s + a
Next
MsgBox("sum = " & s)
```

Exercise 16

Write a VB program that enters 10 integer numbers, and then calculates and displays the multiplication of even numbers.

```
Dim i, a, m As Integer
m = 1

For i = 1 To 10 Step 1
    a = InputBox("Enter a number")
    If (a Mod 2 = 0) Then
        m = m * a
    End If
Next
MsgBox(m)
```

Exercise 17

Write a VB program that enters 30 integer numbers, and then counts the number of odd values.

```
Dim a, i, c As Integer
C=0
For i = 1 To 30 Step 1
    a = InputBox("Enter a number ")
    If (a Mod 2 = 1) Then
        c = c + 1
    End If
Next
MsgBox("Count = " & c)
```

Solution 2

```
If (a Mod 2 <> 0) Then
    c = c + 1
End If
```

Exercise 18

Write a VB program that enters 30 integer numbers, and then calculates and displays the average of them.

```
Dim a, i, s as Integer
Dim avg As Double

s = 0
For i = 1 To 30 Step 1
    a = InputBox("Enter a number ")
    s = s + a
Next

avg = s / 30
MsgBox("Average = " & avg)
```