

Exercise 01

Step 01: Create a new database

Connect (Preview)

History

Recent Connections

- GAMIKA\SQLEXPRESS, <default> (GAMIKA\gamik)

▼ Connection Properties

Server Name:

Authentication:

User Name:

Password:

☐ Remember Password

Database Name:

Encrypt:

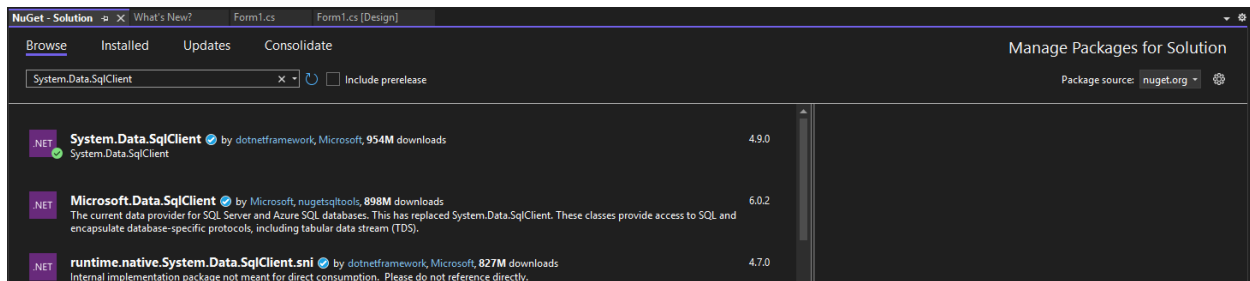
☒ Trust Server Certificate

Color:

Gamika\SQLEX...dbo.Students			
	Column Name	Data Type	Allow Nulls
🔑	IndexNo	char(10)	<input type="checkbox"/>
	Name	nchar(50)	<input type="checkbox"/>
	Age	int	<input type="checkbox"/>
	City	nchar(50)	<input type="checkbox"/>
▶			<input type="checkbox"/>

Gamika\SQLEX...dbo.Students				
	IndexNo	Name	Aqe	City
▶	S001	PERERA N K ...	26	Kandy ...
	S002	SILVA S A ...	23	Maharagama ...
	S003	YAPA W P ...	45	Pannipitiya ...
	S004	NIRMALA G S ...	34	Kegalle ...
*	NULL	NULL	NULL	NULL

Step 02: Install Required Package (NuGet)

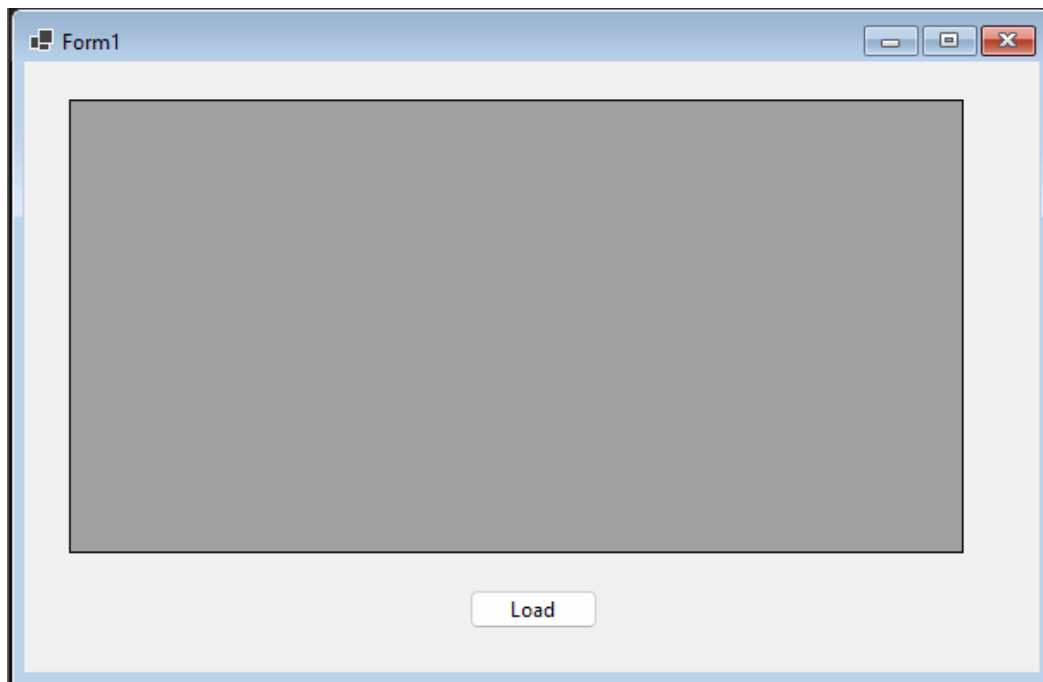


Step 03: Create the Windows Forms App

Step 04: Add These Using Directives at the Top of the Code File

```
using System.Data.SqlClient;
using System.Data;
```

Step 05: Add Controls to the Form



```
using System.Data.SqlClient;
using System.Data;

namespace DatabaseTest
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void Form1_Load(object sender, EventArgs e)
        {
        }

        private void button1_Click(object sender, EventArgs e)
        {
            string connectionString = "Data Source=GAMIKA\\SQLEXPRESS;Initial
Catalog=StudentDB;Integrated Security=True";

            string sql = "SELECT * FROM Students";

            SqlConnection connection = new SqlConnection(connectionString);
            SqlDataAdapter adapter = new SqlDataAdapter(sql, connection);
            DataSet ds = new DataSet();

            try
            {
                connection.Open();
                adapter.Fill(ds);
            }
        }
    }
}
```

```

    }
    catch (SqlException ex)
    {
        MessageBox.Show("SQL Error: " + ex.Message);
    }
    finally
    {
        connection.Close();
    }

    dataGridView1.DataSource = ds.Tables[0];
}
}
}

```

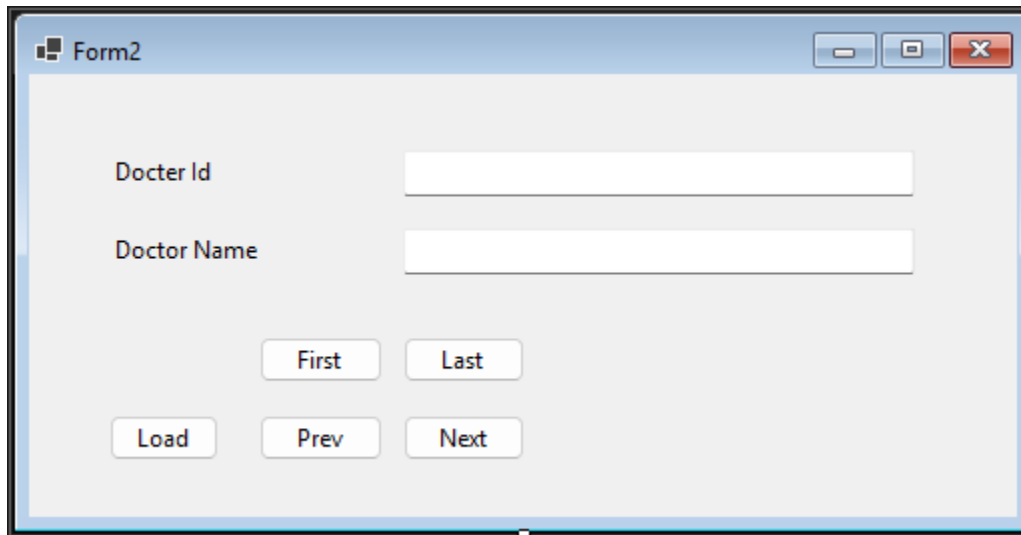
The screenshot shows a Windows Form titled 'Form1' with a standard Windows interface (minimize, maximize, close buttons). Inside the form, there is a data grid with the following data:

	IndexNo	Name	Age	City
▶	S001	PERERA N K	26	Kandy
	S002	SILVA S A	23	Maharagama
	S003	YAPA W P	45	Pannipitiya
	S004	NIRMALA G S	34	Kegalle
*				

Below the grid, there is a 'Load' button.

Exercise 02

Step 01: Design Your Form



Form2

Doctor Id

Doctor Name

First Last

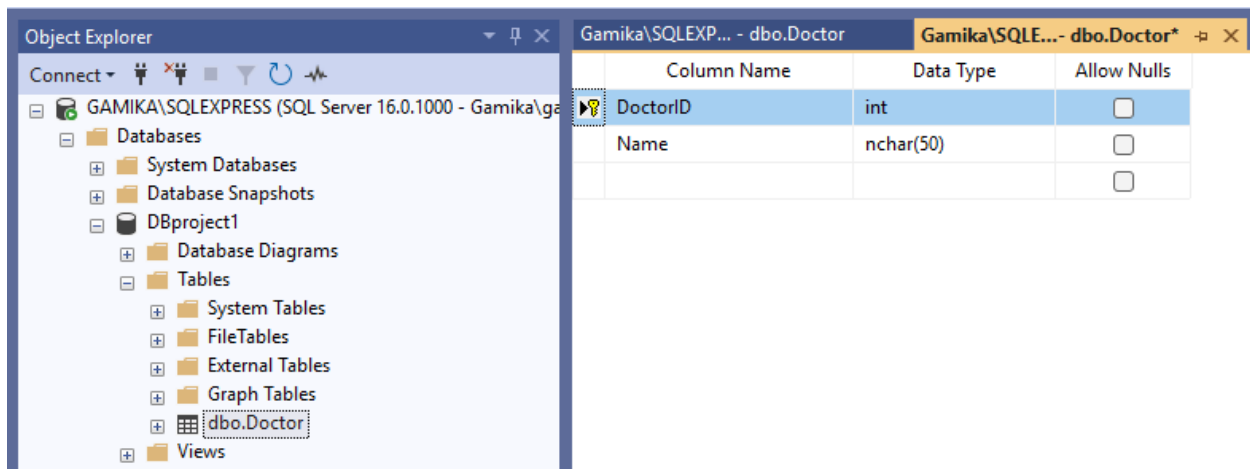
Load Prev Next

Step 02: Add Required Namespaces

```
using System.Data;
```

```
using System.Data.SqlClient;
```

Step 03: Create a new database



Object Explorer

Connect

GAMIKA\SQLEXPRESS (SQL Server 16.0.1000 - Gamika\ga)

Databases

System Databases

Database Snapshots

DBproject1

Database Diagrams

Tables

System Tables

FileTables

External Tables

Graph Tables

dbo.Doctor

Views

Gamika\SQLEXP... - dbo.Doctor

Gamika\SQLE... - dbo.Doctor*

Column Name	Data Type	Allow Nulls
DoctorID	int	<input type="checkbox"/>
Name	nchar(50)	<input type="checkbox"/>

Gamika\SQLEX... - dbo.Doctor		
DoctorID	Name	
1	KUMARA N K ...	
2	SILVA Y K ...	
3	YAPA W K ...	
4	MALANI N H ...	
▶*	NULL	NULL

Step 04:

```
private void btnLoad_Click(object sender, EventArgs e)
{
    connection = new SqlConnection("Data Source=GAMIKA\\SQLEXPRESS;Initial
Catalog=StudentDB;Integrated Security=True");
    adapter = new SqlDataAdapter("SELECT * Doctor", connection);

    dataTable = new DataTable();
    adapter.Fill(dataTable);

    BindingSource.DataSource = dataTable;
    txtIndexNo.DataBindings.Clear();
    txtName.DataBindings.Clear();

    txtIndexNo.DataBindings.Add("Text", BindingSource, "DoctorID");
    txtName.DataBindings.Add("Text", BindingSource, "Name");
}
```

Step 05: Add Navigation Button Functionalities

```
private void btnFirst_Click(object sender, EventArgs e)
{
    BindingSource.MoveFirst();
}

private void btnLast_Click(object sender, EventArgs e)
{
    BindingSource.MoveLast();
}

private void btnPrev_Click(object sender, EventArgs e)
{
    BindingSource.MovePrevious();
}

private void btnNext_Click(object sender, EventArgs e)
{
    BindingSource.MoveNext();
}
```

Step 05: Step Run the application by pressing F5

Form2

Doctor Id

Doctor Name

First Last

Load Prev Next

Form2

Doctor Id

Doctor Name

First Last

Load Prev Next

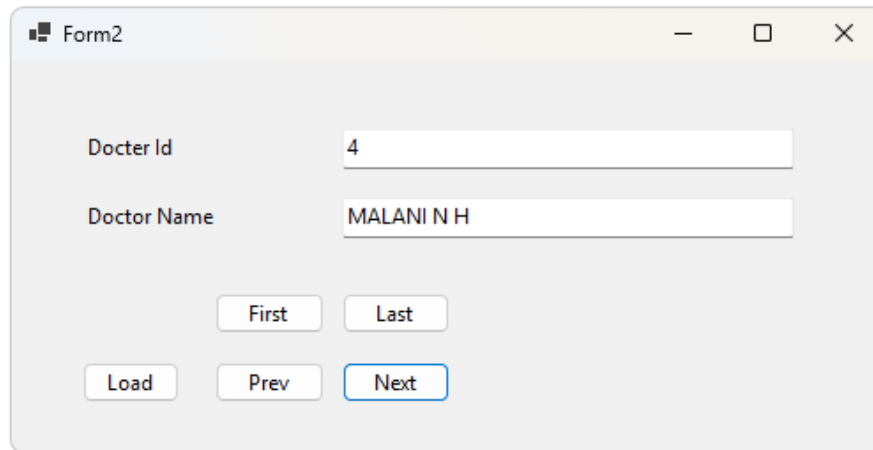
Form2

Doctor Id

Doctor Name

First Last

Load Prev Next



The image shows a web browser window with a title bar that says "Form2". Inside the window, there is a form with two text input fields. The first field is labeled "Doctor Id" and contains the number "4". The second field is labeled "Doctor Name" and contains the text "MALANI N H". Below these fields, there are five buttons: "First", "Last", "Load", "Prev", and "Next". The "Next" button is highlighted with a blue border.

Field	Value
Doctor Id	4
Doctor Name	MALANI N H

Buttons: First, Last, Load, Prev, Next (highlighted)