CISP 41 -- Homework 2 (30 points)

Due Thursday, 10/25/2012

Note: Staple pages and arrange your work in this order. You can also use Moodlerooms to submit one single pdf file with appropriate name (such as TvoHW2.pdf).

Review Questions from Book:

- Chapter 5
  - 2, 4, 5, 6, and 8

2.How can the user know if a menu item contains a submenu?

There is a filled triangle to the right of a menu item indicates that a submenu exists

4.Name at least three types of common dialog boxes.

The common dialog components provided with Visual Studio are ColorDialog, FolderBrowserDialog, FontDialog, OpenFileDialog, and SaveFileDialog.

5.What is a context menu?How would you attach a context menu to a control?

Context menus are the shortcut menus that pop up when you right-click.

To assign the context menu to a form or control, first add a *ContextMenuStrip component*, which appears in the Component Tray.

Then set the form or control's ContextMenuStrip property.

6.Why would you need methods that are not attached to an event?

You may want to create the method, then let multiple events have access to it, by using the properties window to select the method.

8.Explain the difference between a method that returns a value and a method that doesn't return a value.

A method that can calculate and return a value, or it may not return a value, i.e. a constructor.

Chapter 6

- 2, 5, 6, 9, and 10

2. What is the purpose of a splash screen?

Splash screens tell the user the program is loading and starting.

It also makes a large application appear to load and start faster.

5. What is the assembly information? How can you change the information?

How can you use the information?

Assembly information includes information such as the product

name, version, copyright, company name, and description.

Open the Project Designer from Project / ProjectName Properties .

Click on the Assembly Information button and fill

in the desired information in the Assembly Information dialog box.

You can display this info in the About Box.

6. Explain the difference between modal and modeless.

A user must respond to the modal form in some way. No other program

code can execute until the user responds to, hides, or closes a modal form.

With a modeless form, both the new and old forms are open and

a user can navigate from one form to the other

9. How are variable values passed from one form to another?

The correct approach for passing variables from one form

object to another is to set up properties of the form's class.

Use a property method to pass values from one form

to another, such as in the lab.

10. How can you run a compiled C# program outside the Visual Studio IDE?

The .exe file is in the project’s bin\Debug folder.

The file can be run from a computer as long as it

has the correct version of the Microsoft .NET Framework

Chapter 7

- 1, 4, 6, 9, and 10

1. What is a list box? a combo box?

Both provide the user with a list of items from which to select.

However the combo box has a DropDownStyle property so

the user can enter info, and also the list will drop down

4. Explain the purpose of the SelectedIndex property and the Items.Count

property.

The SelectedIndex property is used to select an item in

the list or deselect all items.

The Items.Count Property is used to determine

the number of items in the list.

6. In what situation would a loop be used in a method?

To repeat a group of instructions many times without calling the method for

each new set of data.

The group of repeated instructions in a method is called a loop.

9. What are the steps in processing a forloop?

- Initialize the counter
  - The loop index, a properly initialized numeric variable
- Test the counter to determine when to terminate the loop
  - Condition tests the value of the loop index variable
- Increment the counter
  - Add to or subtract from the loop index variable,

    the loop index is incremented after each iteration

10. Discuss how and when the values of the loop index change throughout the processing of the loop.

The program checks condition after comparison is done.

If *condition* is *true*, loop continues execution.

But if *condition* is *false*, loop is exited.

Control then passes to statement following closing brace.

- Chapter 8
    - 1, 2, 3, 4, and 5

1. Define the following terms:

a. Array

A list or series of values

b. Element

Each individual variable of the array.

c. Subscript

The position of the element within the array**.**

d. Index

Same as subscript, the position of the element within the array**.**

e. Subscripted variable

A synonym for array, a list or series of values.

2. What is a structure? When might a structure be useful?

A combination of multiple fields of related data.

3. Describe the logic of a table lookup.

It is used to identify when a series of elements may

not be sequential, to find the correct array element.

It compares the input group number to each element

in the table, one by one.

4. Name some situations in which it is important to

perform validation when working with subscripted variables.

If you are using text boxes rather than list boxes for data entry, the input

requires more validation. Make sure the user entry is valid, i.e. numeric

when asking for a quantity.

5. Compare a two-dimensional table to an array of a structure.

A two-dimensional table contains rows and columns

and is processed similarly to a one-dimensional array.

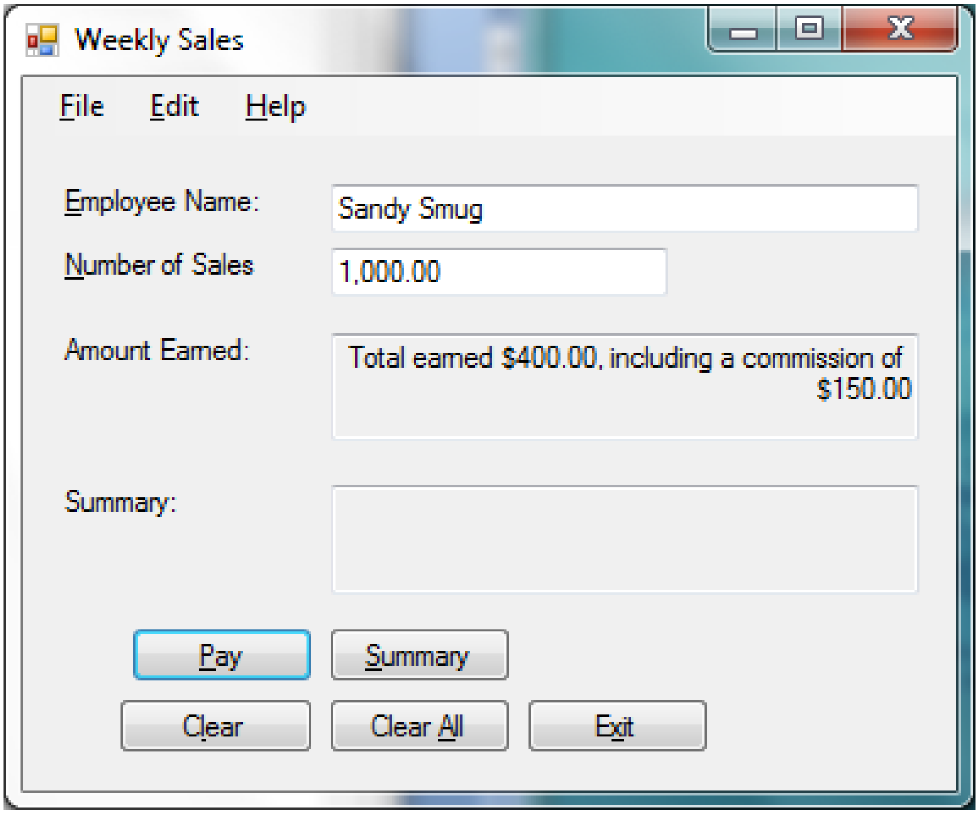
Accessing a multidimensional array frequently requires

the use of nested loops, i.e. to print, look up, summarize.

Programming Exercises from Book (perform at least two out of four):

- Chapter 5
    - 5.3

Lab 5.3 by Bryant Tunbutr

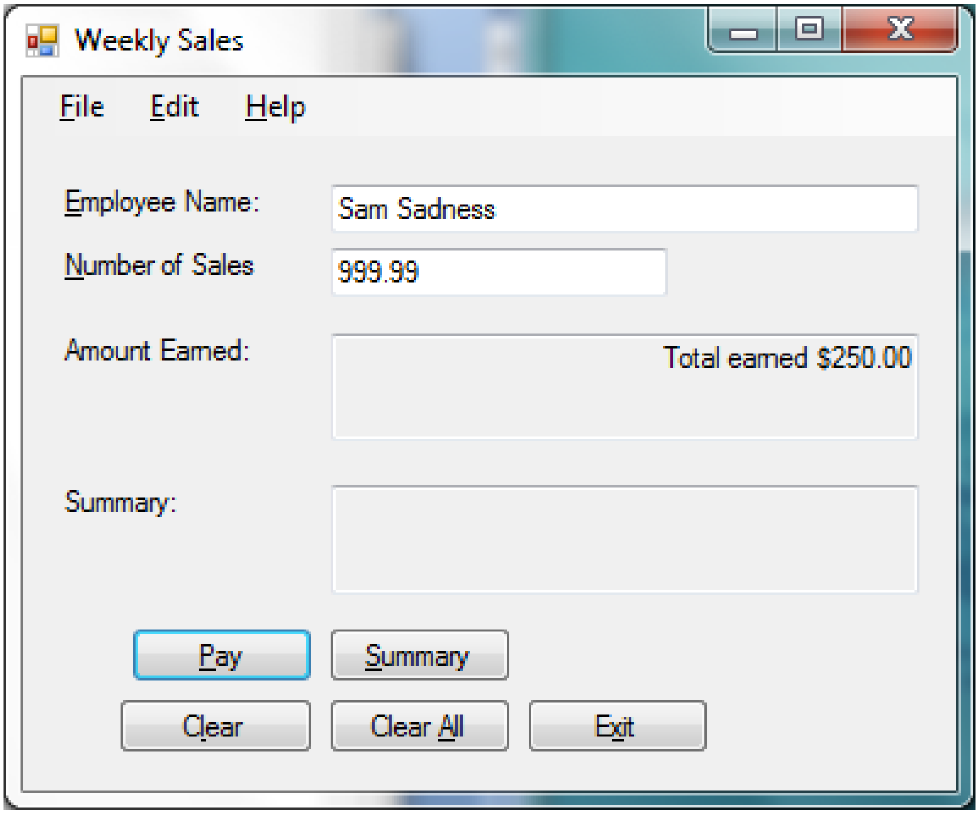


Employee Name: Sandy Smug

Number of Sales 1,000.00

Amount Earned: Total earned $400.00, including a commission of $150.00

Summary:

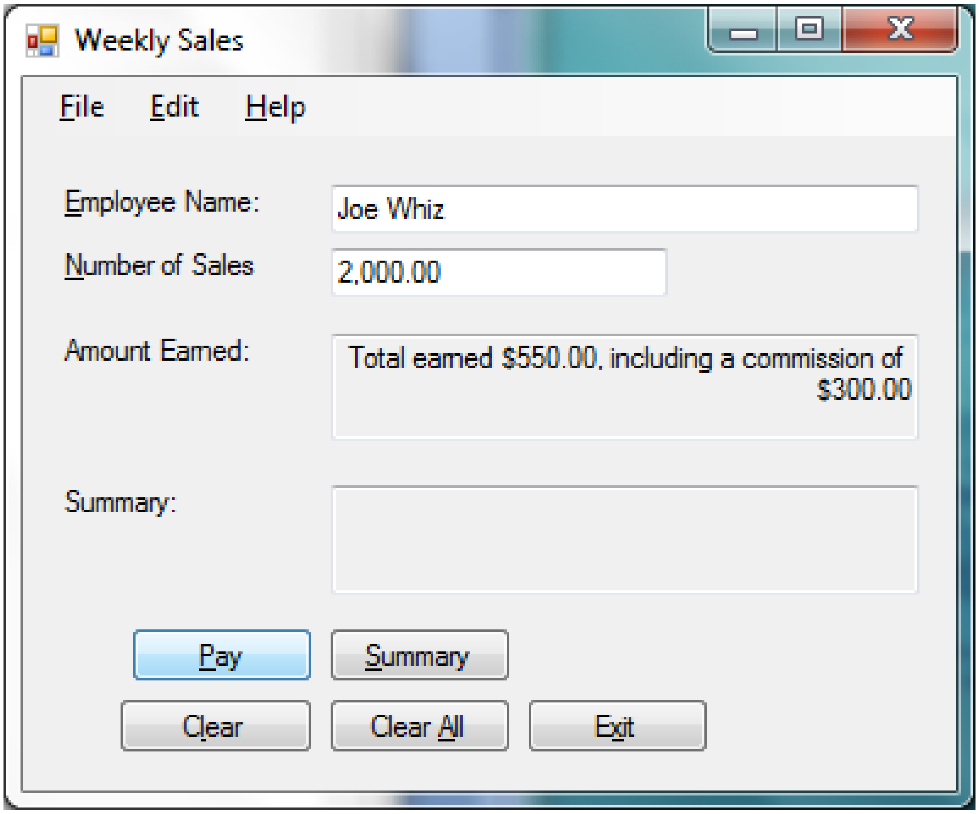


Employee Name: Sam Sadness

Number of Sales 999.99

Amount Earned: Total earned $250.00

Summary:

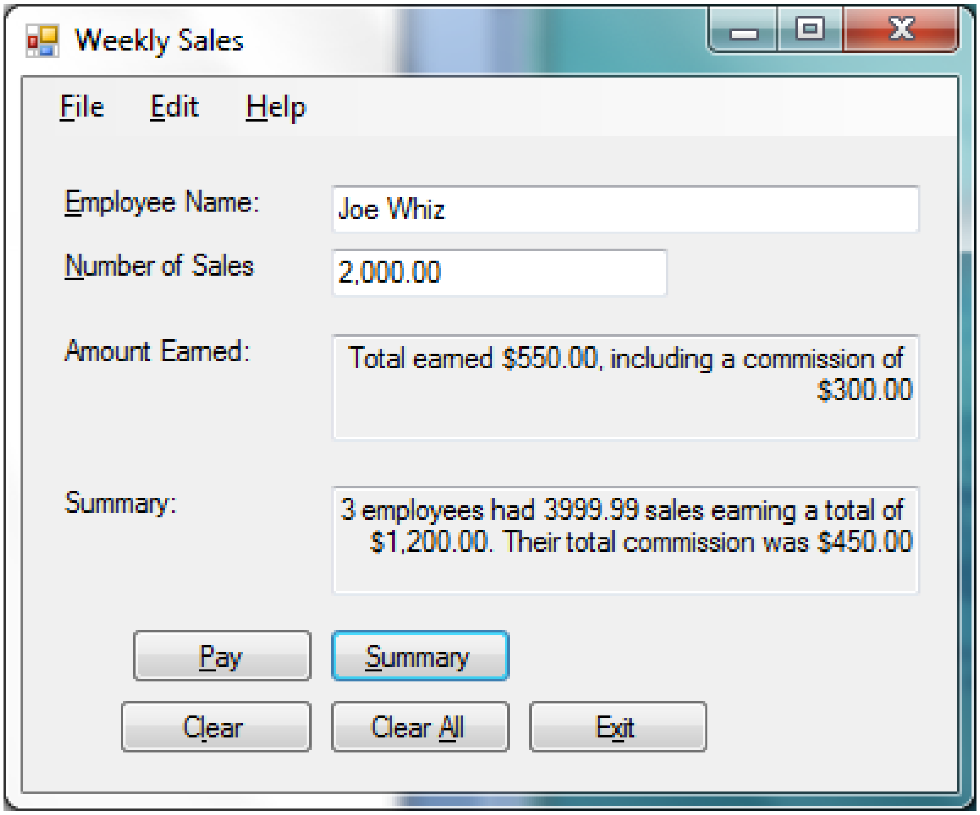


Employee Name: Joe Whiz

Number of Sales 2,000.00

Amount Earned: Total earned $550.00, including a commission of $300.00

Summary:

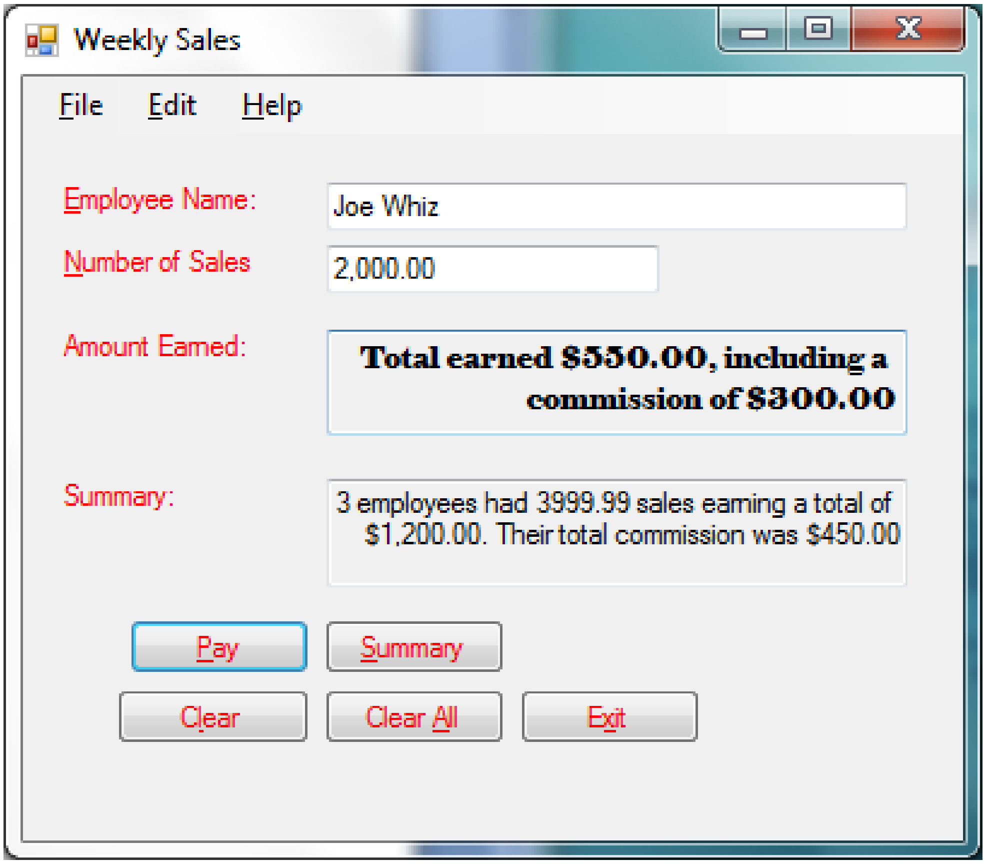


Employee Name: Joe Whiz

Number of Sales 2,000.00

Amount Earned: Total earned $550.00, including a commission of $300.00

Summary: 3 employees had 3999.99 sales earning a total of $1,200.00. Their total commission was $450.00



Employee Name: Joe Whiz

Number of Sales 2,000.00

Amount Earned: **Total earned $550.00, including a commission of $300.00**

Summary: 3 employees had 3999.99 sales earning a total of $1,200.00. Their total commission was $450.00

Source code for salesForm.cs

```
/*
* Project: Exercise 5.3
* Programmer: Bryant Tunbutr
* Date: October 20 2012
* Description: Calculates and displays the amount an employee earns for selling.
* Upgraded with menu and printing options.
 * Upgraded again with splash screen, about box.
 * 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 Piecework
{
    public partial class salesForm : Form
    {
        // Declare the variables.
        int employeesInt;
        decimal salesDec, amountEarnedDec, amountTotalEarnedDec,
            totalSalesDec, commissionEarnedDec,
            commissionEarnedTotalDec;
        public salesForm()
        {
            InitializeComponent();
        }

                private void payButton_Click(object sender, EventArgs e)
                {
                try
                {
                if (salesTextBox.Text != "")
                    {
                // Convert input values to numeric and assign to variables.
                        salesDec = Decimal.Parse(salesTextBox.Text);

                // Calculate values.
                if (salesDec < 1000)
                {
                    commissionEarnedDec = 0m;
                    amountEarnedDec = 250m;
                    amountEarnedTextBox.Text = "Total earned " +
amountEarnedDec.ToString("C");
                }

                // Calculate values.
                else
                    if (salesDec > 999)
                {
                    commissionEarnedDec = salesDec * 0.15m;
                    amountEarnedDec = 250m + commissionEarnedDec;
                    amountEarnedTextBox.Text = "Total earned " +
amountEarnedDec.ToString("C") +
                        ", including a commission of " +
commissionEarnedDec.ToString("C");
                }

                // Add to summary totals.
                employeesInt++;
                commissionEarnedTotalDec += commissionEarnedDec;

                totalSalesDec += salesDec;
                amountTotalEarnedDec += amountEarnedDec;

                    }
                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 (salesTextBox.Text == "")
                 {MessageBox.Show("Missing data entry"); }
            if (nameTextBox.Text == "")
                 {MessageBox.Show("Missing data entry"); }

            // Display the summary information in a message box.
            summaryTextBox.Text = employeesInt.ToString() + " employees had " +
totalSalesDec.ToString() +
                " sales earning a total of " + amountTotalEarnedDec.ToString("C")
+
                ". Their total commission was " +
                commissionEarnedTotalDec.ToString("C");
        }

        private void clearButton_Click(object sender, EventArgs e)
        {
            //Clear forms
            salesTextBox.Text = "";
            amountEarnedTextBox.Text = "";
            nameTextBox.Text = "";

            //Reset focus
            nameTextBox.Focus();
        }

        private void clearAllButton_Click(object sender, EventArgs e)
        {
            //Clear forms
            salesTextBox.Text = "";
```

```
    amountEarnedTextBox.Text = "";
    nameTextBox.Text = "";
    summaryTextBox.Text = "";


    // Clear summary totals.
    employeesInt = 0;
    commissionEarnedTotalDec = 0;

    totalSalesDec = 0;
    amountTotalEarnedDec = 0;

    //Reset focus
    nameTextBox.Focus();
}

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


private void cOlorToolStripMenuItem_Click(object sender, EventArgs e)
{
    // Change the form’s ForeColor.
    // Applies to all conrols on the form that haven’t had their
    // ForeColor explicitly modified.
    // Initialize the dialog box.
    colorDialog1.Color = this.ForeColor;
    // Display the dialog box.
    colorDialog1.ShowDialog();
    // Assign the new color.
    this.ForeColor = colorDialog1.Color;
}

private void fOntToolStripMenuItem_Click(object sender, EventArgs e)
{
    // Change the font of the total label.
    fontDialog1.Font = amountEarnedTextBox.Font;
    fontDialog1.ShowDialog();
    amountEarnedTextBox.Font = fontDialog1.Font;

    // fontDialog1.ShowDialog();
    // this.Font = fontDialog1.Font;
}

private void aBoutToolStripMenuItem_Click(object sender, EventArgs e)
{
    //MessageBox.Show("Written by B Tunbutr");
    AboutBox1 aboutForm = new AboutBox1();
    aboutForm.ShowDialog();
}

private void printToolStripMenuItem_Click(object sender, EventArgs e)
{
    // Begin the process for print preview.
    printPreviewDialog1.Document = printDocument1;
```

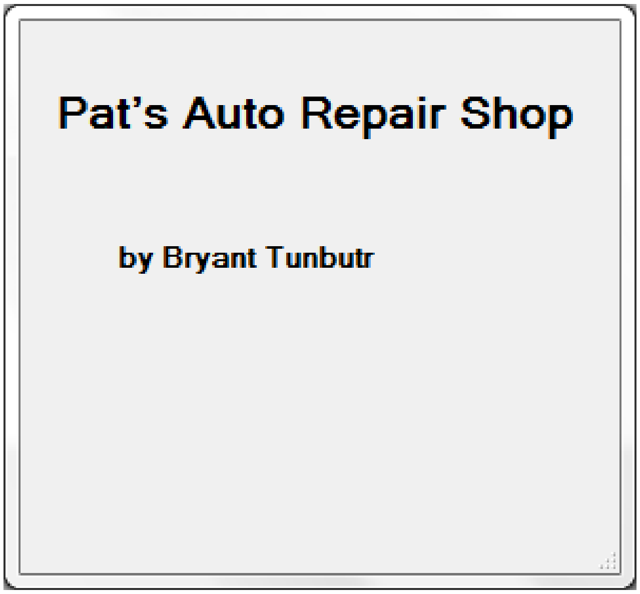
```
            printPreviewDialog1.ShowDialog();

        }

    }
}
```

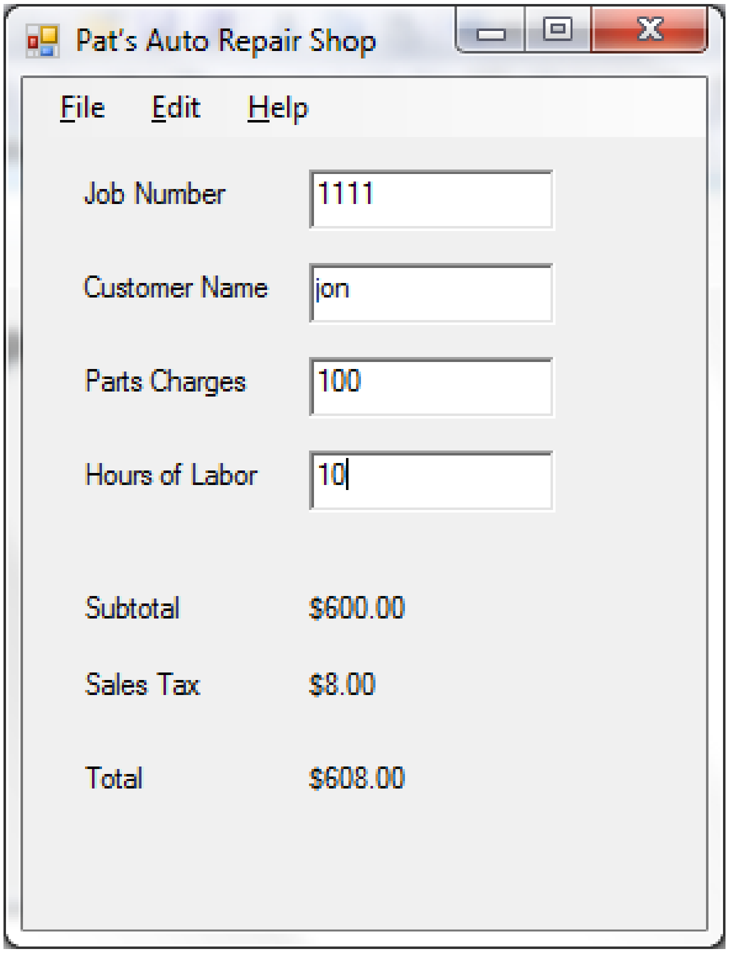
- Chapter 6
    - 6.2

Lab 6.2 by Bryant Tunbutr



Pat’s Auto Repair Shop

by Bryant Tunbutr



Job Number 1111

Customer Name jon

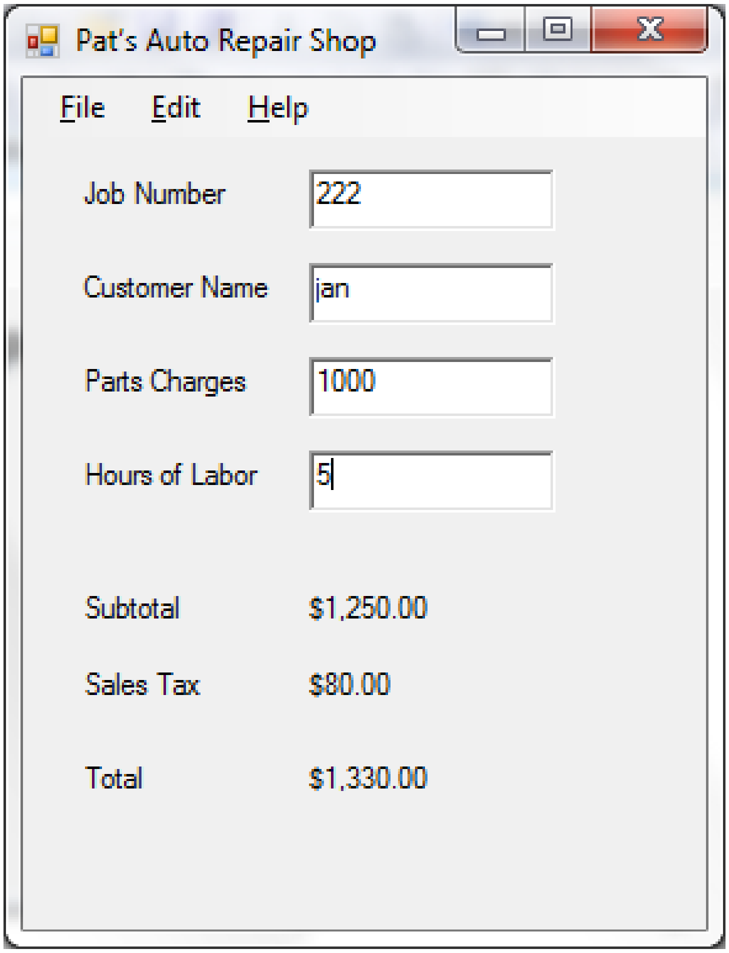
Parts Charges 100

Hours of Labor 10

Subtotal $600.00

Sales Tax $8.00

Total $608.00



Job Number 222

Customer Name jan

Parts Charges 1000

Hours of Labor 5

Subtotal $1,250.00

Sales Tax $80.00

Total $1,330.00

Source code for patsAutoRepair.cs

```
/*
* Project: Exercise 6.2
* Programmer: Bryant Tunbutr
* Date: October 22 2012
* Description: Calculates and displays the cost for autoshop materials and labor
 * 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.Linq;
using System.Text;
using System.Windows.Forms;

namespace WindowsFormsApplication14
{
    public partial class Form1 : Form
    {
        // Declare the variables.

        decimal partsChargesDec, subTotalDec, hoursOfLaborDec,
            salesTaxDec, totalDec, laborChargesDec;

        public Form1()
        {
            InitializeComponent();
        }

        private void calculateToolStripMenuItem_Click(object sender, EventArgs e)
        {

            try
            {
                // Convert input values to numeric and assign to variables.

                partsChargesDec = decimal.Parse(partsChargesTextBox.Text);
                hoursOfLaborDec = decimal.Parse(hoursOfLaborTextBox.Text);

                // Calculate values.

                salesTaxDec = partsChargesDec * .08m;
                laborChargesDec = hoursOfLaborDec * 50m;

                subTotalDec = partsChargesDec + laborChargesDec;

                totalDec = subTotalDec + salesTaxDec;

                //Display the results

                salesTaxInfoLabel.Text = salesTaxDec.ToString("C");
                subtotalInfoLabel.Text = subTotalDec.ToString("C");
                totalInfoLabel.Text = totalDec.ToString("C");

            }

            // To catch bad input.
            catch
            {
            // MessageBox.Show("Bad input");
            }
        }

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

        private void clearToolStripMenuItem_Click(object sender, EventArgs e)
        {
            // clear boxes
            jobNumberTextBox.Text = "";
            customerNameTextBox.Text = "";
            partsChargesTextBox.Text = "";
            hoursOfLaborTextBox.Text = "";

            // reset focus
            jobNumberTextBox.Focus();

        }

        private void aboutToolStripMenuItem_Click(object sender, EventArgs e)
        {
            AboutBox1 aboutForm = new AboutBox1();
            aboutForm.ShowDialog();
        }

    }
}
```