**Task No. 1:** Create a CRUD windows form application for students data using “One procedure for all CRUD operations” (use IF Else concept ).

**Solution: Stored Procedure**

CREATE PROCEDURE ManageData

@name varchar(255),

@age int,

@image image,

@gender varchar(50),

@contact int,

@id int,

@operation varchar(10)

AS

BEGIN

IF @operation = 'INSERT'

BEGIN

INSERT INTO EmpDetails (name, age, gender, contact,picture)

VALUES (@name, @age, @gender, @contact,@image)

END

ELSE IF @operation = 'UPDATE'

BEGIN

UPDATE EmpDetails

SET name = @name, age = @age, gender = @gender, contact = @contact,picture=@image

WHERE ID = @id

END

ELSE IF @operation = 'DELETE'

BEGIN

DELETE FROM EmpDetails

WHERE ID = @id

END

END

--------------------------------------------------------------------------------------------------

using System;

using System.ComponentModel;

using System.Configuration;

using System.Data;

using System.Data.SqlClient;

using System.Drawing;

using System.IO;

using System.Windows.Forms;

namespace CRUD

{

public partial class EmpDetailsForm : Form

{

public EmpDetailsForm()

{

InitializeComponent();

BindGridView();

pictureBox1.Image = Properties.Resources.OIP;

cmbgender.SelectedIndex = 0;

}

string cs = ConfigurationManager.ConnectionStrings["dbcs"].ConnectionString;

void BindGridView()

{

SqlConnection con = new SqlConnection(cs);

string query = "select \* from EmpDetails ";

SqlDataAdapter sda = new SqlDataAdapter(query, con);

DataTable data = new DataTable();

sda.Fill(data);

dataGridView1.DataSource = data;

DataGridViewImageColumn dgv = new DataGridViewImageColumn();

dgv = (DataGridViewImageColumn)dataGridView1.Columns[5];

dgv.ImageLayout = DataGridViewImageCellLayout.Stretch;

dataGridView1.RowTemplate.Height = 50;

}

public void FillGrid(string searchtext)

{

int n;

bool isNumeric = int.TryParse(txtsearch.Text, out n);

string query = "";

SqlConnection con = new SqlConnection(cs);

try

{

query = string.Empty;

if (isNumeric == false)

{

if (string.IsNullOrEmpty(searchtext.Trim()))

{

query = "select \* from empdetails";

}

else

{

query = "select id, name,age,gender,contact,picture from Empdetails where (name+ ' ' +gender) like'%" + searchtext.Trim() + "%'";

}

}

if (isNumeric)

{

if (string.IsNullOrEmpty(searchtext.Trim()))

{

query = "select \* from empdetails";

}

else

{

query = "select id, name,age,gender,contact,picture from Empdetails where (id+ ' ' +age+' '+contact) like'%" + searchtext.Trim() + "%'";

}

}

SqlDataAdapter sda = new SqlDataAdapter(query, con);

DataTable data = new DataTable();

sda.Fill(data);

dataGridView1.DataSource = data;

}

catch

{

MessageBox.Show("Some Issue Occur ", "Error", MessageBoxButtons.OK, MessageBoxIcon.Error);

}

}

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

{

if (cmbgender.SelectedIndex == 0)

{

errorProvider1.SetError(this.cmbgender, "Please Select Gender !");

cmbgender.Focus();

return;

}

SqlConnection con = new SqlConnection(cs);

string query = "ManageData @name,@age,@pic,@gender,@contact,@id,@operation";

SqlCommand cmd = new SqlCommand(query, con);

cmd.Parameters.AddWithValue("@name", txtname.Text);

cmd.Parameters.AddWithValue("@age", txtage.Text);

cmd.Parameters.AddWithValue("@gender", cmbgender.Text);

cmd.Parameters.AddWithValue("@contact", txtcontact.Text);

cmd.Parameters.AddWithValue("@pic", SavePhoto());

cmd.Parameters.AddWithValue("@operation", "Insert");

cmd.Parameters.AddWithValue("@id", Convert.ToInt32(txtID.Text));

con.Open();

int a = cmd.ExecuteNonQuery();

if (a > 0)

{

MessageBox.Show("Inserted Data Successfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);

BindGridView();

clearControls();

}

else

{

MessageBox.Show("Insertion Failed", "Failed", MessageBoxButtons.OK, MessageBoxIcon.Error);

}

con.Close();

}

void clearControls()

{

txtID.Text = string.Empty;

txtname.Text = string.Empty;

txtcontact.Text = string.Empty;

txtage.Text = string.Empty;

cmbgender.SelectedIndex = 0;

pictureBox1.Image = Properties.Resources.OIP;

}

private byte[] SavePhoto()

{

MemoryStream ms = new MemoryStream();

pictureBox1.Image.Save(ms, pictureBox1.Image.RawFormat);

return ms.GetBuffer();

}

private Image GetPhoto(byte[] img)

{

MemoryStream ms = new MemoryStream(img);

return Image.FromStream(ms);

}

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

{

OpenFileDialog open = new OpenFileDialog();

open.Title = "Upload Image";

open.Filter = "Image Files(\*.jpg; \*.jpeg; \*.gif; \*.bmp)|\*.jpg; \*.jpeg; \*.gif; \*.bmp|All files (\*.\*)|\*.\*";

if (open.ShowDialog() == DialogResult.OK)

{

pictureBox1.Image = new Bitmap(open.FileName);

}

}

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

{

SqlConnection con = new SqlConnection(cs);

string query = "ManageData @name,@age,@pic,@gender,@contact,@id,@operation";

SqlCommand cmd = new SqlCommand(query, con);

cmd.Parameters.AddWithValue("@name", txtname.Text);

cmd.Parameters.AddWithValue("@age", txtage.Text);

cmd.Parameters.AddWithValue("@gender", cmbgender.Text);

cmd.Parameters.AddWithValue("@contact", txtcontact.Text);

cmd.Parameters.AddWithValue("@pic", SavePhoto());

cmd.Parameters.AddWithValue("@operation", "Delete");

cmd.Parameters.AddWithValue("@id", Convert.ToInt32(txtID.Text));

con.Open();

int a = cmd.ExecuteNonQuery();

if (a > 0)

{

MessageBox.Show("Deleted Data Successfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);

BindGridView();

clearControls();

}

else

{

MessageBox.Show("Deletion Failed Failed", "Failed", MessageBoxButtons.OK, MessageBoxIcon.Error);

}

con.Close();

}

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

{

if (cmbgender.SelectedIndex == 0)

{

errorProvider1.SetError(this.cmbgender, "Please Select Gender !");

cmbgender.Focus();

return;

}

SqlConnection con = new SqlConnection(cs);

string query = "ManageData @name,@age,@pic,@gender,@contact,@id,@operation";

SqlCommand cmd = new SqlCommand(query, con);

cmd.Parameters.AddWithValue("@name", txtname.Text);

cmd.Parameters.AddWithValue("@age", txtage.Text);

cmd.Parameters.AddWithValue("@gender", cmbgender.Text);

cmd.Parameters.AddWithValue("@contact", txtcontact.Text);

cmd.Parameters.AddWithValue("@pic", SavePhoto());

cmd.Parameters.AddWithValue("@operation", "Update");

cmd.Parameters.AddWithValue("@id", Convert.ToInt32(txtID.Text));

con.Open();

int a = cmd.ExecuteNonQuery();

if (a > 0)

{

MessageBox.Show("Update Data Successfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);

BindGridView();

clearControls();

}

else

{

MessageBox.Show("Updation Failed", "Failed", MessageBoxButtons.OK, MessageBoxIcon.Error);

}

con.Close();

}

private void dataGridView1\_MouseDoubleClick\_1(object sender, MouseEventArgs e)

{

if (dataGridView1.Rows.Count > 0)

{

txtID.Text = dataGridView1.SelectedRows[0].Cells[0].Value.ToString();

txtname.Text = dataGridView1.SelectedRows[0].Cells[1].Value.ToString();

txtage.Text = dataGridView1.SelectedRows[0].Cells[2].Value.ToString();

cmbgender.Text = dataGridView1.SelectedRows[0].Cells[3].Value.ToString();

txtcontact.Text = dataGridView1.SelectedRows[0].Cells[4].Value.ToString();

pictureBox1.Image = GetPhoto((byte[])dataGridView1.SelectedRows[0].Cells[5].Value);

}

}

private void searchtext\_TextChanged(object sender, EventArgs e)

{

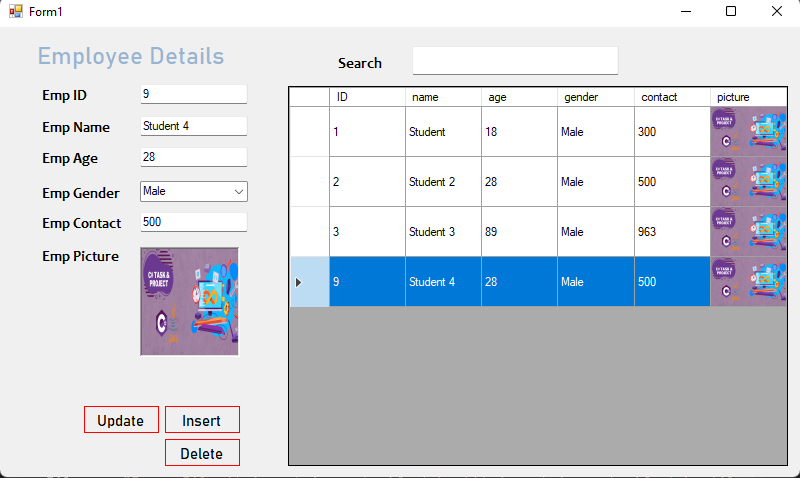
FillGrid(txtsearch.Text.Trim());

}

}

}

**Output:**

****