Home Work 17-11-2023

Lê Hữu Hoàn

A computer screen with a white box

Description automatically generated

A screenshot of a computer

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CODE

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| using AutomobileLibrary.BLL;  using AutomobileLibrary.Repository;  using System;  using System.Collections.Generic;  using System.ComponentModel;  using System.Data;  using System.Drawing;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  using System.Windows.Forms;  namespace AutomobileWinApp {  public partial class Form2 : Form {  public Form2() {  InitializeComponent();  }  public CarRepository carRepository = null;  public bool InsertOrupdate { get; set; }  public Car car { get; set; }  private void btnSave\_Click(object sender, EventArgs e) {  try {  var car = new Car {  CarID = int.Parse(txtCarId.Text),  CarName = txtCarName.Text,  Manufacturer = comboBox1.Text,  Price = decimal.Parse(txtPrice.Text),  ReleaseYear = int.Parse(txtReleaseYear.Text)  };  if (InsertOrupdate == false) {  carRepository.InsertCar(car);  } else {  carRepository.UpdateCar(car);  }  }  catch (Exception ex) {  MessageBox.Show(ex.Message);  }  }  private void btnCancel\_Click(object sender, EventArgs e) => Close();  private void Form2\_Load(object sender, EventArgs e) {  comboBox1.SelectedIndex = 0;  txtCarId.Enabled = !InsertOrupdate;  if(InsertOrupdate == true) {  txtCarId.Text = car.CarID.ToString();  txtCarName.Text = car.CarName.ToString();  txtPrice.Text = car.Price.ToString();  txtReleaseYear.Text = car.ReleaseYear.ToString();  comboBox1.Text = car.Manufacturer.Trim();  }  }  }  } |

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| namespace AutomobileWinApp {  partial class Form2 {  /// <summary>  /// Required designer variable.  /// </summary>  private System.ComponentModel.IContainer components = null;  /// <summary>  /// Clean up any resources being used.  /// </summary>  /// <param name="disposing">true if managed resources should be disposed; otherwise, false.</param>  protected override void Dispose(bool disposing) {  if (disposing && (components != null)) {  components.Dispose();  }  base.Dispose(disposing);  }  #region Windows Form Designer generated code  /// <summary>  /// Required method for Designer support - do not modify  /// the contents of this method with the code editor.  /// </summary>  private void InitializeComponent() {  txtCarName = new TextBox();  txtCarId = new TextBox();  lbReleaseYear = new Label();  lbPrice = new Label();  lbManufacturer = new Label();  lbCarName = new Label();  lbCarId = new Label();  comboBox1 = new ComboBox();  btnSave = new Button();  btnCancel = new Button();  txtPrice = new MaskedTextBox();  txtReleaseYear = new MaskedTextBox();  SuspendLayout();  //  // txtCarName  //  txtCarName.Location = new Point(223, 106);  txtCarName.Name = "txtCarName";  txtCarName.Size = new Size(169, 23);  txtCarName.TabIndex = 21;  //  // txtCarId  //  txtCarId.Location = new Point(223, 57);  txtCarId.Name = "txtCarId";  txtCarId.Size = new Size(169, 23);  txtCarId.TabIndex = 20;  //  // lbReleaseYear  //  lbReleaseYear.AutoSize = true;  lbReleaseYear.Location = new Point(98, 255);  lbReleaseYear.Name = "lbReleaseYear";  lbReleaseYear.Size = new Size(71, 15);  lbReleaseYear.TabIndex = 19;  lbReleaseYear.Text = "Release Year";  //  // lbPrice  //  lbPrice.AutoSize = true;  lbPrice.Location = new Point(98, 207);  lbPrice.Name = "lbPrice";  lbPrice.Size = new Size(33, 15);  lbPrice.TabIndex = 18;  lbPrice.Text = "Price";  //  // lbManufacturer  //  lbManufacturer.AutoSize = true;  lbManufacturer.Location = new Point(98, 153);  lbManufacturer.Name = "lbManufacturer";  lbManufacturer.Size = new Size(79, 15);  lbManufacturer.TabIndex = 17;  lbManufacturer.Text = "Manufacturer";  //  // lbCarName  //  lbCarName.AutoSize = true;  lbCarName.Location = new Point(98, 109);  lbCarName.Name = "lbCarName";  lbCarName.Size = new Size(60, 15);  lbCarName.TabIndex = 16;  lbCarName.Text = "Car Name";  //  // lbCarId  //  lbCarId.AutoSize = true;  lbCarId.Location = new Point(98, 60);  lbCarId.Name = "lbCarId";  lbCarId.Size = new Size(36, 15);  lbCarId.TabIndex = 15;  lbCarId.Text = "CarID";  //  // comboBox1  //  comboBox1.FormattingEnabled = true;  comboBox1.Items.AddRange(new object[] { "Audi", "BMV", "Ford", "Honda", "HuynDai", "Suzuki", "Kia", "Toyota" });  comboBox1.Location = new Point(223, 153);  comboBox1.Name = "comboBox1";  comboBox1.Size = new Size(169, 23);  comboBox1.TabIndex = 25;  //  // btnSave  //  btnSave.Location = new Point(167, 365);  btnSave.Name = "btnSave";  btnSave.Size = new Size(75, 23);  btnSave.TabIndex = 26;  btnSave.Text = "Save";  btnSave.UseVisualStyleBackColor = true;  btnSave.Click += btnSave\_Click;  //  // btnCancel  //  btnCancel.Location = new Point(308, 365);  btnCancel.Name = "btnCancel";  btnCancel.Size = new Size(75, 23);  btnCancel.TabIndex = 27;  btnCancel.Text = "Cancel";  btnCancel.UseVisualStyleBackColor = true;  btnCancel.Click += btnCancel\_Click;  //  // txtPrice  //  txtPrice.Location = new Point(223, 199);  txtPrice.Mask = "000000000";  txtPrice.Name = "txtPrice";  txtPrice.Size = new Size(169, 23);  txtPrice.TabIndex = 28;  txtPrice.Text = "0";  //  // txtReleaseYear  //  txtReleaseYear.Location = new Point(223, 247);  txtReleaseYear.Mask = "0000";  txtReleaseYear.Name = "txtReleaseYear";  txtReleaseYear.Size = new Size(169, 23);  txtReleaseYear.TabIndex = 29;  txtReleaseYear.Text = "0";  //  // Form2  //  AutoScaleDimensions = new SizeF(7F, 15F);  AutoScaleMode = AutoScaleMode.Font;  ClientSize = new Size(497, 450);  Controls.Add(txtReleaseYear);  Controls.Add(txtPrice);  Controls.Add(btnCancel);  Controls.Add(btnSave);  Controls.Add(comboBox1);  Controls.Add(txtCarName);  Controls.Add(txtCarId);  Controls.Add(lbReleaseYear);  Controls.Add(lbPrice);  Controls.Add(lbManufacturer);  Controls.Add(lbCarName);  Controls.Add(lbCarId);  Name = "Form2";  Text = "Form2";  Load += Form2\_Load;  ResumeLayout(false);  PerformLayout();  }  #endregion  private TextBox txtCarName;  private TextBox txtCarId;  private Label lbReleaseYear;  private Label lbPrice;  private Label lbManufacturer;  private Label lbCarName;  private Label lbCarId;  private ComboBox comboBox1;  private Button btnSave;  private Button btnCancel;  private MaskedTextBox txtPrice;  private MaskedTextBox txtReleaseYear;  }  } |

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| namespace AutomobileWinApp {  partial class Form1 {  /// <summary>  /// Required designer variable.  /// </summary>  private System.ComponentModel.IContainer components = null;  /// <summary>  /// Clean up any resources being used.  /// </summary>  /// <param name="disposing">true if managed resources should be disposed; otherwise, false.</param>  protected override void Dispose(bool disposing) {  if (disposing && (components != null)) {  components.Dispose();  }  base.Dispose(disposing);  }  #region Windows Form Designer generated code  /// <summary>  /// Required method for Designer support - do not modify  /// the contents of this method with the code editor.  /// </summary>  private void InitializeComponent() {  lbCarId = new Label();  lbCarName = new Label();  lbManufacturer = new Label();  lbPrice = new Label();  lbReleaseYear = new Label();  btnLoad = new Button();  btnNew = new Button();  btnDelete = new Button();  btnClose = new Button();  dataGridView1 = new DataGridView();  txtCarId = new TextBox();  txtCarName = new TextBox();  txtManuFacturer = new TextBox();  txtPrice = new TextBox();  txtReleaseYear = new TextBox();  ((System.ComponentModel.ISupportInitialize)dataGridView1).BeginInit();  SuspendLayout();  //  // lbCarId  //  lbCarId.AutoSize = true;  lbCarId.Location = new Point(66, 56);  lbCarId.Name = "lbCarId";  lbCarId.Size = new Size(36, 15);  lbCarId.TabIndex = 0;  lbCarId.Text = "CarID";  //  // lbCarName  //  lbCarName.AutoSize = true;  lbCarName.Location = new Point(66, 105);  lbCarName.Name = "lbCarName";  lbCarName.Size = new Size(60, 15);  lbCarName.TabIndex = 1;  lbCarName.Text = "Car Name";  //  // lbManufacturer  //  lbManufacturer.AutoSize = true;  lbManufacturer.Location = new Point(66, 149);  lbManufacturer.Name = "lbManufacturer";  lbManufacturer.Size = new Size(79, 15);  lbManufacturer.TabIndex = 2;  lbManufacturer.Text = "Manufacturer";  //  // lbPrice  //  lbPrice.AutoSize = true;  lbPrice.Location = new Point(414, 53);  lbPrice.Name = "lbPrice";  lbPrice.Size = new Size(33, 15);  lbPrice.TabIndex = 3;  lbPrice.Text = "Price";  //  // lbReleaseYear  //  lbReleaseYear.AutoSize = true;  lbReleaseYear.Location = new Point(414, 110);  lbReleaseYear.Name = "lbReleaseYear";  lbReleaseYear.Size = new Size(71, 15);  lbReleaseYear.TabIndex = 4;  lbReleaseYear.Text = "Release Year";  //  // btnLoad  //  btnLoad.Location = new Point(155, 205);  btnLoad.Name = "btnLoad";  btnLoad.Size = new Size(75, 23);  btnLoad.TabIndex = 5;  btnLoad.Text = "Load";  btnLoad.UseVisualStyleBackColor = true;  btnLoad.Click += btnLoad\_Click;  //  // btnNew  //  btnNew.Location = new Point(345, 205);  btnNew.Name = "btnNew";  btnNew.Size = new Size(75, 23);  btnNew.TabIndex = 6;  btnNew.Text = "New";  btnNew.UseVisualStyleBackColor = true;  btnNew.Click += btnNew\_Click;  //  // btnDelete  //  btnDelete.Location = new Point(511, 205);  btnDelete.Name = "btnDelete";  btnDelete.Size = new Size(75, 23);  btnDelete.TabIndex = 7;  btnDelete.Text = "Delete";  btnDelete.UseVisualStyleBackColor = true;  btnDelete.Click += btnDelete\_Click;  //  // btnClose  //  btnClose.Location = new Point(372, 416);  btnClose.Name = "btnClose";  btnClose.Size = new Size(75, 23);  btnClose.TabIndex = 8;  btnClose.Text = "Close";  btnClose.UseVisualStyleBackColor = true;  btnClose.Click += btnClose\_Click;  //  // dataGridView1  //  dataGridView1.ColumnHeadersHeightSizeMode = DataGridViewColumnHeadersHeightSizeMode.AutoSize;  dataGridView1.Location = new Point(36, 251);  dataGridView1.Name = "dataGridView1";  dataGridView1.RowTemplate.Height = 25;  dataGridView1.Size = new Size(729, 150);  dataGridView1.TabIndex = 9;  //  // txtCarId  //  txtCarId.Location = new Point(191, 53);  txtCarId.Name = "txtCarId";  txtCarId.Size = new Size(169, 23);  txtCarId.TabIndex = 10;  //  // txtCarName  //  txtCarName.Location = new Point(191, 102);  txtCarName.Name = "txtCarName";  txtCarName.Size = new Size(169, 23);  txtCarName.TabIndex = 11;  //  // txtManuFacturer  //  txtManuFacturer.Location = new Point(191, 146);  txtManuFacturer.Name = "txtManuFacturer";  txtManuFacturer.Size = new Size(169, 23);  txtManuFacturer.TabIndex = 12;  //  // txtPrice  //  txtPrice.Location = new Point(534, 53);  txtPrice.Name = "txtPrice";  txtPrice.Size = new Size(160, 23);  txtPrice.TabIndex = 13;  //  // txtReleaseYear  //  txtReleaseYear.Location = new Point(534, 107);  txtReleaseYear.Name = "txtReleaseYear";  txtReleaseYear.Size = new Size(160, 23);  txtReleaseYear.TabIndex = 14;  //  // Form1  //  AutoScaleDimensions = new SizeF(7F, 15F);  AutoScaleMode = AutoScaleMode.Font;  ClientSize = new Size(800, 450);  Controls.Add(txtReleaseYear);  Controls.Add(txtPrice);  Controls.Add(txtManuFacturer);  Controls.Add(txtCarName);  Controls.Add(txtCarId);  Controls.Add(dataGridView1);  Controls.Add(btnClose);  Controls.Add(btnDelete);  Controls.Add(btnNew);  Controls.Add(btnLoad);  Controls.Add(lbReleaseYear);  Controls.Add(lbPrice);  Controls.Add(lbManufacturer);  Controls.Add(lbCarName);  Controls.Add(lbCarId);  Name = "Form1";  Text = "Form1";  Load += Form1\_Load;  ((System.ComponentModel.ISupportInitialize)dataGridView1).EndInit();  ResumeLayout(false);  PerformLayout();  }  #endregion  private Label lbCarId;  private Label lbCarName;  private Label lbManufacturer;  private Label lbPrice;  private Label lbReleaseYear;  private Button btnLoad;  private Button btnNew;  private Button btnDelete;  private Button btnClose;  private DataGridView dataGridView1;  private TextBox txtCarId;  private TextBox txtCarName;  private TextBox txtManuFacturer;  private TextBox txtPrice;  private TextBox txtReleaseYear;  }  } |

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| using AutomobileLibrary.BLL;  using AutomobileLibrary.Repository;  namespace AutomobileWinApp {  public partial class Form1 : Form {  public Form1() {  InitializeComponent();  }  CarRepository carRepository = new CarRepository();  BindingSource source = null;  private void Form1\_Load(object sender, EventArgs e) {  btnDelete.Enabled = false;  dataGridView1.CellDoubleClick += cell\_doubleClick;  }  public void cell\_doubleClick(object sender, DataGridViewCellEventArgs e) {  Form2 form2 = new Form2 {  Text = "Update Car",  carRepository = carRepository,  InsertOrupdate = true,  car = GetCarObject()  };  if (form2.ShowDialog() == DialogResult.OK) {  LoadListCars();  source.Position = source.Count - 1;  }  }  private void btnLoad\_Click(object sender, EventArgs e) {  LoadListCars();  }  public Car GetCarObject() {  try {  return new Car {  CarID = int.Parse(txtCarId.Text),  CarName = txtCarName.Text,  Manufacturer = txtManuFacturer.Text,  Price = decimal.Parse(txtPrice.Text),  ReleaseYear = int.Parse(txtReleaseYear.Text),  };  } catch (Exception e) {  MessageBox.Show(e.Message);  return null;  }  }  public void LoadListCars() {  var cars = carRepository.GetCars();  try {  source = new BindingSource();  source.DataSource = cars;  txtCarId.DataBindings.Clear();  txtCarName.DataBindings.Clear();  txtManuFacturer.DataBindings.Clear();  txtPrice.DataBindings.Clear();  txtReleaseYear.DataBindings.Clear();  txtCarId.DataBindings.Add("Text", source, "CarId");  txtCarName.DataBindings.Add("Text", source, "CarName");  txtManuFacturer.DataBindings.Add("Text", source, "Manufacturer");  txtPrice.DataBindings.Add("Text", source, "Price");  txtReleaseYear.DataBindings.Add("Text", source, "ReleaseYear");  dataGridView1.DataSource = null;  dataGridView1.DataSource = source;  if (cars.Count() == 0) {  ClearText();  btnDelete.Enabled = false;  } else {  btnDelete.Enabled = true;  }  } catch (Exception e) {  MessageBox.Show(e.Message);  }  }  public void ClearText() {  txtCarId.Text = string.Empty;  txtCarName.Text = string.Empty;  txtManuFacturer.Text = string.Empty;  txtPrice.Text = string.Empty;  txtReleaseYear.Text = string.Empty;  }  private void btnClose\_Click(object sender, EventArgs e) => Close();  private void btnNew\_Click(object sender, EventArgs e) {  Form2 form2 = new Form2 {  Text = "Insert Car",  carRepository = carRepository,  InsertOrupdate = false,  };  if (form2.ShowDialog() == DialogResult.OK) {  LoadListCars();  source.Position = source.Count - 1;  }  }  private void btnDelete\_Click(object sender, EventArgs e) {  try {  var car = GetCarObject();  carRepository.DeleteCar(car.CarID);  LoadListCars();  } catch (Exception ex) {  MessageBox.Show(ex.Message);  }  }  }  } |

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| using AutomobileLibrary.BLL;  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace AutomobileLibrary.Repository {  internal interface ICarRepository {  IEnumerable<Car> GetCars();  Car GetCarByid(int id);  void InsertCar(Car car);  void UpdateCar(Car car);  void DeleteCar(int id);  }  } |

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| using AutomobileLibrary.BLL;  using AutomobileLibrary.DAO;  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace AutomobileLibrary.Repository {  public class CarRepository : ICarRepository {  public void DeleteCar(int id) => CarDBContext.GetInstance.Delete(id);  public Car GetCarByid(int id) => CarDBContext.GetInstance.GetCarById(id);  public IEnumerable<Car> GetCars() => CarDBContext.GetInstance.list;  public void InsertCar(Car car) => CarDBContext.GetInstance.AddNew(car);  public void UpdateCar(Car car) => CarDBContext.GetInstance.Update(car);  }  } |

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| using AutomobileLibrary.BLL;  using System;  using System.Collections.Generic;  using System.Linq;  using System.Runtime.ConstrainedExecution;  using System.Text;  using System.Threading.Tasks;  namespace AutomobileLibrary.DAO {  public class CarDBContext {  private static List<Car> listCar = new List<Car> {  new Car {  CarID = 1,  CarName = "CRV",  Manufacturer ="Honda",  Price = 30000,  ReleaseYear = 2021  },  new Car {  CarID = 2,  CarName ="Ford fucus",  Manufacturer ="Ford",  Price = 15000,  ReleaseYear=2020  }  };  private static CarDBContext instance = null;  private static readonly object instanceLock = new object();  private CarDBContext() { }  public static CarDBContext GetInstance {  get {  lock (instanceLock) {  if (instance == null) {  instance = new CarDBContext();  }  return instance;  }  }  }  public List<Car> list => listCar;  public Car? GetCarById(int carID) {  return listCar.SingleOrDefault(s => s.CarID == carID);  }  public void AddNew(Car car) {  var extis = GetCarById(car.CarID);  if (extis == null) {  listCar.Add(car);  } else {  throw new Exception("Car already exits");  }  }  public void Update(Car car) {  var extis = GetCarById(car.CarID);  if (extis != null) {  var index = listCar.IndexOf(extis);  listCar[index] = car;  } else {  throw new Exception("Car not already exits");  }  }  public void Delete(int carID) {  var extis = GetCarById(carID);  if (extis != null) {  listCar.Remove(extis);  } else {  throw new Exception("Car not already exits");  }  }  }  } |

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| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace AutomobileLibrary.BLL {  public class Car {  public int CarID { get; set; }  public string CarName { get; set; }  public string Manufacturer { get; set; }  public decimal Price { get; set; }  public int ReleaseYear { get; set; }  }  } |