

Base de dados Cursos em ACCESS

- 1- Criar um Projecto – **Gestão Cursos**, inserir um Module (Módulo)
- 2- Criar e colocar a BD- Dados no Access na pasta bin, como pode ver:

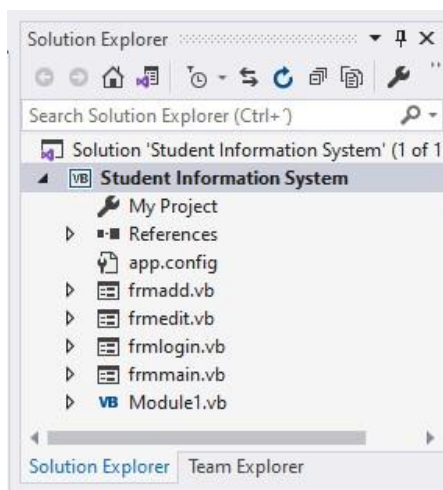
IEFP > Programadores 20531 Bruno > VBNET > ExBD Access > Student Information System (simple) > Student Information System > bin			
Nome	Data de modificação	Tipo	Tamanho
Debug	27/05/2021 08:29	Pasta de ficheiros	
Release	04/02/2018 13:09	Pasta de ficheiros	
Dados	27/05/2021 08:30	Microsoft Access ...	1 KB
Dados	27/05/2021 08:30	Microsoft Access ...	368 KB

Eis a Tabela na BD

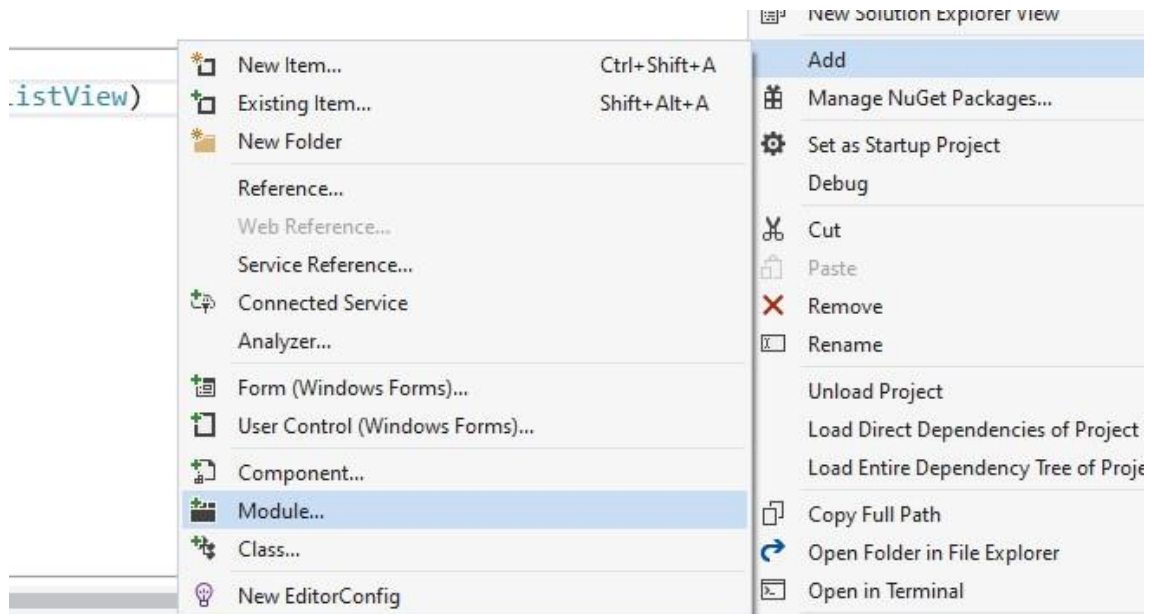
Estudante	
Nome do campo	Tipo de dados
ID	Texto Breve
Nome	Texto Breve
eMail	Texto Breve
Curso	Texto Breve

3- Criar o Form principal

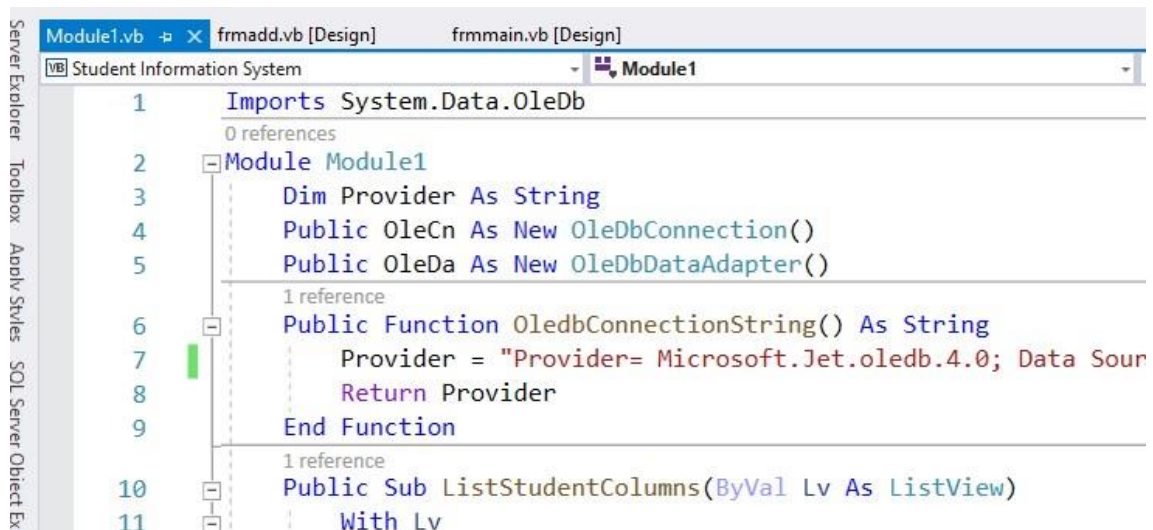
Nota: Cada um dos Botões Abre um Form, por isso criar mais 2 Forms (frmEdit e frmAdd), como pode ver:



4- Criar um Module no Projecto (ou através do ADD ITEM)



Exemplo da janela:



E colocar código:

```
Imports System.Data.OleDb
Module Module1
    Dim Provider As String
    Public OleCn As New OleDbConnection()
    Public OleDa As New OleDbDataAdapter()
    Public Function OleDbConnectionString() As String
        Provider = "Provider= Microsoft.Jet.oledb.4.0; Data Source = ..\Dados.mdb"
        Return Provider
    End Function
    Public Sub ListStudentColumns(ByVal Lv As ListView)
        With Lv
            .Columns.Add("ID", 120)
            .Columns.Add("Nome", 150)
            .Columns.Add("eMail", 180)
            .Columns.Add("Curso", 120)
```

```

        .FullRowSelect = True
        .MultiSelect = True
        .GridLines = True
        .HideSelection = False
        .View = View.Details
    End With
End Sub
Public Sub openconnection()
    If OleCn.State <> ConnectionState.Open Then
        OleCn.ConnectionString = OledbConnectionString()
        OleCn.Open()
    End If
End Sub
Public Sub closeconnection()
    OleCn.Close()
End Sub
Public Sub Initialized()
    OleDa.SelectCommand = New OleDbCommand()
    OleDa.SelectCommand.CommandText = "Select * from Estudante"
    OleDa.SelectCommand.Connection = OleCn
End Sub
End Module

```

5- Código do Form Principal:

```

Imports System.Data.OleDb
Public Class frmmain
    Dim Oledr As OleDbDataReader
    Dim Item As New ListViewItem()
    Dim ItemSearch As New ListViewItem
    Private Sub frmmain_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load
        Call ListStudentColumns(lststudent)
        Call openconnection()
        Call Initialized()
        Call LoadListView()
        Call closeconnection()
    End Sub

    Public Sub LoadListView()
lststudent.Items.Clear()
        Call Initialized()
        Oledr = OleDa.SelectCommand.ExecuteReader()
        Do While Oledr.Read()
            Item = lststudent.Items.Add(Oledr("Id").ToString())
            Item.SubItems.Add(Oledr("Nome").ToString())
            Item.SubItems.Add(Oledr("eMail").ToString())
            Item.SubItems.Add(Oledr("Curso").ToString())

        Loop
        Oledr.Close()
    End Sub

```

```

Private Sub btnAdd_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles btnAdd.Click
    frmadd.ShowDialog()
End Sub

```

Abre Formulário
Adicionar

```

Private Function UpdateValidateStudent() As Boolean
    If lststudent.Items.Count = 0 Then
        MsgBox("Sem Registos.", MsgBoxStyle.Information,
        "Informação- Dados")
        Return True
        Exit Function
    End If
    If lststudent.SelectedItems.Count > 1 Then
        MsgBox("Dê um duplo clique no registo",
        MsgBoxStyle.Information)
        lststudent.SelectedItems.Clear()
        Return True
        Exit Function
    End If
    If lststudent.SelectedItems.Count = 0 Then
        MsgBox("Escolha o registo para Editar",
        MsgBoxStyle.Information)
        Return True
        Exit Function
    End If
End Function

```

```

Private Sub btnEdit_Click(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles btnEdit.Click
    If UpdateValidateStudent() = True Then
        Return
    End If
    frmedit.ShowDialog()
End Sub

```

6- O processo da escrita de código **Eliminar, Pesquisar e Actualizar** é feito no Form principal, como pode ver:

```

Private Function DeleteStudentValidate() As Boolean
    If lststudent.Items.Count = 0 Then
        MsgBox("Não existem registos para Eliminar")
        Return True
        Exit Function
    End If
    If lststudent.SelectedItems.Count = 0 Then
        MsgBox("Escolha o registo para Eliminar.")
        Return True
        Exit Function
    End If
End Function

```

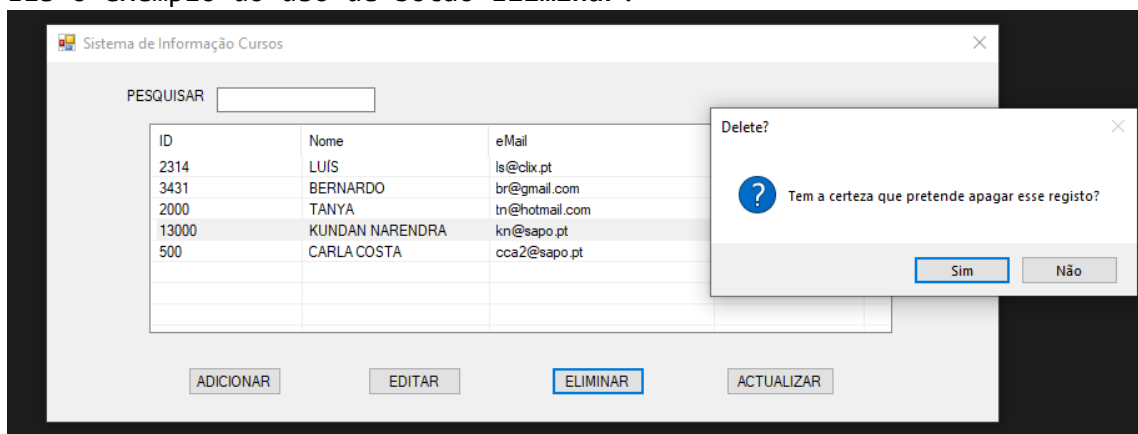
```

Private Sub btnDelete_Click(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles btnDelete.Click
    If DeleteStudentValidate() = True Then
        Return
    End If

    If MsgBox("Tem a certeza que pretende apagar esse registo?",
MsgBoxStyle.YesNo + MsgBoxStyle.Question, "Delete?") = MsgBoxResult.No
Then
        MsgBox("Cancelado.", MsgBoxStyle.Information)
        lststudent.SelectedItems.Clear()
        Exit Sub
    End If
    For Each Item As ListViewItem In lststudent.SelectedItems
        Item.Remove()
        OleDa.DeleteCommand = New OleDbCommand()
        Call openconnection()
        OleDa.DeleteCommand.CommandText = "DELETE FROM Estudante
WHERE Id = @Id"
        OleDa.DeleteCommand.Connection = OleCn
        OleDa.DeleteCommand.Parameters.Add("@Id",
OleDbType.VarChar, 50, "Id").Value = Item.Text.ToString()
        OleDa.DeleteCommand.ExecuteNonQuery()
        Call LoadListView()
        Call closeconnection()
    Next
    MsgBox("Registo eliminado com sucesso")
    lststudent.SelectedItems.Clear()
End Sub

```

Eis o exemplo do uso de botão Eliminar:



Código do Botão Actualizar:

```

Private Sub btnRefresh_Click(ByVal sender As System.Object, ByVal
e As System.EventArgs) Handles btnRefresh.Click
    Call openconnection()
    Call Initialized()
    Call LoadListView()
Call closeconnection()
txtSearch.Clear()

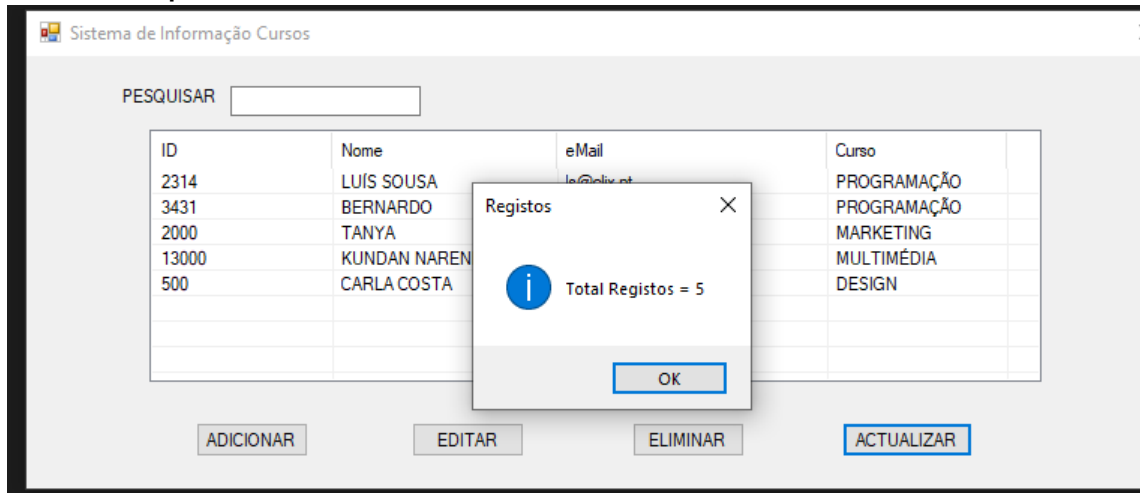
```

```

        MsgBox("Total Registos = " & lststudent.Items.Count,
MsgBoxStyle.Information, "Registos")
    End Sub

```

Eis o exemplo:



```

Private Sub SearchStudent()
    lststudent.Items.Clear()
    Call Initialized()
    OleDa.SelectCommand.CommandText = "SELECT * FROM Estudante
WHERE Id Like '%" & txtSearch.Text.Trim.ToString() & "%'"

    OleDa.SelectCommand.Connection = OleCn
    Oledr = OleDa.SelectCommand.ExecuteReader()
    Do While Oledr.Read()
        ItemSearch = lststudent.Items.Add(Oledr("Id").ToString())
        ItemSearch.SubItems.Add(Oledr("Nome").ToString())
        ItemSearch.SubItems.Add(Oledr("eMail").ToString())
        ItemSearch.SubItems.Add(Oledr("Curso").ToString())

    Loop
    Oledr.Close()
End Sub

Private Sub txtPesquisa_TextChanged (ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
txtSearch.TextChanged
    OleDa.SelectCommand = New OleDbCommand()
    OleDa.SelectCommand.CommandText = "SELECT * FROM Estudante
WHERE Id Like '%" & txtSearch.Text.Trim.ToString() & "%'"
    OleDa.SelectCommand.Connection = OleCn
    Call openconnection()
    OleDa.SelectCommand.ExecuteNonQuery()
    Call SearchStudent()
    Call closeconnection()
End Sub

```

End Class

Opção Pesquisar: e Código:
Eis o exemplo:

ID	Nome	eMail	Curso
500	CARLA COSTA	cca2@sapo.pt	DESIGN

6- Janela do

Form Adiciona e Código:

Combox com nomes de Curso:

- MULTIMÉDIA
- PROGRAMAÇÃO
- DESIGN
- GESTÃO
- MARKETING
- PUBLICIDADE

Nota: Confirmar Nome de Caixas de Texto e Combobox, antes de inserir o código:

Imports System.Data.OleDb

E, dentro da Class:

```
Private Sub frmadd_FormClosing(ByVal sender As Object, ByVal e As  
System.Windows.Forms.FormClosingEventArgs) Handles Me.FormClosing  
    Call cleartext()  
    txtsn.Focus()  
    frmmain.lststudent.SelectedItems.Clear()  
End Sub
```

```

Private Sub frmadd_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load

End Sub
Private Sub cleartext()
    Me.txtsn.Clear()
    Me.txtfn.Clear()
    Me.txtln.Clear()
End Sub

Private Sub btnCancel_Click(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles btnCancel.Click
    Me.Close()
End Sub

Private Sub btnSave_Click(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles btnSave.Click
    If txtsn.Text = "" Or txtfn.Text = "" Or cmbcourse.Text = ""
Then
        MsgBox("Por favor, não deixe espaços em branco",
MsgBoxStyle.Information, "Preenchimento - dados em branco")
        Exit Sub
    End If
    Try
        Call openconnection()
        OleDa.InsertCommand = New OleDbCommand()
        OleDa.InsertCommand.CommandText = "INSERT INTO Estudante
(Id, Nome, eMail, Curso)" &
        "VALUES (@Id, @Nome, @eMail, @Curso)"
        OleDa.InsertCommand.Connection = OleCn
        OleDa.InsertCommand.Parameters.Add("@Id",
OleDbType.VarWChar, 50, "Id").Value = txtsn.Text
        OleDa.InsertCommand.Parameters.Add("@Nome",
OleDbType.VarWChar, 50, "Nome").Value = txtfn.Text
        OleDa.InsertCommand.Parameters.Add("@eMail",
OleDbType.VarWChar, 50, "eMail").Value = txtln.Text
        OleDa.InsertCommand.Parameters.Add("@Curso",
OleDbType.VarWChar, 50, "Curso").Value = cmbcourse.Text

        OleDa.InsertCommand.ExecuteNonQuery()
        Call frmmain.LoadListView()
        Call closeconnection()

        MsgBox("Registo inserido com Sucesso",
MsgBoxStyle.Information, "Dados Estudante")
        Me.Close()

    Catch ex As Exception
        MsgBox("Não é possível guardar esse registo",
MsgBoxStyle.Information, "Erro de Introdução")
    End Try
End Sub

```



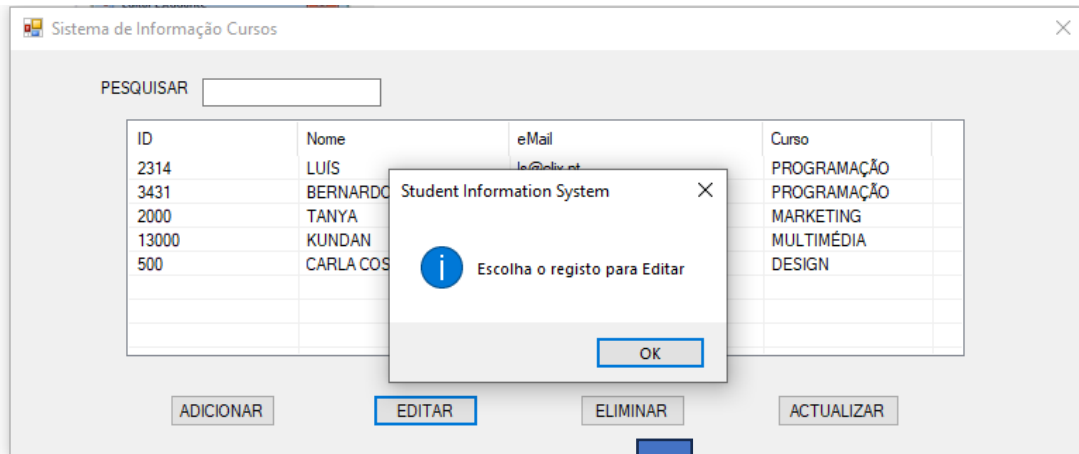
```

        Call closeconnection()
        txtsn.Focus()
    txtsn.SelectAll()

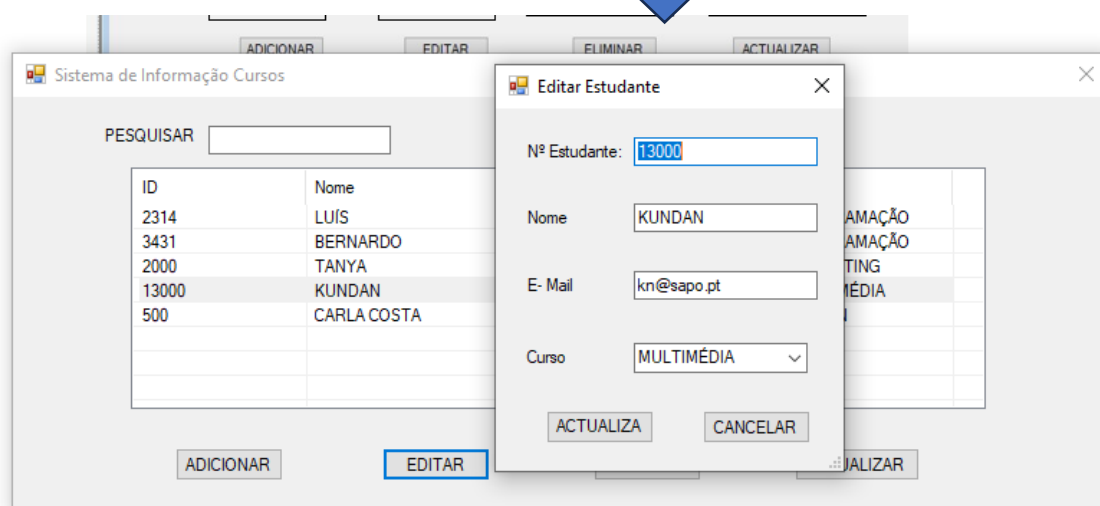
End Try
End Sub

```

7- Janela do Form **Editar** e Código:



Abre a janela **Editar**, como pode ver:



Nota: Confirmar Nome de Caixas de Texto e Combobox, antes de inserir o código:

```
Imports System.Data.OleDb
```

E, dentro da Class:

```

Private Sub frmedit_FormClosing(ByVal sender As Object, ByVal e As
System.Windows.Forms.FormClosingEventArgs) Handles Me.FormClosing
    Call cleartext()
    txtsn.Focus()
    frmmain.lststudent.SelectedItems.Clear()
End Sub

```

```

Private Sub frmedit_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load

```

```

        Call openconnection()
Call Initialized()
    txtsn.Text = CStr(frmmain.lststudent.SelectedItems(0).Text)
    Call Fill()
    Call closeconnection()
End Sub

Private Sub cleartext()
    Me.txtsn.Clear()
    Me.txtfn.Clear()
    Me.txtln.Clear()
End Sub
Private Sub Fill()
    Dim OleDr As OleDbDataReader
    OleDa.SelectCommand = New OleDbCommand()
    OleDa.SelectCommand.CommandText = "SELECT * From Estudante
WHERE Id = @Id"
    OleDa.SelectCommand.Parameters.Add("@Id", OleDbType.VarWChar,
50, "Id").Value = txtsn.Text
    OleDa.SelectCommand.Connection = OleCn
    OleDr = OleDa.SelectCommand.ExecuteReader()

    If OleDr.HasRows() Then
OleDr.Read()
        txtsn.Text = OleDr("Id").ToString()
        txtfn.Text = OleDr("Nome").ToString()
        txtln.Text = OleDr("email").ToString()
        cmbcourse.Text = OleDr("Curso").ToString()
    End If
    OleDr.Close()
End Sub

Private Sub btnCancel_Click(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles btnCancel.Click
    Me.Close()
End Sub

Private Sub btnSave_Click(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles btnSave.Click
    If txtsn.Text = "" Or txtfn.Text = "" Or txtln.Text = "" Or
cmbcourse.Text = "" Then
        MsgBox("Preencha os campos todos- não deixe em branco")
        Exit Sub
    End If
    Try
        Call openconnection()
        OleDa.UpdateCommand = New OleDbCommand()
        OleDa.UpdateCommand.CommandText = "UPDATE Estudante SET Id
= @Id, Nome = @nome, email = @email, Curso = @curso WHERE Id = ?"
        OleDa.UpdateCommand.Connection = OleCn
        OleDa.UpdateCommand.Parameters.Add("@Id",
OleDbType.VarWChar, 50, "Id").Value = txtsn.Text

```

```

        OleDa.UpdateCommand.Parameters.Add("@nome",
OleDbType.VarWChar, 50, "Nome").Value = txtfn.Text
        OleDa.UpdateCommand.Parameters.Add("@email",
OleDbType.VarWChar, 50, "email").Value = txtln.Text
        OleDa.UpdateCommand.Parameters.Add("@curso",
OleDbType.VarWChar, 50, "Curso").Value = cmbcourse.Text

        OleDa.UpdateCommand.Parameters.Add(New
System.Data.OleDb.OleDbParameter("EmpID",
System.Data.OleDb.OleDbType.VarWChar, 50, _

System.Data.ParameterDirection.Input, False, CType(0, Byte), CType(0,
Byte), "studentno", _

System.Data.DataRowVersion.Original, Nothing)).Value =
frmmain.lststudent.SelectedItems(0).Text

        OleDa.UpdateCommand.ExecuteNonQuery()
        Call frmmain.LoadListView()
        Call closeconnection()

        MsgBox("Registros atualizados com sucesso")
        Me.Close()

    Catch ex As Exception
        MsgBox("Não é possível atualizar os dados")
        Call closeconnection()
txtsn.Focus()
txtsn.SelectAll()
    End Try
End Sub

```

Module- o que é?

Um **Module** define um tipo de referência disponível em todo o seu namespace. Um Module (às vezes chamado de módulo padrão) é semelhante a uma classe, mas com algumas distinções importantes. Cada Module possui exatamente uma instância e não precisa ser criado ou atribuído a uma variável.

Um **Module** tem a mesma vida útil que o seu programa. Como seus membros são todos compartilhados, eles também têm vida útil igual à do programa.

Módulos são containers para definir funções, procedimentos ou variáveis personalizadas para agrupar código em Visual Basic.

E, assim termina este Exercício prático do uso da linguagem VB.NET com Bases de Dados Access.

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