**Course Project   
DeVry University  
College of Engineering and Information Sciences**

***Screenshot of program running:***

Graphical user interface, application

Description automatically generated

Graphical user interface, text

Description automatically generated

***Form code (only the code for the form and classes, not program.cs):***

using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Drawing;

using System.IO;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Windows.Forms;

namespace Purnell\_CourseProject\_Part2

{

public partial class MainForm : Form

{

public MainForm()

{

InitializeComponent();

}

private void button4\_Click(object sender, EventArgs e)

{

// clear the Employee listbox

EmployeesListBox.Items.Clear();

// read employees from the file

string filename = "Employees.csv";

StreamReader sr = new StreamReader(filename);

while(sr.Peek() > -1)

{

string line = sr.ReadLine();

string[] parts = line.Split(',');

string firstName = parts[0];

string lastName = parts[1];

string ssn = parts[2];

DateTime hireDate = DateTime.Parse(parts[3]);

string healthIns = parts[4];

int lifeIns = int.Parse(parts[5]);

int vacation = int.Parse(parts[6]);

Benefits ben = new Benefits(healthIns, lifeIns, vacation);

Employee emp = new Employee(firstName, lastName, ssn, hireDate, ben);

EmployeesListBox.Items.Add(emp);

}

sr.Close();

}

private void AddButton\_Click(object sender, EventArgs e)

{

// add item to the Employee listbox

InputForm frmInput = new InputForm();

using (frmInput)

{

DialogResult result = frmInput.ShowDialog();

// see if input form was cancelled

if (result == DialogResult.Cancel)

return; // end the methos since cancelled

// get user's input and create Employee object

string fName = frmInput.FirstNameTextBox.Text;

string lName = frmInput.LastNameTextBox.Text;

string ssn = frmInput.SSNTextBox.Text;

string date = frmInput.HireDateTextBox.Text;

DateTime hireDate = DateTime.Parse(date);

string healthIns = frmInput.HealthInsuranceTextBox.Text;

int lifeIns = int.Parse(frmInput.LifeInsuranceTextBox.Text);

int vacation = int.Parse(frmInput.VacationDaysTextBox.Text);

Benefits ben = new Benefits(healthIns, lifeIns, vacation);

Employee emp = new Employee(fName, lName, ssn, hireDate, ben);

// add the Employee object to the Employee listbox

EmployeesListBox.Items.Add(emp);

// write all date to the file

WriteEmpToFile();

}

}

private void WriteEmpToFile()

{

string filename = "Employees.csv";

StreamWriter sw = new StreamWriter(filename);

foreach (Employee emp in EmployeesListBox.Items)

{

sw.WriteLine(emp.FirstName + ','

+ emp.LastName + ','

+ emp.SSN + ','

+ emp.HireDate.ToShortDateString() + ','

+ emp.BenefitsEmp.HealthInsurance + ','

+ emp.BenefitsEmp.LifeInsurance + ','

+ emp.BenefitsEmp.Vacation);

}

sw.Close();

}

private void RemoveButton\_Click(object sender, EventArgs e)

{

// remove the selected itme from the Employee listbox

int itemNumber = EmployeesListBox.SelectedIndex;

if (itemNumber > -1)

{

EmployeesListBox.Items.RemoveAt(itemNumber);

WriteEmpToFile();

}

else

{

MessageBox.Show("Please select employee to remove.");

}

}

private void EmployeesListBox\_DoubleClick(object sender, EventArgs e)

{ // get the selected Employee object

Employee emp = EmployeesListBox.SelectedItem as Employee;

// show the Input/Update form with the Employee info

InputForm frmUpdate = new InputForm();

frmUpdate.FirstNameTextBox.Text = emp.FirstName;

frmUpdate.LastNameTextBox.Text = emp.LastName;

frmUpdate.SSNTextBox.Text = emp.SSN;

frmUpdate.HireDateTextBox.Text = emp.HireDate.ToShortDateString();

frmUpdate.HealthInsuranceTextBox.Text = emp.BenefitsEmp.HealthInsurance;

frmUpdate.LifeInsuranceTextBox.Text = emp.BenefitsEmp.LifeInsurance.ToString();

frmUpdate.VacationDaysTextBox.Text = emp.BenefitsEmp.Vacation.ToString();

DialogResult result = frmUpdate.ShowDialog();

// if cancelled, stop the mehtod

if(result == DialogResult.Cancel)

return; // end the method

//delete the selected object

int position = EmployeesListBox.SelectedIndex;

EmployeesListBox.Items.RemoveAt(position);

//create new employee using the update Information

Employee newEmp = new Employee();

newEmp.FirstName = frmUpdate.FirstNameTextBox.Text;

newEmp.LastName = frmUpdate.LastNameTextBox.Text;

newEmp.SSN = frmUpdate.SSNTextBox.Text;

newEmp.HireDate = DateTime.Parse(frmUpdate.HireDateTextBox.Text);

newEmp.BenefitsEmp.HealthInsurance = frmUpdate.HealthInsuranceTextBox.Text;

newEmp.BenefitsEmp.LifeInsurance = int.Parse(frmUpdate.LifeInsuranceTextBox.Text);

newEmp.BenefitsEmp.Vacation = int.Parse(frmUpdate.VacationDaysTextBox.Text);

// add the new employee to the listbox

EmployeesListBox.Items.Add(newEmp);

}

}

}

public class Benefits

{

// attributes

private string healthInsurance;

private int lifeInsurance;

private int vacation;

public class Employee

{

// attributes

private string firstName;

private string lastName;

private string ssn;

private DateTime hireDate;

private Benefits benefits;