using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Windows.Forms;

namespace WindowsFormsApplication1

{

 public partial class frmMatrices : Form

 {

 #region ATRIBUTOS

 int Columna = 0;

 int Fila = 0;

 double s, prom;

 #endregion ATRIBUTOS

 #region CONSTRUCTORES

 public frmMatrices()

 {

 InitializeComponent();

 }

 #endregion CONSTRUCTORES

 #region METODOS

 //===========================================================

 public void ActivarGrilla()

 {

 Columna = 0;

 Fila = 0;

 if (int.TryParse(txtColumna.Text, out Columna))

 {

 if (int.TryParse(txtFila.Text, out Fila))

 {

 dgvMatriz1.Visible = true;

 dgvMatriz1.ColumnCount = Columna;

 dgvMatriz1.RowCount = Fila;

 for (int i = 0; i < Fila; i++)

 //for (int i = Fila - 1; i >= 0; i--)

 {

 dgvMatriz1.Rows[i].HeaderCell.Value= (i + 1).ToString();

 dgvMatriz1.Rows[i].Height = 30;

 //for (int j = Columna - 1; j >= 0; j--)

 for (int j = 0; j < Columna; j++)

 {

 dgvMatriz1.Columns[j].HeaderText = (j + 1).ToString();

 dgvMatriz1.Columns[j].Width = 30;

 //---poner valor por defecto

 dgvMatriz1[j, i].Value = 1;

 }

 }

 }

 }

 }

 public void ProcesarSumar()

 {

 // aca define la matriz de acuerdo al tamaño de la grilla

 double[,] M = new double[dgvMatriz1.Rows.Count, dgvMatriz1.Columns.Count];

 // aca carga la matriz desde la grilla

 int col = Columna - 1;

 int fil = Fila - 1;

 for (int i = 0; i < Fila; i++)

 {

 for (int j = 0; j < Columna; j++)

 {

 M[i, j] = Convert.ToDouble(dgvMatriz1[j, i].Value);

 }

 }

 //calcula suma y promedio

 s = 0;

 prom = 0;

 for (int i = 0; i < Fila; i++)

 for (int j = 0; j < Columna; j++)

 s = s + M[i, j];

 prom = s / (Columna \* Fila);

 textBox1.Text = Convert.ToString(s);

 textBox2.Text = Convert.ToString(prom);

 }

 #endregion METODOS

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

 {

 Close();

 }

 private void btnSalir\_Click\_1(object sender, EventArgs e)

 {

 this.Close();

 }

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

 {

 ProcesarSumar();

 }

 private void btn\_crearGrilla\_Click(object sender, EventArgs e)

 {

 ActivarGrilla();

 }

 private void frmMatrices\_Load(object sender, EventArgs e)

 {

 }

 }

}