Name **Session:**
Programming II
Typing Tutor Project
Lab Exercise 3.20.2025

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.**