Chapter Seven: Part Two of Another Controls

7.1 Picture Box

This control is like a form within a form. Its primary use is to display pictures, but it can also be used to contain other objects within a group like a frame, or to display messages. The controls can simply be dragged into the picture box in design time to make them part of picture box. It is a good tool for when you want a colored region of a form or when you would like to group controls on the form separately.

7.1.1 Picture Box Properties:

Property name	Description
Auto Size	This property, set to false by default, determines how the picture box responds to a loaded image size. If Auto size is False, the picture box does not resize to fit the image. If however, Auto size is True, the picture box resize and does not truncate the image. Therefore, the picture boxes size is depends on the size of the image to be displayed.
Font	Sets the font size, style, and size of any printing done in the picture box.
Picture	Sets the graphic image to be displayed in the control. Select a file through the dialog box that appears when this property is clicked.
Border Style	Determines the whether the controls have borders (0: none 1: fixed single).
Height	Specifies the height of the control.
Left	Specifies the number of twips from the controls left edge to the form windows left edge.
Back color	Set a background color for the picture box.

7.1.2 Picture Box Events

Click	Triggered when a picture box is clicked.
DblClick	Triggered when a picture box is double-clicked.

7.1.3 Picture Box Methods

Cls	Clears the picture box from the string.
Print	Prints information to the picture box.

Example (1):-

Picture1.print"welcome"	Print the string "welcome" into picture box.
Picture1.cls	Clear the picture box from the string.

Example (2): - Add one picture box and two commands. Write the code of command1 to print the string "visual basic" into the picture box, and the code command2 to clear the picture box from any string.

Sol:-

Private sub command1_click()

Picture1.print"visual basic"

End sub

…………………………..

Private sub command2_click()

Picture1.cls

End sub

7.1.4 Five types of graphics files can be loaded into a picture box

Bitmap	An image represented by pixels and stored as a collection of bits in which each bit corresponds to one pixel. Usually has a **.bmp** extension. Appears in original size.
Icon	A special type of bitmap files of maximum 32 x 32 sizes. Has a **.ico** extension. Appears in original size.
Metafile	A file that stores an image as a collection of graphical objects (lines, circles, polygons) rather than pixels. Has a **.wmf** extension. Resizes itself to fit the picture box area.
JPEG	JPEG (Joint Photographic Experts Group) is a compressed bitmap format which supports 8 and 24 bit color. Has a .**jpg** extension.
GIF	GIF (Graphic Interchange Format) is a compressed bitmap. It supports up to 256 colors. Has a .**gif** extension.

7.2 Image Box

Image controls are far less complex than picture box controls. They can't work as containers, it only allows you to place image files on a form.

7.2.1 Image Box Properties

The common Image Box Properties

Property Name	Description
Picture	Load the picture file to display in the image box, Select a file through the dialog box that appears when this property is clicked.
Stretch	If False, the image box resizes itself to fit the picture. If True, the picture resizes to fit the image box control area.
Border Style	Determines the whether the controls have borders (0: none 1: fixed single).
Height	Specifies the height of the control.
Left	Specifies the number of twips from the controls left edge to the form windows left edge.

Note:-

The image box and picture box share with the following properties as shown below (Border Style, Height, Left, Visible, Enabled, Mouse pointer, Picture… and not share in some of them.

7.2.2 Image Box Events

Click	Triggered when a image box is clicked.
DblClick	Triggered when a image box is double-clicked.

Note:-

The image box does not support any methods. Also image boxes can load the same file types as the picture box: bitmap (.bmp), icon (.ico), metafiles (.wmf), GIF files (.gif), and JPEG files (.jpg). With Stretch = True, all the graphic types will expand to fit the image box area.

7.2.3 Loading the picture property at the run time

You can also set the picture of any object has the picture property (such as form, command, image box, picture box…) in code by using the **load picture** function. Which loads a picture from a file into the object at run- time. The load picture functions takes a file name as an argument. Sample syntax is:

Object. Picture = load picture ("path of the picture \ name of the picture")

Example (3): - Write the code of the command1 to load the picture in the form1 at the run time.

Sol: -

Private sub command1_click()

Form1.picture=loadpicture("c:\My Document\ My Picture\ My Pic.bmp")

End sub

Path of picture   name of the picture

Example (4): - Write the option1-click-event procedure to display the picture into the image box and make the picture resize to fit the image box.

Sol: -

Private sub option1_click()

Image1.stretch=true

Image1.picture=LoadPicture("C:\VB program\ Images\grape.gif").

End sub

Note:-

To clear the image from any has the picture property such as form, option, check box, image box, picture box, ….etc at the run time, use the load picture function with an empty set of parentheses.

Example (5): - clear the image from image box named img My Pic

Img MyPic. Picture= Load Picture ()

Note:-

If you have more than one image control on a form, you can copy a picture from one image control to another via **an assignment statement** like this:

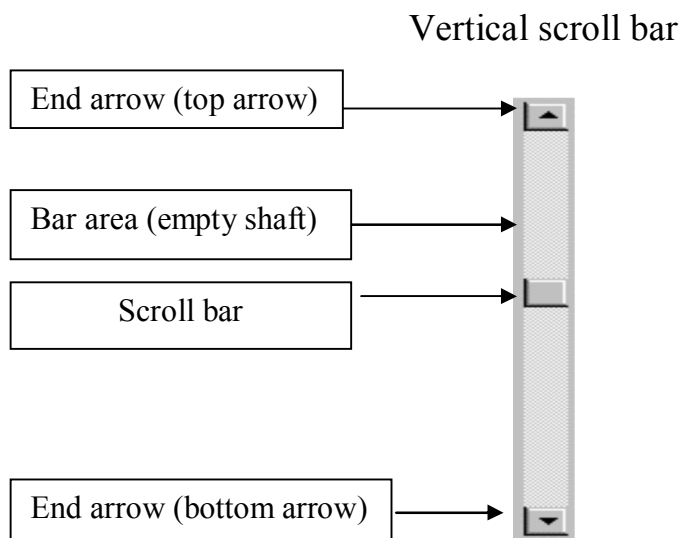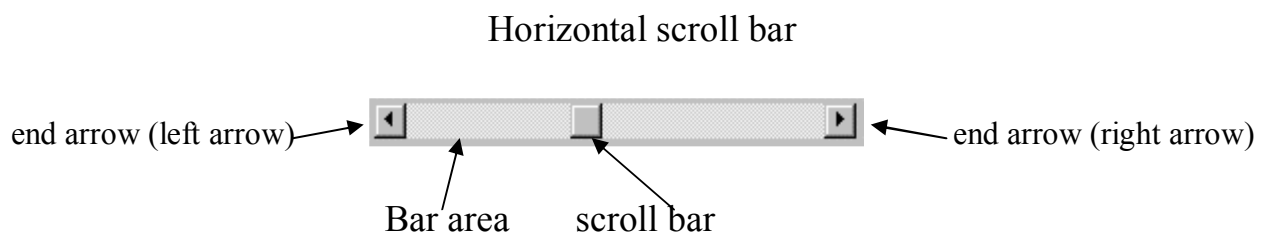Image1.picture=LoadPicture("C:\VB program\ Images\grape.gif")

Image2.picture= Image1.Picture

7.3 Horizontal and Vertical Scroll Bars

The **H Scroll Bar** and the **V Scroll Bar** controls are perfectly identical. The scroll bars give the user the ability to control changing value and select a value by positioning it at the desired location in the scroll bar. Rather than entering the individual values, the user can move the scroll box between the two arrows to determine relative positions within a range of values and select a value at this position.

Both types of scroll bars are comprised of three areas that can be clicked, or dragged, to change the scroll bar value. Those areas are:

1- Arrow at each end(**end arrow**)

2- **scroll box** (is a square box between the end arrows, also called a "thumb")

3- **bar area** or Empty shaft area(is area between scroll box and end arrow)

Horizontal scroll bar

end arrow (left arrow) →　　　　　　　← end arrow (right arrow)

Bar area　　　scroll bar

Vertical scroll bar

End arrow (top arrow) →

Bar area (empty shaft) →

Scroll bar →

End arrow (bottom arrow) →

.**Clicking an end arrow** increments the **scroll box** a small amount determined by the **small change property**. (In first case this small amount will be added to the value of **scroll box** when **click the right arrow** of the horizontal scroll bar while in a vertical scroll bar by **clicking an bottom end arrow** of scroll. In second case the small amount will be **subtracted** from the value of scroll bar when click the **left end arrow** back to left side in horizontal scroll bar while in a vertical scroll bar by click the **top end arrow** back to up of the scroll bar).

Clicking the bar area (empty shaft). Increments the **scroll box** a small amount determined by **large change property**. (In the first case this large amount will be added to the value of **scroll box** when the **clicking bar area (empty shaft)** and moving the scroll box to **right** in horizontal scroll bar while in the vertical scroll bar by **clicking bar area (empty shaft)** and moving the scroll box to **down**. In second case the large amount will be **subtracted** from the value of scroll box when clicking **bar area (empty shaft)** and backing scroll box to the left side in horizontal scroll bar while in a vertical scroll bar by clicking **bar area (empty shaft)** and backing scroll box to **top**).

7.3.1 Fundamental Scroll Bar (vertical and horizontal) Properties

Property Name	Description
LargeChange	The large change property determines the amount of change (large amount) to the value property of a scroll bar control when the user clicks the area between the scroll box and scroll arrow.
Value	Represents the current value of scroll box position. That may be any integer between minimum and maximum values assigned.
Max	The max property determines the maximum value property setting in a scroll bar control. The range is from 0 to 32767(the default).
Min	The min property determines the minmum value property setting in a scroll bar control. The range is from 0 to 32767(the default).
SmallChange	Determines the amount of change (small amount) to the value property of a scroll bar control when the user clicks one of the scroll arrows.

7.3.2 Scroll Bar Events

Change	Event is triggered after the scroll box's position has been modified. Use this event to retrieve the Value property after any changes in the scroll bar.
Scroll	Event triggered continuously whenever the scroll box is being moved.

Example (6): - Label is used to display the value of the scroll bar as it changes by the user clicking the arrows or moving the scroll box. To build the example, start a new project, place a label control and a vertical scroll bar (V Scroll Bar) control on the form and set their properties as indicated in the callouts below.

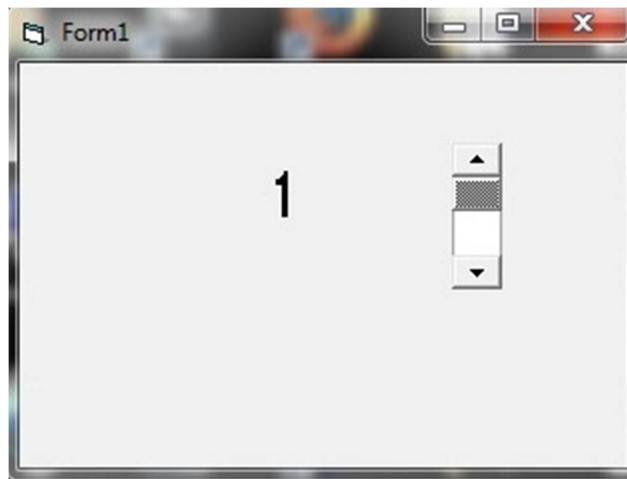| Label1	
Name	Lblcount
Alignment	2-center
Border Style	1-fixed single
caption	1
Font	Size 24
Vscroll Bar	
Nam e	Vsb count
Max	10
Min	1
Value	1

Sol:-

Private sub vsb count_change()

Lblcount.caption=vsbcount.value

End sub

When you run the program, you will see that the value display in the label will vary as you click on the scroll bars arrows or move its scroll box.

Example (7): - We have a textbox and a horizontal scrollbar was to represent a range of whole dollar amounts from 5$ to 100$. Programming the scrollbar, when the user clicks the scroll arrows, the scroll bars value is to change by two dollar and display this value in textbox. When the user clicks the empty shaft on either side of the scroll box, the scrollbars value is to change by five dollars and display in the text box. To do that, first we must set the properties of scroll bar that give us this rang of values either in the design time or at the run time in form- load- event procedure.

Sol:-

In this program we assign these properties at the design time by property window as shown below:

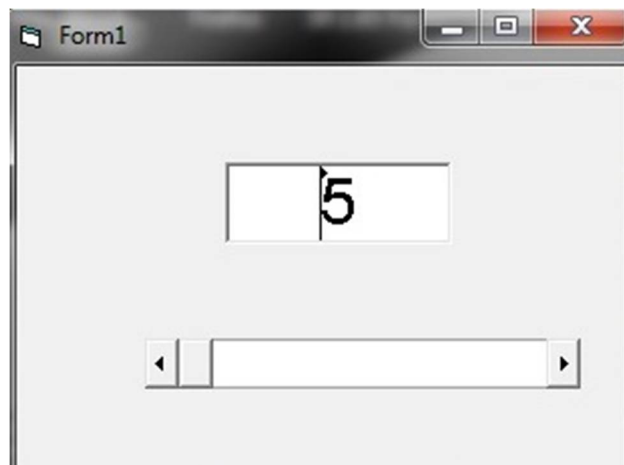| property	Value
Min	5
Max	100
Small change	2
Large change	5

And then write the code of Hsrollbar to display the change of the scroll value in the textbox as shown below:

Private sub Hsrollbar _change()

Text1.text = Hsrollbar.value

End sub

The program after running as showing below:

Example (8):- start a new project, place a textbox control, a vertical scrollbar (Vscrollbar) control and command on the form and set their properties as indicated in the below:

object	property	value
Form1	Caption	scrollbar
Vscrollbar	Max	100
	Min	0
	value	50
Command	caption	Exit
Text1	text	blank

After that write the code of:

1- Form1 – load event to display the initial value of scrollbar that assigned at the design time and put it into textbox.

2- Vscrollbar- change- event is used to display the value of the scrollbar as it changes by the user clicking the arrows or moving the scrollbox in the textbox.

3- Command –click-event to exit from the program.

Sol:-

1- **Private sub Form1_ load ()**

   Text1.text = Vsrollbar.value

   End sub

2- **Private sub Vscrollbar_ change()**
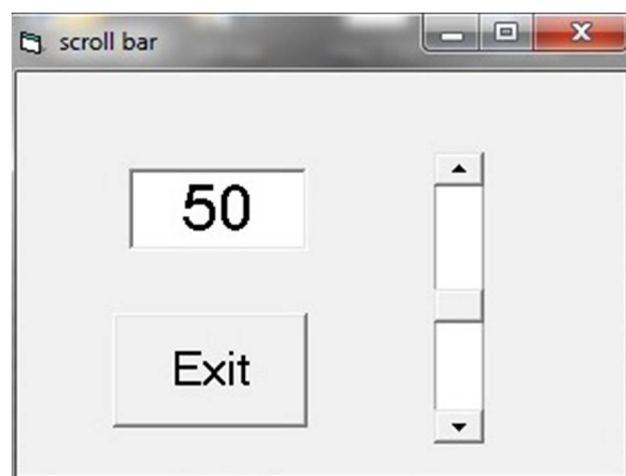
   Text1.text = Vsrollbar.value

   End sub

3- **Private sub Command _click ()**

   End

   End sub

The program after running as showing below:

Example (9): - Write an application in vb that uses a vertical scrollbar to represent a range of values 10 to 24, and then programming it to change the size of a labels font size. As the user clicks the top scrollbar arrow, the font size shrinks by the small change value is 2. As the user clicks the bottom scroll bar arrow, the font size increases by the small change value is 2. If the user clicks in the scrollbars empty shaft on either side of the scrollbar, the font size is either added to or subtracted by the large change property value is 5.

Sol:-

First we must set the properties of scrollbar that represent the rang of values that determine the amount of changing when click a scroll arrow or when click in empty shaft as shown below:

property	Value
Scrollbar	
Min	10
Max	24
Small change	2
Large change	5
label	
caption	Visual basic

And then write the Vsrollbar_change_ event procedure
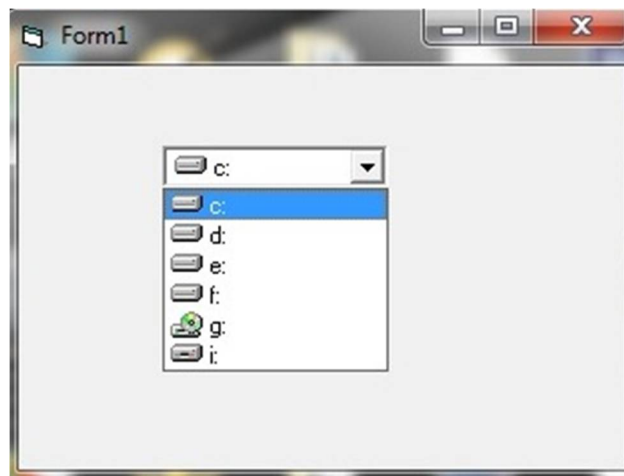
Private sub Vsroll1 _change()

Label1.fontsize = Vsroll1.value

End sub

7.4 Drive List Box, Dir List Box, and File List Box

7.4.1 The Drive List Box Control

 It allows a user to select a valid disk drive at run-time. When you place this control into the form and run the program, you will be able to select different drives from your computer as shown in Figure below.
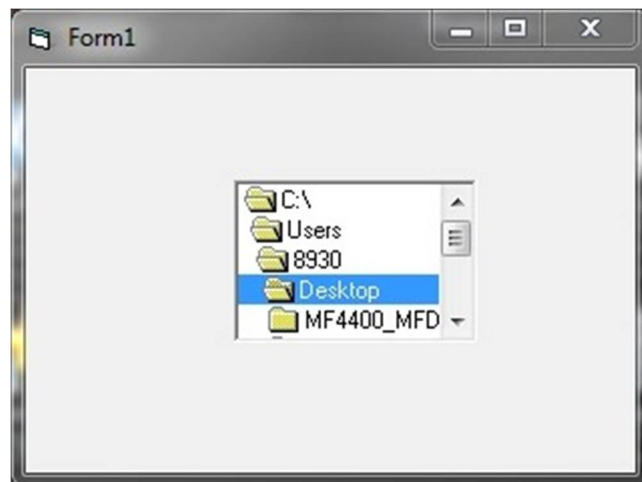

7.4.1.1 Drive List Box Properties

Drive	Contains the name of the currently selected drive.

7.4.1.2 Drive List Box Events

Change	Triggered whenever the user or program changes the drive selection.

 7.4.2 The Dir List Box

The Dir List Box is used for display the list of directories or folders in a selected drive list box. When you place this control into the form and run the program, you will be able to select different directories as shown in figure below:
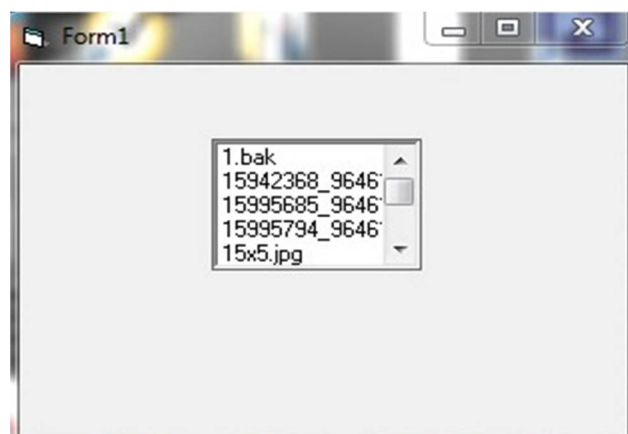
7.4.2.1 Dir List Box Properties

Path	Contains the current directory path.

7.4.2.2 Dir List Box Events

Change	Triggered when the directory selection is changed.

7.4.3 The File List Box

The File List Box is used for displaying the list of files in selected directory or folder in the Dri list box. When you place this control into the form and run the program, you will be able to show the list of files and selected it as shown in figure below:

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7.4.3.1 File List Box Properties

FileName	Contains the currently selected file name from File list box.
Path	Contains the current path directory.
Pattern	Contains a string that determines which files will be displayed. It supports the use of * characters. For example, using *.dat only displays files with the dat extension.

7.4.3.2 File List Box Events

Click	Triggered whenever a file name is clicked in the file list box.
DblClick	Triggered whenever a file name is double-clicked in the file list box.

7.5 Synchronizing the Drive, Directory, and File List Boxes

The drive, directory, and file list boxes are almost always used together to obtain a file name. As such, it is important that their operation be synchronized to insure the displayed information is always consistent. So you should put them together at the form.

Example (10): - Write the program, contain one form, drive list box, dir list box and file list box to display any file on the computer. To do that, write the code of:-

1- Drive box **change** event, when the driver selection is changed (drive box **change** event occur), you should update the directory path. The default name of drive box is **Drive1** and of the Dir box is **Dir1** use the code below:

   Private sub Drive1 _change()
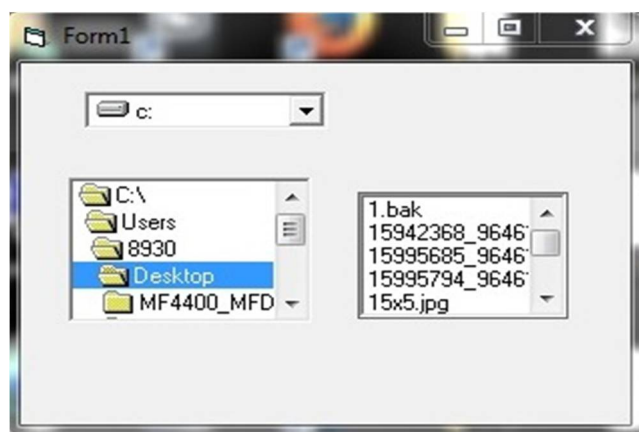
   Dir1.path = Drive1. Drive

   End sub

2- Directory box **change** event, when the directory selection is changed (directory box **change** event occur), you should update the displayed file name. The default name of a file box list is **file1**, this code is:

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Private sub Dir1 _change()

file1.path = Dir1. path

End sub

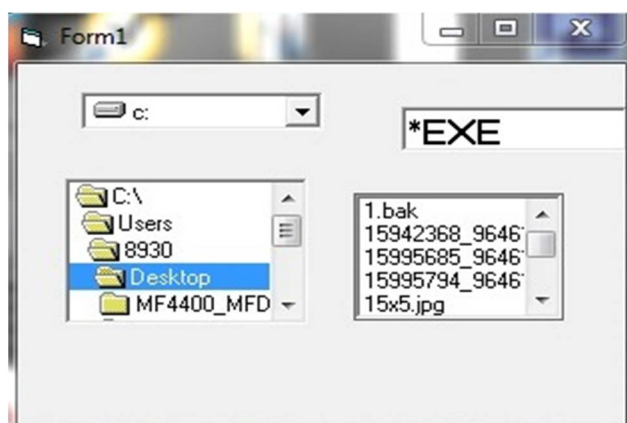The program after running as shown below:-

If you want to display the specific file that has the certain feature such as display the only files that have the extension "exe" we need adding text box that contains a string (extension) that determines which files will be displayed and adding the following code also in the previous program above:

Private sub text1 _change()

file1.pattern = Text1. text

End sub

The program after running as shown below:-

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Once all of the selections have been made (i.e select the diver you want and the directory in it and finally display the files in directory) and if you want to select the file name and used it such as load this file into picture box, image box or put this file into label1 or text box after selecting from file list box, you need a variable string. This variable string concatenates the drive, directory, and file name information. For example if you want to select file from file list box and put the complete path (path and name) of it into textbox2 and then load it to the image box, we need first add textbox2 and image box into a form above and also add this code in file1-click-event in the previous program above as showing below:-

Private sub File1_ click()

Dim c AS string

C = File1.path + File1. FileName   (when select the file from File box by

                                        clicking it by the mouse, the file box

                                        click event occur and then execute

                                        the procedure)

Text2.Text = C

Image1.stretch=True

Image1.picture=LoadPicture(C)

End sub