

Activity 1:

```
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 EditorApp
{
    public partial class frmEditor : Form
    {
        public frmEditor()
        {
            InitializeComponent();
        }

        private void undoToolStripMenuItem_Click(object sender, EventArgs e)
        {
            richTextBox1.Undo();
        }

        private void redoToolStripMenuItem_Click(object sender, EventArgs e)
        {
            richTextBox1.Redo();
        }

        private void cutToolStripMenuItem_Click(object sender, EventArgs e)
        {
            richTextBox1.Cut();
        }

        private void copyToolStripMenuItem_Click(object sender, EventArgs e)
        {
            richTextBox1.Copy();
        }

        private void pasteToolStripMenuItem_Click(object sender, EventArgs e)
        {
            richTextBox1.Paste();
        }

        private void selectAllToolStripMenuItem_Click(object sender, EventArgs e)
        {
            richTextBox1.SelectAll();
        }

        private void fontToolStripMenuItem_Click(object sender, EventArgs e)
        {
            FontDialog fd = new FontDialog();
        }
    }
}
```

```

        if (fd.ShowDialog() == DialogResult.OK)
        {
            richTextBox1.SelectionFont = fd.Font;
        }
    }

    private void colorToolStripMenuItem_Click(object sender, EventArgs e)
    {
        ColorDialog cd = new ColorDialog();

        if (cd.ShowDialog() == DialogResult.OK)
        {
            richTextBox1.SelectionColor = cd.Color;
        }
    }

    private void openToolStripMenuItem_Click(object sender, EventArgs e)
    {
        OpenFileDialog ofd = new OpenFileDialog();

        if (ofd.ShowDialog() == DialogResult.OK)
        {
            richTextBox1.LoadFile(ofd.FileName);
        }
    }

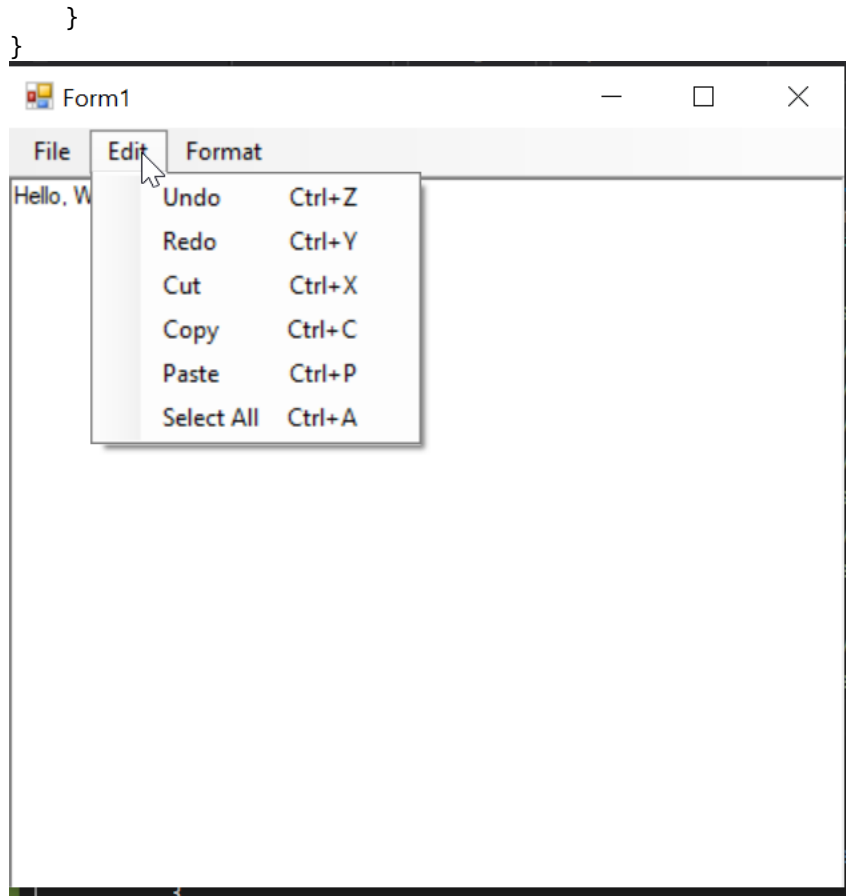
    private void saveToolStripMenuItem_Click(object sender, EventArgs e)
    {
        SaveFileDialog sfd = new SaveFileDialog();

        if (sfd.ShowDialog() == DialogResult.OK)
        {
            richTextBox1.SaveFile(sfd.FileName);
        }
    }

    private void frmEditor_Load(object sender, EventArgs e)
    {
        newToolStripMenuItem.ShortcutKeys = Keys.Control | Keys.N;
        openToolStripMenuItem.ShortcutKeys = Keys.Control | Keys.O;
        saveToolStripMenuItem.ShortcutKeys = Keys.Control | Keys.S;
        undoToolStripMenuItem.ShortcutKeys = Keys.Control | Keys.Z;
        redoToolStripMenuItem.ShortcutKeys = Keys.Control | Keys.Y;
        cutToolStripMenuItem.ShortcutKeys = Keys.Control | Keys.X;
        copyToolStripMenuItem.ShortcutKeys = Keys.Control | Keys.C;
        pasteToolStripMenuItem.ShortcutKeys = Keys.Control | Keys.P;
        selectAllToolStripMenuItem.ShortcutKeys = Keys.Control | Keys.A;
        fontToolStripMenuItem.ShortcutKeys = Keys.Control | Keys.F;
        colorToolStripMenuItem.ShortcutKeys = Keys.Control | Keys.C;
    }

    private void newToolStripMenuItem_Click(object sender, EventArgs e)
    {
        richTextBox1.Text = "";
    }

```



Activity 2:

```
using System;  
using System.Collections.Generic;  
using System.ComponentModel;  
using System.Data;  
using System.Data.SqlClient;  
using System.Drawing;  
using System.Linq;  
using System.Text;  
using System.Threading.Tasks;  
using System.Windows.Forms;  
  
namespace DatabaseApplication  
{  
    public partial class frmConnectedAccess : Form  
    {  
        public frmConnectedAccess()  
        {  
            InitializeComponent();  
        }  
    }  
}
```

```

private void button1_Click(object sender, EventArgs e)
{
    string connectionString = @"Data Source=(localdb)\MSSQLLocalDB;Initial
Catalog=ProjectDatabase;Integrated Security=True;";

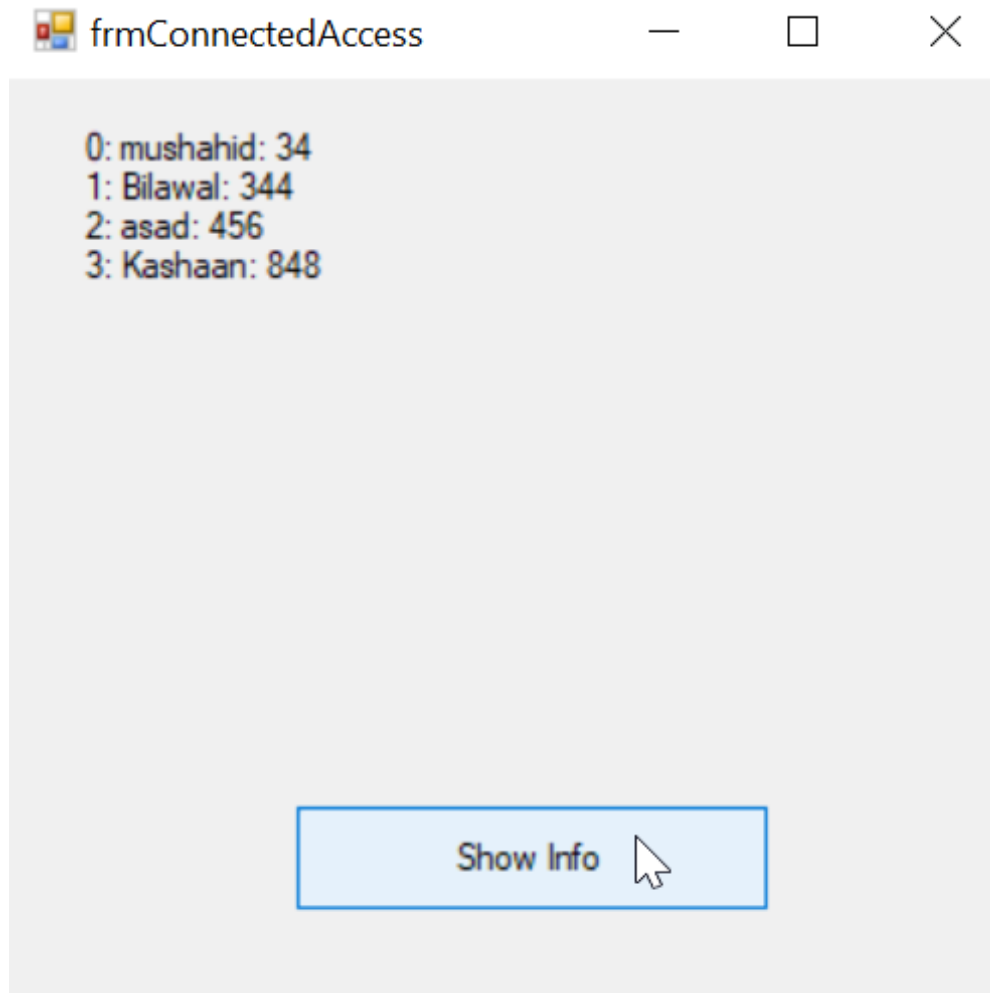
    try
    {
        SqlConnection sqlcnnection = new SqlConnection();
        sqlcnnection.ConnectionString = connectionString;

        SqlCommand sqlcmnd = new SqlCommand();
        sqlcmnd.Connection = sqlcnnection;
        sqlcmnd.CommandText = @"SELECT * FROM [dbo].[Table]";

        sqlcnnection.Open();
        lblinfo.Text = "";
        SqlDataReader reader = sqlcmnd.ExecuteReader();

        while (reader.Read())
        {
            lblinfo.Text += $"{reader.GetValue(0)}: {reader.GetValue(1)}:
{reader.GetValue(2)}\n";
        }
        sqlcnnection.Close();
    }
    catch (Exception)
    {
        Console.WriteLine("Exception has occurred");
    }
}
}

```



Acitivity 3:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace DatabaseApplication
{
    class Person
    {
        String firstname, lastname, city;
        public string FirstName
        {
            set;
            get;
        }
    }
}
```

```

        public string LastName
        {
            set;
            get;
        }
        public string City
        {
            set;
            get;
        }
    }
}

```

```

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 DatabaseApplication
{
    public partial class frmGridView : Form
    {
        Person[] persons;
        public frmGridView()
        {
            InitializeComponent();
        }

        private void button1_Click(object sender, EventArgs e)
        {
            dataGridView1.DataSource = persons;
        }

        private void frmGridView_Load(object sender, EventArgs e)
        {
            persons = new Person[5];
            int i = 0;

            Person person = new Person();
            person.FirstName = "Mushahid";
            person.LastName = "Hussain";
            person.City = "Parachinar";
            persons[i++] = person;

            Person person2 = new Person();
            person2.FirstName = "Bilawal";
            person2.LastName = "Hussain";
            person2.City = "Kohat";
            persons[i++] = person2;
        }
    }
}

```

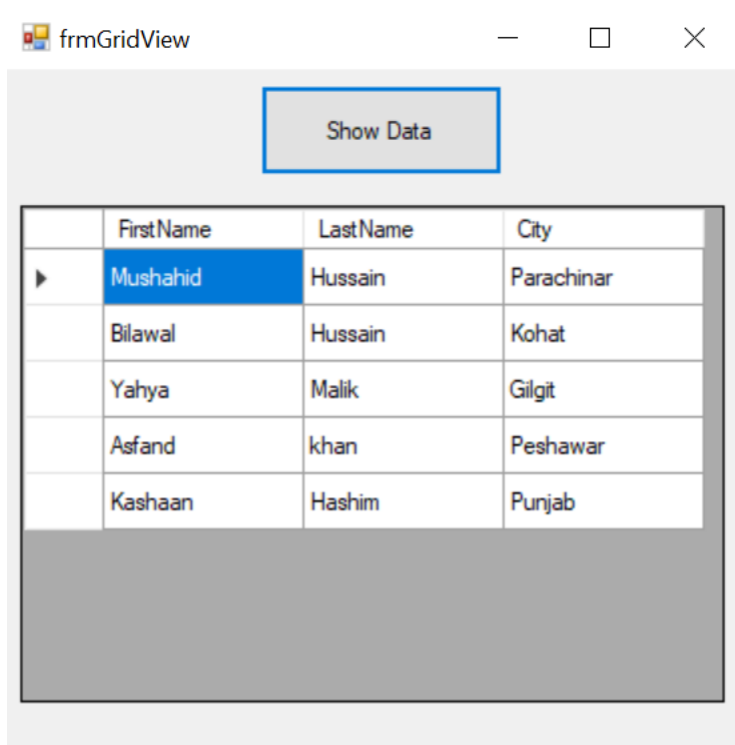
```

        Person person3 = new Person();
        person3.FirstName = "Yahya";
        person3.LastName = "Malik";
        person3.City = "Gilgit";
        persons[i++] = person3;

        Person person4 = new Person();
        person4.FirstName = "Asfand";
        person4.LastName = "khan";
        person4.City = "Peshawar";
        persons[i++] = person4;

        Person person5 = new Person();
        person5.FirstName = "Kashaan";
        person5.LastName = "Hashim";
        person5.City = "Punjab";
        persons[i++] = person5;
    }
}

```



Activity 4

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 DatabaseApplication
{
    public partial class frmBookStore : Form
    {
        public frmBookStore()
        {
            InitializeComponent();
        }

        private void frmBookStore_Load(object sender, EventArgs e)
        {
        }

        private void comboBox1_SelectedIndexChanged(object sender, EventArgs e)
        {
            listBox1.Items.Clear();
            BookDB bdb = new BookDB();
            bdb.AddBooks(bdb);
            if (comboBox1.SelectedItem == "Title")
            {
                foreach(Book b in bdb.list)
                {
                    listBox1.Items.Add(b.getTitle());
                }
            }
            else if (comboBox1.SelectedItem == "Author")
            {
                foreach (Book b in bdb.list)
                {
                    listBox1.Items.Add(b.getAuthor());
                }
            }
            else
            {
            }
        }
    }
}

```

```

using System;
using System.Collections;
using System.Collections.Generic;
using System.Linq;
using System.Text;

```



```

using System.Threading.Tasks;

namespace DatabaseApplication
{
    public delegate string ProcessBookDelegate(Book b);

    public struct Book
    {
        public string Title;
        public string Author;
        public decimal Price;
        public bool Paperback;

        public Book(string title, string author, decimal price, bool paperBack)
        {
            Title = title;
            Author = author;
            Price = price;
            Paperback = paperBack;
        }

        public string getTitle()
        {
            return Title;
        }

        public string getAuthor()
        {
            return Author;
        }
    }

    class BookDB
    {
        public ArrayList list = new ArrayList();
        {
            list.Add(new Book(title, author, price, paperBack));
        }

        public void ProcessPaperBackBooks(ProcessBookDelegate processBook)
        {
            foreach(Book b in list)
            {
                processBook(b);
            }
        }

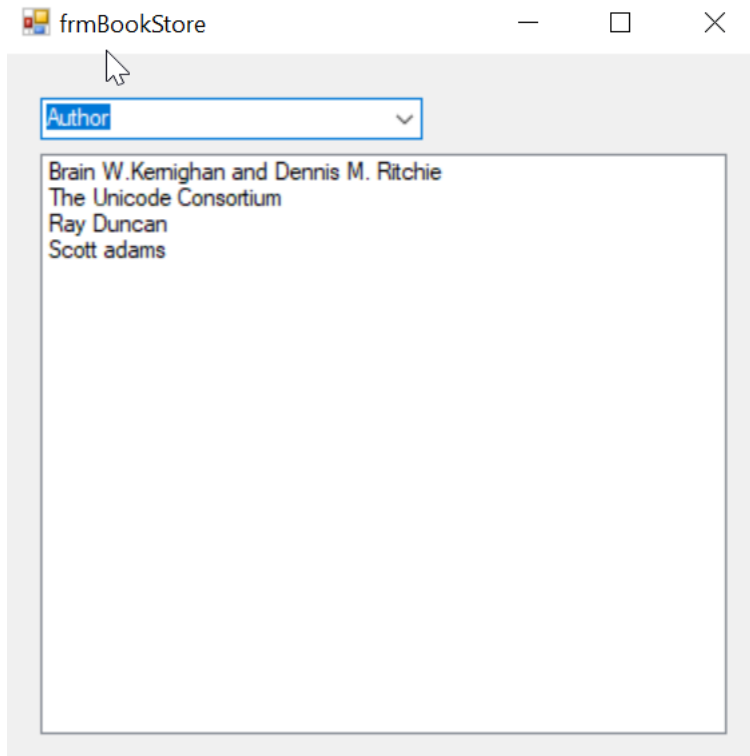
        public void AddBooks(BookDB bookdb)
        {
            bookdb.AddBook("The C porgramming Language", "Brain W.Kernighan and Dennis M.
Ritchie", 19.95m, true);
            bookdb.AddBook("The Unicode Standard 2.0", "The Unicode Consortium", 39.95m,
true);
            bookdb.AddBook("The MS-Dos Encyclopedia", "Ray Duncan", 129.95m, false);
        }
    }
}

```

```

        bookdb.AddBook("Dogbert's Clues for the Clueless", "Scott adams", 12.00m,
true);
    }
}

```



Activity 5

```

using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Data.SqlClient;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;

namespace studentManagementDB
{
    public partial class Form1 : Form
    {
        int i = -1;
    }
}

```

```

SqlConnection connection;
SqlCommand command;
string connectionString = @"Data Source=(localdb)\MSSQLLocalDB;Initial
Catalog=ProjectDatabase;Integrated Security=True;";
public Form1()
{
    InitializeComponent();

    connection = new SqlConnection();
    connection.ConnectionString = connectionString;

    command = new SqlCommand();
    command.Connection = connection;
}

private void Form1_Load(object sender, EventArgs e)
{

    String query = "SELECT * FROM [dbo].[studentRecords]";

    try
    {

        connection.Open();
        command.CommandText = query;

        SqlDataReader reader = command.ExecuteReader();
        while (reader.Read())
        {

            listBox1.Items.Add(reader.GetValue(1));

        }
        connection.Close();

    }
    catch (Exception)
    {

    }

}

private void button1_Click(object sender, EventArgs e)
{
    ++i;
    try
    {
        string commandtext = $@"INSERT INTO [dbo].[studentRecords]
                                VALUES
(' {i}', '{textBox1.Text}', '{textBox2.Text}', '{textBox3.Text}', '{textBox4.Text}', '{textBox5
.Text}', '{textBox6.Text}')";

        connection.Open();

        command.CommandText = commandtext;

```

```

        command.ExecuteNonQuery();

        listBox1.Items.Add(textBox1.Text);
        MessageBox.Show("Record Added successfully");

        connection.Close();
    }
    catch(Exception)
    {
        Console.WriteLine("\n\nerror occured\n\n");
    }
}

private void button2_Click(object sender, EventArgs e)
{
    try
    {
        string commandtext = $"DELETE FROM [dbo].[studentRecords] WHERE
firstName= '{textBox1.Text}'";

        connection.Open();

        command.CommandText = commandtext;

        command.ExecuteNonQuery();

        listBox1.Items.Remove(textBox1.Text);

        MessageBox.Show("Record deleted successfully");

        connection.Close();
    }
    catch (Exception)
    {
        Console.WriteLine("\n\nerror occured\n\n");
    }
}

private void button4_Click(object sender, EventArgs e)
{
    emptyTextboxes();
}

private void button3_Click(object sender, EventArgs e)
{
    string commandtext = $"UPDATE [dbo].[studentRecords]
                        SET firstName = '{textBox1.Text}', lastName =
'{textBox2.Text}', city='{textBox3.Text}', state='{textBox4.Text}',
country='{textBox5.Text}', Nationality='{textBox6.Text}'
                        WHERE firstName='{textBox1.Text}'";

    connection.Open();

    command.CommandText = commandtext;
    command.ExecuteNonQuery();
    MessageBox.Show("Updated successfully");
    emptyTextboxes();
}

```

```

        connection.Close();
    }

    private void emptyTextboxes()
    {
        this.textBox1.Text = "firstname";
        this.textBox2.Text = "lastname";
        this.textBox3.Text = "city";
        this.textBox4.Text = "state";
        this.textBox5.Text = "country";
        this.textBox6.Text = "nationality";
    }

    private void listBox1_SelectedIndexChanged(object sender, EventArgs e)
    {
        string data=listBox1.SelectedItem.ToString();

        String query = $"SELECT * FROM [dbo].[studentRecords] WHERE
firstname='{data}'";

        try
        {
            connection.Open();
            command.CommandText = query;

            SqlDataReader reader = command.ExecuteReader();
            while (reader.Read())
            {

                this.textBox1.Text = reader.GetValue(1).ToString();
                this.textBox2.Text = reader.GetValue(2).ToString();
                this.textBox3.Text = reader.GetValue(3).ToString();
                this.textBox4.Text = reader.GetValue(4).ToString();
                this.textBox5.Text = reader.GetValue(5).ToString();
                this.textBox6.Text = reader.GetValue(6).ToString();

            }
            connection.Close();

        }
        catch (Exception)
        {
        }
    }
}

```

Form1

Mushahid

Mushahid

Hussan

Parachinar

KPK

Pakistan

Pakistani

Add New

Delete

Update

Clear

Continue

Find in Files (Ctrl+Shift+F)

studentManagementDB.Form1

query = \$"SELECT * FROM [dbo].[studentRecords] WHERE firstna

connection.Open();

command.CommandText = query;

DataReader reader = command.ExecuteReader();

while (reader.Read())

this.textBox1.Text

this.textBox2.Text

this.textBox3.Text

this.textBox4.Text

this.textBox5.Text

this.textBox6.Text

Record Added successfully

OK