**TẠO CƠ SỞ DỮ LIỆU**

## CHÚ Ý ĐỐI TƯỢNG KẾT NỐI CSDL

openFileDialog    imageList    bindingSource    dUOCDataSet

## CÁC THUỘC TÍNH CSDL

dbo.SINHVIEN [Design] ⊣ ✕   Form1.cs 🔒    Form1.cs [Design] 🔒

⬆ Update | Script File: dbo.SINHVIEN.sql ▾

| | Name | Data Type | Allow Nulls | Default | |
|---|---|---|---|---|---|
| ⊶ | masinhvien | nchar(10) | ☐ | | |
| | tensinhvien | nvarchar(30) | ☑ | | |
| | diachi | nvarchar(50) | ☑ | | |
| | gioitinh | nchar(5) | ☑ | | |
| | ngaysinh | datetime | ☑ | | |
| | diemlythuyet | nchar(5) | ☑ | | |
| | diemthuchanh | nchar(5) | ☑ | | |
| | diemtrungbinh | nchar(5) | ☑ | | |
| | xeploai | nchar(10) | ☑ | | |
| | anh | nvarchar(100) | ☑ | | |

🖵 Design   ↑↓   🗏 T-SQL

```sql
1   CREATE TABLE [dbo].[SINHVIEN] (
2       [masinhvien]    NCHAR (10)    NOT NULL,
3       [tensinhvien]   NVARCHAR (30)  NULL,
4       [diachi]        NVARCHAR (50)  NULL,
5       [gioitinh]      NCHAR (5)      NULL,
6       [ngaysinh]      DATETIME       NULL,
7       [diemlythuyet]  NCHAR (5)      NULL,
8       [diemthuchanh]  NCHAR (5)      NULL,
9       [diemtrungbinh] NCHAR (5)      NULL,
10      [xeploai]       NCHAR (10)     NULL,
11      [anh]           NVARCHAR (100) NULL,
12      PRIMARY KEY CLUSTERED ([masinhvien] ASC)
13  );
```

## TẠO CHUỖI KẾT NỐI

```csharp
public static SqlConnection connect = new
SqlConnection(quan_ly_sinh_vien.Properties.Settings.Default.DUOCConnectionString);
```

## KHAI BÁO THÊM CÁC BIẾN

```csharp
string str, sql_view,path_image;
int k;
```

## ĐƯA DỮ LIỆU LÊN DATAGRIDVIEW

```csharp
private void View_database(string sql){
    try{
            connect.Open();
            SqlCommand command = new SqlCommand(sql, connect);
            SqlDataAdapter data_adapter = new SqlDataAdapter(command);
```

```
            DataTable data_table = new DataTable();
            data_adapter.Fill(data_table);
            connect.Close();
            this.dataGridView.DataSource = data_table;
    }catch (Exception) { MessageBox.Show("Error !!!"); }
}
```

## THỰC HIỆN QUERY

```
private void Execute_Query(string query){
        try{
            connect.Open();
            SqlCommand sqlCommand = new SqlCommand(query, connect);
            sqlCommand.ExecuteNonQuery();
            connect.Close();
        }
        catch (Exception) { MessageBox.Show("Error !!!"); }
    }
```

## DƯA DỮ LIỆU LÊN DATAGRIDVIEW

```
private void DataGridView_Click(int Index) {
    str = this.textBox_masinhvien.Text = this.dataGridView.Rows[Index].
                                        Cells[0].Value.ToString();
    this.textBox_tensinhvien.Text = this.dataGridView.
                                    Rows[Index].Cells[1].Value.ToString();
    this.textBox_diachi.Text = this.dataGridView.
                                    Rows[Index].Cells[2].Value.ToString();
    this.comboBox_gioitinh.Text = this.dataGridView.
                                    Rows[Index].Cells[3].Value.ToString();
int dd = int.Parse(this.dataGridView.Rows[this.dataGridView.CurrentRow.Index].
                            Cells[4].Value.ToString().Substring(0, 2));
int mm = int.Parse(this.dataGridView.Rows[this.dataGridView.CurrentRow.Index].
                            Cells[4].Value.ToString().Substring(3, 2));
int yyyy = int.Parse(this.dataGridView.Rows[this.dataGridView.CurrentRow.Index].
                            Cells[4].Value.ToString().Substring(6, 4));
    this.dateTimePicker_ngaysinh.Value = new DateTime(yyyy, mm, dd);
    this.textBox_diemlythuyet.Text = this.dataGridView.
                                    Rows[Index].Cells[5].Value.ToString();
    this.textBox_diemthuchanh.Text = this.dataGridView.
                                    Rows[Index].Cells[6].Value.ToString();
    this.textBox_diemtrungbinh.Text = Math.Round(double.Parse(this.dataGridView.
                    Rows[Index].Cells[7].Value.ToString()), 2).ToString();
    this.textBox_xeploai.Text = this.dataGridView.
                                    Rows[Index].Cells[8].Value.ToString();
}
```

## TÌNH HUỐNG FORM LOAD

```
private void Form1_Load(object sender, EventArgs e){
    sql_view = "SELECT masinhvien, tensinhvien, diachi, gioitinh,
            ngaysinh, diemlythuyet, diemthuchanh, " +
            " (diemlythuyet * 2 + diemthuchanh) / 3 AS diemtrungbinh, CASE" +
            " WHEN (diemlythuyet * 2 + diemthuchanh) / 3 > 8 THEN N'Giỏi'" +
            " WHEN (diemlythuyet * 2 + diemthuchanh) / 3 > 7 THEN N'Khá'" +
            " WHEN (diemlythuyet * 2 + diemthuchanh) / 3 > 5 THEN N'Trung bình'"+
            " ELSE N'Yếu' END AS xeploai, anh FROM SINHVIEN";
    View_database(sql_view);
    DataGridView_Click(this.dataGridView.CurrentRow.Index);
}
```

## KIỂM TRA KHÓA

```csharp
private bool Check_Key(string sql, string key){
    bool ok = false;
    try{
        connect.Open();
        SqlCommand command = new SqlCommand(sql, connect);
        SqlDataReader data = command.ExecuteReader();
        if (data.Read() && (data.GetString(0).ToUpper()
                                     == key.ToUpper()))ok = true;
        connect.Close();
    }catch (Exception) { MessageBox.Show("Error !!!"); }
    return ok;
}
```

**TẠO MỚI MỘT BẢN GHI**

```csharp
private void button_cap_nhat_Click(object sender, EventArgs e){
    string dd = this.dateTimePicker_ngaysinh.Value.Day.ToString();
    string MM = this.dateTimePicker_ngaysinh.Value.Month.ToString();
    string yyyy = this.dateTimePicker_ngaysinh.Value.Year.ToString();
    string key = this.textBox_masinhvien.Text;
    string sql = "SELECT masinhvien FROM SINHVIEN WHERE masinhvien = '"+key+ "'";
    if (this.textBox_masinhvien.Text != "" && !Check_Key(sql, key)){
            string query = "INSERT INTO SINHVIEN VALUES('"
                        + this.textBox_masinhvien.Text + "',N'"
                        + this.textBox_tensinhvien.Text + "',N'"
                        + this.textBox_diachi.Text + "',N'"
                        + this.comboBox_gioitinh.Text + "',"
                        + yyyy + "/" + MM + "/" + dd + ",'"
                        + this.textBox_diemlythuyet.Text + "','"
                        + this.textBox_diemthuchanh.Text + "','"
                        + path_image + "')";
            Execute_Query(query);
            View_database(sql_view);
            path_image = "";
        }else MessageBox.Show("Khóa rỗng hoặc trùng", "Kiểm tra khóa",
                        MessageBoxButtons.OK, MessageBoxIcon.Information);
}
```

**XÓA MỘT BẢN GHI**

```csharp
private void button_delete_Click(object sender, EventArgs e){
    try{
        if (MessageBox.Show("Ban chác chắn xóa bản ghi này ?", "C# Programming",
        MessageBoxButtons.OKCancel, MessageBoxIcon.Question).ToString() == "OK"){
            Execute_Query(@"DELETE FROM SINHVIEN WHERE (masinhvien='" +
                                                str + "')");
            View_database(sql_view);
        }
    }catch (Exception) { MessageBox.Show("Error !!!"); }
}
```

**SỬA MỘT BẢN GHI**

```csharp
private void button_update_Click(object sender, EventArgs e){
    string key = this.textBox_masinhvien.Text;
    string sql = "SELECT masinhvien FROM SINHVIEN WHERE masinhvien = '"+key+ "'";
    if (this.textBox_masinhvien.Text != "" && Check_Key(sql, key)){
        string query = "UPDATE SINHVIEN SET   tensinhvien=N'"
            +this.textBox_tensinhvien.Text
            +"',diachi=N'"+this.textBox_diachi.Text
            +"',gioitinh=N'" + this.comboBox_gioitinh.Text
            +"',diemlythuyet ='" + this.textBox_diemlythuyet.Text
```

```
                +"',diemthuchanh ='" + this.textBox_diemthuchanh.Text
                + "',anh ='" + this.openFileDialog.FileName
                + "' WHERE (masinhvien = '" + this.textBox_masinhvien.Text + "')";
        Execute_Query(query);
        View_database(sql_view);
    }else MessageBox.Show("Khóa rỗng hoặc không hợp lệ", "Kiểm tra khóa",
                        MessageBoxButtons.OK, MessageBoxIcon.Information);
}
```