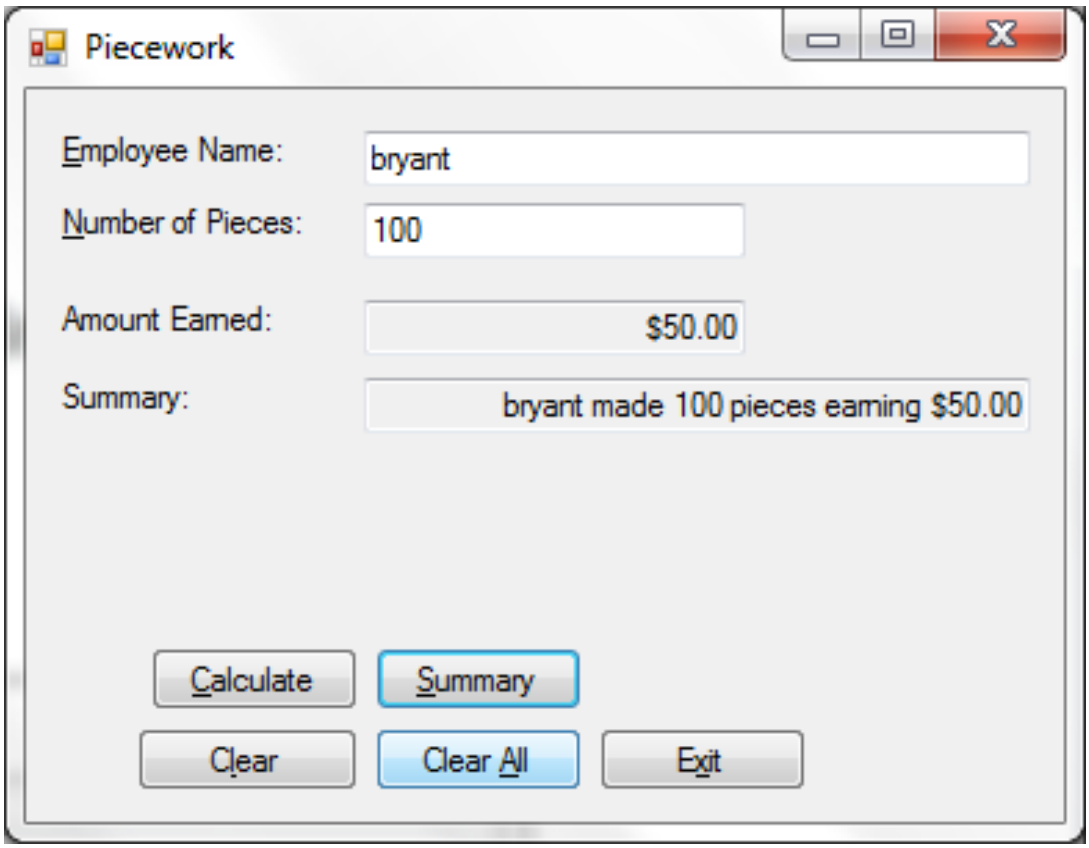
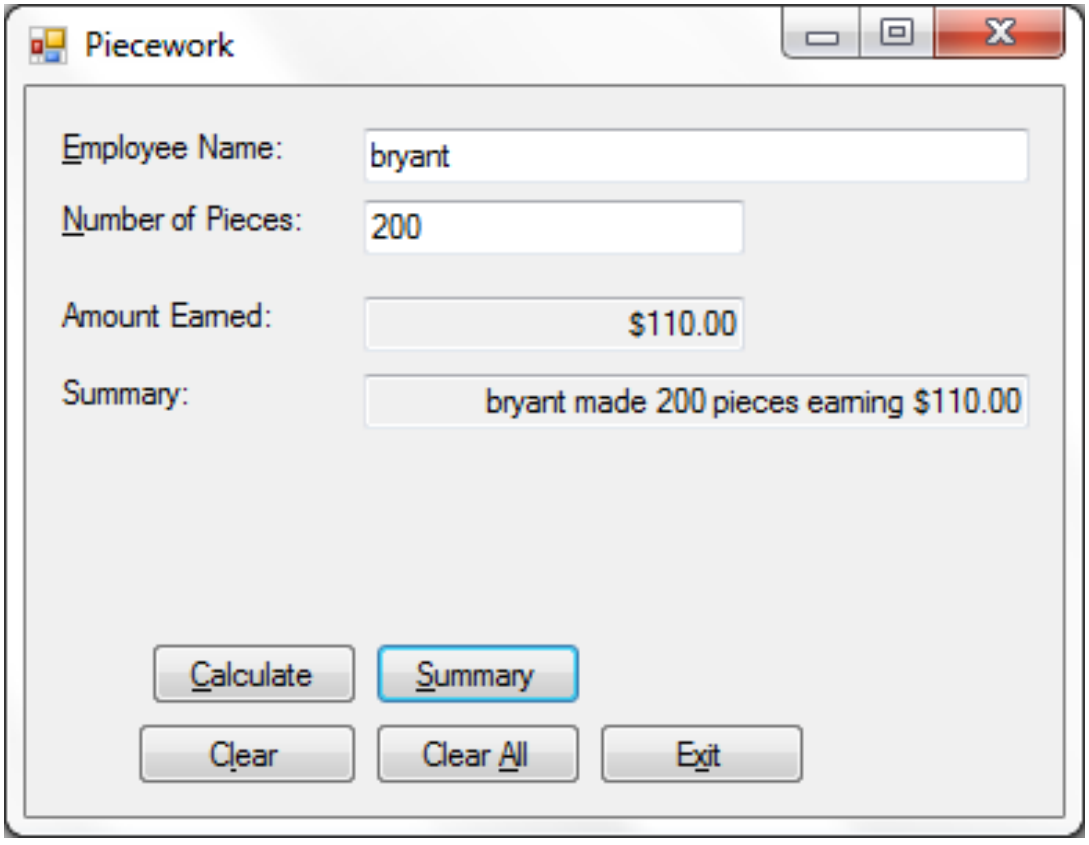
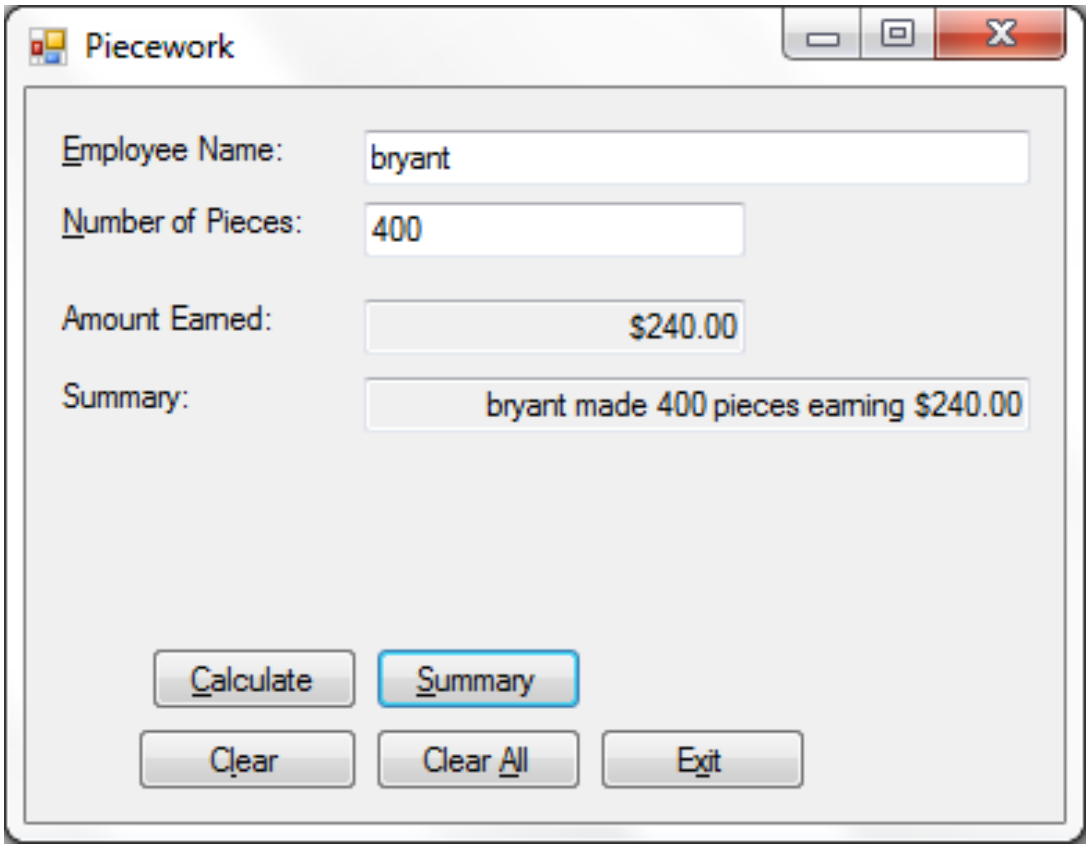
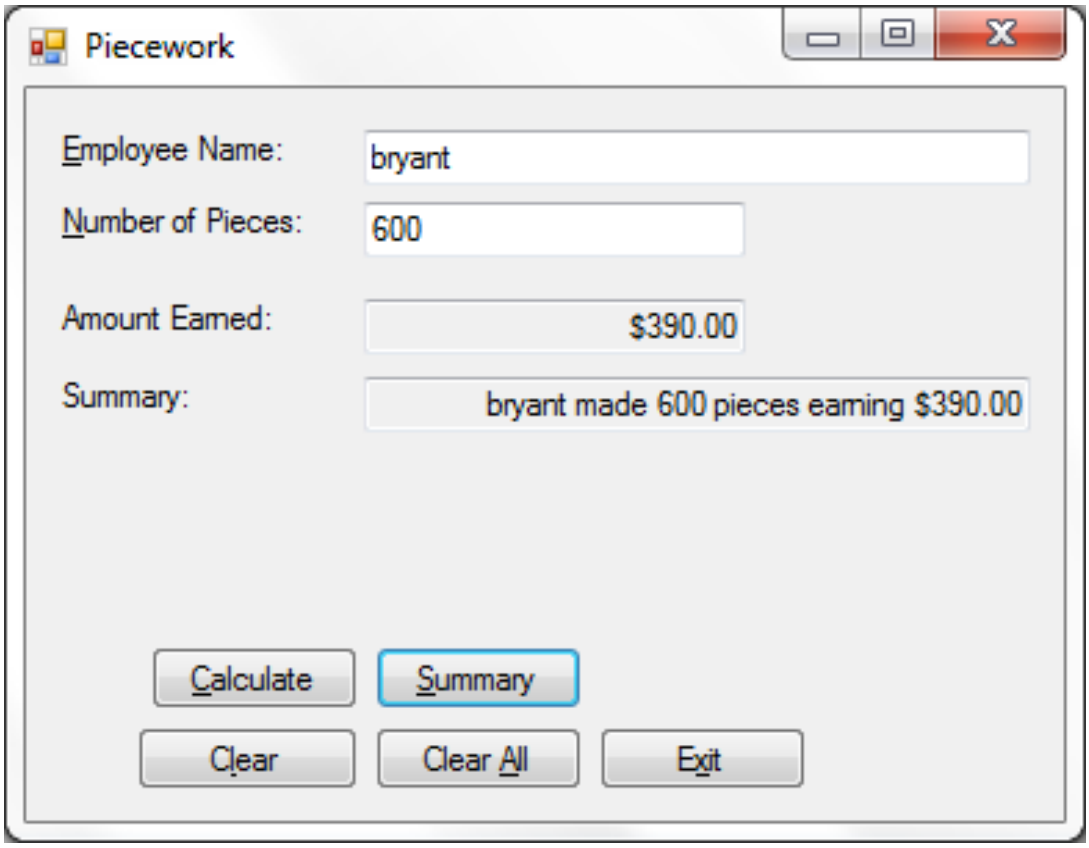
Lab 4 by Bryant Tunbutr






Piecework
Employee Name:
bryant
Number of Pieces:
400
Amount Earned:
$240.00
Summary:
bryant made 400 pieces earning $240.00
Calculate
Summary
Clear
Clear All
Exit


Piecework
Employee Name:
bryant
Number of Pieces:
600
Amount Earned:
$390.00
Summary:
bryant made 600 pieces earning $390.00
Calculate
Summary
Clear
Clear All
Exit

Source code for PieceworkForm.cs

```
/*
* Project: EX0406 - Exercise 4.6
* Programmer: Bryant Tunbutr
* Date: September 27 2012
* Description: Calculates and displays the amount an employee earns for producing items.
* I certify that the code below is my own work.
*/

using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;

namespace EX0406
{
    public partial class pieceWorkForm : Form
    {

        public pieceWorkForm()
        {
            InitializeComponent();
        }

        private void calculateButton_Click(object sender, EventArgs e)
        {
            // Declare the variables.
            int piecesInt;
            decimal amountEarnedDec;
            try
            {
                if (piecesTextBox.Text != "")
                    {
                // Convert input values to numeric and assign to variables.
                piecesInt = int.Parse(piecesTextBox.Text);

                // Calculate values.
                if (piecesInt < 200)
                {
                    amountEarnedDec = piecesInt * 0.5m;
                    amountEarnedTextBox.Text = amountEarnedDec.ToString("C");
                }
                else
                    if (piecesInt < 400 && piecesInt > 199)
                {
                    amountEarnedDec = piecesInt * 0.55m;
                    amountEarnedTextBox.Text = amountEarnedDec.ToString("C");
                }
                if (piecesInt < 600 && piecesInt > 399)
                {
                    amountEarnedDec = piecesInt * 0.60m;
                    amountEarnedTextBox.Text = amountEarnedDec.ToString("C");
                }
                if (piecesInt > 599)
                {
                    amountEarnedDec = piecesInt * 0.65m;
                    amountEarnedTextBox.Text = amountEarnedDec.ToString("C");
                }
```

```
                }
            else MessageBox.Show("Missing data entry"); ;
        }
            catch
            {
                MessageBox.Show("Bad input");
            }
            if (nameTextBox.Text == "") MessageBox.Show("Missing data entry");
        }


        private void summaryButton_Click(object sender, EventArgs e)
        {
            if (piecesTextBox.Text == "") MessageBox.Show("Missing data entry");
            if (nameTextBox.Text == "") MessageBox.Show("Missing data entry");
            summaryTextBox.Text = nameTextBox.Text + " made " + piecesTextBox.Text + "
pieces earning " + amountEarnedTextBox.Text;
        }

        private void clearButton_Click(object sender, EventArgs e)
        {
            piecesTextBox.Text = "";
            amountEarnedTextBox.Text = "";
            nameTextBox.Text = "";
            summaryTextBox.Text = "";
        }

        private void clearAllButton_Click(object sender, EventArgs e)
        {
            piecesTextBox.Text = "";
            amountEarnedTextBox.Text = "";
            nameTextBox.Text = "";
            summaryTextBox.Text = "";
        }

        private void exitButton_Click(object sender, EventArgs e)
        {
            this.Close();
        }

        private void pieceWorkForm_Load(object sender, EventArgs e)
        {

        }
    }
}
```

According to the current requirements, if a worker produces 200 pieces then the rate for each piece will be 0.55 (a higher rate for all the pieces) so this worker would get paid $110.00. It is possible that another company would only pay a higher rate for only pieces above a certain threshold. If that is the case, then the above worker would only be paid $100.05 (199 * 0.50 + 1 * 0.55). Outline a possible solution to deal with the new requirement (discuss or provide pseudocode).

A solution would be to create tiers with maximums.

For instance, every piece below 200 earns .5

The pseudocode for pay would be

```
If (x<200) {

pay = x * .5;

}
```

X = number of pieces

The next tier would be written as such

99.5 ←the maximum from the first tier

```
If (x<400 && x>199) ) {

pay = 99.5 + (x-199) * .55;

}
```

The logic is including the maximum of the lower tier(s), then adding the additional pieces at the increased rate of pay.

This would be written by using if else statements.