Ngô Thảo Vy – 1150080123

Lab3 WINDOWS FORMS APPLICATION NÂNG CAO

Bài 1

**Bước 1. Tạo project mới**

* Mở **Visual Studio → File → New → Project…**
* Chọn: **Windows Forms App (.NET Framework)**
* Đặt tên: \_1150080123\_lab3
* Chọn Framework: **.NET Framework 4.8**
* Nhấn **Create**

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**Bước 2. Mở file Designer để thiết kế giao diện bằng code**

1. Trong cửa sổ **Solution Explorer**, mở:

Form1.Designer.cs

1. Xóa toàn bộ nội dung cũ trong file chừa lại namespace
2. Nhập code như sau

namespace \_1150080123\_lab3\_1\_

{

partial class Form1

{

/// <summary>

/// Required designer variable.

/// </summary>

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.labelTitle = new System.Windows.Forms.Label();

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

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

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

this.dtpNgaySinh = new System.Windows.Forms.DateTimePicker();

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

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

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

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

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

this.groupBox2 = new System.Windows.Forms.GroupBox();

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

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

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

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

this.groupBox3 = new System.Windows.Forms.GroupBox();

this.dgvSinhVien = new System.Windows.Forms.DataGridView();

this.colHoTen = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.colNgaySinh = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.colLop = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.colDiaChi = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.groupBox1.SuspendLayout();

this.groupBox2.SuspendLayout();

this.groupBox3.SuspendLayout();

((System.ComponentModel.ISupportInitialize)(this.dgvSinhVien)).BeginInit();

this.SuspendLayout();

//

// labelTitle

//

this.labelTitle.Dock = System.Windows.Forms.DockStyle.Top;

this.labelTitle.Font = new System.Drawing.Font("Microsoft Sans Serif", 18F, System.Drawing.FontStyle.Bold);

this.labelTitle.ForeColor = System.Drawing.Color.DodgerBlue;

this.labelTitle.Location = new System.Drawing.Point(0, 0);

this.labelTitle.Name = "labelTitle";

this.labelTitle.Size = new System.Drawing.Size(620, 40);

this.labelTitle.TabIndex = 0;

this.labelTitle.Text = "DANH MỤC SINH VIÊN";

this.labelTitle.TextAlign = System.Drawing.ContentAlignment.MiddleCenter;

//

// groupBox1

//

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

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

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

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

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

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

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

this.groupBox1.Controls.Add(this.label1);

this.groupBox1.Location = new System.Drawing.Point(12, 43);

this.groupBox1.Name = "groupBox1";

this.groupBox1.Size = new System.Drawing.Size(596, 100);

this.groupBox1.TabIndex = 1;

this.groupBox1.TabStop = false;

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

//

// txtDiaChi

//

this.txtDiaChi.Location = new System.Drawing.Point(372, 60);

this.txtDiaChi.Name = "txtDiaChi";

this.txtDiaChi.Size = new System.Drawing.Size(200, 20);

this.txtDiaChi.TabIndex = 7;

//

// label4

//

this.label4.AutoSize = true;

this.label4.Location = new System.Drawing.Point(315, 63);

this.label4.Name = "label4";

this.label4.Size = new System.Drawing.Size(44, 13);

this.label4.TabIndex = 6;

this.label4.Text = "Địa chỉ:";

//

// dtpNgaySinh

//

this.dtpNgaySinh.Format = System.Windows.Forms.DateTimePickerFormat.Short;

this.dtpNgaySinh.Location = new System.Drawing.Point(90, 60);

this.dtpNgaySinh.Name = "dtpNgaySinh";

this.dtpNgaySinh.Size = new System.Drawing.Size(200, 20);

this.dtpNgaySinh.TabIndex = 5;

//

// label3

//

this.label3.AutoSize = true;

this.label3.Location = new System.Drawing.Point(22, 63);

this.label3.Name = "label3";

this.label3.Size = new System.Drawing.Size(59, 13);

this.label3.TabIndex = 4;

this.label3.Text = "Ngày sinh:";

//

// txtLop

//

this.txtLop.Location = new System.Drawing.Point(372, 25);

this.txtLop.Name = "txtLop";

this.txtLop.Size = new System.Drawing.Size(200, 20);

this.txtLop.TabIndex = 3;

//

// label2

//

this.label2.AutoSize = true;

this.label2.Location = new System.Drawing.Point(315, 28);

this.label2.Name = "label2";

this.label2.Size = new System.Drawing.Size(28, 13);

this.label2.TabIndex = 2;

this.label2.Text = "Lớp:";

//

// txtHoTen

//

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

this.txtHoTen.Name = "txtHoTen";

this.txtHoTen.Size = new System.Drawing.Size(200, 20);

this.txtHoTen.TabIndex = 1;

//

// label1

//

this.label1.AutoSize = true;

this.label1.Location = new System.Drawing.Point(22, 28);

this.label1.Name = "label1";

this.label1.Size = new System.Drawing.Size(46, 13);

this.label1.TabIndex = 0;

this.label1.Text = "Họ tên: ";

//

// groupBox2

//

this.groupBox2.Controls.Add(this.btnThoat);

this.groupBox2.Controls.Add(this.btnXoa);

this.groupBox2.Controls.Add(this.btnSua);

this.groupBox2.Controls.Add(this.btnThem);

this.groupBox2.Location = new System.Drawing.Point(12, 149);

this.groupBox2.Name = "groupBox2";

this.groupBox2.Size = new System.Drawing.Size(596, 60);

this.groupBox2.TabIndex = 2;

this.groupBox2.TabStop = false;

this.groupBox2.Text = "Chức năng:";

//

// btnThoat

//

this.btnThoat.Location = new System.Drawing.Point(460, 20);

this.btnThoat.Name = "btnThoat";

this.btnThoat.Size = new System.Drawing.Size(90, 30);

this.btnThoat.TabIndex = 3;

this.btnThoat.Text = "Thoát";

this.btnThoat.UseVisualStyleBackColor = true;

//

// btnXoa

//

this.btnXoa.Location = new System.Drawing.Point(320, 20);

this.btnXoa.Name = "btnXoa";

this.btnXoa.Size = new System.Drawing.Size(90, 30);

this.btnXoa.TabIndex = 2;

this.btnXoa.Text = "Xóa";

this.btnXoa.UseVisualStyleBackColor = true;

//

// btnSua

//

this.btnSua.Location = new System.Drawing.Point(180, 20);

this.btnSua.Name = "btnSua";

this.btnSua.Size = new System.Drawing.Size(90, 30);

this.btnSua.TabIndex = 1;

this.btnSua.Text = "Sửa";

this.btnSua.UseVisualStyleBackColor = true;

//

// btnThem

//

this.btnThem.Location = new System.Drawing.Point(40, 20);

this.btnThem.Name = "btnThem";

this.btnThem.Size = new System.Drawing.Size(90, 30);

this.btnThem.TabIndex = 0;

this.btnThem.Text = "Thêm";

this.btnThem.UseVisualStyleBackColor = true;

//

// groupBox3

//

this.groupBox3.Controls.Add(this.dgvSinhVien);

this.groupBox3.Location = new System.Drawing.Point(12, 215);

this.groupBox3.Name = "groupBox3";

this.groupBox3.Size = new System.Drawing.Size(596, 150);

this.groupBox3.TabIndex = 3;

this.groupBox3.TabStop = false;

this.groupBox3.Text = "Thông tin chung sinh viên:";

//

// dgvSinhVien

//

this.dgvSinhVien.ColumnHeadersHeightSizeMode = System.Windows.Forms.DataGridViewColumnHeadersHeightSizeMode.AutoSize;

this.dgvSinhVien.Columns.AddRange(new System.Windows.Forms.DataGridViewColumn[] {

this.colHoTen,

this.colNgaySinh,

this.colLop,

this.colDiaChi});

this.dgvSinhVien.Dock = System.Windows.Forms.DockStyle.Fill;

this.dgvSinhVien.Location = new System.Drawing.Point(3, 16);

this.dgvSinhVien.Name = "dgvSinhVien";

this.dgvSinhVien.Size = new System.Drawing.Size(590, 131);

this.dgvSinhVien.TabIndex = 0;

//

// colHoTen

//

this.colHoTen.HeaderText = "Họ tên";

this.colHoTen.Name = "colHoTen";

this.colHoTen.Width = 150;

//

// colNgaySinh

//

this.colNgaySinh.HeaderText = "Ngày sinh";

this.colNgaySinh.Name = "colNgaySinh";

//

// colLop

//

this.colLop.HeaderText = "Lớp";

this.colLop.Name = "colLop";

//

// colDiaChi

//

this.colDiaChi.HeaderText = "Địa chỉ";

this.colDiaChi.Name = "colDiaChi";

this.colDiaChi.Width = 150;

//

// Form1

//

this.ClientSize = new System.Drawing.Size(620, 380);

this.Controls.Add(this.groupBox3);

this.Controls.Add(this.groupBox2);

this.Controls.Add(this.groupBox1);

this.Controls.Add(this.labelTitle);

this.Name = "Form1";

this.Text = "Danh sách sinh viên";

this.groupBox1.ResumeLayout(false);

this.groupBox1.PerformLayout();

this.groupBox2.ResumeLayout(false);

this.groupBox3.ResumeLayout(false);

((System.ComponentModel.ISupportInitialize)(this.dgvSinhVien)).EndInit();

this.ResumeLayout(false);

}

#endregion

private System.Windows.Forms.Label labelTitle;

private System.Windows.Forms.GroupBox groupBox1;

private System.Windows.Forms.TextBox txtDiaChi;

private System.Windows.Forms.Label label4;

private System.Windows.Forms.DateTimePicker dtpNgaySinh;

private System.Windows.Forms.Label label3;

private System.Windows.Forms.TextBox txtLop;

private System.Windows.Forms.Label label2;

private System.Windows.Forms.TextBox txtHoTen;

private System.Windows.Forms.Label label1;

private System.Windows.Forms.GroupBox groupBox2;

private System.Windows.Forms.Button btnThoat;

private System.Windows.Forms.Button btnXoa;

private System.Windows.Forms.Button btnSua;

private System.Windows.Forms.Button btnThem;

private System.Windows.Forms.GroupBox groupBox3;

private System.Windows.Forms.DataGridView dgvSinhVien;

private System.Windows.Forms.DataGridViewTextBoxColumn colHoTen;

private System.Windows.Forms.DataGridViewTextBoxColumn colNgaySinh;

private System.Windows.Forms.DataGridViewTextBoxColumn colLop;

private System.Windows.Forms.DataGridViewTextBoxColumn colDiaChi;

}

} namespace \_1150080123\_lab3\_1\_

{

partial class Form1

{

/// <summary>

/// Required designer variable.

/// </summary>

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.labelTitle = new System.Windows.Forms.Label();

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

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

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

this.dtpNgaySinh = new System.Windows.Forms.DateTimePicker();

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

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

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

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

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

this.groupBox2 = new System.Windows.Forms.GroupBox();

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

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

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

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

this.groupBox3 = new System.Windows.Forms.GroupBox();

this.dgvSinhVien = new System.Windows.Forms.DataGridView();

this.colHoTen = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.colNgaySinh = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.colLop = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.colDiaChi = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.groupBox1.SuspendLayout();

this.groupBox2.SuspendLayout();

this.groupBox3.SuspendLayout();

((System.ComponentModel.ISupportInitialize)(this.dgvSinhVien)).BeginInit();

this.SuspendLayout();

//

// labelTitle

//

this.labelTitle.Dock = System.Windows.Forms.DockStyle.Top;

this.labelTitle.Font = new System.Drawing.Font("Microsoft Sans Serif", 18F, System.Drawing.FontStyle.Bold);

this.labelTitle.ForeColor = System.Drawing.Color.DodgerBlue;

this.labelTitle.Location = new System.Drawing.Point(0, 0);

this.labelTitle.Name = "labelTitle";

this.labelTitle.Size = new System.Drawing.Size(620, 40);

this.labelTitle.TabIndex = 0;

this.labelTitle.Text = "DANH MỤC SINH VIÊN";

this.labelTitle.TextAlign = System.Drawing.ContentAlignment.MiddleCenter;

//

// groupBox1

//

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

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

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

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

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

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

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

this.groupBox1.Controls.Add(this.label1);

this.groupBox1.Location = new System.Drawing.Point(12, 43);

this.groupBox1.Name = "groupBox1";

this.groupBox1.Size = new System.Drawing.Size(596, 100);

this.groupBox1.TabIndex = 1;

this.groupBox1.TabStop = false;

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

//

// txtDiaChi

//

this.txtDiaChi.Location = new System.Drawing.Point(372, 60);

this.txtDiaChi.Name = "txtDiaChi";

this.txtDiaChi.Size = new System.Drawing.Size(200, 20);

this.txtDiaChi.TabIndex = 7;

//

// label4

//

this.label4.AutoSize = true;

this.label4.Location = new System.Drawing.Point(315, 63);

this.label4.Name = "label4";

this.label4.Size = new System.Drawing.Size(44, 13);

this.label4.TabIndex = 6;

this.label4.Text = "Địa chỉ:";

//

// dtpNgaySinh

//

this.dtpNgaySinh.Format = System.Windows.Forms.DateTimePickerFormat.Short;

this.dtpNgaySinh.Location = new System.Drawing.Point(90, 60);

this.dtpNgaySinh.Name = "dtpNgaySinh";

this.dtpNgaySinh.Size = new System.Drawing.Size(200, 20);

this.dtpNgaySinh.TabIndex = 5;

//

// label3

//

this.label3.AutoSize = true;

this.label3.Location = new System.Drawing.Point(22, 63);

this.label3.Name = "label3";

this.label3.Size = new System.Drawing.Size(59, 13);

this.label3.TabIndex = 4;

this.label3.Text = "Ngày sinh:";

//

// txtLop

//

this.txtLop.Location = new System.Drawing.Point(372, 25);

this.txtLop.Name = "txtLop";

this.txtLop.Size = new System.Drawing.Size(200, 20);

this.txtLop.TabIndex = 3;

//

// label2

//

this.label2.AutoSize = true;

this.label2.Location = new System.Drawing.Point(315, 28);

this.label2.Name = "label2";

this.label2.Size = new System.Drawing.Size(28, 13);

this.label2.TabIndex = 2;

this.label2.Text = "Lớp:";

//

// txtHoTen

//

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

this.txtHoTen.Name = "txtHoTen";

this.txtHoTen.Size = new System.Drawing.Size(200, 20);

this.txtHoTen.TabIndex = 1;

//

// label1

//

this.label1.AutoSize = true;

this.label1.Location = new System.Drawing.Point(22, 28);

this.label1.Name = "label1";

this.label1.Size = new System.Drawing.Size(46, 13);

this.label1.TabIndex = 0;

this.label1.Text = "Họ tên: ";

//

// groupBox2

//

this.groupBox2.Controls.Add(this.btnThoat);

this.groupBox2.Controls.Add(this.btnXoa);

this.groupBox2.Controls.Add(this.btnSua);

this.groupBox2.Controls.Add(this.btnThem);

this.groupBox2.Location = new System.Drawing.Point(12, 149);

this.groupBox2.Name = "groupBox2";

this.groupBox2.Size = new System.Drawing.Size(596, 60);

this.groupBox2.TabIndex = 2;

this.groupBox2.TabStop = false;

this.groupBox2.Text = "Chức năng:";

//

// btnThoat

//

this.btnThoat.Location = new System.Drawing.Point(460, 20);

this.btnThoat.Name = "btnThoat";

this.btnThoat.Size = new System.Drawing.Size(90, 30);

this.btnThoat.TabIndex = 3;

this.btnThoat.Text = "Thoát";

this.btnThoat.UseVisualStyleBackColor = true;

//

// btnXoa

//

this.btnXoa.Location = new System.Drawing.Point(320, 20);

this.btnXoa.Name = "btnXoa";

this.btnXoa.Size = new System.Drawing.Size(90, 30);

this.btnXoa.TabIndex = 2;

this.btnXoa.Text = "Xóa";

this.btnXoa.UseVisualStyleBackColor = true;

//

// btnSua

//

this.btnSua.Location = new System.Drawing.Point(180, 20);

this.btnSua.Name = "btnSua";

this.btnSua.Size = new System.Drawing.Size(90, 30);

this.btnSua.TabIndex = 1;

this.btnSua.Text = "Sửa";

this.btnSua.UseVisualStyleBackColor = true;

//

// btnThem

//

this.btnThem.Location = new System.Drawing.Point(40, 20);

this.btnThem.Name = "btnThem";

this.btnThem.Size = new System.Drawing.Size(90, 30);

this.btnThem.TabIndex = 0;

this.btnThem.Text = "Thêm";

this.btnThem.UseVisualStyleBackColor = true;

//

// groupBox3

//

this.groupBox3.Controls.Add(this.dgvSinhVien);

this.groupBox3.Location = new System.Drawing.Point(12, 215);

this.groupBox3.Name = "groupBox3";

this.groupBox3.Size = new System.Drawing.Size(596, 150);

this.groupBox3.TabIndex = 3;

this.groupBox3.TabStop = false;

this.groupBox3.Text = "Thông tin chung sinh viên:";

//

// dgvSinhVien

//

this.dgvSinhVien.ColumnHeadersHeightSizeMode = System.Windows.Forms.DataGridViewColumnHeadersHeightSizeMode.AutoSize;

this.dgvSinhVien.Columns.AddRange(new System.Windows.Forms.DataGridViewColumn[] {

this.colHoTen,

this.colNgaySinh,

this.colLop,

this.colDiaChi});

this.dgvSinhVien.Dock = System.Windows.Forms.DockStyle.Fill;

this.dgvSinhVien.Location = new System.Drawing.Point(3, 16);

this.dgvSinhVien.Name = "dgvSinhVien";

this.dgvSinhVien.Size = new System.Drawing.Size(590, 131);

this.dgvSinhVien.TabIndex = 0;

//

// colHoTen

//

this.colHoTen.HeaderText = "Họ tên";

this.colHoTen.Name = "colHoTen";

this.colHoTen.Width = 150;

//

// colNgaySinh

//

this.colNgaySinh.HeaderText = "Ngày sinh";

this.colNgaySinh.Name = "colNgaySinh";

//

// colLop

//

this.colLop.HeaderText = "Lớp";

this.colLop.Name = "colLop";

//

// colDiaChi

//

this.colDiaChi.HeaderText = "Địa chỉ";

this.colDiaChi.Name = "colDiaChi";

this.colDiaChi.Width = 150;

//

// Form1

//

this.ClientSize = new System.Drawing.Size(620, 380);

this.Controls.Add(this.groupBox3);

this.Controls.Add(this.groupBox2);

this.Controls.Add(this.groupBox1);

this.Controls.Add(this.labelTitle);

this.Name = "Form1";

this.Text = "Danh sách sinh viên";

this.groupBox1.ResumeLayout(false);

this.groupBox1.PerformLayout();

this.groupBox2.ResumeLayout(false);

this.groupBox3.ResumeLayout(false);

((System.ComponentModel.ISupportInitialize)(this.dgvSinhVien)).EndInit();

this.ResumeLayout(false);

}

#endregion

private System.Windows.Forms.Label labelTitle;

private System.Windows.Forms.GroupBox groupBox1;

private System.Windows.Forms.TextBox txtDiaChi;

private System.Windows.Forms.Label label4;

private System.Windows.Forms.DateTimePicker dtpNgaySinh;

private System.Windows.Forms.Label label3;

private System.Windows.Forms.TextBox txtLop;

private System.Windows.Forms.Label label2;

private System.Windows.Forms.TextBox txtHoTen;

private System.Windows.Forms.Label label1;

private System.Windows.Forms.GroupBox groupBox2;

private System.Windows.Forms.Button btnThoat;

private System.Windows.Forms.Button btnXoa;

private System.Windows.Forms.Button btnSua;

private System.Windows.Forms.Button btnThem;

private System.Windows.Forms.GroupBox groupBox3;

private System.Windows.Forms.DataGridView dgvSinhVien;

private System.Windows.Forms.DataGridViewTextBoxColumn colHoTen;

private System.Windows.Forms.DataGridViewTextBoxColumn colNgaySinh;

private System.Windows.Forms.DataGridViewTextBoxColumn colLop;

private System.Windows.Forms.DataGridViewTextBoxColumn colDiaChi;

}

}

**Bước 3. Dán code logic vào file Form1.cs**

1. Mở **Form1.cs** (không phải Designer).
2. Xóa nội dung cũ chừa lại namespace
3. Dán code

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 \_1150080123\_lab3

{

public partial class Form1 : Form

{

// Danh sách món đã chọn

private Dictionary<string, int> dsMonAn = new Dictionary<string, int>();

public Form1()

{

InitializeComponent();

// Gán sự kiện cho các button món ăn

foreach (Control ctrl in this.Controls)

{

if (ctrl is Button btn && btn != btnXoa && btn != btnOrder)

{

btn.Click += BtnMonAn\_Click;

}

}

// Gán sự kiện cho nút xóa & order

btnXoa.Click += BtnXoa\_Click;

btnOrder.Click += BtnOrder\_Click;

}

// ===== TẠO CÁC NÚT MÓN ĂN =====

// ===== SỰ KIỆN NHẤN MÓN ĂN =====

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

{

Button btn = sender as Button;

string tenMon = btn.Text;

// Nếu món đã có, tăng số lượng

if (dsMonAn.ContainsKey(tenMon))

dsMonAn[tenMon]++;

else

dsMonAn[tenMon] = 1;

CapNhatBang();

}

// ===== CẬP NHẬT DATAGRIDVIEW =====

private void CapNhatBang()

{

dgvOrder.Rows.Clear();

foreach (var mon in dsMonAn)

{

dgvOrder.Rows.Add(mon.Key, mon.Value);

}

}

// ===== NÚT XÓA =====

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

{

if (dgvOrder.SelectedRows.Count > 0)

{

string tenMon = dgvOrder.SelectedRows[0].Cells["TenMon"].Value.ToString();

dsMonAn.Remove(tenMon);

CapNhatBang();

}

else

{

MessageBox.Show("Vui lòng chọn món cần xóa.", "Thông báo", MessageBoxButtons.OK, MessageBoxIcon.Information);

}

}

// ===== NÚT ORDER =====

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

{

if (cbBan.SelectedIndex == -1)

{

MessageBox.Show("Vui lòng chọn bàn trước khi Order.", "Thông báo", MessageBoxButtons.OK, MessageBoxIcon.Warning);

return;

}

if (dsMonAn.Count == 0)

{

MessageBox.Show("Chưa có món nào được chọn.", "Thông báo", MessageBoxButtons.OK, MessageBoxIcon.Warning);

return;

}

string tenBan = cbBan.SelectedItem.ToString();

string filePath = $"order\_{tenBan.Replace(" ", "\_")}.txt";

using (StreamWriter sw = new StreamWriter(filePath, false))

{

sw.WriteLine($"=== ĐƠN GỌI MÓN CHO {tenBan} ===");

sw.WriteLine($"Thời gian: {DateTime.Now}");

sw.WriteLine("---------------------------");

foreach (var mon in dsMonAn)

{

sw.WriteLine($"{mon.Key} - Số lượng: {mon.Value}");

}

sw.WriteLine("---------------------------");

sw.WriteLine("Trạng thái: Đã gửi xuống bếp!");

}

MessageBox.Show($"Order của {tenBan} đã được ghi ra file:\n{filePath}", "Thông báo", MessageBoxButtons.OK, MessageBoxIcon.Information);

// Sau khi order xong, reset danh sách

dsMonAn.Clear();

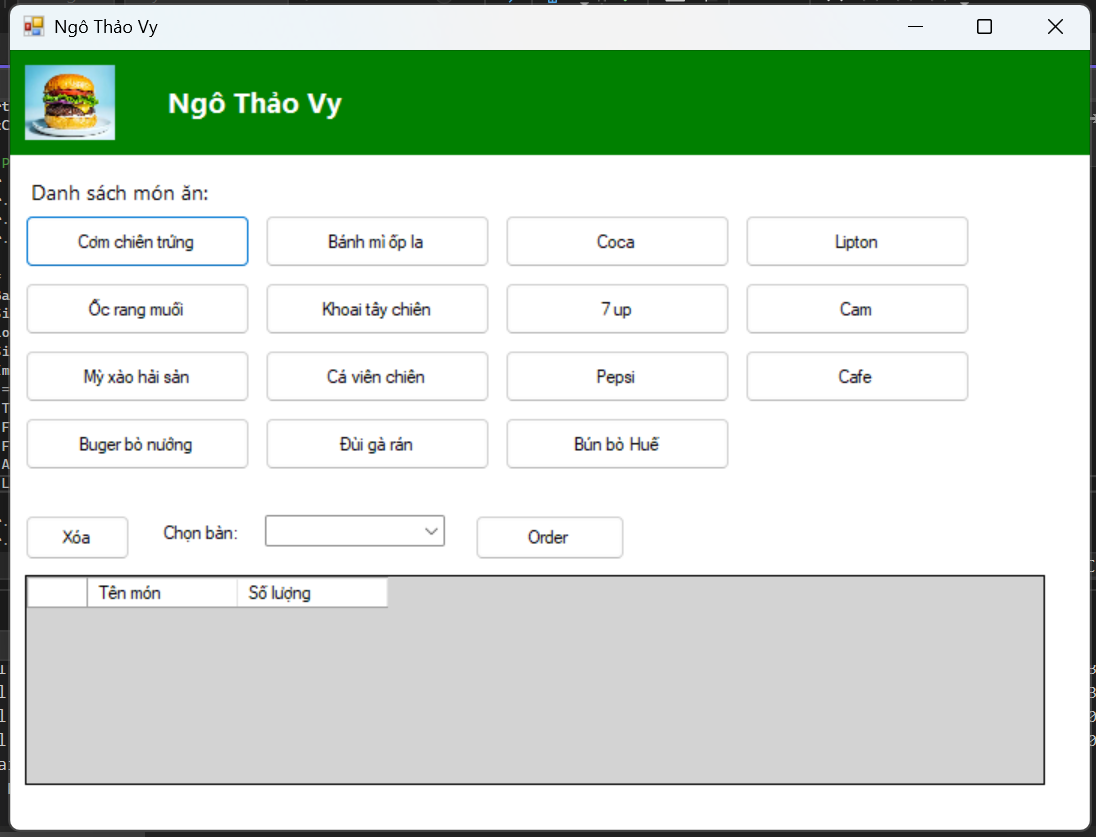
CapNhatBang();

cbBan.SelectedIndex = -1;

}

}

}



A screenshot of a computer

AI-generated content may be incorrect.

**Bài 2**

**Bước 1. Tạo project mới**

* Mở **Visual Studio → File → New → Project…**
* Chọn: **Windows Forms App (.NET Framework)**
* Đặt tên: \_1150080123\_lab3\_1\_
* Chọn Framework: **.NET Framework 4.8**
* Nhấn **Create**

**Bước 2. Mở file Designer để thiết kế giao diện bằng code**

1. Trong cửa sổ **Solution Explorer**, mở:

Form1.Designer.cs

1. Xóa toàn bộ nội dung cũ trong file chừa lại namespace
2. Nhập code như sau

namespace \_1150080123\_lab3\_1\_

{

partial class Form1

{

/// <summary>

/// Required designer variable.

/// </summary>

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.labelTitle = new System.Windows.Forms.Label();

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

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

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

this.dtpNgaySinh = new System.Windows.Forms.DateTimePicker();

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

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

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

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

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

this.groupBox2 = new System.Windows.Forms.GroupBox();

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

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

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

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

this.groupBox3 = new System.Windows.Forms.GroupBox();

this.dgvSinhVien = new System.Windows.Forms.DataGridView();

this.colHoTen = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.colNgaySinh = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.colLop = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.colDiaChi = new System.Windows.Forms.DataGridViewTextBoxColumn();

this.groupBox1.SuspendLayout();

this.groupBox2.SuspendLayout();

this.groupBox3.SuspendLayout();

((System.ComponentModel.ISupportInitialize)(this.dgvSinhVien)).BeginInit();

this.SuspendLayout();

//

// labelTitle

//

this.labelTitle.Dock = System.Windows.Forms.DockStyle.Top;

this.labelTitle.Font = new System.Drawing.Font("Microsoft Sans Serif", 18F, System.Drawing.FontStyle.Bold);

this.labelTitle.ForeColor = System.Drawing.Color.DodgerBlue;

this.labelTitle.Location = new System.Drawing.Point(0, 0);

this.labelTitle.Name = "labelTitle";

this.labelTitle.Size = new System.Drawing.Size(620, 40);

this.labelTitle.TabIndex = 0;

this.labelTitle.Text = "DANH MỤC SINH VIÊN";

this.labelTitle.TextAlign = System.Drawing.ContentAlignment.MiddleCenter;

//

// groupBox1

//

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

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

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

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

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

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

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

this.groupBox1.Controls.Add(this.label1);

this.groupBox1.Location = new System.Drawing.Point(12, 43);

this.groupBox1.Name = "groupBox1";

this.groupBox1.Size = new System.Drawing.Size(596, 100);

this.groupBox1.TabIndex = 1;

this.groupBox1.TabStop = false;

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

//

// txtDiaChi

//

this.txtDiaChi.Location = new System.Drawing.Point(372, 60);

this.txtDiaChi.Name = "txtDiaChi";

this.txtDiaChi.Size = new System.Drawing.Size(200, 20);

this.txtDiaChi.TabIndex = 7;

//

// label4

//

this.label4.AutoSize = true;

this.label4.Location = new System.Drawing.Point(315, 63);

this.label4.Name = "label4";

this.label4.Size = new System.Drawing.Size(44, 13);

this.label4.TabIndex = 6;

this.label4.Text = "Địa chỉ:";

//

// dtpNgaySinh

//

this.dtpNgaySinh.Format = System.Windows.Forms.DateTimePickerFormat.Short;

this.dtpNgaySinh.Location = new System.Drawing.Point(90, 60);

this.dtpNgaySinh.Name = "dtpNgaySinh";

this.dtpNgaySinh.Size = new System.Drawing.Size(200, 20);

this.dtpNgaySinh.TabIndex = 5;

//

// label3

//

this.label3.AutoSize = true;

this.label3.Location = new System.Drawing.Point(22, 63);

this.label3.Name = "label3";

this.label3.Size = new System.Drawing.Size(59, 13);

this.label3.TabIndex = 4;

this.label3.Text = "Ngày sinh:";

//

// txtLop

//

this.txtLop.Location = new System.Drawing.Point(372, 25);

this.txtLop.Name = "txtLop";

this.txtLop.Size = new System.Drawing.Size(200, 20);

this.txtLop.TabIndex = 3;

//

// label2

//

this.label2.AutoSize = true;

this.label2.Location = new System.Drawing.Point(315, 28);

this.label2.Name = "label2";

this.label2.Size = new System.Drawing.Size(28, 13);

this.label2.TabIndex = 2;

this.label2.Text = "Lớp:";

//

// txtHoTen

//

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

this.txtHoTen.Name = "txtHoTen";

this.txtHoTen.Size = new System.Drawing.Size(200, 20);

this.txtHoTen.TabIndex = 1;

//

// label1

//

this.label1.AutoSize = true;

this.label1.Location = new System.Drawing.Point(22, 28);

this.label1.Name = "label1";

this.label1.Size = new System.Drawing.Size(46, 13);

this.label1.TabIndex = 0;

this.label1.Text = "Họ tên: ";

//

// groupBox2

//

this.groupBox2.Controls.Add(this.btnThoat);

this.groupBox2.Controls.Add(this.btnXoa);

this.groupBox2.Controls.Add(this.btnSua);

this.groupBox2.Controls.Add(this.btnThem);

this.groupBox2.Location = new System.Drawing.Point(12, 149);

this.groupBox2.Name = "groupBox2";

this.groupBox2.Size = new System.Drawing.Size(596, 60);

this.groupBox2.TabIndex = 2;

this.groupBox2.TabStop = false;

this.groupBox2.Text = "Chức năng:";

//

// btnThoat

//

this.btnThoat.Location = new System.Drawing.Point(460, 20);

this.btnThoat.Name = "btnThoat";

this.btnThoat.Size = new System.Drawing.Size(90, 30);

this.btnThoat.TabIndex = 3;

this.btnThoat.Text = "Thoát";

this.btnThoat.UseVisualStyleBackColor = true;

//

// btnXoa

//

this.btnXoa.Location = new System.Drawing.Point(320, 20);

this.btnXoa.Name = "btnXoa";

this.btnXoa.Size = new System.Drawing.Size(90, 30);

this.btnXoa.TabIndex = 2;

this.btnXoa.Text = "Xóa";

this.btnXoa.UseVisualStyleBackColor = true;

//

// btnSua

//

this.btnSua.Location = new System.Drawing.Point(180, 20);

this.btnSua.Name = "btnSua";

this.btnSua.Size = new System.Drawing.Size(90, 30);

this.btnSua.TabIndex = 1;

this.btnSua.Text = "Sửa";

this.btnSua.UseVisualStyleBackColor = true;

//

// btnThem

//

this.btnThem.Location = new System.Drawing.Point(40, 20);

this.btnThem.Name = "btnThem";

this.btnThem.Size = new System.Drawing.Size(90, 30);

this.btnThem.TabIndex = 0;

this.btnThem.Text = "Thêm";

this.btnThem.UseVisualStyleBackColor = true;

//

// groupBox3

//

this.groupBox3.Controls.Add(this.dgvSinhVien);

this.groupBox3.Location = new System.Drawing.Point(12, 215);

this.groupBox3.Name = "groupBox3";

this.groupBox3.Size = new System.Drawing.Size(596, 150);

this.groupBox3.TabIndex = 3;

this.groupBox3.TabStop = false;

this.groupBox3.Text = "Thông tin chung sinh viên:";

//

// dgvSinhVien

//

this.dgvSinhVien.ColumnHeadersHeightSizeMode = System.Windows.Forms.DataGridViewColumnHeadersHeightSizeMode.AutoSize;

this.dgvSinhVien.Columns.AddRange(new System.Windows.Forms.DataGridViewColumn[] {

this.colHoTen,

this.colNgaySinh,

this.colLop,

this.colDiaChi});

this.dgvSinhVien.Dock = System.Windows.Forms.DockStyle.Fill;

this.dgvSinhVien.Location = new System.Drawing.Point(3, 16);

this.dgvSinhVien.Name = "dgvSinhVien";

this.dgvSinhVien.Size = new System.Drawing.Size(590, 131);

this.dgvSinhVien.TabIndex = 0;

//

// colHoTen

//

this.colHoTen.HeaderText = "Họ tên";

this.colHoTen.Name = "colHoTen";

this.colHoTen.Width = 150;

//

// colNgaySinh

//

this.colNgaySinh.HeaderText = "Ngày sinh";

this.colNgaySinh.Name = "colNgaySinh";

//

// colLop

//

this.colLop.HeaderText = "Lớp";

this.colLop.Name = "colLop";

//

// colDiaChi

//

this.colDiaChi.HeaderText = "Địa chỉ";

this.colDiaChi.Name = "colDiaChi";

this.colDiaChi.Width = 150;

//

// Form1

//

this.ClientSize = new System.Drawing.Size(620, 380);

this.Controls.Add(this.groupBox3);

this.Controls.Add(this.groupBox2);

this.Controls.Add(this.groupBox1);

this.Controls.Add(this.labelTitle);

this.Name = "Form1";

this.Text = "Danh sách sinh viên";

this.groupBox1.ResumeLayout(false);

this.groupBox1.PerformLayout();

this.groupBox2.ResumeLayout(false);

this.groupBox3.ResumeLayout(false);

((System.ComponentModel.ISupportInitialize)(this.dgvSinhVien)).EndInit();

this.ResumeLayout(false);

}

#endregion

private System.Windows.Forms.Label labelTitle;

private System.Windows.Forms.GroupBox groupBox1;

private System.Windows.Forms.TextBox txtDiaChi;

private System.Windows.Forms.Label label4;

private System.Windows.Forms.DateTimePicker dtpNgaySinh;

private System.Windows.Forms.Label label3;

private System.Windows.Forms.TextBox txtLop;

private System.Windows.Forms.Label label2;

private System.Windows.Forms.TextBox txtHoTen;

private System.Windows.Forms.Label label1;

private System.Windows.Forms.GroupBox groupBox2;

private System.Windows.Forms.Button btnThoat;

private System.Windows.Forms.Button btnXoa;

private System.Windows.Forms.Button btnSua;

private System.Windows.Forms.Button btnThem;

private System.Windows.Forms.GroupBox groupBox3;

private System.Windows.Forms.DataGridView dgvSinhVien;

private System.Windows.Forms.DataGridViewTextBoxColumn colHoTen;

private System.Windows.Forms.DataGridViewTextBoxColumn colNgaySinh;

private System.Windows.Forms.DataGridViewTextBoxColumn colLop;

private System.Windows.Forms.DataGridViewTextBoxColumn colDiaChi;

}

}

**Bước 3. Dán code logic vào file Form1.cs**

1. Mở **Form1.cs** (không phải Designer).
2. Xóa nội dung cũ chừa lại namespace
3. Dán code

using System;

using System.Windows.Forms;

namespace \_1150080123\_lab3\_1\_

{

public partial class Form1 : Form

{

public Form1()

{

InitializeComponent();

// Cấu hình DataGridView

dgvSinhVien.SelectionMode = DataGridViewSelectionMode.FullRowSelect;

dgvSinhVien.MultiSelect = false;

dgvSinhVien.AllowUserToAddRows = false;

dgvSinhVien.ReadOnly = true;

// Nếu chưa có cột trong Designer thì tạo ở đây

EnsureColumns();

// Gắn sự kiện (nếu bạn đã gắn trong Designer rồi thì vẫn OK, không lỗi)

btnThem.Click += btnThem\_Click;

btnXoa.Click += btnXoa\_Click;

btnSua.Click += btnSua\_Click;

btnThoat.Click += btnThoat\_Click;

dgvSinhVien.SelectionChanged += dgvSinhVien\_SelectionChanged;

}

// Tạo cột nếu thiếu – tên cột TRÙNG với code Sửa/Chọn dòng

private void EnsureColumns()

{

if (dgvSinhVien.Columns.Count == 0)

{

dgvSinhVien.Columns.Add("colHoTen", "Họ tên");

dgvSinhVien.Columns.Add("colNgaySinh", "Ngày sinh");

dgvSinhVien.Columns.Add("colLop", "Lớp");

dgvSinhVien.Columns.Add("colDiaChi", "Địa chỉ");

}

else

{

// Đảm bảo name đúng để Cells["colXYZ"] không lỗi

if (!dgvSinhVien.Columns.Contains("colHoTen"))

dgvSinhVien.Columns[0].Name = "colHoTen";

if (dgvSinhVien.Columns.Count > 1 && !dgvSinhVien.Columns.Contains("colNgaySinh"))

dgvSinhVien.Columns[1].Name = "colNgaySinh";

if (dgvSinhVien.Columns.Count > 2 && !dgvSinhVien.Columns.Contains("colLop"))

dgvSinhVien.Columns[2].Name = "colLop";

if (dgvSinhVien.Columns.Count > 3 && !dgvSinhVien.Columns.Contains("colDiaChi"))

dgvSinhVien.Columns[3].Name = "colDiaChi";

}

}

// ✅ Thêm sinh viên

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

{

string hoTen = txtHoTen.Text.Trim();

string lop = txtLop.Text.Trim();

string diaChi = txtDiaChi.Text.Trim();

string ngaySinh = dtpNgaySinh.Value.ToShortDateString();

if (string.IsNullOrEmpty(hoTen))

{

MessageBox.Show("Họ tên sinh viên không được để trống!",

"Thông báo", MessageBoxButtons.OK, MessageBoxIcon.Warning);

txtHoTen.Focus();

return;

}

// Thêm đúng thứ tự cột: Họ tên – Ngày sinh – Lớp – Địa chỉ

dgvSinhVien.Rows.Add(hoTen, ngaySinh, lop, diaChi);

ClearInput();

}

// ✅ Xóa sinh viên

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

{

if (dgvSinhVien.SelectedRows.Count == 0)

{

MessageBox.Show("Vui lòng chọn 1 sinh viên cần xóa!",

"Thông báo", MessageBoxButtons.OK, MessageBoxIcon.Information);

return;

}

if (MessageBox.Show("Bạn có chắc muốn xóa dòng này?", "Xác nhận",

MessageBoxButtons.YesNo, MessageBoxIcon.Question) == DialogResult.Yes)

{

dgvSinhVien.Rows.RemoveAt(dgvSinhVien.SelectedRows[0].Index);

ClearInput();

}

}

// ✅ Sửa thông tin sinh viên

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

{

if (dgvSinhVien.SelectedRows.Count == 0)

{

MessageBox.Show("Vui lòng chọn 1 sinh viên cần sửa!",

"Thông báo", MessageBoxButtons.OK, MessageBoxIcon.Information);

return;

}

string hoTen = txtHoTen.Text.Trim();

string lop = txtLop.Text.Trim();

string diaChi = txtDiaChi.Text.Trim();

string ngaySinh = dtpNgaySinh.Value.ToShortDateString();

if (string.IsNullOrEmpty(hoTen))

{

MessageBox.Show("Họ tên sinh viên không được để trống!",

"Thông báo", MessageBoxButtons.OK, MessageBoxIcon.Warning);

txtHoTen.Focus();

return;

}

DataGridViewRow row = dgvSinhVien.SelectedRows[0];

row.Cells["colHoTen"].Value = hoTen;

row.Cells["colNgaySinh"].Value = ngaySinh;

row.Cells["colLop"].Value = lop;

row.Cells["colDiaChi"].Value = diaChi;

MessageBox.Show("Đã cập nhật thông tin sinh viên!",

"Thông báo", MessageBoxButtons.OK, MessageBoxIcon.Information);

ClearInput();

}

// ✅ Thoát chương trình (đóng form hiện tại)

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

{

if (MessageBox.Show("Bạn có chắc muốn thoát?", "Xác nhận",

MessageBoxButtons.YesNo, MessageBoxIcon.Question) == DialogResult.Yes)

{

this.Close(); // dùng Close() thay vì Application.Exit() cho an toàn

}

}

// ✅ Khi chọn 1 dòng trong DataGridView

private void dgvSinhVien\_SelectionChanged(object sender, EventArgs e)

{

if (dgvSinhVien.SelectedRows.Count > 0)

{

DataGridViewRow row = dgvSinhVien.SelectedRows[0];

txtHoTen.Text = row.Cells["colHoTen"].Value?.ToString();

txtLop.Text = row.Cells["colLop"].Value?.ToString();

txtDiaChi.Text = row.Cells["colDiaChi"].Value?.ToString();

if (DateTime.TryParse(row.Cells["colNgaySinh"].Value?.ToString(), out DateTime ns))

dtpNgaySinh.Value = ns;

}

}

// ✅ Hàm xóa trắng ô nhập

private void ClearInput()

{

txtHoTen.Clear();

txtLop.Clear();

txtDiaChi.Clear();

dtpNgaySinh.Value = DateTime.Now;

dgvSinhVien.ClearSelection();

}

}

}

**Bước 4. Build & chạy thử chương trình**

**Run 🡪 nhập và thử các nút thêm xóa sửa**

