



FATIMA JINNAH WOMEN UNIVERSITY
Department Of Software Engineering

HUMAN COMPUTER INTERACTION LAB

LAB 6 (User Interface Connectivity with Database)

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Registration # 2021-BSE-032

Semester: VI - A

LAB TASKS

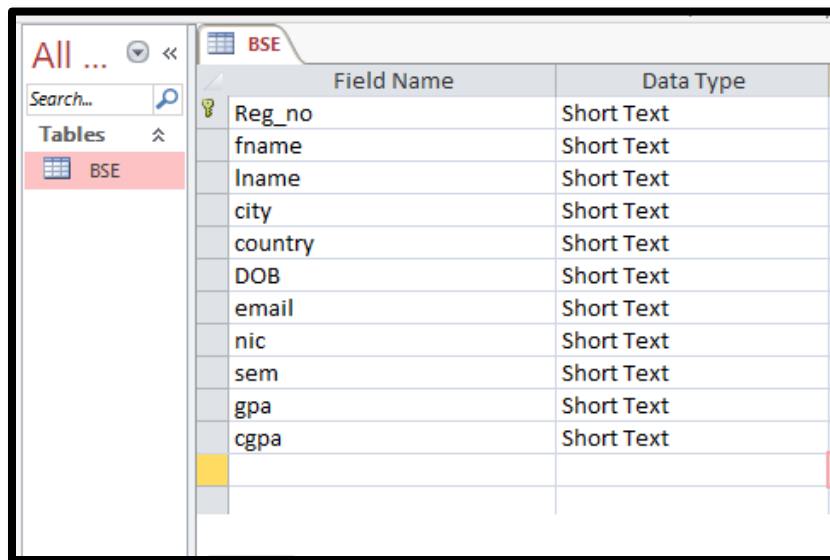
Task 1

Create a MS Access database (name of data base = bsestudents) with following fields

Table name: BSE

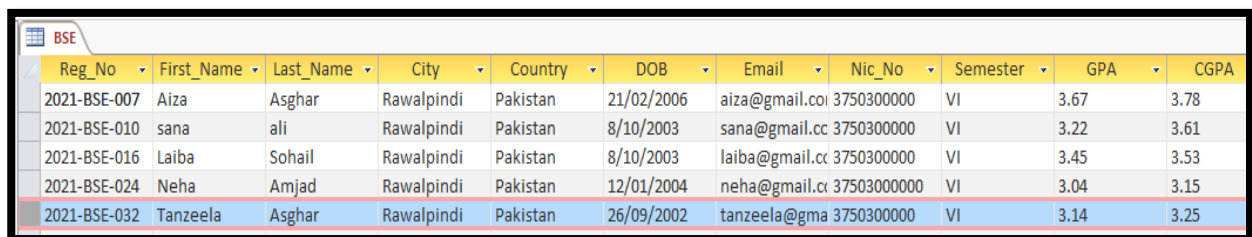
Add data for 5 random students in MS Access Database.

Microsoft Access:



The screenshot shows the Microsoft Access interface with the 'BSE' table selected in the 'Tables' pane. The table structure is displayed in a grid with two columns: 'Field Name' and 'Data Type'.

Field Name	Data Type
Reg_no	Short Text
fname	Short Text
lname	Short Text
city	Short Text
country	Short Text
DOB	Short Text
email	Short Text
nic	Short Text
sem	Short Text
gpa	Short Text
cgpa	Short Text



The screenshot shows the Microsoft Access interface with the 'BSE' table selected in the 'Tables' pane. The table data is displayed in a grid with 12 columns: 'Reg_No', 'First_Name', 'Last_Name', 'City', 'Country', 'DOB', 'Email', 'Nic_No', 'Semester', 'GPA', and 'CGPA'.

Reg_No	First_Name	Last_Name	City	Country	DOB	Email	Nic_No	Semester	GPA	CGPA
2021-BSE-007	Aiza	Asghar	Rawalpindi	Pakistan	21/02/2006	aiza@gmail.coi	3750300000	VI	3.67	3.78
2021-BSE-010	sana	ali	Rawalpindi	Pakistan	8/10/2003	sana@gmail.cc	3750300000	VI	3.22	3.61
2021-BSE-016	Laiba	Sohail	Rawalpindi	Pakistan	8/10/2003	laiba@gmail.cc	3750300000	VI	3.45	3.53
2021-BSE-024	Neha	Amjad	Rawalpindi	Pakistan	12/01/2004	neha@gmail.c	37503000000	VI	3.04	3.15
2021-BSE-032	Tanzeela	Asghar	Rawalpindi	Pakistan	26/09/2002	tanzeela@gma	3750300000	VI	3.14	3.25

Task 2

Create a user interface in C# for the above database, connect your application with the database to perform following operations;

1. ADD
2. Update
3. Delete

Test your connection by;

- Add 3 more records through your app
- Update data for 2nd record
- Delete last row

Program:

```
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;
using System.Data.OleDb;

namespace HCI_LAB_6
{
    public partial class Form1 : Form
    {
        private OleDbConnection connection = new OleDbConnection();

        public Form1()
        {
            InitializeComponent();
            try
            {
                connection.ConnectionString = @"Provider=Microsoft.ACE.OLEDB.12.0;Data
Source=C:\Users\92313\Documents\Database2.accdb;Persist Security Info=False;";
                MessageBox.Show("Connection Established");
            }
            catch (Exception exp1)
            {
                MessageBox.Show("Error in " + exp1);
            }
        }

        private void button1_Click(object sender, EventArgs e)
        {
            try
            {
                connection.Open();
                OleDbCommand command = new OleDbCommand();
                command.Connection = connection;
            }
        }
    }
}
```

```

        command.CommandText = "insert into BSE
(Reg_no,fname,lname,city,country,DOB,email,nic,sem,gpa,cgpa) values('" + textBox1.Text
+ "','" + textBox2.Text + "','" + textBox3.Text + "','" + textBox4.Text + "','" +
textBox5.Text + "','" + textBox6.Text + "','" + textBox7.Text + "','" + textBox8.Text
+ "','" + textBox9.Text + "','" + textBox10.Text + "','" + textBox11.Text + "')";
        command.ExecuteNonQuery();
        connection.Close();
        MessageBox.Show("Data stored!");
    }
    catch (Exception exp2)
    {
        MessageBox.Show("Error in " + exp2);
    }
}

private void button2_Click(object sender, EventArgs e)
{
    try
    {
        connection.Open();
        {
            String del = "DELETE FROM BSE WHERE [Reg_no]=@Reg_no";
            OleDbCommand command = new OleDbCommand();
            command.CommandText = del;
            command.Connection = connection;
            command.Parameters.AddWithValue("@Reg_no", textBox1.Text);
            command.ExecuteNonQuery();

            MessageBox.Show("Data Deleted!");
        }
        connection.Close();
    }
    catch (Exception exp3)
    {
        MessageBox.Show("Error in Delete = " + exp3);
    }
}

private void button3_Click(object sender, EventArgs e)
{
    try
    {
        connection.Open();
        {
            OleDbCommand command = new OleDbCommand();
            command.Connection = connection;

            command.CommandText = "update BSE set fname='" + textBox2.Text +
            "','lname='" + textBox3.Text + "','city='" + textBox4.Text + "','country='" +
            textBox5.Text + "','DOB='" + textBox6.Text + "','email='" + textBox7.Text + "','nic='"
            + textBox8.Text + "','sem='" + textBox9.Text + "','gpa='" + textBox10.Text + "','cgpa='"
            + textBox11.Text + "' where Reg_no= '" + textBox1.Text + "'";
            command.ExecuteNonQuery();

            MessageBox.Show("Data Updated!");
        }
        connection.Close();
    }
}

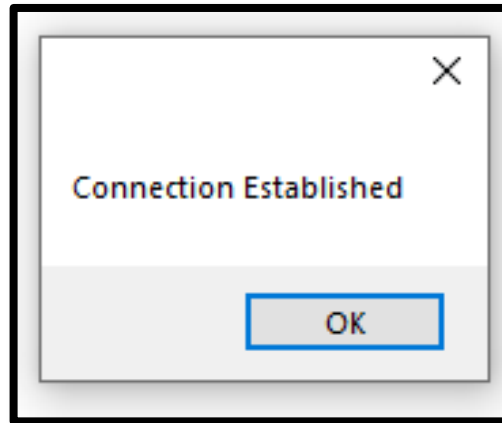
```

```

        catch (Exception exp3)
        {
            MessageBox.Show("Error in update = " + exp3);
        }
    }
}

```

Output:



Data Added (Row 2):

Reg_no	fname	lname	city	country	DOB	email	nic	sem	gpa	cgpa
1	Aimma	Butt	Islamabad	Pakistan	19-5-2002	aimmabutt@gmail.com	12345	6th	3.81	3.76
12	Laiba	Amir	Rwp	Pak	1-2-3	laiba@gmail.com	122334	4	3.17	3.22
2	Saba	Tariq	Rawalpindi	Pakistan	18-9-2002	sabatariq@gmail.com	42632	6th	3.66	3.5
3	Hamna	Malik	Jeddah	KSA	3-8-2001	laiba@gmail.com	34798	4th	2.54	3.4
4	Abeeha	Ahmed	Lahore	Pakistan	6-10-2005	abeeha@gmail.c	47493	2nd	2.39	3.22
5	Farwa	Batool	Karachi	Pakistan	8-11-2008	batool@gmail.cc	68723	8th	3.12	3.12

Data Updated (Row 5):

Form1

Reg # 5

First Name Farwa Last Name Batool

City Multan Country Pakistan

DOB 8-11-2004 Email j@gmail.com

Nic # 68723 Semester 8th

GPA 3.12 CGPA 3.12

ADD DELETE UPDATE

The screenshot shows a web browser window titled "Form1" with a light blue background. The form contains the following fields and values:

- Reg #: 5
- First Name: Farwa
- Last Name: Batool
- City: Multan
- Country: Pakistan
- DOB: 8-11-2004
- Email: [redacted]@gmail.com
- Nic #: 68723
- 8th: 8th
- GPA: 3.12
- CGPA: 3.12

At the bottom of the form are three buttons: "ADD", "DELETE", and "UPDATE". A modal dialog box is open in the center of the screen, titled "Data Updated!" with a close button (X) in the top right corner. The dialog contains an "OK" button.

Reg_no	fname	lname	city	country	DOB	email	nic	sem	gpa	cgpa
1	Aimma	Butt	Islamabad	Pakistan	19-5-2002	aimmabutt@gmail	12345	6th	3.81	3.76
12	Laiba	Amir	Rwp	Pak	1-2-3	laiba@gmail.com	122334	4	3.17	3.22
2	Saba	Tariq	Rawalpindi	Pakistan	18-9-2002	sabatarig@gmail	42632	6th	3.66	3.5
3	Hamna	Malik	Jeddah	KSA	3-8-2001	laiba@gmail.com	34798	4th	2.54	3.4
4	Abeeha	Ahmed	Lahore	Pakistan	6-10-2005	abeeha@gmail.c	47493	2nd	2.39	3.22
5	Farwa	Batool	Multan	Pakistan	8-11-2004	batool@gmail.cc	68723	8th	3.12	3.12

Data Deleted (Row 2):

Form1

Reg # 12

First Name Last Name

City

DOB

Nic # Semester

GPA CGPA

Data Deleted!

OK

ADD DELETE UPDATE

Reg_no	fname	lname	city	country	DOB	email	nic	sem	gpa	cgpa
1	Aimma	Butt	Islamabad	Pakistan	19-5-2002	aimmabutt@gmail	12345	6th	3.81	3.76
#Deleted	#Deleted	#Deleted	#Deleted	#Deleted	#Deleted	#Deleted	#Deleted	#Deleted	#Deleted	#Deleted
2	Saba	Tariq	Rawalpindi	Pakistan	18-9-2002	sabatariq@gmail	42632	6th	3.66	3.5
3	Hamna	Malik	Jeddah	KSA	3-8-2001	laiba@gmail.com	34798	4th	2.54	3.4
4	Abeeha	Ahmed	Lahore	Pakistan	6-10-2005	abeeha@gmail.c	47493	2nd	2.39	3.22
5	Farwa	Batool	Multan	Pakistan	8-11-2004	batool@gmail.cc	68723	8th	3.12	3.12

CONNECTION TESTING

Add 3 Records:

Form1

Reg # 6

First Name maham Last Name naeem

City Karachi Country Pakistan

DOB 1-4-2006 Email mahamnaeem@gmail.com

Nic # 326534 Semester 1

GPA 3.22 CGPA 3.55

ADD DELETE UPDATE

Data stored!
OK

Form1

Reg # 7

First Name zaupash Last Name tariq

City hairpur Country Pak

DOB 20-3-2002 Email zaupash@gn

Nic # 43657 Semester 4

GPA 3.33 CGPA 3.93

ADD DELETE UPDATE

Data stored!
OK

The screenshot shows a web browser window with a title bar containing a logo and the text 'Form1'. The browser has standard navigation buttons (back, forward, home, search) and address bar. The main content area has a light blue background and contains a form with the following fields:

- Reg #: 8
- First Name: ayesha
- Last Name: qayyum
- City: kashmir
- Country: kashmir
- DOB: 23-4-2002
- Email: ayesha@gmail.com
- Nic #: 43657332
- Semester: 8
- GPA: 3.11
- CGPA: 3.11

At the bottom of the form are three buttons: 'ADD', 'DELETE', and 'UPDATE'. A modal dialog box is open in the foreground, displaying the message 'Data stored!' and an 'OK' button. The dialog box has a close button (X) in the top right corner.

Reg_no	fname	lname	city	country	DOB	email	nic	sem	gpa	cgpa
1	Aimma	Butt	Islamabad	Pakistan	19-5-2002	aimmabutt@gmail.com	12345	6th	3.81	3.76
2	Saba	Tariq	Rawalpindi	Pakistan	18-9-2002	sabatariq@gmail.com	42632	6th	3.66	3.5
3	Hamna	Malik	Jeddah	KSA	3-8-2001	laiba@gmail.com	34798	4th	2.54	3.4
4	Abeeha	Ahmed	Lahore	Pakistan	6-10-2005	abeeha@gmail.com	47493	2nd	2.39	3.22
5	Farwa	Batool	Multan	Pakistan	8-11-2004	batool@gmail.com	68723	8th	3.12	3.12
6	maham	naeem	Karachi	Pak	1-4-2006	maham@gmail.com	326534	4	3.22	3.55
7	zaupash	tariq	hairpur	Pak	20-3-2002	zaupash@gmail.com	43657	4	3.33	3.93
8	ayasha	qayyum	kashmir	kashmir	23-4-2002	ayasha@gmail.com	43657332	8	3.11	3.22

Update 2nd Record:

Form1

Reg # 2

First Name Saba Last Name Tariq

City Murree Country

DOB 19-9-2002 Email

Nic # 42632 Semester

GPA 3.66 CGPA 3.22

ADD DELETE UPDATE

Data Updated!

OK

Reg_no	fname	lname	city	country	DOB	email	nic	sem	gpa	cgpa
1	Aimma	Butt	Islamabad	Pakistan	19-5-2002	aimmabutt@gmail.com	12345	6th	3.81	3.76
2	Saba	Tariq	Murree	Pak	19-9-2002	sabataiq@gmail.com	42632	6	3.66	3.22
3	Hamna	Malik	Jeddah	KSA	3-8-2001	laiba@gmail.com	34798	4th	2.54	3.4
4	Abeeha	Ahmed	Lahore	Pakistan	6-10-2005	abeeha@gmail.com	47493	2nd	2.39	3.22
5	Farwa	Batool	Multan	Pakistan	8-11-2004	batool@gmail.com	68723	8th	3.12	3.12
6	maham	naeem	Karachi	Pak	1-4-2006	maham@gmail.com	326534	4	3.22	3.55
7	zaupash	tariq	hairpur	Pak	20-3-2002	zaupash@gmail.com	43657	4	3.33	3.93
8	ayasha	qayyum	kashmir	kashmir	23-4-2002	ayasha@gmail.com	43657332	8	3.11	3.22

Delete last row:

Form1

Reg # 8

First Name Last Name

City Country

DOB Email

Nic # Semester

GPA CGPA

ADD DELETE UPDATE

Data Deleted!

OK

BSE											
Reg_no	fname	lname	city	country	DOB	email	nic	sem	gpa	cgpa	
1	Aimma	Butt	Islamabad	Pakistan	19-5-2002	aimmabutt@gmail	12345	6th	3.81	3.76	
2	Saba	Tariq	Murree	Pak	19-9-2002	sabataiq@gmail	42632	6	3.66	3.22	
3	Hamna	Malik	Jeddah	KSA	3-8-2001	laiba@gmail.com	34798	4th	2.54	3.4	
4	Abeeha	Ahmed	Lahore	Pakistan	6-10-2005	abeeha@gmail.c	47493	2nd	2.39	3.22	
5	Farwa	Batool	Multan	Pakistan	8-11-2004	batool@gmail.cc	68723	8th	3.12	3.12	
6	maham	naeem	Karachi	Pak	1-4-2006	maham@gmail.c	326534	4	3.22	3.55	
7	zaupash	tariq	hairpur	Pak	20-3-2002	zaupash@gmail	43657	4	3.33	3.93	