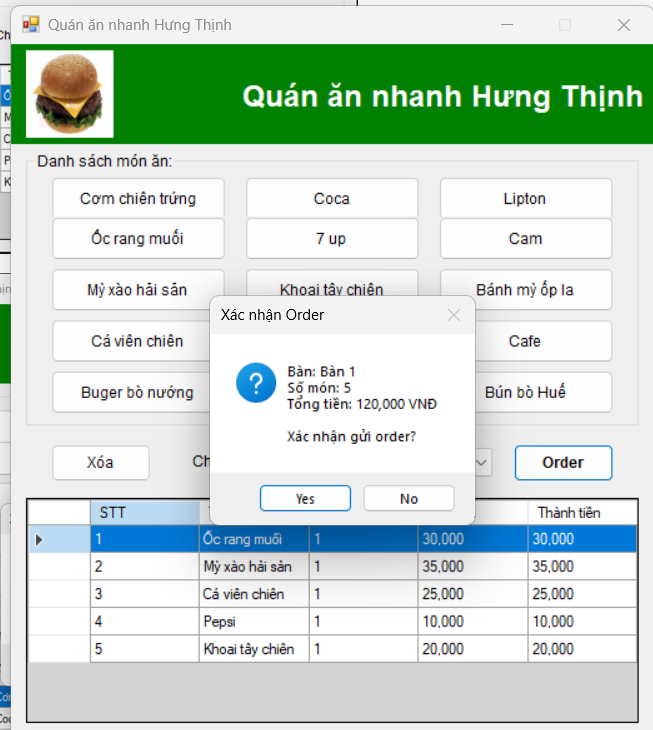
Họ tên: Nguyễn Hữu Bình

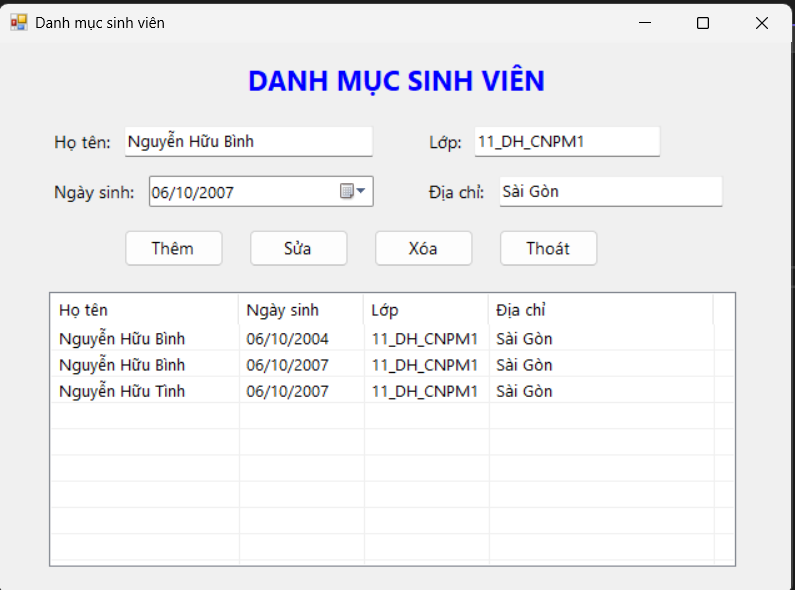
Lớp: 11\_DH\_CNPM1

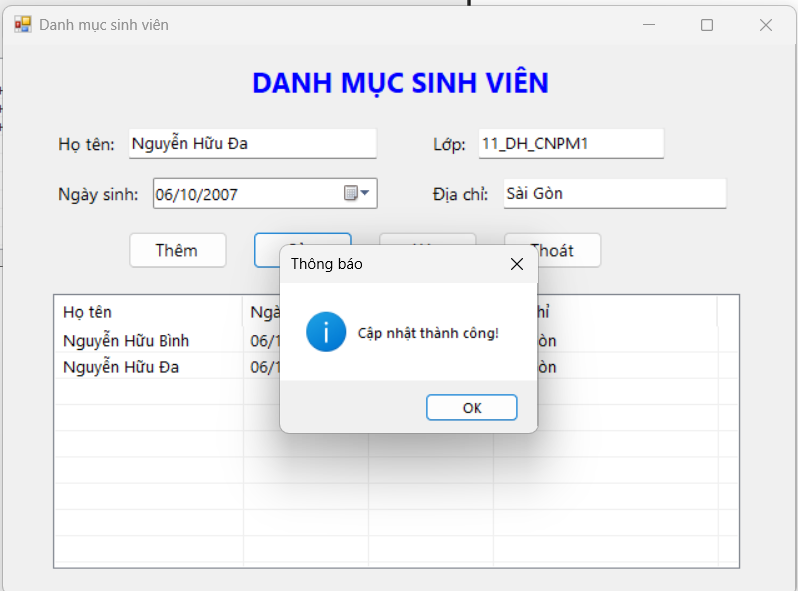
MSSV: 1150080005

Lab3

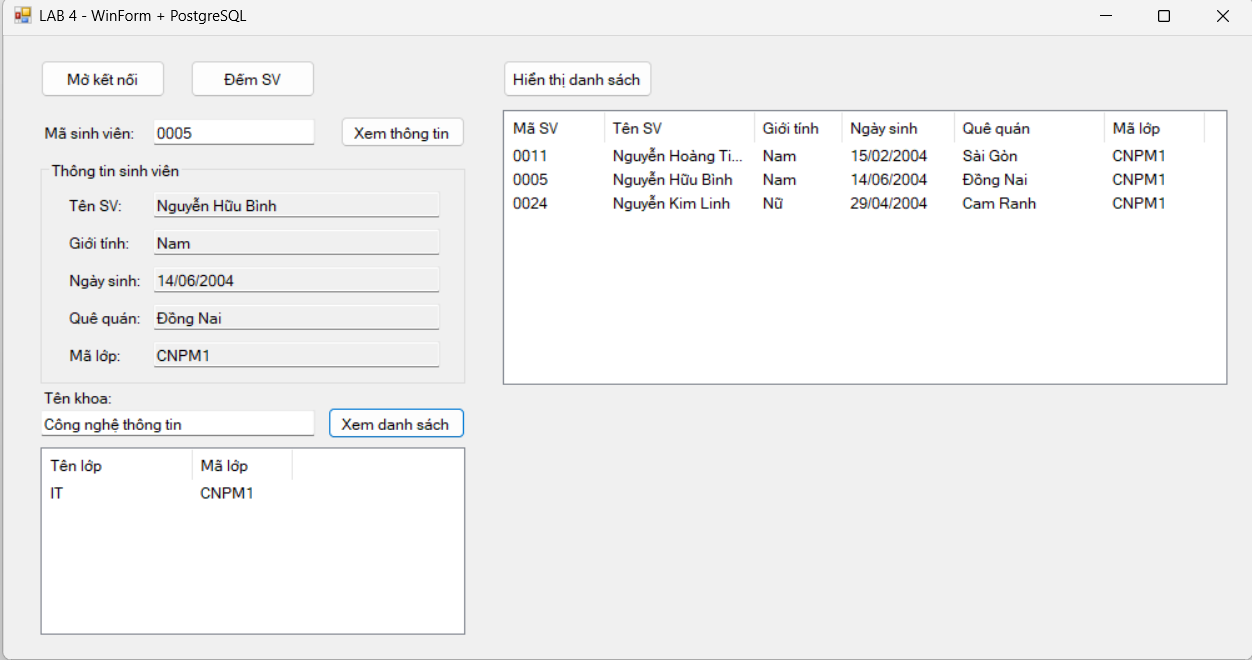








Lab 4



**Form1.cs**

using System;

using System.Data;

using System.Windows.Forms;

using Npgsql;

namespace Lab4\_postgres

{

public partial class Form1 : Form

{

private NpgsqlConnection pgCon = null;

private string strCon = "Host=localhost;Port=5432;Database=quanlysinhvien;Username=postgres;Password=123";

public Form1()

{

InitializeComponent();

InitializeListViews();

}

private void InitializeListViews()

{

lsvList.View = View.Details;

lsvList.Columns.Add("Mã SV", 80);

lsvList.Columns.Add("Tên SV", 120);

lsvList.Columns.Add("Giới tính", 70);

lsvList.Columns.Add("Ngày sinh", 90);

lsvList.Columns.Add("Quê quán", 120);

lsvList.Columns.Add("Mã lớp", 80);

lsvDanhSach.View = View.Details;

lsvDanhSach.Columns.Add("Tên lớp", 120);

lsvDanhSach.Columns.Add("Mã lớp", 80);

}

private void EnsureConnectionOpen()

{

if (pgCon == null)

{

pgCon = new NpgsqlConnection(strCon);

}

if (pgCon.State == ConnectionState.Closed)

{

pgCon.Open();

}

}

private void ClearInfo()

{

txtTenSV.Clear(); txtGioiTinh.Clear(); txtNgaySinh.Clear();

txtQueQuan.Clear(); txtMaLop.Clear();

}

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

{

try

{

if (pgCon == null)

{

pgCon = new NpgsqlConnection(strCon);

}

if (pgCon.State == ConnectionState.Closed)

{

pgCon.Open();

}

MessageBox.Show("Kết nối PostgreSQL thành công!", "Thông báo", MessageBoxButtons.OK, MessageBoxIcon.Information);

}

catch (Exception ex)

{

MessageBox.Show("Lỗi kết nối: " + ex.Message, "Lỗi", MessageBoxButtons.OK, MessageBoxIcon.Error);

}

}

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

{

EnsureConnectionOpen();

try

{

using (var cmd = new NpgsqlCommand("SELECT COUNT(\*) FROM sinhvien", pgCon))

{

long count = (long)cmd.ExecuteScalar();

MessageBox.Show($"Số lượng sinh viên: {count}", "Kết quả");

}

}

catch (Exception ex)

{

MessageBox.Show("Lỗi: " + ex.Message);

}

}

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

{

string maSV = txtMaSV.Text.Trim();

if (string.IsNullOrEmpty(maSV))

{

MessageBox.Show("Vui lòng nhập mã sinh viên!");

return;

}

EnsureConnectionOpen();

try

{

using (var cmd = new NpgsqlCommand("SELECT \* FROM sinhvien WHERE masv = @masv", pgCon))

{

cmd.Parameters.AddWithValue("masv", maSV);

using (var reader = cmd.ExecuteReader())

{

if (reader.Read())

{

txtTenSV.Text = reader["tensv"]?.ToString();

txtGioiTinh.Text = reader["gioitinh"]?.ToString();

txtNgaySinh.Text = reader["ngaysinh"] != DBNull.Value

? Convert.ToDateTime(reader["ngaysinh"]).ToString("dd/MM/yyyy")

: "";

txtQueQuan.Text = reader["quequan"]?.ToString();

txtMaLop.Text = reader["malop"]?.ToString();

}

else

{

MessageBox.Show("Không tìm thấy sinh viên!");

ClearInfo();

}

}

}

}

catch (Exception ex)

{

MessageBox.Show("Lỗi: " + ex.Message);

}

}

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

{

lsvList.Items.Clear();

EnsureConnectionOpen();

try

{

using (var cmd = new NpgsqlCommand("SELECT \* FROM sinhvien", pgCon))

using (var reader = cmd.ExecuteReader())

{

while (reader.Read())

{

var item = new ListViewItem(reader["masv"]?.ToString());

item.SubItems.Add(reader["tensv"]?.ToString());

item.SubItems.Add(reader["gioitinh"]?.ToString());

item.SubItems.Add(reader["ngaysinh"] != DBNull.Value

? Convert.ToDateTime(reader["ngaysinh"]).ToString("dd/MM/yyyy")

: "");

item.SubItems.Add(reader["quequan"]?.ToString());

item.SubItems.Add(reader["malop"]?.ToString());

lsvList.Items.Add(item);

}

}

}

catch (Exception ex)

{

MessageBox.Show("Lỗi: " + ex.Message);

}

}

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

{

string tenKhoa = txtTenKhoa.Text.Trim();

string maKhoa = "";

if (string.IsNullOrEmpty(tenKhoa))

{

MessageBox.Show("Vui lòng nhập tên khoa!");

return;

}

switch (tenKhoa)

{

case "Công nghệ thông tin": maKhoa = "CNTT"; break;

case "Cơ khí": maKhoa = "CK"; break;

case "Điện tử": maKhoa = "DT"; break;

case "Kinh tế": maKhoa = "KT"; break;

default:

MessageBox.Show("Không hỗ trợ khoa này!");

return;

}

lsvDanhSach.Items.Clear();

EnsureConnectionOpen();

try

{

using (var cmd = new NpgsqlCommand("SELECT tenlop, malop FROM lop WHERE makhoa = @makhoa", pgCon))

{

cmd.Parameters.AddWithValue("makhoa", maKhoa);

using (var reader = cmd.ExecuteReader())

{

while (reader.Read())

{

var item = new ListViewItem(reader["tenlop"]?.ToString());

item.SubItems.Add(reader["malop"]?.ToString());

lsvDanhSach.Items.Add(item);

}

}

}

}

catch (Exception ex)

{

MessageBox.Show("Lỗi: " + ex.Message);

}

}

private void Form1\_FormClosing(object sender, FormClosingEventArgs e)

{

if (pgCon != null && pgCon.State == ConnectionState.Open)

{

pgCon.Close();

pgCon.Dispose();

}

}

}

}

**Form1.Designer**

namespace Lab4\_postgres

{

partial class Form1

{

private System.ComponentModel.IContainer components = null;

protected override void Dispose(bool disposing)

{

if (disposing && (components != null))

{

components.Dispose();

}

base.Dispose(disposing);

}

#region Windows Form Designer generated code

private void InitializeComponent()

{

this.btnMoKetNoi = new System.Windows.Forms.Button();

this.btnCount = new System.Windows.Forms.Button();

this.label1 = new System.Windows.Forms.Label();

this.txtMaSV = new System.Windows.Forms.TextBox();

this.btnXemThongTin = new System.Windows.Forms.Button();

this.groupBox1 = new System.Windows.Forms.GroupBox();

this.txtMaLop = new System.Windows.Forms.TextBox();

this.label6 = new System.Windows.Forms.Label();

this.txtQueQuan = new System.Windows.Forms.TextBox();

this.label5 = new System.Windows.Forms.Label();

this.txtNgaySinh = new System.Windows.Forms.TextBox();

this.label4 = new System.Windows.Forms.Label();

this.txtGioiTinh = new System.Windows.Forms.TextBox();

this.label3 = new System.Windows.Forms.Label();

this.txtTenSV = new System.Windows.Forms.TextBox();

this.label2 = new System.Windows.Forms.Label();

this.btnListView = new System.Windows.Forms.Button();

this.lsvList = new System.Windows.Forms.ListView();

this.txtTenKhoa = new System.Windows.Forms.TextBox();

this.label7 = new System.Windows.Forms.Label();

this.btnXemDS = new System.Windows.Forms.Button();

this.lsvDanhSach = new System.Windows.Forms.ListView();

this.groupBox1.SuspendLayout();

this.SuspendLayout();

//

// btnMoKetNoi

//

this.btnMoKetNoi.Location = new System.Drawing.Point(30, 20);

this.btnMoKetNoi.Name = "btnMoKetNoi";

this.btnMoKetNoi.Size = new System.Drawing.Size(100, 30);

this.btnMoKetNoi.TabIndex = 0;

this.btnMoKetNoi.Text = "Mở kết nối";

this.btnMoKetNoi.UseVisualStyleBackColor = true;

this.btnMoKetNoi.Click += new System.EventHandler(this.btnMoKetNoi\_Click);

//

// btnCount

//

this.btnCount.Location = new System.Drawing.Point(150, 20);

this.btnCount.Name = "btnCount";

this.btnCount.Size = new System.Drawing.Size(100, 30);

this.btnCount.TabIndex = 1;

this.btnCount.Text = "Đếm SV";

this.btnCount.UseVisualStyleBackColor = true;

this.btnCount.Click += new System.EventHandler(this.btnCount\_Click);

//

// label1

//

this.label1.AutoSize = true;

this.label1.Location = new System.Drawing.Point(30, 70);

this.label1.Name = "label1";

this.label1.Size = new System.Drawing.Size(75, 15);

this.label1.TabIndex = 2;

this.label1.Text = "Mã sinh viên:";

//

// txtMaSV

//

this.txtMaSV.Location = new System.Drawing.Point(120, 67);

this.txtMaSV.Name = "txtMaSV";

this.txtMaSV.Size = new System.Drawing.Size(130, 23);

this.txtMaSV.TabIndex = 3;

//

// btnXemThongTin

//

this.btnXemThongTin.Location = new System.Drawing.Point(270, 65);

this.btnXemThongTin.Name = "btnXemThongTin";

this.btnXemThongTin.Size = new System.Drawing.Size(100, 25);

this.btnXemThongTin.TabIndex = 4;

this.btnXemThongTin.Text = "Xem thông tin";

this.btnXemThongTin.UseVisualStyleBackColor = true;

this.btnXemThongTin.Click += new System.EventHandler(this.btnXemThongTin\_Click);

//

// groupBox1

//

this.groupBox1.Controls.Add(this.txtMaLop);

this.groupBox1.Controls.Add(this.label6);

this.groupBox1.Controls.Add(this.txtQueQuan);

this.groupBox1.Controls.Add(this.label5);

this.groupBox1.Controls.Add(this.txtNgaySinh);

this.groupBox1.Controls.Add(this.label4);

this.groupBox1.Controls.Add(this.txtGioiTinh);

this.groupBox1.Controls.Add(this.label3);

this.groupBox1.Controls.Add(this.txtTenSV);

this.groupBox1.Controls.Add(this.label2);

this.groupBox1.Location = new System.Drawing.Point(30, 100);

this.groupBox1.Name = "groupBox1";

this.groupBox1.Size = new System.Drawing.Size(340, 180);

this.groupBox1.TabIndex = 5;

this.groupBox1.TabStop = false;

this.groupBox1.Text = "Thông tin sinh viên";

//

// txtMaLop

//

this.txtMaLop.Location = new System.Drawing.Point(90, 145);

this.txtMaLop.Name = "txtMaLop";

this.txtMaLop.ReadOnly = true;

this.txtMaLop.Size = new System.Drawing.Size(230, 23);

this.txtMaLop.TabIndex = 9;

//

// label6

//

this.label6.AutoSize = true;

this.label6.Location = new System.Drawing.Point(20, 148);

this.label6.Name = "label6";

this.label6.Size = new System.Drawing.Size(52, 15);

this.label6.TabIndex = 8;

this.label6.Text = "Mã lớp:";

//

// txtQueQuan

//

this.txtQueQuan.Location = new System.Drawing.Point(90, 115);

this.txtQueQuan.Name = "txtQueQuan";

this.txtQueQuan.ReadOnly = true;

this.txtQueQuan.Size = new System.Drawing.Size(230, 23);

this.txtQueQuan.TabIndex = 7;

//

// label5

//

this.label5.AutoSize = true;

this.label5.Location = new System.Drawing.Point(20, 118);

this.label5.Name = "label5";

this.label5.Size = new System.Drawing.Size(64, 15);

this.label5.TabIndex = 6;

this.label5.Text = "Quê quán:";

//

// txtNgaySinh

//

this.txtNgaySinh.Location = new System.Drawing.Point(90, 85);

this.txtNgaySinh.Name = "txtNgaySinh";

this.txtNgaySinh.ReadOnly = true;

this.txtNgaySinh.Size = new System.Drawing.Size(230, 23);

this.txtNgaySinh.TabIndex = 5;

//

// label4

//

this.label4.AutoSize = true;

this.label4.Location = new System.Drawing.Point(20, 88);

this.label4.Name = "label4";

this.label4.Size = new System.Drawing.Size(64, 15);

this.label4.TabIndex = 4;

this.label4.Text = "Ngày sinh:";

//

// txtGioiTinh

//

this.txtGioiTinh.Location = new System.Drawing.Point(90, 55);

this.txtGioiTinh.Name = "txtGioiTinh";

this.txtGioiTinh.ReadOnly = true;

this.txtGioiTinh.Size = new System.Drawing.Size(230, 23);

this.txtGioiTinh.TabIndex = 3;

//

// label3

//

this.label3.AutoSize = true;

this.label3.Location = new System.Drawing.Point(20, 58);

this.label3.Name = "label3";

this.label3.Size = new System.Drawing.Size(59, 15);

this.label3.TabIndex = 2;

this.label3.Text = "Giới tính:";

//

// txtTenSV

//

this.txtTenSV.Location = new System.Drawing.Point(90, 25);

this.txtTenSV.Name = "txtTenSV";

this.txtTenSV.ReadOnly = true;

this.txtTenSV.Size = new System.Drawing.Size(230, 23);

this.txtTenSV.TabIndex = 1;

//

// label2

//

this.label2.AutoSize = true;

this.label2.Location = new System.Drawing.Point(20, 28);

this.label2.Name = "label2";

this.label2.Size = new System.Drawing.Size(54, 15);

this.label2.TabIndex = 0;

this.label2.Text = "Tên SV:";

//

// btnListView

//

this.btnListView.Location = new System.Drawing.Point(400, 20);

this.btnListView.Name = "btnListView";

this.btnListView.Size = new System.Drawing.Size(120, 30);

this.btnListView.TabIndex = 6;

this.btnListView.Text = "Hiển thị danh sách";

this.btnListView.UseVisualStyleBackColor = true;

this.btnListView.Click += new System.EventHandler(this.btnListView\_Click);

//

// lsvList

//

this.lsvList.Location = new System.Drawing.Point(400, 60);

this.lsvList.Name = "lsvList";

this.lsvList.Size = new System.Drawing.Size(580, 220);

this.lsvList.TabIndex = 7;

this.lsvList.UseCompatibleStateImageBehavior = false;

//

// txtTenKhoa

//

this.txtTenKhoa.Location = new System.Drawing.Point(30, 300);

this.txtTenKhoa.Name = "txtTenKhoa";

this.txtTenKhoa.Size = new System.Drawing.Size(220, 23);

this.txtTenKhoa.TabIndex = 8;

//

// label7

//

this.label7.AutoSize = true;

this.label7.Location = new System.Drawing.Point(30, 282);

this.label7.Name = "label7";

this.label7.Size = new System.Drawing.Size(59, 15);

this.label7.TabIndex = 9;

this.label7.Text = "Tên khoa:";

//

// btnXemDS

//

this.btnXemDS.Location = new System.Drawing.Point(260, 298);

this.btnXemDS.Name = "btnXemDS";

this.btnXemDS.Size = new System.Drawing.Size(110, 25);

this.btnXemDS.TabIndex = 10;

this.btnXemDS.Text = "Xem danh sách";

this.btnXemDS.UseVisualStyleBackColor = true;

this.btnXemDS.Click += new System.EventHandler(this.btnXemDS\_Click);

//

// lsvDanhSach

//

this.lsvDanhSach.Location = new System.Drawing.Point(30, 330);

this.lsvDanhSach.Name = "lsvDanhSach";

this.lsvDanhSach.Size = new System.Drawing.Size(340, 150);

this.lsvDanhSach.TabIndex = 11;

this.lsvDanhSach.UseCompatibleStateImageBehavior = false;

//

// Form1

//

this.AutoScaleDimensions = new System.Drawing.SizeF(7F, 15F);

this.AutoScaleMode = System.Windows.Forms.AutoScaleMode.Font;

this.ClientSize = new System.Drawing.Size(1000, 500);

this.Controls.Add(this.lsvDanhSach);

this.Controls.Add(this.btnXemDS);

this.Controls.Add(this.label7);

this.Controls.Add(this.txtTenKhoa);

this.Controls.Add(this.lsvList);

this.Controls.Add(this.btnListView);

this.Controls.Add(this.groupBox1);

this.Controls.Add(this.btnXemThongTin);

this.Controls.Add(this.txtMaSV);

this.Controls.Add(this.label1);

this.Controls.Add(this.btnCount);

this.Controls.Add(this.btnMoKetNoi);

this.Font = new System.Drawing.Font("Microsoft Sans Serif", 9F, System.Drawing.FontStyle.Regular, System.Drawing.GraphicsUnit.Point, ((byte)(0)));

this.Name = "Form1";

this.Text = "LAB 4 - WinForm + PostgreSQL";

this.FormClosing += new System.Windows.Forms.FormClosingEventHandler(this.Form1\_FormClosing);

this.groupBox1.ResumeLayout(false);

this.groupBox1.PerformLayout();

this.ResumeLayout(false);

this.PerformLayout();

}

#endregion

private System.Windows.Forms.Button btnMoKetNoi;

private System.Windows.Forms.Button btnCount;

private System.Windows.Forms.Label label1;

private System.Windows.Forms.TextBox txtMaSV;

private System.Windows.Forms.Button btnXemThongTin;

private System.Windows.Forms.GroupBox groupBox1;

private System.Windows.Forms.TextBox txtMaLop;

private System.Windows.Forms.Label label6;

private System.Windows.Forms.TextBox txtQueQuan;

private System.Windows.Forms.Label label5;

private System.Windows.Forms.TextBox txtNgaySinh;

private System.Windows.Forms.Label label4;

private System.Windows.Forms.TextBox txtGioiTinh;

private System.Windows.Forms.Label label3;

private System.Windows.Forms.TextBox txtTenSV;

private System.Windows.Forms.Label label2;

private System.Windows.Forms.Button btnListView;

private System.Windows.Forms.ListView lsvList;

private System.Windows.Forms.TextBox txtTenKhoa;

private System.Windows.Forms.Label label7;

private System.Windows.Forms.Button btnXemDS;

private System.Windows.Forms.ListView lsvDanhSach;

}

}