

Forum:[Hack Forums](#)

Thread: [\[TUT\] How to create a Pong Game in VB.NET](#)

Obi-Wan Cannabis - August 26, 2010, 4:25 am

What we're gonna do?

In this tutorial I'm gonna show you how to create a Pong Game in vb.net.

What will we need?

Windows Compute

Visual Basic 2008/2010

Free Time ?

Lets Start

Step 1) Create a new Windows Form and rename it to whatever you want. Mine will be called PongZ.

Step 2) Add two labels, two panels, a picturebox, a timer and display them as the following image.

[\[IMG\]http://img844.imageshack.us/img844/6867/semttulovvp.th.png\[IMG\]](http://img844.imageshack.us/img844/6867/semttulovvp.th.png)

Step 3) Rename the left label to "ComputerScore", rename the right label to "PlayerScore", rename the left panel to "Computer", rename the right panel to "Player" and rename the PictureBox to "Ball".

Step 4) Now, let's make the "Player Panel" move according to the mouse position.

```
Code Private Sub Form1_MouseMove(ByVal sender As Object, ByVal e As  
System.Windows.Forms.MouseEventArgs) Handles Me.MouseMove  
    If e.Y > 5 And e.Y < Me.Height - 40 - Player.Height Then _  
        Player.Location = New Point(Player.Location.X, e.Y)  
End Sub
```

If you test your game now you'll note that the ball doesn't move. If you want to make that piece of sh#\$ we call ball move, read step 5. ?

Step 5) Make the ball move by adding the following code to your form (GV).

```
Code Dim speed As Single = 10 ' This is Ball Speed  
Dim rndInst As New Random() ' Random instance  
Dim xVel As Single = Math.Cos(rndInst.Next(5, 10)) * speed  
Dim yVel As Single = Math.Sin(rndInst.Next(5, 10)) * speed  
And add this code to the Timer you just added on the beginning of tutorial.
```

```
Code Ball.Location = New Point(Ball.Location.X + xVel, Ball.Location.Y
```

Step 6) Now, let's make the ball bounce when it collides with "everything". It's easier than what you might be thinking.

Add the following code to the Timer1 (i could be here saying to add an individual code to every wall and panel but I just put all together).

Code ' Colides with top wall.

```
If Ball.Location.Y < 0 Then
    Ball.Location = New Point(Ball.Location.X, 0)
    yVel = -yVel
End If
```

' Colides with down wall.

```
If Ball.Location.Y > Me.Height - Ball.Size.Height - 45 Then
    Ball.Location = New Point(Ball.Location.X, Me.Height - Ball.Size.Height - 45)
    yVel = -yVel
End If
```

' Colides with player panel.

```
If Ball.Bounds.Intersects(Player.Bounds) Then
    Ball.Location = New Point(Player.Location.X - Ball.Size.Width, _
    Ball.Location.Y)
    xVel = -xVel
End If
```

' Colides with computer panel.

```
If Ball.Bounds.Intersects(Computer.Bounds) Then
    Ball.Location = New Point(Computer.Location.X + Computer.Size.Width + 1, _
    Ball.Location.Y)
    xVel = -xVel
End If
```

Step 7) Now lets make the computer play like an intelligent player. Add the following code to Timer1.

Code 'Make the computer moves according to ball position

```
If Ball.Location.Y > 5 And Ball.Location.Y < Me.Height - 40 _
- Player.Height Then _
    Computer.Location = New Point(Computer.Location.X, Ball.Location.Y)
```

After you add that code the computer will be a master playing pong and you will never beat him.

Don't be sad! You can always add another timer and set the computer speed so you can beat him.

But, for now we just want to make a playable game.

Step 8) Lets set our Score System.

You need to add two global variables in order to give score.

Code Dim compScore As Integer = 0

Dim plrScore As Integer = 0

Lets give some use to those gv. Add the following code to timer1.

Code 'Add 1 score to player if ball reaches the left side of the field

```
If Ball.Location.X < 0 Then
    plrScore += 1
    : Ball.Location = New Point(Me.Size.Width / 2, Me.Size.Height / 2)
    PlayerScore.Text = Convert.ToString(plrScore)
End If
```

```
'Add 1 score to computer if ball reaches the right side of the field
If Ball.Location.X > Me.Width - Ball.Size.Width - Player.Width Then
    compScore += 1
    Ball.Location = New Point(Me.Size.Width / 2, Me.Size.Height / 2)
    : ComputerScore.Text = Convert.ToString(compScore)
End If
Step 9) Lets hide our cursor.
```

```
Code Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles MyBase.Load
    Cursor.Hide()
End Sub
Step 10) Now lets add a key to close our game [ESC].
```

```
Code Private Sub From1_KeyDown(ByVal sender As Object, ByVal e As
System.Windows.Forms.KeyEventArgs) Handles Me.KeyDown
    If e.KeyValue = Keys.Escape Then
        Me.Close()
    End If
End Sub
Full Source Code Spoiler (Click to View)
```

```
Code Public Class Form1
    Dim speed As Single = 10 ' Ball Speed
    Dim rndInst As New Random() ' Random instance
    Dim xVel As Single = Math.Cos(rndInst.Next(5, 10)) * speed
    Dim yVel As Single = Math.Sin(rndInst.Next(5, 10)) * speed
    Dim compScore As Integer = 0
    Dim plrScore As Integer = 0
    Private Sub Form1_MouseMove(ByVal sender As Object, ByVal e As
System.Windows.Forms.MouseEventArgs) Handles Me.MouseMove
        If e.Y > 5 And e.Y < Me.Height - 40 - Player.Height Then _
            Player.Location = New Point(Player.Location.X, e.Y)
        End Sub
    Private Sub Timer1_Tick(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles Timer1.Tick
        Ball.Location = New Point(Ball.Location.X + xVel, Ball.Location.Y)
        Timer1.Interval = 13
        ' Colides with top wall.
        If Ball.Location.Y < 0 Then
            Ball.Location = New Point(Ball.Location.X, 0)
            yVel = -yVel
        End If
        ' Colides with down wall.
        If Ball.Location.Y > Me.Height - Ball.Size.Height - 45 Then
            Ball.Location = New Point(Ball.Location.X, Me.Height - Ball.Size.Height - 45)
            yVel = -yVel
        End If
        ' Colides with player panel.
        If Ball.Bounds.Intersects(Player.Bounds) Then
            Ball.Location = New Point(Player.Location.X - Ball.Size.Width, _
            Ball.Location.Y)
            xVel = -xVel
```

```

End If
' Colides with computer panel.
If Ball.Bounds.Intersects(Computer.Bounds) Then
    Ball.Location = New Point(Computer.Location.X + Computer.Size.Width + 1, _
        Ball.Location.Y)
    xVel = -xVel
End If
'Make the computer moves according to ball position
If Ball.Location.Y > 5 And Ball.Location.Y < Me.Height - 40 _
    - Player.Height Then _
    Computer.Location = New Point(Computer.Location.X, Ball.Location.Y)
'Add 1 score to player if ball reach the left side of the field
If Ball.Location.X < 0 Then
    plrScore += 1
    : Ball.Location = New Point(Me.Size.Width / 2, Me.Size.Height / 2)
    PlayerScore.Text = Convert.ToString(plrScore)
End If
'Add 1 score to computer if ball reaches the right side of the field
If Ball.Location.X > Me.Width - Ball.Size.Width - Player.Width Then
    compScore += 1
    Ball.Location = New Point(Me.Size.Width / 2, Me.Size.Height / 2)
    : ComputerScore.Text = Convert.ToString(compScore)
End If
End Sub
Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles MyBase.Load
    Cursor.Hide()
End Sub
Private Sub From1_KeyDown(ByVal sender As Object, ByVal e As
System.Windows.Forms.KeyEventArgs) Handles Me.KeyDown
    If e.KeyValue = Keys.Escape Then
        Me.Close()
    End If
End Sub
End Class

```

Our game is completed now!

[\[IMG\]http://img704.imageshack.us/img704/3808/77722840.png\[IMG\]](http://img704.imageshack.us/img704/3808/77722840.png)

Shippage - August 26, 2010, 4:29 am

Very nice! I did not know you could make any type of games in VB.NET.

Obi-Wan Cannabis - August 26, 2010, 4:32 am

(Aug 26, 2010 04:29 AM)Shippage Wrote: [\[CITE\]](#) Very nice! I did not know you could make any type of games in VB.NET.

You can!

All we need is some imagination. ?

21 views and one comment?

Com'On guys!

Kris` - August 26, 2010, 5:09 am

nice to share with us, i'm sure it will help people but:

<http://www.dreamincode.net/forums/topic/39686-creating-a-fully-functional-pong-game/>

exact the same, u just renamed a few controls ?

Entrepreneur - August 26, 2010, 5:13 am

Looks good, although games in vb.net are usually pointless.

Obi-Wan Cannabis - August 26, 2010, 5:38 am

(Aug 26, 2010 05:09 AM)phtttjee Wrote: [\[CITE\]](#) nice to share with us, i'm sure it will help people but:

<http://www.dreamincode.net/forums/topic/39686-creating-a-fully-functional-pong-game/>

exact the same, u just renamed a few controls ?

Yes! I followed that tut to create my first pong game.

Then I wrote this. ?

DeToX - August 30, 2010, 4:34 pm

thanks this is very useful i'm going to read this over a couple of times and make some classes for a first person zombie shooter game ;)

Obi-Wan Cannabis - August 30, 2010, 4:36 pm

(Aug 30, 2010 04:34 PM)DeToX Wrote: [\[CITE\]](#) thanks this is very useful i'm going to read this over a couple of times and make some classes for a first person zombie shooter game ;)

Are u thinking about making a 3D FPS in vb.net? ?

Uncle Pillow - August 30, 2010, 4:57 pm

You can also do this with VB.NET and XNA, and of course you can make a game in vb.net, you can do anything your imagination will think up :)

DeToX - August 30, 2010, 5:02 pm

2D lol

not 2D lmao >.<

RuleBreaker - August 30, 2010, 6:14 pm

thank you i will try this ;)

Obi-Wan Cannabis - August 30, 2010, 6:19 pm

Thanks for your comments!

I'm creating a new pong game (more advanced), I'll post it later!

RuleBreaker - September 1, 2010, 4:50 pm

i had few errors with source

so i used full source but ball isn't moving and computer isn't moving :\

what should u do?

i found what's wrong i didn't turn timer :D

but i have 2 more problems

1.ball is just going in 1 row...it isn't going up or down

2.i added super cool big picture in background and it's slowing my game :\ can i speed up it without deleting background??

Obi-Wan Cannabis - September 1, 2010, 4:58 pm

(Sep 1, 2010 04:50 PM)HACKER0 Wrote: [\[CITE\]](#) i had few errors with source so i used full source but ball isn't moving and computer isn't moving :\

what should u do?

i found what's wrong i didn't turned timer :D

but i have 2 more problems

1.ball is just going in 1 row...it isn't goind up or down

2.i added super cool big picture in bacground and it's slowing my game :\ can i speed up it without deleting background??

1. Use the folowing code instead of the first line of your timer:

Code Ball.Location = New Point(Ball.Location.X + xVel, Ball.Location.Y + yVel)

The code you're looking for looks like the one I gave you.

2. Use a picturebox with an image (no background of picbox) instead of background of the form.

(Sep 1, 2010 04:50 PM)HACKER0 Wrote: [\[CITE\]](#) i had few errors with source so i used full source but ball isn't moving and computer isn't moving :\

what should u do?

i found what's wrong i didn't turned timer :D

but i have 2 more problems

1.ball is just going in 1 row...it isn't goind up or down

2.i added super cool big picture in bacground and it's slowing my game :\ can i speed up it without deleting background??

When you get your pong finished share with us.

Toxic Asshole - September 1, 2010, 6:31 pm

Fail its using a timer why not use multithreading ?

Benne-R - September 1, 2010, 10:28 pm

I just copy + pasted the full source code. No errors, and it didn't work?

Obi-Wan Cannabis - September 1, 2010, 10:30 pm

(Sep 1, 2010 10:28 PM)Benne-R Wrote: [\[CITE\]](#) I just copy + pasted the full source code. No errors, and it didn't work?

What didn't work?

If the ball is not moving, please enable the Timer!

To The Limits - September 2, 2010, 2:40 am

thank's man! i try it and works good! ?

Obi-Wan Cannabis - September 2, 2010, 2:46 am

(Sep 2, 2010 02:40 AM)JesusOfSuburbia Wrote: [\[CITE\]](#) thank's man! i try it and works good! ? Glad you liked it! ?

Thanks for your comment!

Maasie - September 2, 2010, 3:26 am

Wow! Nice! Game in VB.NET, would +rep if i cud. Nice imagination and coding skills =)!

RuleBreaker - September 2, 2010, 5:16 am

it`s not bad but i found bug with ball when i put my label in the midle i can leave it there :\

so i want relase it and i deleted it :|

but anyway nice tut ;)

Obi-Wan Cannabis - September 2, 2010, 1:27 pm

Here's a sneak peak at the pong game I'm working on.

<https://hackforums.net/showthread.php?tid=654010>

BeanerAtWork - April 27, 2011, 7:35 pm

YAY! I got it too work mind helping how to slow down the panel of the computer

Obi-Wan Cannabis - April 28, 2011, 6:20 am

(Apr 27, 2011 07:35 PM)BeanerAtWork Wrote: [\[CITE\]](#) YAY! I got it too work mind helping how to slow down the panel of the computer

If you don't know how to do that I would recommend you to stop copy and pasting. ?

Anyway, all you have to do is changing the computer's timer interval...

s3v3red - April 28, 2011, 6:50 am

(Aug 26, 2010 04:29 AM)Shippage Wrote: [\[CITE\]](#) Very nice! I did not know you could make any type of games in VB.NET.

<https://hackforums.net/showthread.php?tid=500934>

TLF-KoBE - April 28, 2011, 8:19 am

Nice tutorial iCrack™.. with all these games being released, maybe I should release my snake game!? Good job.

J?k? - April 28, 2011, 11:07 am

WOW! Thanks! It looks so simple and fun/easy to make :)

BeanerAtWork - April 28, 2011, 8:08 pm

(Apr 28, 2011 06:20 AM)iCrack™ Wrote: [\[CITE\]](#) If you don't know how to do that I would recommend you to stop copy and pasting. ?

Anyway, all you have to do is changing the computer's timer interval...

I am very new to vb, and my ways on learning that i have used very much is a little bit odd. I like to see someone do the work.(Your code)

Then i would read or understand what you done and undergo what each thing means and how it is used. The most practice ive gotten with vb is taking the class in highschool which i am at the moment, and i will be taking an (Honors) Class about VB, which will probably involve C++. I Know all the basics but i haven't really gotten to know the inside look of vb. Most of the coding you used was very new to me and it helped me a lot more understanding it.?