**Breakout Phase II – Designing the Board – 40 Points**

In Phase 1, we used graph paper to position all of the 98 blocks that will make up the “alien” in our game, as well as the paddle, ball and the three walls. We will now code it in Visual Studio:

1. Create a project called **Breakout**.
2. Copy these images into the debug folder ( Weebly Resources page): arkball.png, paddle.png, topwall.png, sidewall.png, bluetexture.png
3. Just under Public Class Form1, declare the following objects and variables:

 'Objects

 Dim block(100) As Label

 Dim paddle As PictureBox

 Dim ball As PictureBox

 Dim leftWall, rightWall, topwall As PictureBox

 Dim blackBackground As Label 'This will cover the area above the top wall on the form

 'Variables

 Dim x As Integer 'used for looping

 Dim ballVertDir As String = "up" 'controls the ball’s vertical direction

 Dim ballHorizDir As String = "left" ' controls the ball's horizontal direction

 Dim paddleDir As String 'controls the paddle's direction

 Dim blockCounter As Integer = 0 'keeps count of the number of blocks removed from the board

 Private Sub Form1\_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load

 'Set the form's size and background

 Me.Size = New Size(616, 720)

 Me.BackColor = Color.Blue

 Me.BackgroundImage = Image.FromFile("bluetexture.png")

 Me.BackgroundImageLayout = ImageLayout.Tile

 makeObjects() ' Creates three walls, paddle, ball, black background

 makeBlocks() 'Creates the array of 98 blocks

 placeBlocks() 'Sets the Location of the 98 Blocks

End Sub

**Public sub makeObjects()**

You create this. You should create six objects here from code (3 walls, paddle, ball, black background). Be sure to carefully position each object based on your graph paper design.

Here’s the code for the topWall picturebox:

 topwall = New PictureBox

 topwall.Image = Image.FromFile("topwall.png")

 topwall.Size = New Size(600, 20)

 topwall.Location = New Point(0, 60)

 topwall.SizeMode = PictureBoxSizeMode.StretchImage

 Controls.Add(topwall)

You’ll need to create the leftWall, rightWall, paddle, ball, and the blackBackground label at the top. The blackBackground label should be positioned first to cover up the blue texture background image of the form. We will not worry about the scoring labels at this time.

**Public Sub makeBlocks()** – Here’s the code for make all of the blocks. We use a for loop make this way easier.

For Me.x = 1 To 98

 block(x) = New Label

 block(x).Size = New Size(40, 20)

 block(x).AutoSize = False

 block(x).BackColor = Color.Gray

 block(x).BorderStyle = BorderStyle.FixedSingle

 Controls.Add(block(x))

Next

We will also need to set the backcolor of 8 blocks to yellow and four blocks to red. If you properly numbered your graph paper design, the yellow blocks should be 12,13,24,25,64,65,76, and 77. The red blocks should be 28, 29, 68, 69.

**Public Sub placeBlocks()**

You create the code here. Here you will be responsible for setting the locations of all 98 blocks. This will require 98 different statements, but Mr. Dixon will give a mathematical shortcut, that can shorten your code here. Using the shortcut is optional.

Block(1).Location = new Point(80, 280)

Block(2).Location = new Point(80, 300)

….

Block(98).Location = new Point(480,380)