

Mr. Giansante



Visual Basic

Animation

August 2016

Animation

Learning Objectives:

To reinforce the use of the PictureBox Control and introduce the Timer Control and using Integer Variables (declaring, setting an initial value, incrementing the value, checking the value).



Design a Visual Basic program that will display a simple animation containing a minimum of six frames.

The user should be presented with a button to control the starting and stopping of the animation. When the animation is stopped, the button should read "Start" and when the animation is running, the button should read "Stop".

The user should be able to control the speed of the animation by using three OptionButtons (labeled: "Slow", "Medium" and "Fast"). Use the Timer's Interval property to control the speed.

Step by Step

Place a **PictureBox** Control on the Form (default name PictureBox1)

Set the **SizeMode** property to **AutoSize**

Set the **BorderStyle** property to **Fixed3D**

Place a **Timer** Control on the Form (default name Timer1)

Set the **Enabled** property to **False**

Set the **Interval** property to **200**

Place a **Button** Control on the Form (default name Button1)

Set the **Text** property to "&Start"
Note: The "&" symbol is used to underline.

Place three **RadioButton** Controls on the Form (default names: RadioButton1, RadioButton2, RadioButton3)

Set the **Text** properties to "Slow", "Medium" and "Fast".

Select a **PictureBox** control and press [F4] to activate the Properties window.

Select the "Image" property.

Click on the button with the three dots.

Select "Local Resource" and then click "Import".

Browse for the file and then click "Open". Click "OK".

Animation

Pre-made Animation "Frames"

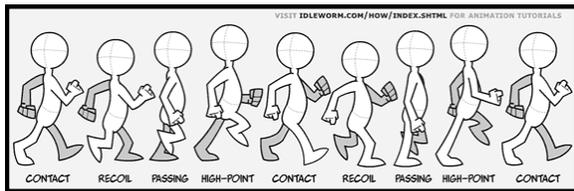
Several options for pre-made animation frames are available in the resource: Animation.zip

Creating Your Own Animation Frames

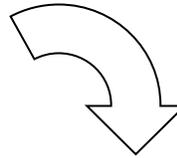
If you do not want to use the pre-made animation frames provided, you can create your own.

You can use Google Images to find suitable animations (hint: google "animation frames" or "animation walking")

You will have to edit these picture files using PhotoShop or Window's Paint program. This will involve breaking up the files containing the series of frames into individual files containing each frames. It is important that all the files you create have the same dimensions.



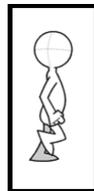
originalanimation.gif



anim01.gif



anim02.gif



anim03.gif



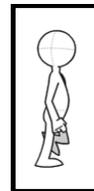
anim04.gif



anim05.gif



anim06.gif



anim07.gif



anim08.gif



anim09.gif

Animation

In the "Medium" RadioButton ...

```
Timer1.Interval = 200
```

Declare a variable named pic which will store the number of the current picture. In General | Declarations type

```
Dim pic As Integer
```

You must initialize the value of the variable pic. In Form | Load type

```
pic = 0
```

Double-Click the Button Control and enter the following code ...

```
If Button1.Text = "&Start" Then
    Button1.Text = "&Stop"
    Timer1.Start()
Else
    Button1.Text = "&Start"
    Timer1.Stop()
End If
```

The above code will cause the animation to start when the button is pressed and the caption for the button to change to "Stop". When the button's caption is "Stop" and the button is pressed, the animation will stop and the button's caption will be changed to "Start". The animation is started and stopped by enabling or disabling the Timer Control.

Double-Click the Timer Control and enter the following code in Timer1.Tick ...

```
pic = pic + 1
If pic = 10 Then pic = 1

If pic = 1 Then anim.Image = PictureBox1.Image
If pic = 2 Then anim.Image = PictureBox2.Image
If pic = 3 Then anim.Image = PictureBox3.Image
If pic = 4 Then anim.Image = PictureBox4.Image
If pic = 5 Then anim.Image = PictureBox5.Image
If pic = 6 Then anim.Image = PictureBox6.Image
If pic = 7 Then anim.Image = PictureBox7.Image
If pic = 8 Then anim.Image = PictureBox8.Image
If pic = 9 Then anim.Image = PictureBox9.Image
```

Everytime the Timer Control triggers, the variable pic will be incremented by 1. The number in the variable pic represents a picture in your animation sequence. If there are 9 pictures in your animation, then the variable "pic" should go from 1 to 9 and then back to 1.

Animation

Please fill out all the information in this column using a pen before getting this assignment marked.

Name

Date

Class

Academic Honesty

The work I am submitting is completely my own creation and has not been copied from anyone else's work. If I have received help on this project, the names of those who have assisted are listed below.

Signature

Pre-Marking

The following people have pre-marked this assignment: (minimum of two)

Deductions

Each which is checked indicates the item was not satisfactory and results in the loss of one mark.

Deduction for late assignment is 1 mark per day.

Deduction for program crashing is 2 marks.

User Interface

- Appropriate Text in Title Bar (Form.Text)
- Separators and Access Keys in Menu, Capitalization
- "Exit" DialogBox meets requirements
- "About" DialogBox meets requirements
- Efficient and Esthetically-Pleasing User Interface
- Appropriate controls are used
- Spelling and Grammar are correct

Code / Programming Style

- Variables are declared and logically named
- Code is commented where appropriate
- Code is indented and spaced to show
- Code is efficient

Work Ethic / Problem Solving Skills

- Problem Solving Skills are demonstrated
- Makes Productive Use of Time
- Only Seeks Help when Necessary

Program-Specific Criteria

- First Image of Animation is Displayed
- Initial speed is displayed in RadioButtons
- Animation starts on first click of "Start" Button
- "Start" / "Stop" Button Works
- Speed can be controlled
- Pictures are appropriate size and well positioned
- Animation is Fluid (ie. variable corresponds to number of frames)

Comments

Mark _____ / 10