**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ**

**НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ “ЛЬВІВСЬКА ПОЛІТЕХНІКА”**

Інститут **ІКНІ**

Кафдера **ПЗ**



**ЗВІТ**

**З дисципліни:** *“Об’єктно-орієнтоване програмування”*

**На тему:** *“Наслідування. Створення та використання ієрархії класів”*

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**Тема:** Наслідування. Створення та використання ієрархії класів.

**Мета:** Навчитися створювати базові та похідні класи, використовувати наслідування різного типу доступу, опанувати принципи використання множинного наслідування. Навчитися перевизначати методи в похідному класі, освоїти принципи такого перевизначення.

**Завдання для лабораторної роботи:**

1. Розробити ієрархію класів відповідно до варіанту.
2. Створити базовий, похідні класи.
3. Використати public, protected наслідування.
4. Використати множинне наслідування (за необхідності).
5. Виконати перевантаження функції print() в базовому класі, яка друкує назву відповідного класу, перевизначити її в похідних. В проекті при натисканні кнопки виведіть на форму назви всіх розроблених класів.
6. Реалізувати методи варіанта та результати вивести на форму.
7. Оформити звіт до лабораторної роботи. Включити у звіт UML-діаграму розробленої ієрархії класів.

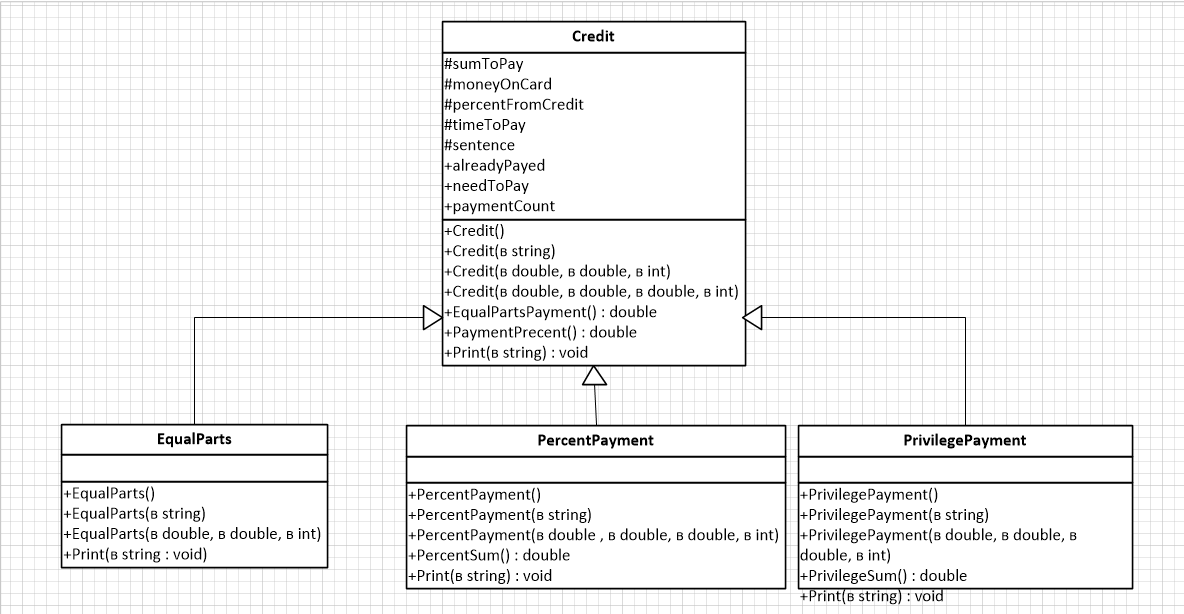
**Індивідуальне завдання(варіант 7):**

Розробити ієрархію класів для сутності: **кредит**.

Розробити такі типи кредитів:

* Кредит, при якому сума ділиться рівними платежами;
* Кредит, при якому нараховується відсоток від суми;
* Пільговий кредит, при якому держава компенсує частину кредиту.

**UML-діаграми:**

****

**Код програми:**

**MyForm.cpp**

#include "MyForm.h"

#include <Windows.h>

using namespace lab08;

int WINAPI WinMain(HINSTANCE, HINSTANCE, LPSTR, int)

{

Application::EnableVisualStyles();

Application::SetCompatibleTextRenderingDefault(false);

Application::Run(gcnew MyForm);

return 0;

}

**Credit.h**

#pragma once

#include <string>

using namespace std;

class Credit

{

protected:

double sumToPay, moneyOnCard, percentFromCredit;

int timeToPay;

string sentence;

public:

double alreadyPayed, needToPay;

int paymentCount;

Credit();

Credit(string);

Credit(double num1, double num2, int num3);

Credit(double num1, double num2, double num3, int num4);

double EqualPartsPayment();

double PaymentPrecent();

void Print(string);

};

class EqualParts : public Credit

{

public:

EqualParts();

EqualParts(string);

EqualParts(double, double, int);

void Print(string);

};

class PercentPayment : public Credit

{

public:

PercentPayment();

PercentPayment(string);

PercentPayment(double, double, double, int);

double PercentSum();

void Print(string);

};

class PrivilegePayment : public Credit

{

public:

PrivilegePayment();

PrivilegePayment(string);

PrivilegePayment(double, double, double, int);

double PrivilegeSum();

void Print(string);

};

**Credit.cpp**

#include "Credit.h"

Credit::Credit()

{

}

Credit::Credit(string tSentence)

{

}

Credit::Credit(double num1, double num2, int num3)

{

sumToPay = num1;

moneyOnCard = num2;

timeToPay = num3;

alreadyPayed = 0;

needToPay = num1;

paymentCount = num3;

}

Credit::Credit(double num1, double num2, double num3, int num4)

{

sumToPay = num1;

moneyOnCard = num2;

percentFromCredit = num3;

timeToPay = num4;

alreadyPayed = 0;

paymentCount = num3;

}

double Credit::EqualPartsPayment()

{

double result;

result = sumToPay / timeToPay;

return result;

}

double Credit::PaymentPrecent()

{

double result;

result = sumToPay \* percentFromCredit / 100;

return result;

}

void Credit::Print(string sentence)

{

sentence += "Credit\n";

}

EqualParts::EqualParts() :Credit()

{

}

EqualParts::EqualParts(string tSentence) : Credit(tSentence)

{

}

EqualParts::EqualParts(double num1, double num2, int num3) : Credit(num1, num2, num3)

{

}

void EqualParts::Print(string sentence)

{

sentence += "EqualParts";

}

PercentPayment::PercentPayment() :Credit()

{}

PercentPayment::PercentPayment(string tSentence) :Credit(tSentence)

{}

PercentPayment::PercentPayment(double num1, double num2, double num3, int num4) : Credit(num1, num2, num3, num4)

{}

double PercentPayment::PercentSum()

{

double percent, result;

percent = PaymentPrecent();

result = sumToPay + (percent \* timeToPay);

needToPay = result;

sumToPay = result;

return result;

}

void PercentPayment::Print(string sentence)

{

sentence += "PercentPayment\n";

}

PrivilegePayment::PrivilegePayment():Credit()

{}

PrivilegePayment::PrivilegePayment(string tSentence):Credit(tSentence)

{}

PrivilegePayment::PrivilegePayment(double num1, double num2, double num3, int num4):Credit(num1, num2, num3, num4)

{}

double PrivilegePayment::PrivilegeSum()

{

double result, percent;

percent = PaymentPrecent();

result = sumToPay - (percent \* timeToPay);

needToPay = result;

sumToPay = result;

return result;

}

void PrivilegePayment::Print(string sentence)

{

sentence += "\nPrivilegePayment";

}

**MyForm.h**

#pragma once

#include "Parts.h"

#include "Percent.h"

#include "Privilege.h"

#include "Credit.h"

namespace lab08 {

using namespace System;

using namespace System::ComponentModel;

using namespace System::Collections;

using namespace System::Windows::Forms;

using namespace System::Data;

using namespace System::Drawing;

string sentence = "This program is using:\n";

public ref class MyForm : public System::Windows::Forms::Form

{

public:

MyForm(void)

{

InitializeComponent();

}

protected:

~MyForm()

{

if (components)

{

delete components;

}

}

private: System::Windows::Forms::Label^ label1;

protected:

private: System::Windows::Forms::Button^ button1;

private: System::Windows::Forms::Button^ button2;

private: System::Windows::Forms::Button^ button3;

private: System::Windows::Forms::TextBox^ textBox1;

private: System::Windows::Forms::Button^ button4;

private:

/// <summary>

/// Обязательная переменная конструктора.

/// </summary>

System::ComponentModel::Container^ components;

#pragma region Windows Form Designer generated code

/// <summary>

/// Требуемый метод для поддержки конструктора — не изменяйте

/// содержимое этого метода с помощью редактора кода.

/// </summary>

void InitializeComponent(void)

{

this->label1 = (gcnew System::Windows::Forms::Label());

this->button1 = (gcnew System::Windows::Forms::Button());

this->button2 = (gcnew System::Windows::Forms::Button());

this->button3 = (gcnew System::Windows::Forms::Button());

this->textBox1 = (gcnew System::Windows::Forms::TextBox());

this->button4 = (gcnew System::Windows::Forms::Button());

this->SuspendLayout();

//

// label1

//

this->label1->AutoSize = true;

this->label1->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label1->Location = System::Drawing::Point(39, 25);

this->label1->Name = L"label1";

this->label1->Size = System::Drawing::Size(257, 29);

this->label1->TabIndex = 0;

this->label1->Text = L"Оберіть тип кредиту:";

//

// button1

//

this->button1->Location = System::Drawing::Point(42, 83);

this->button1->Name = L"button1";

this->button1->Size = System::Drawing::Size(259, 34);

this->button1->TabIndex = 1;

this->button1->Text = L"Кредит \"Рівні частини\"";

this->button1->UseVisualStyleBackColor = true;

this->button1->Click += gcnew System::EventHandler(this, &MyForm::button1\_Click);

//

// button2

//

this->button2->Location = System::Drawing::Point(42, 123);

this->button2->Name = L"button2";

this->button2->Size = System::Drawing::Size(259, 34);

this->button2->TabIndex = 2;

this->button2->Text = L"Кредит \"З відсотками\"";

this->button2->UseVisualStyleBackColor = true;

this->button2->Click += gcnew System::EventHandler(this, &MyForm::button2\_Click);

//

// button3

//

this->button3->Location = System::Drawing::Point(42, 163);

this->button3->Name = L"button3";

this->button3->Size = System::Drawing::Size(259, 34);

this->button3->TabIndex = 3;

this->button3->Text = L"Кредит \"Пільговий\"";

this->button3->UseVisualStyleBackColor = true;

this->button3->Click += gcnew System::EventHandler(this, &MyForm::button3\_Click);

//

// textBox1

//

this->textBox1->Location = System::Drawing::Point(467, 12);

this->textBox1->Multiline = true;

this->textBox1->Name = L"textBox1";

this->textBox1->ReadOnly = true;

this->textBox1->Size = System::Drawing::Size(281, 189);

this->textBox1->TabIndex = 4;

this->textBox1->Text = L"This program is using:";

//

// button4

//

this->button4->Location = System::Drawing::Point(386, 12);

this->button4->Name = L"button4";

this->button4->Size = System::Drawing::Size(75, 189);

this->button4->TabIndex = 5;

this->button4->Text = L"print->";

this->button4->UseVisualStyleBackColor = true;

this->button4->Click += gcnew System::EventHandler(this, &MyForm::button4\_Click\_1);

//

// MyForm

//

this->AutoScaleDimensions = System::Drawing::SizeF(8, 16);

this->AutoScaleMode = System::Windows::Forms::AutoScaleMode::Font;

this->ClientSize = System::Drawing::Size(760, 218);

this->Controls->Add(this->button4);

this->Controls->Add(this->textBox1);

this->Controls->Add(this->button3);

this->Controls->Add(this->button2);

this->Controls->Add(this->button1);

this->Controls->Add(this->label1);

this->Name = L"MyForm";

this->Text = L"MyForm";

this->ResumeLayout(false);

this->PerformLayout();

}

#pragma endregion

private: System::Void button1\_Click(System::Object^ sender, System::EventArgs^ e)

{

Parts^ F2;

F2 = gcnew Parts();

F2->ShowDialog();

}

private: System::Void button2\_Click(System::Object^ sender, System::EventArgs^ e)

{

Percent^ F2;

F2 = gcnew Percent();

F2->ShowDialog();

}

private: System::Void button3\_Click(System::Object^ sender, System::EventArgs^ e)

{

Privilege^ F2;

F2 = gcnew Privilege();

F2->ShowDialog();

}

private: System::Void button4\_Click(System::Object^ sender, System::EventArgs^ e)

{}

private: System::Void button4\_Click\_1(System::Object^ sender, System::EventArgs^ e)

{

textBox1->Text += "\n Credit EqualParts PercentPayment PrivilegePayment";

button4->Enabled = false;

}

};

}

**Parts.h**

#include "Credit.h"

namespace lab08 {

using namespace System;

using namespace System::ComponentModel;

using namespace System::Collections;

using namespace System::Windows::Forms;

using namespace System::Data;

using namespace System::Drawing;

/// <summary>

/// Сводка для Parts

/// </summary>

public ref class Parts : public System::Windows::Forms::Form

{

public:

Parts(void)

{

InitializeComponent();

//

//TODO: добавьте код конструктора

//

}

protected:

/// <summary>

/// Освободить все используемые ресурсы.

/// </summary>

~Parts()

{

if (components)

{

delete components;

}

}

private: System::Windows::Forms::Label^ label1;

protected:

private: System::Windows::Forms::TextBox^ textBox1;

private: System::Windows::Forms::Label^ label2;

private: System::Windows::Forms::TextBox^ textBox2;

private: System::Windows::Forms::Label^ label3;

private: System::Windows::Forms::TextBox^ textBox3;

private: System::Windows::Forms::Button^ button1;

private: System::Windows::Forms::Label^ label4;

private: System::Windows::Forms::TextBox^ textBox4;

private: System::Windows::Forms::Label^ label5;

private: System::Windows::Forms::TextBox^ textBox5;

private: System::Windows::Forms::Button^ button2;

private: System::Windows::Forms::Label^ label6;

private: System::Windows::Forms::TextBox^ textBox6;

private: System::Windows::Forms::Label^ label7;

private: System::Windows::Forms::TextBox^ textBox7;

private:

/// <summary>

/// Обязательная переменная конструктора.

/// </summary>

System::ComponentModel::Container^ components;

#pragma region Windows Form Designer generated code

/// <summary>

/// Требуемый метод для поддержки конструктора — не изменяйте

/// содержимое этого метода с помощью редактора кода.

/// </summary>

void InitializeComponent(void)

{

this->label1 = (gcnew System::Windows::Forms::Label());

this->textBox1 = (gcnew System::Windows::Forms::TextBox());

this->label2 = (gcnew System::Windows::Forms::Label());

this->textBox2 = (gcnew System::Windows::Forms::TextBox());

this->label3 = (gcnew System::Windows::Forms::Label());

this->textBox3 = (gcnew System::Windows::Forms::TextBox());

this->button1 = (gcnew System::Windows::Forms::Button());

this->label4 = (gcnew System::Windows::Forms::Label());

this->textBox4 = (gcnew System::Windows::Forms::TextBox());

this->label5 = (gcnew System::Windows::Forms::Label());

this->textBox5 = (gcnew System::Windows::Forms::TextBox());

this->button2 = (gcnew System::Windows::Forms::Button());

this->label6 = (gcnew System::Windows::Forms::Label());

this->textBox6 = (gcnew System::Windows::Forms::TextBox());

this->label7 = (gcnew System::Windows::Forms::Label());

this->textBox7 = (gcnew System::Windows::Forms::TextBox());

this->SuspendLayout();

//

// label1

//

this->label1->AutoSize = true;

this->label1->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label1->Location = System::Drawing::Point(12, 19);

this->label1->Name = L"label1";

this->label1->Size = System::Drawing::Size(176, 29);

this->label1->TabIndex = 0;

this->label1->Text = L"Сума кредиту:";

//

// textBox1

//

this->textBox1->Location = System::Drawing::Point(194, 19);

this->textBox1->Multiline = true;

this->textBox1->Name = L"textBox1";

this->textBox1->Size = System::Drawing::Size(138, 38);

this->textBox1->TabIndex = 1;

//

// label2

//

this->label2->AutoSize = true;

this->label2->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label2->Location = System::Drawing::Point(11, 60);

this->label2->Name = L"label2";

this->label2->Size = System::Drawing::Size(327, 29);

this->label2->TabIndex = 2;

this->label2->Text = L"Час, за який треба віддати:";

//

// textBox2

//

this->textBox2->Location = System::Drawing::Point(344, 60);

this->textBox2->Multiline = true;

this->textBox2->Name = L"textBox2";

this->textBox2->Size = System::Drawing::Size(138, 38);

this->textBox2->TabIndex = 3;

//

// label3

//

this->label3->AutoSize = true;

this->label3->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label3->Location = System::Drawing::Point(338, 19);

this->label3->Name = L"label3";

this->label3->Size = System::Drawing::Size(207, 29);

this->label3->TabIndex = 4;

this->label3->Text = L"Грошей на карті:";

//

// textBox3

//

this->textBox3->Location = System::Drawing::Point(551, 19);

this->textBox3->Multiline = true;

this->textBox3->Name = L"textBox3";

this->textBox3->Size = System::Drawing::Size(138, 38);

this->textBox3->TabIndex = 5;

//

// button1

//

this->button1->Location = System::Drawing::Point(17, 114);

this->button1->Name = L"button1";

this->button1->Size = System::Drawing::Size(672, 43);

this->button1->TabIndex = 6;

this->button1->Text = L"Порахувати";

this->button1->UseVisualStyleBackColor = true;

this->button1->Click += gcnew System::EventHandler(this, &Parts::button1\_Click);

//

// label4

//

this->label4->AutoSize = true;

this->label4->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label4->Location = System::Drawing::Point(12, 160);

this->label4->Name = L"label4";

this->label4->Size = System::Drawing::Size(309, 29);

this->label4->TabIndex = 7;

this->label4->Text = L"Сума рівномірної оплати:";

//

// textBox4

//

this->textBox4->Location = System::Drawing::Point(327, 160);

this->textBox4->Multiline = true;

this->textBox4->Name = L"textBox4";

this->textBox4->ReadOnly = true;

this->textBox4->Size = System::Drawing::Size(138, 38);

this->textBox4->TabIndex = 8;

this->textBox4->TextChanged += gcnew System::EventHandler(this, &Parts::textBox4\_TextChanged);

//

// label5

//

this->label5->AutoSize = true;

this->label5->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label5->Location = System::Drawing::Point(12, 210);

this->label5->Name = L"label5";

this->label5->Size = System::Drawing::Size(236, 29);

this->label5->TabIndex = 9;

this->label5->Text = L"Кількість платежів:";

//

// textBox5

//

this->textBox5->Location = System::Drawing::Point(248, 210);

this->textBox5->Multiline = true;

this->textBox5->Name = L"textBox5";

this->textBox5->ReadOnly = true;

this->textBox5->Size = System::Drawing::Size(138, 38);

this->textBox5->TabIndex = 10;

//

// button2

//

this->button2->Location = System::Drawing::Point(12, 254);

this->button2->Name = L"button2";

this->button2->Size = System::Drawing::Size(672, 43);

this->button2->TabIndex = 11;

this->button2->Text = L"Оплатити";

this->button2->UseVisualStyleBackColor = true;

this->button2->Click += gcnew System::EventHandler(this, &Parts::button2\_Click);

//

// label6

//

this->label6->AutoSize = true;

this->label6->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label6->Location = System::Drawing::Point(11, 327);

this->label6->Name = L"label6";

this->label6->Size = System::Drawing::Size(188, 29);

this->label6->TabIndex = 12;

this->label6->Text = L"Уже оплачено:";

//

// textBox6

//

this->textBox6->Location = System::Drawing::Point(205, 318);

this->textBox6->Multiline = true;

this->textBox6->Name = L"textBox6";

this->textBox6->ReadOnly = true;

this->textBox6->Size = System::Drawing::Size(138, 38);

this->textBox6->TabIndex = 13;

//

// label7

//

this->label7->AutoSize = true;

this->label7->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label7->Location = System::Drawing::Point(12, 376);

this->label7->Name = L"label7";

this->label7->Size = System::Drawing::Size(255, 29);

this->label7->TabIndex = 14;

this->label7->Text = L"Лишилось оплатити:";

//

// textBox7

//

this->textBox7->Location = System::Drawing::Point(273, 367);

this->textBox7->Multiline = true;

this->textBox7->Name = L"textBox7";

this->textBox7->ReadOnly = true;

this->textBox7->Size = System::Drawing::Size(138, 38);

this->textBox7->TabIndex = 15;

this->textBox7->TextChanged += gcnew System::EventHandler(this, &Parts::textBox7\_TextChanged);

//

// Parts

//

this->AutoScaleDimensions = System::Drawing::SizeF(8, 16);

this->AutoScaleMode = System::Windows::Forms::AutoScaleMode::Font;

this->ClientSize = System::Drawing::Size(700, 435);

this->Controls->Add(this->textBox7);

this->Controls->Add(this->label7);

this->Controls->Add(this->textBox6);

this->Controls->Add(this->label6);

this->Controls->Add(this->button2);

this->Controls->Add(this->textBox5);

this->Controls->Add(this->label5);

this->Controls->Add(this->textBox4);

this->Controls->Add(this->label4);

this->Controls->Add(this->button1);

this->Controls->Add(this->textBox3);

this->Controls->Add(this->label3);

this->Controls->Add(this->textBox2);

this->Controls->Add(this->label2);

this->Controls->Add(this->textBox1);

this->Controls->Add(this->label1);

this->FormBorderStyle = System::Windows::Forms::FormBorderStyle::FixedSingle;

this->Name = L"Parts";

this->ResumeLayout(false);

this->PerformLayout();

}

#pragma endregion

private: System::Void button1\_Click(System::Object^ sender, System::EventArgs^ e)

{

double sumToPay, moneyOnCard;

int timeToPay;

sumToPay = Convert::ToDouble(textBox1->Text);

moneyOnCard = Convert::ToDouble(textBox3->Text);

timeToPay = Convert::ToInt16(textBox2->Text);

EqualParts a(sumToPay, moneyOnCard, timeToPay);

double equalPartPayment = a.EqualPartsPayment();

textBox4->Text = Convert::ToString(equalPartPayment);

textBox5->Text = Convert::ToString(a.paymentCount);

textBox6->Text = Convert::ToString(a.alreadyPayed);

textBox7->Text = Convert::ToString(a.needToPay);

}

private: System::Void textBox7\_TextChanged(System::Object^ sender, System::EventArgs^ e)

{}

private: System::Void textBox4\_TextChanged(System::Object^ sender, System::EventArgs^ e) {

}

private: System::Void button2\_Click(System::Object^ sender, System::EventArgs^ e)

{

double moneyOnCard, needToPay, alreadyPayed, sumToPay;

int timeToPay;

moneyOnCard = Convert::ToDouble(textBox3->Text);

needToPay = Convert::ToDouble(textBox7->Text);

alreadyPayed = Convert::ToDouble(textBox6->Text);

sumToPay = Convert::ToDouble(textBox4->Text);

timeToPay = Convert::ToInt16(textBox5->Text);

if (moneyOnCard > sumToPay&& timeToPay != 0)

{

moneyOnCard -= sumToPay;

timeToPay -= 1;

alreadyPayed += sumToPay;

needToPay -= sumToPay;

}

textBox3->Text = Convert::ToString(moneyOnCard);

textBox5->Text = Convert::ToString(timeToPay);

textBox6->Text = Convert::ToString(alreadyPayed);

textBox7->Text = Convert::ToString(needToPay);

}

};

}

**Percent.h**

#include "Credit.h"

namespace lab08 {

using namespace System;

using namespace System::ComponentModel;

using namespace System::Collections;

using namespace System::Windows::Forms;

using namespace System::Data;

using namespace System::Drawing;

/// <summary>

/// Сводка для Percent

/// </summary>

public ref class Percent : public System::Windows::Forms::Form

{

public:

Percent(void)

{

InitializeComponent();

//

//TODO: добавьте код конструктора

//

}

protected:

/// <summary>

/// Освободить все используемые ресурсы.

/// </summary>

~Percent()

{

if (components)

{

delete components;

}

}

private: System::Windows::Forms::TextBox^ textBox7;

protected:

private: System::Windows::Forms::Label^ label7;

private: System::Windows::Forms::TextBox^ textBox6;

private: System::Windows::Forms::Label^ label6;

private: System::Windows::Forms::Button^ button2;

private: System::Windows::Forms::TextBox^ textBox5;

private: System::Windows::Forms::Label^ label5;

private: System::Windows::Forms::TextBox^ textBox4;

private: System::Windows::Forms::Label^ label4;

private: System::Windows::Forms::Button^ button1;

private: System::Windows::Forms::TextBox^ textBox3;

private: System::Windows::Forms::Label^ label3;

private: System::Windows::Forms::TextBox^ textBox2;

private: System::Windows::Forms::Label^ label2;

private: System::Windows::Forms::TextBox^ textBox1;

private: System::Windows::Forms::Label^ label1;

private: System::Windows::Forms::Label^ label8;

private: System::Windows::Forms::TextBox^ textBox8;

private: System::Windows::Forms::Label^ label9;

private: System::Windows::Forms::TextBox^ textBox9;

private: System::Windows::Forms::TextBox^ textBox10;

private: System::Windows::Forms::Label^ label10;

protected:

private:

/// <summary>

/// Обязательная переменная конструктора.

/// </summary>

System::ComponentModel::Container^ components;

#pragma region Windows Form Designer generated code

/// <summary>

/// Требуемый метод для поддержки конструктора — не изменяйте

/// содержимое этого метода с помощью редактора кода.

/// </summary>

void InitializeComponent(void)

{

this->textBox7 = (gcnew System::Windows::Forms::TextBox());

this->label7 = (gcnew System::Windows::Forms::Label());

this->textBox6 = (gcnew System::Windows::Forms::TextBox());

this->label6 = (gcnew System::Windows::Forms::Label());

this->button2 = (gcnew System::Windows::Forms::Button());

this->textBox5 = (gcnew System::Windows::Forms::TextBox());

this->label5 = (gcnew System::Windows::Forms::Label());

this->textBox4 = (gcnew System::Windows::Forms::TextBox());

this->label4 = (gcnew System::Windows::Forms::Label());

this->button1 = (gcnew System::Windows::Forms::Button());

this->textBox3 = (gcnew System::Windows::Forms::TextBox());

this->label3 = (gcnew System::Windows::Forms::Label());

this->textBox2 = (gcnew System::Windows::Forms::TextBox());

this->label2 = (gcnew System::Windows::Forms::Label());

this->textBox1 = (gcnew System::Windows::Forms::TextBox());

this->label1 = (gcnew System::Windows::Forms::Label());

this->label8 = (gcnew System::Windows::Forms::Label());

this->textBox8 = (gcnew System::Windows::Forms::TextBox());

this->label9 = (gcnew System::Windows::Forms::Label());

this->textBox9 = (gcnew System::Windows::Forms::TextBox());

this->textBox10 = (gcnew System::Windows::Forms::TextBox());

this->label10 = (gcnew System::Windows::Forms::Label());

this->SuspendLayout();

//

// textBox7

//

this->textBox7->Location = System::Drawing::Point(268, 435);

this->textBox7->Multiline = true;

this->textBox7->Name = L"textBox7";

this->textBox7->ReadOnly = true;

this->textBox7->Size = System::Drawing::Size(138, 38);

this->textBox7->TabIndex = 31;

//

// label7

//

this->label7->AutoSize = true;

this->label7->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label7->Location = System::Drawing::Point(7, 444);

this->label7->Name = L"label7";

this->label7->Size = System::Drawing::Size(255, 29);

this->label7->TabIndex = 30;

this->label7->Text = L"Лишилось оплатити:";

//

// textBox6

//

this->textBox6->Location = System::Drawing::Point(200, 386);

this->textBox6->Multiline = true;

this->textBox6->Name = L"textBox6";

this->textBox6->ReadOnly = true;

this->textBox6->Size = System::Drawing::Size(138, 38);

this->textBox6->TabIndex = 29;

//

// label6

//

this->label6->AutoSize = true;

this->label6->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label6->Location = System::Drawing::Point(6, 395);

this->label6->Name = L"label6";

this->label6->Size = System::Drawing::Size(188, 29);

this->label6->TabIndex = 28;

this->label6->Text = L"Уже оплачено:";

//

// button2

//

this->button2->Location = System::Drawing::Point(11, 337);

this->button2->Name = L"button2";

this->button2->Size = System::Drawing::Size(672, 43);

this->button2->TabIndex = 27;

this->button2->Text = L"Оплатити";

this->button2->UseVisualStyleBackColor = true;

this->button2->Click += gcnew System::EventHandler(this, &Percent::button2\_Click);

//

// textBox5

//

this->textBox5->Location = System::Drawing::Point(247, 244);

this->textBox5->Multiline = true;

this->textBox5->Name = L"textBox5";

this->textBox5->ReadOnly = true;

this->textBox5->Size = System::Drawing::Size(138, 38);

this->textBox5->TabIndex = 26;

//

// label5

//

this->label5->AutoSize = true;

this->label5->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label5->Location = System::Drawing::Point(11, 244);

this->label5->Name = L"label5";

this->label5->Size = System::Drawing::Size(236, 29);

this->label5->TabIndex = 25;

this->label5->Text = L"Кількість платежів:";

//

// textBox4

//

this->textBox4->Location = System::Drawing::Point(339, 194);

this->textBox4->Multiline = true;

this->textBox4->Name = L"textBox4";

this->textBox4->ReadOnly = true;

this->textBox4->Size = System::Drawing::Size(138, 38);

this->textBox4->TabIndex = 24;

//

// label4

//

this->label4->AutoSize = true;

this->label4->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label4->Location = System::Drawing::Point(11, 194);

this->label4->Name = L"label4";

this->label4->Size = System::Drawing::Size(322, 29);

this->label4->TabIndex = 23;

this->label4->Text = L"Сума оплати з відсотками:";

//

// button1

//

this->button1->Location = System::Drawing::Point(11, 145);

this->button1->Name = L"button1";

this->button1->Size = System::Drawing::Size(672, 43);

this->button1->TabIndex = 22;

this->button1->Text = L"Порахувати";

this->button1->UseVisualStyleBackColor = true;

this->button1->Click += gcnew System::EventHandler(this, &Percent::button1\_Click);

//

// textBox3

//

this->textBox3->Location = System::Drawing::Point(551, 24);

this->textBox3->Multiline = true;

this->textBox3->Name = L"textBox3";

this->textBox3->Size = System::Drawing::Size(138, 38);

this->textBox3->TabIndex = 21;

//

// label3

//

this->label3->AutoSize = true;

this->label3->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label3->Location = System::Drawing::Point(338, 24);

this->label3->Name = L"label3";

this->label3->Size = System::Drawing::Size(207, 29);

this->label3->TabIndex = 20;

this->label3->Text = L"Грошей на карті:";

//

// textBox2

//

this->textBox2->Location = System::Drawing::Point(344, 65);

this->textBox2->Multiline = true;

this->textBox2->Name = L"textBox2";

this->textBox2->Size = System::Drawing::Size(138, 38);

this->textBox2->TabIndex = 19;

//

// label2

//

this->label2->AutoSize = true;

this->label2->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label2->Location = System::Drawing::Point(11, 65);

this->label2->Name = L"label2";

this->label2->Size = System::Drawing::Size(327, 29);

this->label2->TabIndex = 18;

this->label2->Text = L"Час, за який треба віддати:";

//

// textBox1

//

this->textBox1->Location = System::Drawing::Point(194, 24);

this->textBox1->Multiline = true;

this->textBox1->Name = L"textBox1";

this->textBox1->Size = System::Drawing::Size(138, 38);

this->textBox1->TabIndex = 17;

//

// label1

//

this->label1->AutoSize = true;

this->label1->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label1->Location = System::Drawing::Point(12, 24);

this->label1->Name = L"label1";

this->label1->Size = System::Drawing::Size(176, 29);

this->label1->TabIndex = 16;

this->label1->Text = L"Сума кредиту:";

//

// label8

//

this->label8->AutoSize = true;

this->label8->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label8->Location = System::Drawing::Point(18, 110);

this->label8->Name = L"label8";

this->label8->Size = System::Drawing::Size(119, 29);

this->label8->TabIndex = 32;

this->label8->Text = L"Відсоток:";

//

// textBox8

//

this->textBox8->Location = System::Drawing::Point(143, 101);

this->textBox8->Multiline = true;

this->textBox8->Name = L"textBox8";

this->textBox8->Size = System::Drawing::Size(138, 38);

this->textBox8->TabIndex = 33;

//

// label9

//

this->label9->AutoSize = true;

this->label9->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label9->Location = System::Drawing::Point(391, 244);

this->label9->Name = L"label9";

this->label9->Size = System::Drawing::Size(220, 29);

this->label9->TabIndex = 34;

this->label9->Text = L"Відсоток від суми:";

//

// textBox9

//

this->textBox9->Location = System::Drawing::Point(617, 244);

this->textBox9->Multiline = true;

this->textBox9->Name = L"textBox9";

this->textBox9->ReadOnly = true;

this->textBox9->Size = System::Drawing::Size(66, 38);

this->textBox9->TabIndex = 35;

//

// textBox10

//

this->textBox10->Location = System::Drawing::Point(327, 294);

this->textBox10->Multiline = true;

this->textBox10->Name = L"textBox10";

this->textBox10->ReadOnly = true;

this->textBox10->Size = System::Drawing::Size(138, 38);

this->textBox10->TabIndex = 37;

//

// label10

//

this->label10->AutoSize = true;

this->label10->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label10->Location = System::Drawing::Point(12, 294);

this->label10->Name = L"label10";

this->label10->Size = System::Drawing::Size(309, 29);

this->label10->TabIndex = 36;

this->label10->Text = L"Сума рівномірної оплати:";

//

// Percent

//

this->AutoScaleDimensions = System::Drawing::SizeF(8, 16);

this->AutoScaleMode = System::Windows::Forms::AutoScaleMode::Font;

this->ClientSize = System::Drawing::Size(696, 489);

this->Controls->Add(this->textBox10);

this->Controls->Add(this->label10);

this->Controls->Add(this->textBox9);

this->Controls->Add(this->label9);

this->Controls->Add(this->textBox8);

this->Controls->Add(this->label8);

this->Controls->Add(this->textBox7);

this->Controls->Add(this->label7);

this->Controls->Add(this->textBox6);

this->Controls->Add(this->label6);

this->Controls->Add(this->button2);

this->Controls->Add(this->textBox5);

this->Controls->Add(this->label5);

this->Controls->Add(this->textBox4);

this->Controls->Add(this->label4);

this->Controls->Add(this->button1);

this->Controls->Add(this->textBox3);

this->Controls->Add(this->label3);

this->Controls->Add(this->textBox2);

this->Controls->Add(this->label2);

this->Controls->Add(this->textBox1);

this->Controls->Add(this->label1);

this->Name = L"Percent";

this->Text = L"Percent";

this->ResumeLayout(false);

this->PerformLayout();

}

#pragma endregion

private: System::Void button1\_Click(System::Object^ sender, System::EventArgs^ e)

{

double sumToPay, moneyOnCard, percentToPay;

int timeToPay;

sumToPay = Convert::ToDouble(textBox1->Text);

moneyOnCard = Convert::ToDouble(textBox3->Text);

timeToPay = Convert::ToInt16(textBox2->Text);

percentToPay = Convert::ToDouble(textBox8->Text);

PercentPayment a(sumToPay, moneyOnCard, percentToPay, timeToPay);

textBox9->Text = Convert::ToString(a.PaymentPrecent());

textBox4->Text = Convert::ToString(a.PercentSum());

textBox5->Text = Convert::ToString(timeToPay);

textBox6->Text = Convert::ToString(a.alreadyPayed);

textBox7->Text = Convert::ToString(a.needToPay);

textBox10->Text = Convert::ToString(a.EqualPartsPayment());

}

private: System::Void button2\_Click(System::Object^ sender, System::EventArgs^ e)

{

double sumToPay, moneyOnCard, alreadyPayed, needToPay;

int timeToPay;

sumToPay = Convert::ToDouble(textBox10->Text);

moneyOnCard = Convert::ToDouble(textBox3->Text);

timeToPay = Convert::ToInt16(textBox5->Text);

alreadyPayed = Convert::ToDouble(textBox6->Text);

needToPay = Convert::ToDouble(textBox7->Text);

if (moneyOnCard > sumToPay&& timeToPay != 0)

{

moneyOnCard -= sumToPay;

timeToPay -= 1;

alreadyPayed += sumToPay;

needToPay -= sumToPay;

}

textBox3->Text = Convert::ToString(moneyOnCard);

textBox5->Text = Convert::ToString(timeToPay);

textBox6->Text = Convert::ToString(alreadyPayed);

textBox7->Text = Convert::ToString(needToPay);

}

};

}

**Privilege.h**

#pragma once

#include "Credit.h"

namespace lab08 {

using namespace System;

using namespace System::ComponentModel;

using namespace System::Collections;

using namespace System::Windows::Forms;

using namespace System::Data;

using namespace System::Drawing;

/// <summary>

/// Сводка для Privilege

/// </summary>

public ref class Privilege : public System::Windows::Forms::Form

{

public:

Privilege(void)

{

InitializeComponent();

//

//TODO: добавьте код конструктора

//

}

protected:

/// <summary>

/// Освободить все используемые ресурсы.

/// </summary>

~Privilege()

{

if (components)

{

delete components;

}

}

private: System::Windows::Forms::TextBox^ textBox8;

protected:

private: System::Windows::Forms::Label^ label8;

private: System::Windows::Forms::TextBox^ textBox7;

private: System::Windows::Forms::Label^ label7;

private: System::Windows::Forms::TextBox^ textBox6;

private: System::Windows::Forms::Label^ label6;

private: System::Windows::Forms::Button^ button2;

private: System::Windows::Forms::TextBox^ textBox5;

private: System::Windows::Forms::Label^ label5;

private: System::Windows::Forms::TextBox^ textBox4;

private: System::Windows::Forms::Label^ label4;

private: System::Windows::Forms::Button^ button1;

private: System::Windows::Forms::TextBox^ textBox3;

private: System::Windows::Forms::Label^ label3;

private: System::Windows::Forms::TextBox^ textBox2;

private: System::Windows::Forms::Label^ label2;

private: System::Windows::Forms::TextBox^ textBox1;

private: System::Windows::Forms::Label^ label1;

private: System::Windows::Forms::Label^ label9;

private: System::Windows::Forms::TextBox^ textBox9;

private: System::Windows::Forms::Label^ label10;

private: System::Windows::Forms::TextBox^ textBox10;

private:

/// <summary>

/// Обязательная переменная конструктора.

/// </summary>

System::ComponentModel::Container^ components;

#pragma region Windows Form Designer generated code

/// <summary>

/// Требуемый метод для поддержки конструктора — не изменяйте

/// содержимое этого метода с помощью редактора кода.

/// </summary>

void InitializeComponent(void)

{

this->textBox8 = (gcnew System::Windows::Forms::TextBox());

this->label8 = (gcnew System::Windows::Forms::Label());

this->textBox7 = (gcnew System::Windows::Forms::TextBox());

this->label7 = (gcnew System::Windows::Forms::Label());

this->textBox6 = (gcnew System::Windows::Forms::TextBox());

this->label6 = (gcnew System::Windows::Forms::Label());

this->button2 = (gcnew System::Windows::Forms::Button());

this->textBox5 = (gcnew System::Windows::Forms::TextBox());

this->label5 = (gcnew System::Windows::Forms::Label());

this->textBox4 = (gcnew System::Windows::Forms::TextBox());

this->label4 = (gcnew System::Windows::Forms::Label());

this->button1 = (gcnew System::Windows::Forms::Button());

this->textBox3 = (gcnew System::Windows::Forms::TextBox());

this->label3 = (gcnew System::Windows::Forms::Label());

this->textBox2 = (gcnew System::Windows::Forms::TextBox());

this->label2 = (gcnew System::Windows::Forms::Label());

this->textBox1 = (gcnew System::Windows::Forms::TextBox());

this->label1 = (gcnew System::Windows::Forms::Label());

this->label9 = (gcnew System::Windows::Forms::Label());

this->textBox9 = (gcnew System::Windows::Forms::TextBox());

this->label10 = (gcnew System::Windows::Forms::Label());

this->textBox10 = (gcnew System::Windows::Forms::TextBox());

this->SuspendLayout();

//

// textBox8

//

this->textBox8->Location = System::Drawing::Point(268, 96);

this->textBox8->Multiline = true;

this->textBox8->Name = L"textBox8";

this->textBox8->Size = System::Drawing::Size(138, 38);

this->textBox8->TabIndex = 51;

//

// label8

//

this->label8->AutoSize = true;

this->label8->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label8->Location = System::Drawing::Point(21, 105);

this->label8->Name = L"label8";

this->label8->Size = System::Drawing::Size(241, 29);

this->label8->TabIndex = 50;

this->label8->Text = L"Пільговий відсоток:";

//

// textBox7

//

this->textBox7->Location = System::Drawing::Point(271, 434);

this->textBox7->Multiline = true;

this->textBox7->Name = L"textBox7";

this->textBox7->ReadOnly = true;

this->textBox7->Size = System::Drawing::Size(138, 38);

this->textBox7->TabIndex = 49;

//

// label7

//

this->label7->AutoSize = true;

this->label7->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label7->Location = System::Drawing::Point(10, 443);

this->label7->Name = L"label7";

this->label7->Size = System::Drawing::Size(255, 29);

this->label7->TabIndex = 48;

this->label7->Text = L"Лишилось оплатити:";

//

// textBox6

//

this->textBox6->Location = System::Drawing::Point(203, 385);

this->textBox6->Multiline = true;

this->textBox6->Name = L"textBox6";

this->textBox6->ReadOnly = true;

this->textBox6->Size = System::Drawing::Size(138, 38);

this->textBox6->TabIndex = 47;

//

// label6

//

this->label6->AutoSize = true;

this->label6->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label6->Location = System::Drawing::Point(9, 394);

this->label6->Name = L"label6";

this->label6->Size = System::Drawing::Size(188, 29);

this->label6->TabIndex = 46;

this->label6->Text = L"Уже оплачено:";

//

// button2

//

this->button2->Location = System::Drawing::Point(14, 336);

this->button2->Name = L"button2";

this->button2->Size = System::Drawing::Size(672, 43);

this->button2->TabIndex = 45;

this->button2->Text = L"Оплатити";

this->button2->UseVisualStyleBackColor = true;

this->button2->Click += gcnew System::EventHandler(this, &Privilege::button2\_Click);

//

// textBox5

//

this->textBox5->Location = System::Drawing::Point(554, 239);

this->textBox5->Multiline = true;

this->textBox5->Name = L"textBox5";

this->textBox5->ReadOnly = true;

this->textBox5->Size = System::Drawing::Size(138, 38);

this->textBox5->TabIndex = 44;

//

// label5

//

this->label5->AutoSize = true;

this->label5->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label5->Location = System::Drawing::Point(14, 239);

this->label5->Name = L"label5";

this->label5->Size = System::Drawing::Size(236, 29);

this->label5->TabIndex = 43;

this->label5->Text = L"Кількість платежів:";

//

// textBox4

//

this->textBox4->Location = System::Drawing::Point(305, 189);

this->textBox4->Multiline = true;

this->textBox4->Name = L"textBox4";

this->textBox4->ReadOnly = true;

this->textBox4->Size = System::Drawing::Size(138, 38);

this->textBox4->TabIndex = 42;

//

// label4

//

this->label4->AutoSize = true;

this->label4->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label4->Location = System::Drawing::Point(14, 189);

this->label4->Name = L"label4";

this->label4->Size = System::Drawing::Size(285, 29);

this->label4->TabIndex = 41;

this->label4->Text = L"Сума оплати з пільгою:";

//

// button1

//

this->button1->Location = System::Drawing::Point(14, 140);

this->button1->Name = L"button1";

this->button1->Size = System::Drawing::Size(672, 43);

this->button1->TabIndex = 40;

this->button1->Text = L"Порахувати";

this->button1->UseVisualStyleBackColor = true;

this->button1->Click += gcnew System::EventHandler(this, &Privilege::button1\_Click);

//

// textBox3

//

this->textBox3->Location = System::Drawing::Point(554, 19);

this->textBox3->Multiline = true;

this->textBox3->Name = L"textBox3";

this->textBox3->Size = System::Drawing::Size(138, 38);

this->textBox3->TabIndex = 39;

//

// label3

//

this->label3->AutoSize = true;

this->label3->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label3->Location = System::Drawing::Point(341, 19);

this->label3->Name = L"label3";

this->label3->Size = System::Drawing::Size(207, 29);

this->label3->TabIndex = 38;

this->label3->Text = L"Грошей на карті:";

//

// textBox2

//

this->textBox2->Location = System::Drawing::Point(347, 51);

this->textBox2->Multiline = true;

this->textBox2->Name = L"textBox2";

this->textBox2->Size = System::Drawing::Size(138, 38);

this->textBox2->TabIndex = 37;

//

// label2

//

this->label2->AutoSize = true;

this->label2->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label2->Location = System::Drawing::Point(14, 60);

this->label2->Name = L"label2";

this->label2->Size = System::Drawing::Size(327, 29);

this->label2->TabIndex = 36;

this->label2->Text = L"Час, за який треба віддати:";

//

// textBox1

//

this->textBox1->Location = System::Drawing::Point(197, 19);

this->textBox1->Multiline = true;

this->textBox1->Name = L"textBox1";

this->textBox1->Size = System::Drawing::Size(138, 38);

this->textBox1->TabIndex = 35;

//

// label1

//

this->label1->AutoSize = true;

this->label1->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label1->Location = System::Drawing::Point(15, 19);

this->label1->Name = L"label1";

this->label1->Size = System::Drawing::Size(176, 29);

this->label1->TabIndex = 34;

this->label1->Text = L"Сума кредиту:";

//

// label9

//

this->label9->AutoSize = true;

this->label9->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label9->Location = System::Drawing::Point(14, 293);

this->label9->Name = L"label9";

this->label9->Size = System::Drawing::Size(215, 29);

this->label9->TabIndex = 52;

this->label9->Text = L"Місячний платіж:";

//

// textBox9

//

this->textBox9->Location = System::Drawing::Point(231, 292);

this->textBox9->Multiline = true;

this->textBox9->Name = L"textBox9";

this->textBox9->ReadOnly = true;

this->textBox9->Size = System::Drawing::Size(138, 38);

this->textBox9->TabIndex = 53;

//

// label10

//

this->label10->AutoSize = true;

this->label10->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 14));

this->label10->Location = System::Drawing::Point(389, 239);

this->label10->Name = L"label10";

this->label10->Size = System::Drawing::Size(159, 29);

this->label10->TabIndex = 54;

this->label10->Text = L"Сума пільги:";

//

// textBox10

//

this->textBox10->Location = System::Drawing::Point(256, 239);

this->textBox10->Multiline = true;

this->textBox10->Name = L"textBox10";

this->textBox10->ReadOnly = true;

this->textBox10->Size = System::Drawing::Size(138, 38);

this->textBox10->TabIndex = 55;

//

// Privilege

//

this->AutoScaleDimensions = System::Drawing::SizeF(8, 16);

this->AutoScaleMode = System::Windows::Forms::AutoScaleMode::Font;

this->ClientSize = System::Drawing::Size(700, 481);

this->Controls->Add(this->textBox10);

this->Controls->Add(this->label10);

this->Controls->Add(this->textBox9);

this->Controls->Add(this->label9);

this->Controls->Add(this->textBox8);

this->Controls->Add(this->label8);

this->Controls->Add(this->textBox7);

this->Controls->Add(this->label7);

this->Controls->Add(this->textBox6);

this->Controls->Add(this->label6);

this->Controls->Add(this->button2);

this->Controls->Add(this->textBox5);

this->Controls->Add(this->label5);

this->Controls->Add(this->textBox4);

this->Controls->Add(this->label4);

this->Controls->Add(this->button1);

this->Controls->Add(this->textBox3);

this->Controls->Add(this->label3);

this->Controls->Add(this->textBox2);

this->Controls->Add(this->label2);

this->Controls->Add(this->textBox1);

this->Controls->Add(this->label1);

this->Name = L"Privilege";

this->Text = L"Privilege";

this->ResumeLayout(false);

this->PerformLayout();

}

#pragma endregion

private: System::Void button1\_Click(System::Object^ sender, System::EventArgs^ e)

{

double sumToPay, moneyOnCard, privilegePrecent;

int timeToPay;

sumToPay = Convert::ToDouble(textBox1->Text);

moneyOnCard = Convert::ToDouble(textBox3->Text);

privilegePrecent = Convert::ToDouble(textBox8->Text);

timeToPay = Convert::ToInt16(textBox2->Text);

PrivilegePayment a(sumToPay, moneyOnCard, privilegePrecent, timeToPay);

textBox5->Text = Convert::ToString(a.PaymentPrecent());

textBox4->Text = Convert::ToString(a.PrivilegeSum());

textBox10->Text = Convert::ToString(timeToPay);

textBox9->Text = Convert::ToString(a.EqualPartsPayment());

textBox6->Text = Convert::ToString(a.alreadyPayed);

textBox7->Text = Convert::ToString(a.needToPay);

}

private: System::Void button2\_Click(System::Object^ sender, System::EventArgs^ e)

{

double sumToPay, moneyOnCard, needToPay, alreadyPayed;

int timeToPay;

sumToPay = Convert::ToDouble(textBox9->Text);

moneyOnCard = Convert::ToDouble(textBox3->Text);

timeToPay = Convert::ToInt16(textBox10->Text);

alreadyPayed = Convert::ToDouble(textBox6->Text);

needToPay = Convert::ToDouble(textBox7->Text);

if (moneyOnCard > sumToPay&& timeToPay != 0)

{

moneyOnCard -= sumToPay;

timeToPay -= 1;

alreadyPayed += sumToPay;

needToPay -= sumToPay;

}

textBox3->Text = Convert::ToString(moneyOnCard);

textBox6->Text = Convert::ToString(alreadyPayed);

textBox7->Text = Convert::ToString(needToPay);

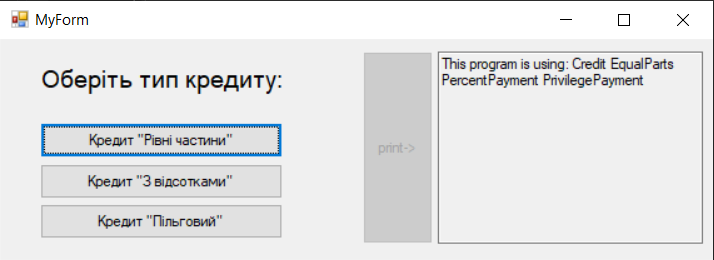
textBox10->Text = Convert::ToString(timeToPay);

}

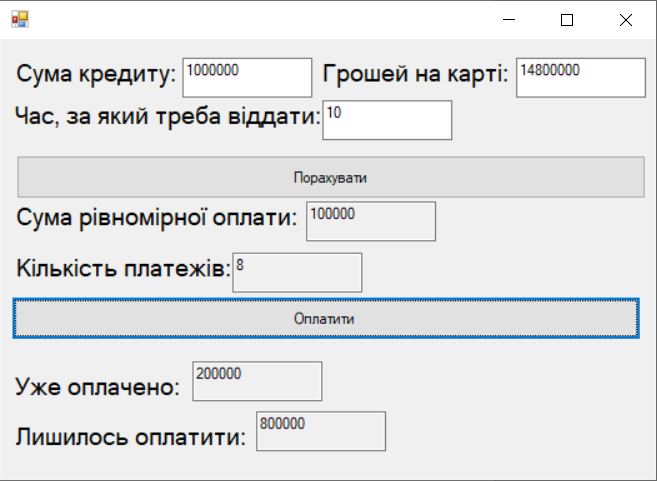
};

}

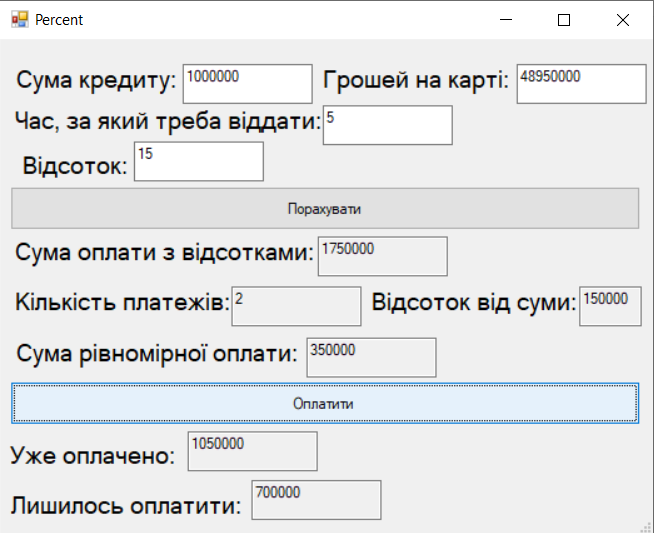
**Результат виконання:**

****

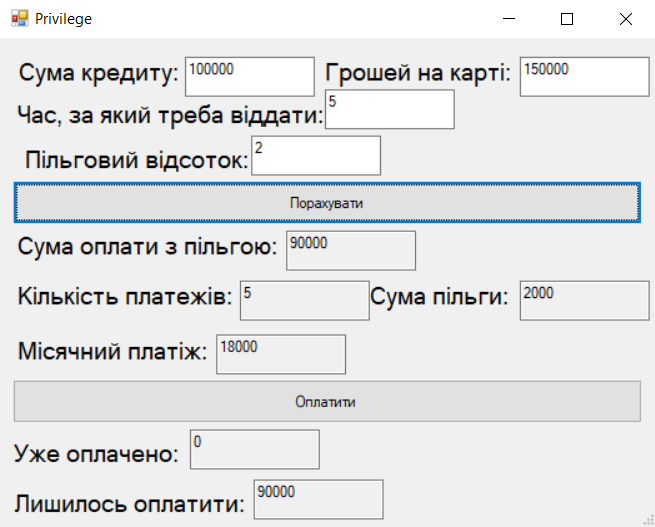
Головне меню



Кредит “Рівні частини”, де користувач зробив два платежа



Кредит “З відсотками”, де користувач провів 3 оплати



Кредит “Пільговий”, де користувач, ще не провів ні однієї оплати

**Висновок**

Виконуючи дану лабораторну роботу, я навчивсь створювати ієрархію класів та використовувати її на прикладі цієї програми.