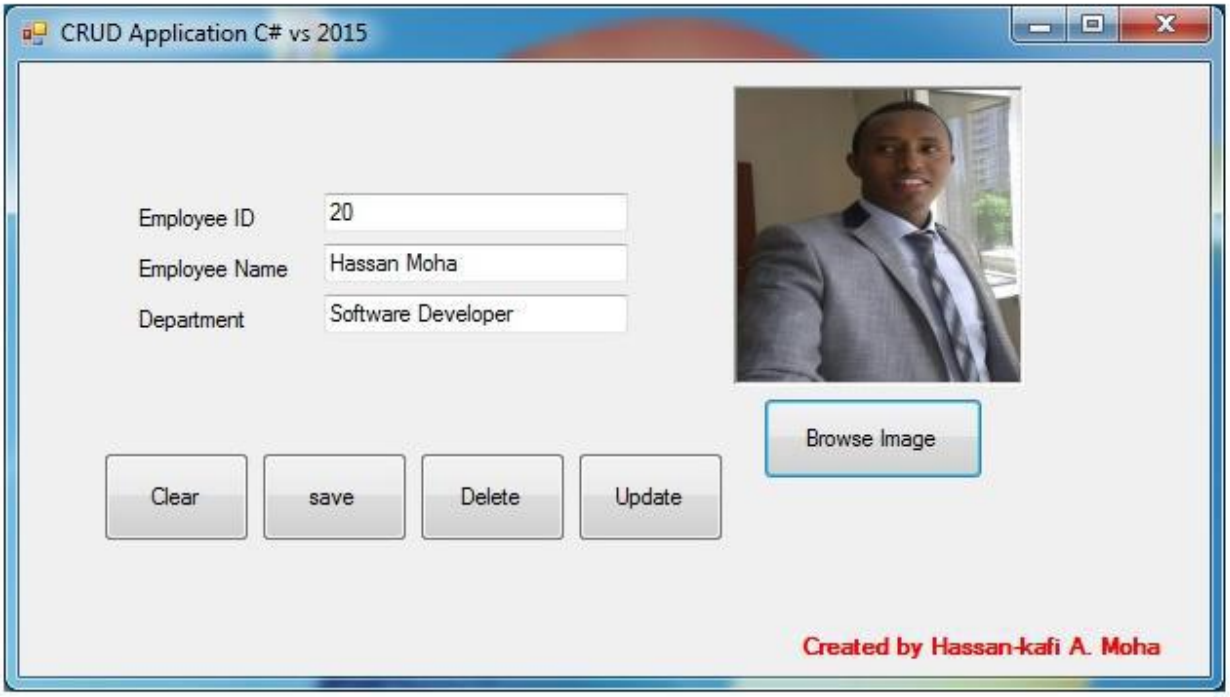
Chapter 2: Desktop Application

Lesson 2: basic CRUD using UWP/WPF

A Universal Windows Platform (UWP) app is a Windows experience that is built upon the Universal Windows Platform (UWP), which was first introduced in Windows 8 as the Windows Runtime. At the core of UWP apps is the idea that users want their *experiences* to be mobile across ALL their devices, and they want to use whatever device is most convenient or productive for the task at hand.

The following screenshot show CRUD / insertion, update, delete with images into the sql server database



C#

```
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;
using System.IO;

namespace CRUD_app
{
public partial class Form1 : Form
{
employeeDataContext ed;
string imagename;
public Form1()
{
InitializeComponent();
ed = new employeeDataContext();
}
private void Form1_Load(object sender, EventArgs e)
{
}
private void button1_Click(object sender, EventArgs e)
{
```

```
employeetab empTable = new employeetab(); // calling the employee class in
the employee.designer.cs file
var empid = from data in ed.employeetabs
where data.empid == textBox1.Text.ToString()
select data;
if (!empid.Any())
{
if (imagename != "")
{
FileStream fs;
fs = new FileStream(@imagename, FileMode.Open, FileAccess.Read);
//a byte array to read the image
byte[] picbyte = new byte[fs.Length];
fs.Read(picbyte, 0, System.Convert.ToInt32(fs.Length));
fs.Close();
empTable.empid = textBox1.Text;
empTable.empname = textBox2.Text.ToString();
empTable.empdep = textBox3.Text.ToString();
empTable.empimage = picbyte;
ed.employeetabs.InsertOnSubmit(empTable);
ed.SubmitChanges();
MessageBox.Show("Record Inserted Successfully");
}
}
else MessageBox.Show("Record allready existing");
}
private void button2_Click(object sender, EventArgs e)
{
string empid = textBox1.Text.ToString();
```

```
//Here "ed" is the employeeDataContext
employeetab emp = ed.employeetabs.Single(e1 => e1.empid == empid); //To Retrieve one single record from the database for the given empid.
if (emp != null)
{
ed.employeetabs.DeleteOnSubmit(emp);
ed.SubmitChanges();
MessageBox.Show("Record Deleted");
}
}
```

```
private void textBox1_TextChanged(object sender, EventArgs e)
{
string empid = textBox1.Text;
var empresult = from data in ed.employeetabs // Ling Query to retrive data from table
where data.empid == empid
select data;
if(empresult.Any()) {
// Data Binding
foreach (var emp in empresult)
{
MemoryStream stream = new MemoryStream();
textBox2.Text = emp.empname.ToString(); // Retriving column data and binding to the textbox
textBox3.Text = emp.empdep.ToString(); // Retriving column data and binding to the textbox
if(emp.empimage != null) {
byte[] image = (byte[])emp.empimage.ToArray();
stream.Write(image, 0, image.Length);
//Bitmap bitmap = new Bitmap(stream);
pictureBox1.SizeMode = PictureBoxSizeMode.StretchImage;
```

```
pictureBox1.Image = Image.FromStream(stream);
;
}
}
}
else {
textBox2.Text = ""; textBox3.Text = "";
pictureBox1.Image = null;
}
}
private void button3_Click(object sender, EventArgs e)
{
string empid = textBox1.Text;
employeetab emp = ed.employeetabs.Single(e1 => e1.empid == empid); //To Retrieve one single record from the database for the given empid.
emp.empid = textBox1.Text; // Mapping the data to the column in the table
emp.empname = textBox2.Text.ToString(); // Mapping the data to the column in the table
emp.empdep = textBox3.Text.ToString(); // Mapping the data to the column in the table
```

```
//emp.EMP_LOCATION = txtEmpLocation.Text.ToString(); // Mapping the data to
the column in the table
if (imagename != "")
{
FileStream fs;
fs = new FileStream(@imagename, FileMode.Open, FileAccess.Read);
//a byte array to read the image
byte[] picbyte = new byte[fs.Length];
fs.Read(picbyte, 0, System.Convert.ToInt32(fs.Length));
fs.Close();
emp.empimage = picbyte;
ed.SubmitChanges();
imagename = "";
}
MessageBox.Show("Record Updated");
}
```

```
private void button4_Click(object sender, EventArgs e)
{
try
{
FileDialog fldlg = new OpenFileDialog();
//specify your own initial directory
fldlg.InitialDirectory = @"C:\";
//this will allow only those file extensions to be added
fldlg.Filter = "Image File (*.jpg;*.bmp;*.gif) | *.jpg;*.bmp;*.gif";
if (fldlg.ShowDialog() == DialogResult.OK)
{
imagename = fldlg.FileName;
//Bitmap newimg = new Bitmap(imagename);
pictureBox1.SizeMode = PictureBoxSizeMode.StretchImage;
pictureBox1.Image = Image.FromFile(imagename);
}
```

```
fldlg = null;
}
catch (System.ArgumentException ae)
{
imagename = " ";
MessageBox.Show(ae.Message.ToString());
}
catch (Exception ex)
{
MessageBox.Show(ex.Message.ToString());
}
}
private void bindingNavigatorDeleteItem_Click(object sender, EventArgs e)
{
}
private void cmdClear_Click(object sender, EventArgs e)
{
textBox1.Text = "";
```

```
textBox2.Text = "";
textBox3.Text = "";
}
}
}
```