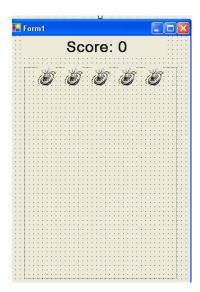
Name: Session:

Programming II

Lab Exercise 2/25/2022

## **Space Invaders**

In this lab exercise, you will build a classic video game; Space Invaders. Start by creating a Form that looks like this:



1. After your interface is created, add the following global variables to your code:

int value;

string score;

int lives;

2. Set the following timer1 properties:

Enabled = True

Interval = 300

3. Add the following to the Form1\_Load event:

value = 0;

score = "Score: " + value.ToString();

lives = 10;

4. Add the following code to the timer1\_Tick event:

```
PictureBox1.Top += 20;

PictureBox2.Top += 20;

PictureBox3.Top += 20;

PictureBox4.Top += 20;

PictureBox5.Top += 20;

checkLanded();

updateScore();

if (lives < 0)

{

timer1.Enabled = false;

lblOver.Text = "Game\n" + "Over";

}
```

5. Write the checkLanded() and updateScore() functions.

```
public void checkLanded()
       if (PictureBox1.Top \geq 344)
          value -= 5;
          PictureBox1.Top = 0;
          score = "Score: " + value.ToString();
         lives--;
       }
       if (PictureBox2.Top \geq 344)
          value -= 5;
          PictureBox2.Top = 0;
          score = "Score: " + value.ToString()
         lives--;
       }
       if (PictureBox3.Top \geq 344)
          value -= 5;
          PictureBox3.Top = 0;
          score = "Score: " + value.ToString();
          lives--;
       }
```

```
if (PictureBox4.Top >= 344)
{
    value -= 5;
    PictureBox4.Top = 0;
    score = "Score: " + value.ToString();
    lives--;
}

if (PictureBox5.Top >= 344)
{
    value -= 5;
    PictureBox5.Top = 0;
    score = "Score: " + value.ToString();
    lives--;
}

public void updateScore()
{
    lblScore.Text = score;
}
```

6. Now write the PictureBox click event handlers as such

```
private void PictureBox1_Click(object sender, EventArgs e)
{
     PictureBox1.Top = 0;
     value += 1;
     score = "Score: " + value.ToString();
}
```

This example is for PictureBox1. You will have to add similar code to PictureBox1\_Click, PictureBox2\_Click, PictureBox3\_Click, PictureBox4\_Click, and PictureBox5\_Click.

- 7. Once you have your game working, add Start, Stop, and Reset buttons.
- 8. Add a ProgressBar (value 0 to 100) control to keep track of your health and caused your game to end when you get to a 0 value on the progress bar. Each landing should cost the player 10 points on their progress bar.

When you have completed your game, submit a screen shot of your running game and attach to this sheet and turn in.