**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)