Visual Basic Functions

Visual Basic offers a rich assortment of built-in functions. Some examples are:

A. **Rnd** Function.

In writing games and learning software, we use the **Rnd** function to introduce randomness. This insures different results each time you try a program. The Visual Basic function **Rnd** returns a single precision, random number between 0 and 1 (actually <= 0 and < 1).

Examples:

- To produce random integers (I) between Imin and Imax, use the formula:

I = Int ((Imax - Imin + 1) * Rnd) + Imin

- To roll a six-sided die, the number of spots would be computed using:

NumberSpots = Int(6 * Rnd) + 1

- To randomly choose a number between 100 and 200, use:

Number = Int(101 * Rnd) + 100

B. **Msgbox** Function.

To ease the programming work Visual basic has also something called a Message box. The message box displays a message, optional icon, and selected set of command buttons to show warning messages and help messages. The user responds by clicking a button. The function form of the message box returns an integer value (corresponding to the button clicked by the user). The statement form of the message box displays the box:

MsgBox Message, Type, Title : Where

- Message: Text message to be displayed
- Type: Type of message box (discussed in a bit)
- Title :Text in title bar of message box

- The first component of the **Type** value specifies the **buttons** to display:

Value	Meaning	Symbolic Constant
0	OK button only	vbOKOnly
1	OK/Cancel buttons	vbOKCancel
2	Abort/Retry/Ignore buttons	vbAbortRetryIgnore
3	Yes/No/Cancel buttons	vbYesNoCancel
4	Yes/No buttons	vbYesNo
5	Retry/Cancel buttons	vbRetryCancel

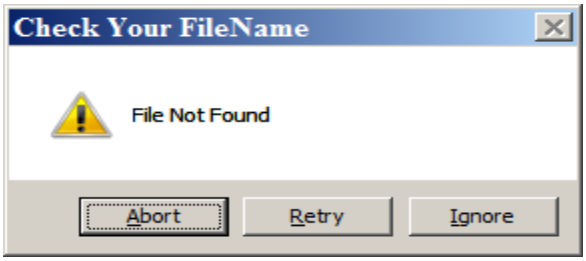
- The second component of **Type** specifies the **icon** to display in the message box:

Value	Meaning	Symbolic Constant
0	No icon	(None)
16	Critical icon	vbCritical
32	Question mark	vbQuestion
48	Exclamation point	vbExclamation
64	Information icon	vbInformation

The type argument is formed by summing four values corresponding to the buttons to display, any icon to show, which button is the default response, and the modality of the message box.

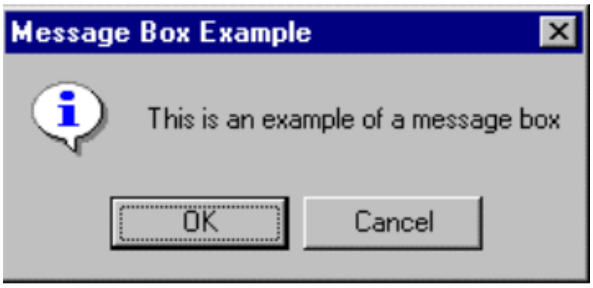
Example

- R = MsgBox ("File Not Found", 2,"Check Your File Name")



- **MsgBox** "Hello World", vbOKOnly + vbInformation, "My first Message"

- MsgBox “This is an example of a message box”, vbOKCancel + vbInformation, “Message Box Example”



If the box is Application Modal, the user must respond to the box before continuing work in the current application. If the box is system modal, all applications are suspended until the user responds to the message box.

Note for each option in type, there are numeric values listed and symbolic constants.

C. **InputBox** function:

Used to input numeric or symbolic values of data and its format:

InputBox (B1, B2, B3)

B1: The text in the middle of the input box.

B2 :The title bar.

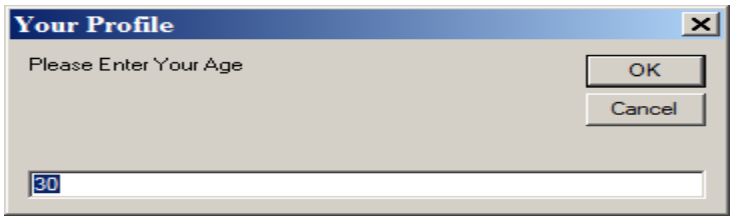
B3: The default value of the input appears inside the box.

B1 is necessary, B2, B3 are not necessary.

The input box contains both Ok and Cancel buttons.

Example

- X=inputbox("Pleas enter your Age", "your Profile","30"



D. Color Functions.

Notice that all the graphics methods can use a Color argument. If that argument is omitted, the ForeColor property is used. Color is actually a hexadecimal (long integer) representation of color - look in the Properties

Window at some of the values of color for various object properties. There are other ways, though. ·

1. **Symbolic Constants:**

Visual Basic offers eight symbolic constants (see table below) to represent some basic colors. Any of these constants can be used as a Color argument.

Example: Form1.BackColor = vbGreen

Constant	Color
vbBlack	Black
vbRed	Red
vbGreen	Green
vbYellow	Yellow
vbBlue	Blue
vbMagenta	Magenta
vbCyan	Cyan
vbWhite	White

2. **QBColor** Function.

Visual Basic replicates the sixteen most used colors with the QBColor function. The color is specified by QBColor(Index), where the colors corresponding to the Index are:

Index	Color	Index	Color
0	Black	8	Gray
1	Blue	9	Light blue
2	Green	10	Light green
3	Cyan	11	Light cyan
4	Red	12	Light red
5	Magenta	13	Light magenta
6	Brown	14	Yellow
7	White	15	Light (bright) white

Example: Picture1.FillColor = QBColor(3)

3. **RGB** Function

The RGB function can be used to produce one of (over 16 million) colors. The syntax for using RGB to specify the color property is:

RGB(Red, Green, Blue)

Where Red, Green, and Blue are integer measures of intensity of the corresponding primary colors. These measures can range from 0 (least intensity) to 255 (greatest intensity). For example, RGB(255, 255, 0) will produce yellow. This function accepts three values red(R), green (G) and blue (B). The values of each (R,G,B) range between (0 to255) as shown in The general format is:

RGB(R, G, B)

Example: lblExample.ForeColor = RGB(100, 100, 100)

Color	RGB (, , ,)	QBcolor(No.)	VBcolor
Black	0,0,0	0	VBBlack
Blue	0,0,255	1	VBBlue
Green	0,255,0	2	VBGreen
Cyan	50,100,0	3	VB Cyan
Brown	255,165,0	4	VB Brown
Magenta	255,0,255	5	VB Magenta
Red	255,0,0	12	VB Red
Yellow	255,2;55,0	14	VB Yellow
White	255,255,255	15	VB White

The above table compering between the three methods of color representations formats.

Example: Write program that allows the user to enter the RGB values to display the form background color will change at run time according to the RGB entered values within text box?

Solution:

```
Dim R, G, B As Integer
R = Val(Text1.Text)
 G= Val(Text2.Text)
B= Val(Text13.Text)
Form1.BackColor = RGB(R, G, B)
```