

Name

Session:

Programming II

Typing Tutor Project

Lab Exercise 4.6.2021

1. In this project we will be making a Space Invaders-like game that is designed to improve your typing skills. Start by laying out a form as shown in figure 1. Your Form should be of size 480 x 640. The Y coordinate of Labels 1 – 5 should be at 34. lblScore should be at location (135, 573) with a size of 432 x 20.



Figure 1 Typing Tutor Form

As you can see, this form will require the following Objects placed on it.

Quit button	btnQuit
Start/Stop button	btnStart
Score box	lblScore
Cat label	lblCat
Dog label	lblDog
Fish label	lblFish
Bird label	lblBird

Turtle label	lblTurtle
Text entry box	txtEntry
A timer	timer1

1. Create a global variable

```
int score;
```
2. Set the timer1 properties to enabled = false and interval = 30 (Increasing the timer interval will make the game less challenging. Note: timer interval is short and the labels move 5 pixels per tick to reduce screen repaint flicker.

3. Add the following to btnQuit_Click event to cause your game to end.

```
this.close()
```

4. Add the following to btnStart_Click event to start and stop your game.

```
if (btnStart.Text == "Start")
{
    btnStart.Text = "Stop";
    score = 0;
    lblScore.Text = "Score: " + score;
    timer1.Enabled = true;
    txtEntry.Focus();
}
else
{
    btnStart.Text = "Start";
    timer1.Enabled = false;
    lblCat.Top = 0;
    lblDog.Top = 0;
    lblFish.Top = 0;
    lblBird.Top = 0;
    lblTurtle.Top = 0;
}
```

5. Add the txtEntry_TextChanged event to allow your input.

```
if (txtEntry.Text != "")
{
    if (txtEntry.Text == lblCat.Text)
    {
        txtEntry.Text = "";
        lblCat.Top = 0;
        score++;
        lblScore.Text = "Score: " + score;
    }
}
```

```

if (txtEntry.Text == lblDog.Text)
{
    txtEntry.Text = "";
    lblDog.Top = 0;
    score++;
    lblScore.Text = "Score: " + score;
}

if (txtEntry.Text == lblFish.Text)
{
    txtEntry.Text = "";
    lblFish.Top = 0;
    score++;
    lblScore.Text = "Score: " + score;
}

if (txtEntry.Text == lblBird.Text)
{
    txtEntry.Text = "";
    lblBird.Top = 0;
    score++;
    lblScore.Text = "Score: " + score;
}

if (txtEntry.Text == lblTurtle.Text)
{
    txtEntry.Text = "";
    lblTurtle.Top = 0;
    score++;
    lblScore.Text = "Score: " + score;
}
}

```

6. Add the following to the timer1_Tick event to cause the Tetris-like effect.

```

lblCat.Top += 5;
if (lblCat.Top > 480)
{
    lblCat.Top = 0;
    score -= 10;
    lblScore.Text = "Score: " + score;
}

```

```
lblDog.Top += 5;
if (lblDog.Top > 480)
{
    lblDog.Top = 0;
    score -= 10;
    lblScore.Text = "Score: " + score;
}
```

```
lblFish.Top += 5;
if (lblFish.Top > 480)
{
    lblFish.Top = 0;
    score -= 10;
    lblScore.Text = "Score: " + score;
}
```

```
lblBird.Top += 5;
if (lblBird.Top > 480)
{
    lblBird.Top = 0;
    score -= 10;
    lblScore.Text = "Score: " + score;
}
```

```
lblTurtle.Top += 5;
if (lblTurtle.Top > 480)
{
    lblTurtle.Top = 0;
    score -= 10;
    lblScore.Text = "Score: " + score;
}
```

7. Now test your game and see if it works.
8. Now that you have your game working, you may want to add some modifications to it.
- 9. Now turn in your source code for this program attached to this sheet as well as a screenshot of your working program.**