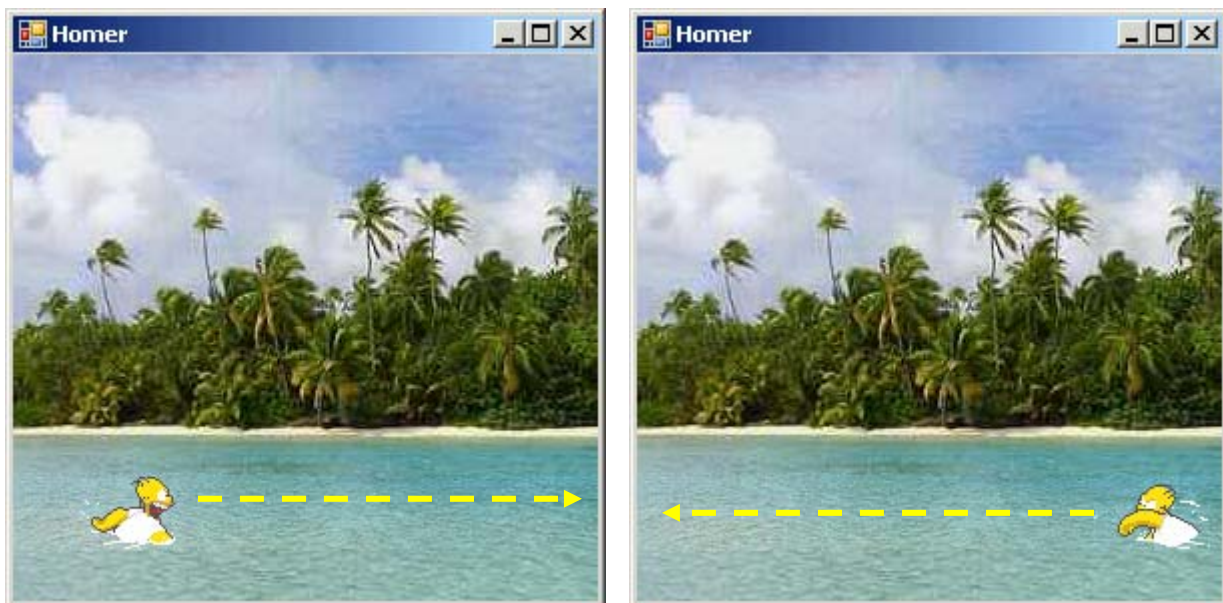


## MOVING AND ANIMATING IMAGES: PROGRAMMING EXERCISES

1. Create a **Homer** application that animates a series of four (4) images of Homer swimming one way and another four (4) images of Homer swimming the opposite way. When the program starts, Homer should start swimming east until he gets to the end, at which point he should turn around and start swimming west. When Homer reaches the west end, he should turn around again and keep doing this repeatedly until the user closes the program. You can find the images in your UNIT 5 folder.

Your program output should look something like this:



Save the program as **Homer** in your UNIT 5 folder.

2. Create a **Frogger** program that moves eight (8) vehicles across the screen (see image below to determine which vehicles should be travelling east and which should be travelling west). For this program you will need to create an array that will store eight PictureBox objects and then create a **For...Next** loop that initializes each PictureBox object, sets the properties of the PictureBox, and adds the objects to the Form. Here are the lines of code that you will need to add to the **Frogger\_Load** procedure:

```
Public Class Frogger
```

```
    'Declare global variables  
    Dim cars(7) As PictureBox
```

```
.....  
    Private Sub Frogger_Load(ByVal sender As System.Object, ByVal e As  
        System.EventArgs) Handles MyBase.Load
```

```

'Declare local variables
Dim rand As New Random
Dim yPos As Integer = 318

'Set the properties of each picture box
For i As Integer = 0 To cars.Length - 1
    cars(i) = New PictureBox
    cars(i).BackColor = Color.Transparent
    cars(i).SizeMode = PictureBoxSizeMode.AutoSize
    cars(i).Image = Image.FromFile(Directory.GetCurrentDirectory &
        "\images\car" & i & ".png")

'Decrease the y-Position by an extra 25 pixels when it gets to
the fifth car
If i = 4 Then
    yPos = yPos - 25
End If

'Set the x- and y-positions of the cars
cars(i).Location = New Point(rand.Next(0, Me.Width()), yPos)

'Add the picture box to the form
Controls.Add(cars(i))

'Decrease the y-position by 34 pixels for the next car
yPos -= 34
Next

End Sub

End Class

```

Once you have added the above code, you need to write the code for the two timers – i.e. **tmrWest** (for the vehicles travelling west) and **tmrEast** (for the vehicles travelling east). For each of the timers you need to set the location of the vehicles. The vehicles at index 0, 2, 4 and 6 are all travelling west, while the vehicles at index 1, 3, 5 and 7 are all travelling east. Make sure that you use different values for the amount by which each vehicle's x-position is increased, that way the vehicles are not all moving at the same pace.

Save the program as **Frogger** in your UNIT 5 folder.

