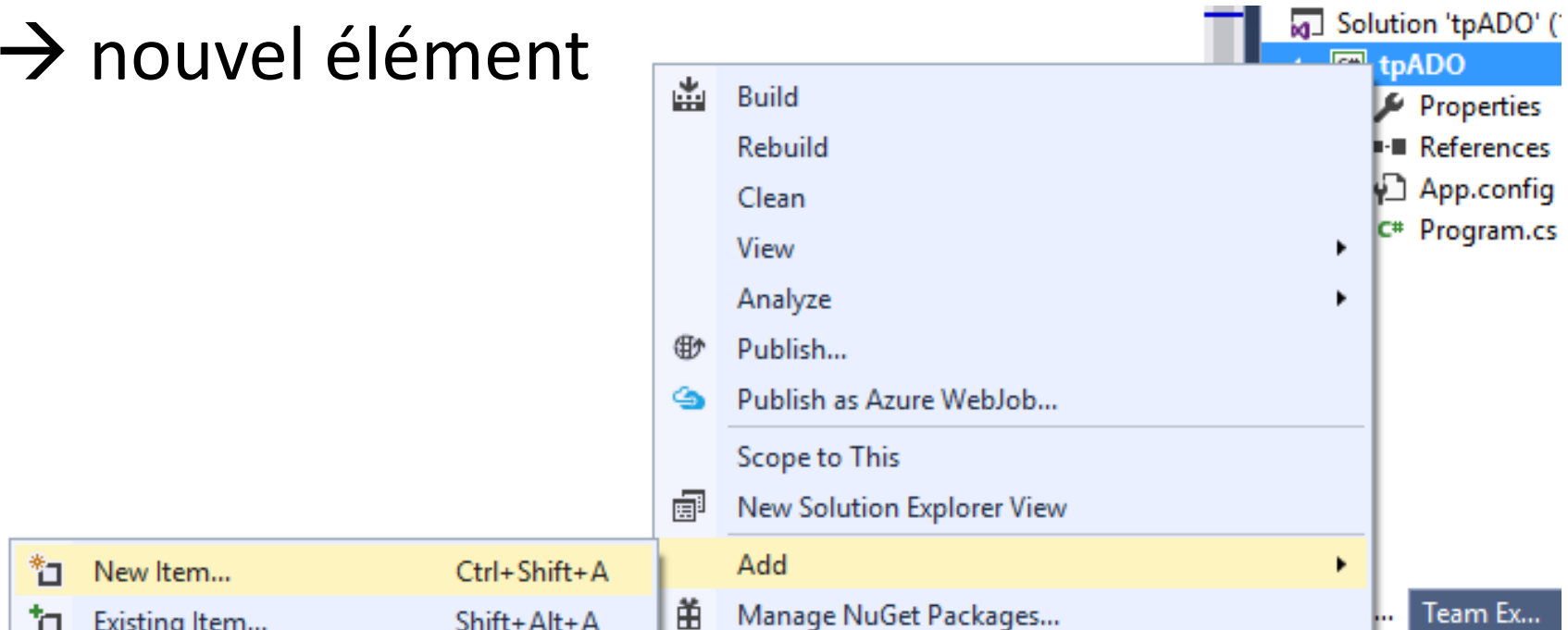
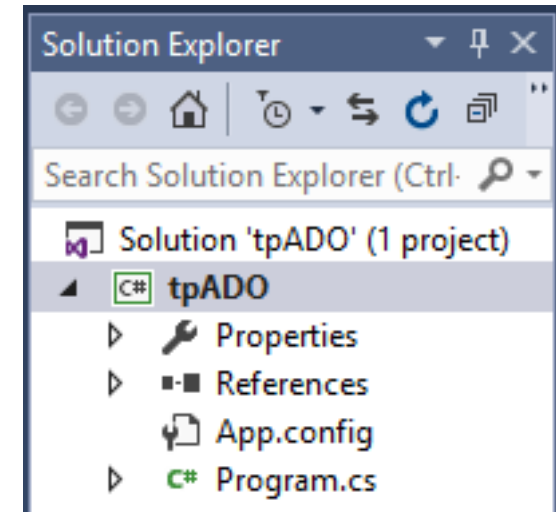


# TP : ADO.Net

Préparé par  
M.G. BELKASMI

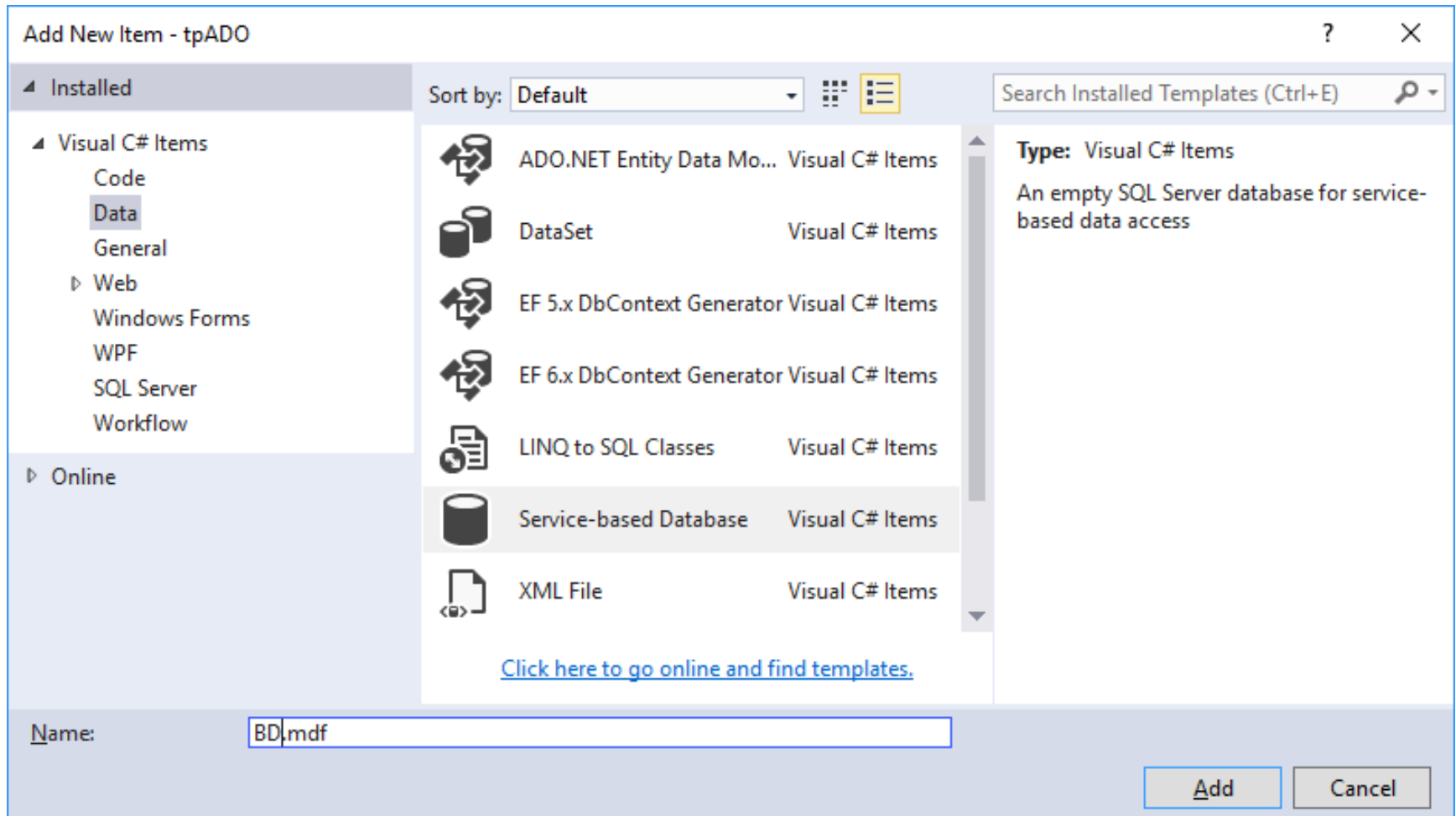
# ADO.Net

- Créer un nouveau projet tpADO
- Click droit sur le projet → ajouter  
→ nouvel élément



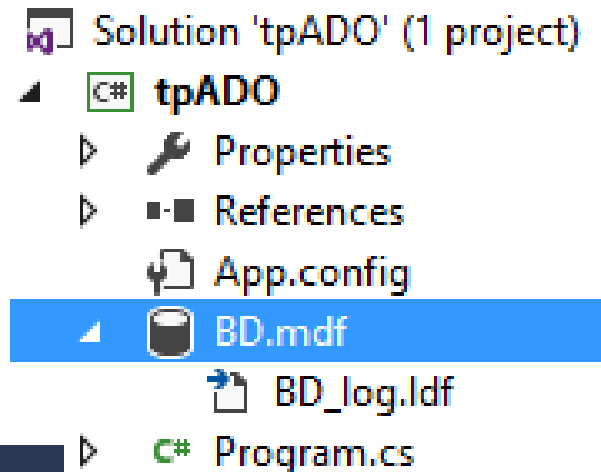
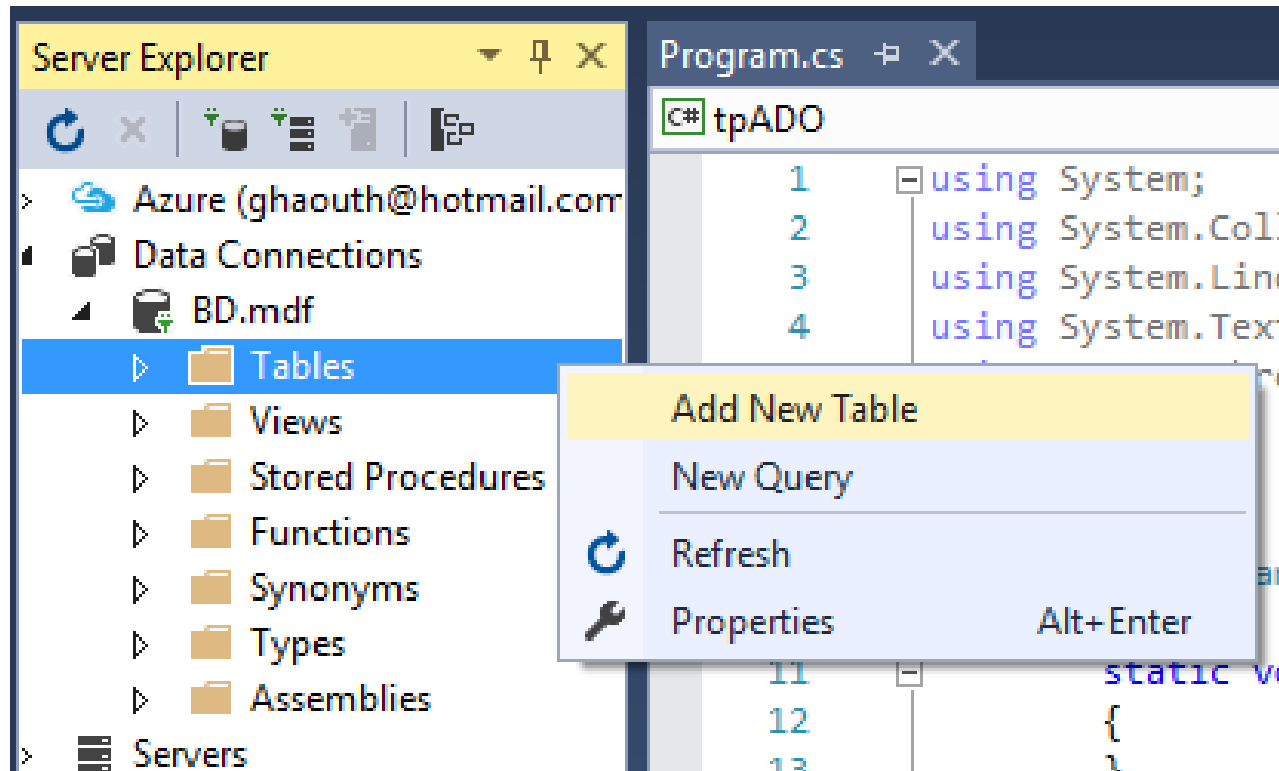
# ADO.Net

- Service Based Database (Base de données locale)



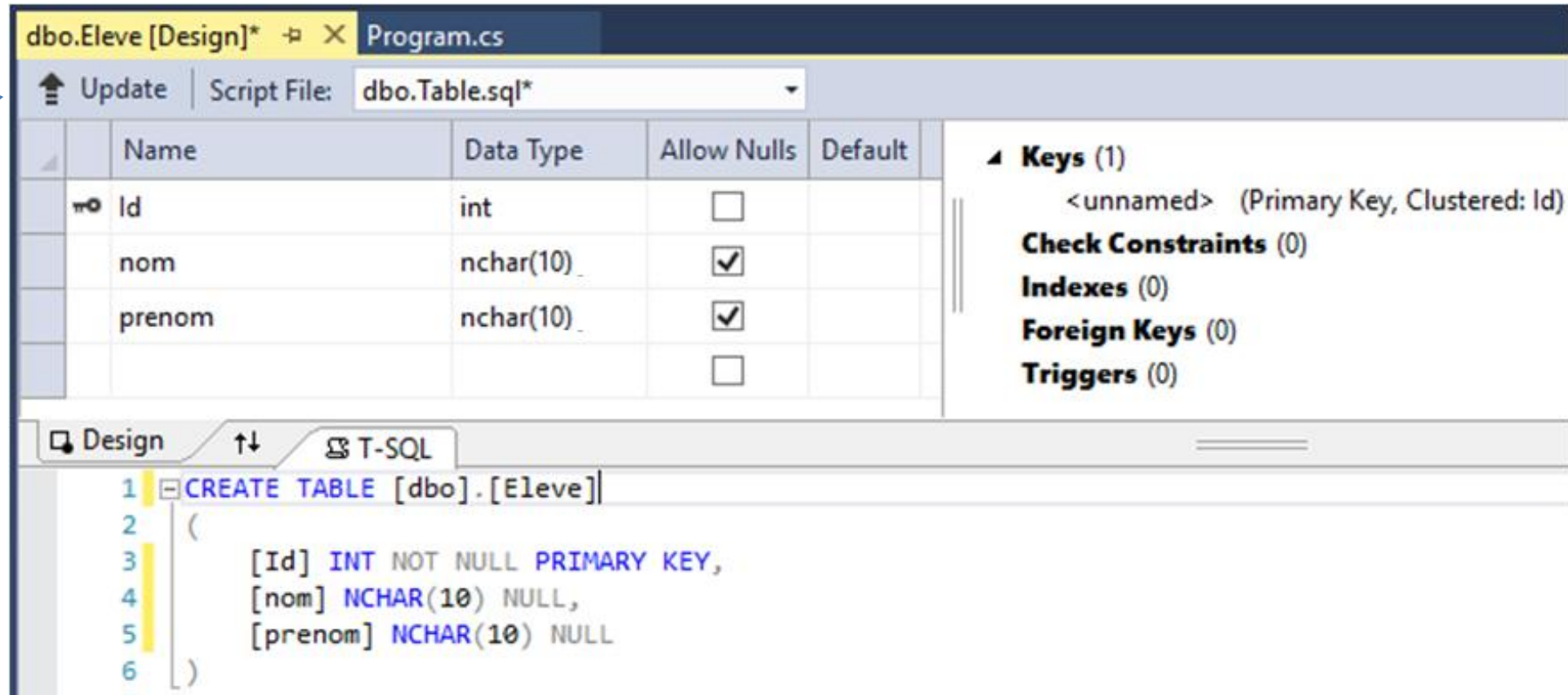
# ADO.Net

double click sur BD.mdf



# ADO.Net

## Ajouter les colonnes



dbo.Eleve [Design]\* Program.cs

Update Script File: dbo.Table.sql\*

	Name	Data Type	Allow Nulls	Default
PK	Id	int	<input type="checkbox"/>	
	nom	nchar(10)	<input checked="" type="checkbox"/>	
	prenom	nchar(10)	<input checked="" type="checkbox"/>	
			<input type="checkbox"/>	

**Keys (1)**  
<unnamed> (Primary Key, Clustered: Id)

**Check Constraints (0)**  
**Indexes (0)**  
**Foreign Keys (0)**  
**Triggers (0)**

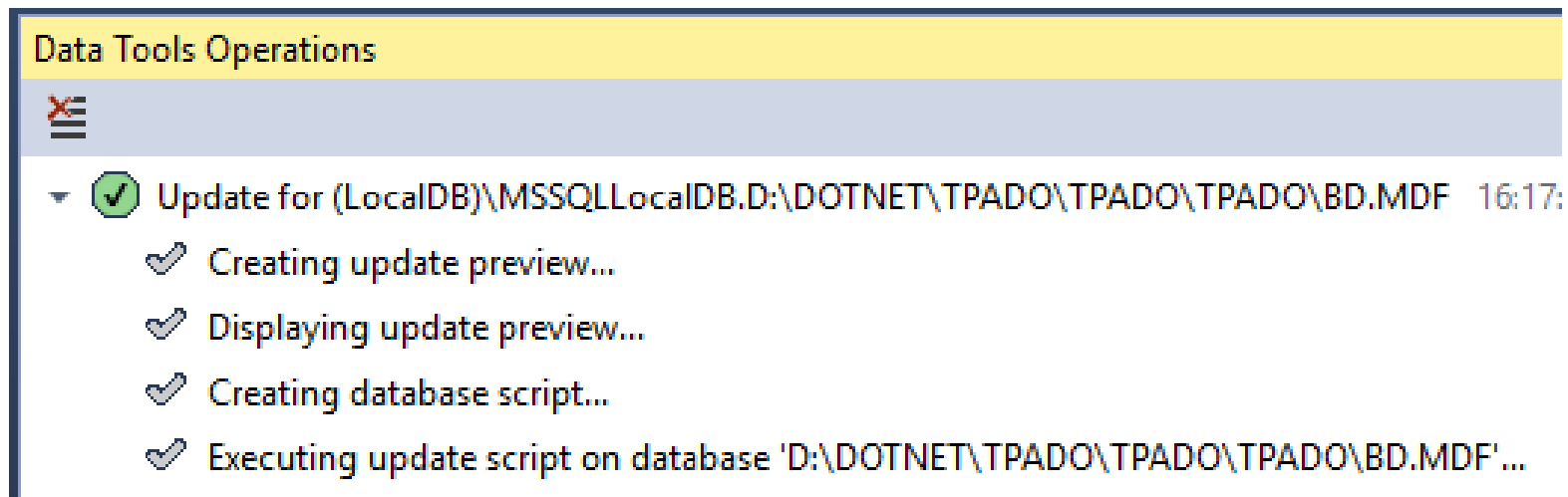
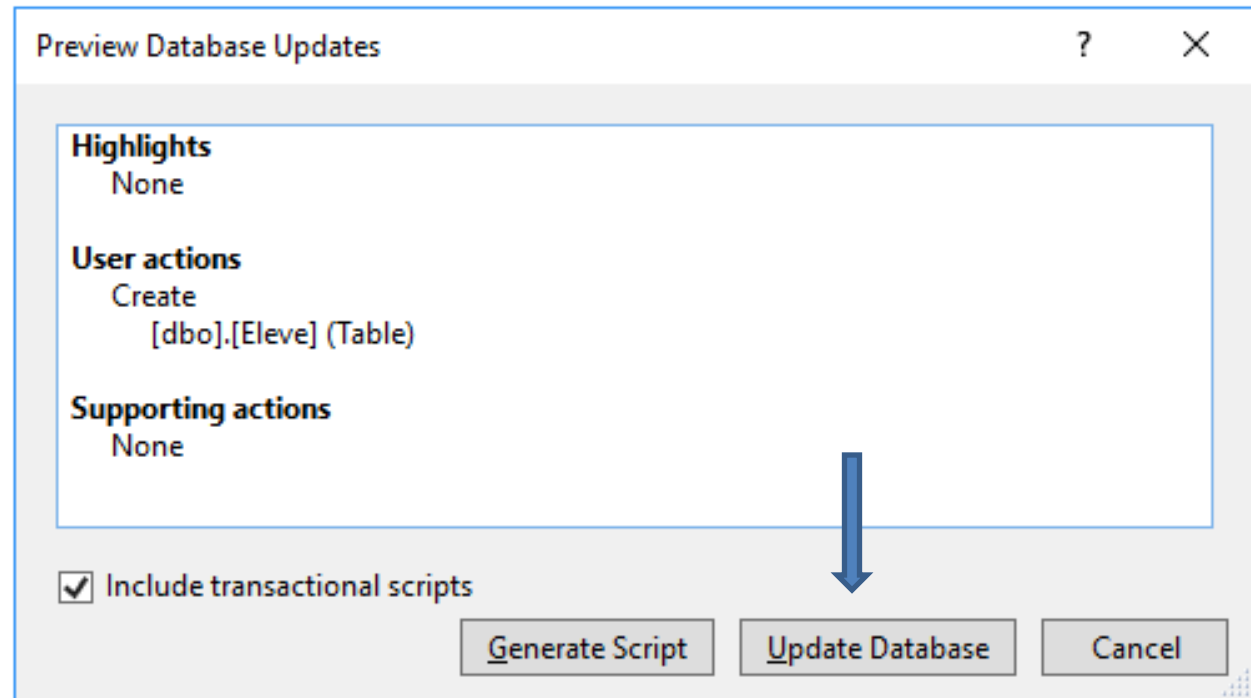
Design T-SQL

```
1 CREATE TABLE [dbo].[Eleve]
2 (
3     [Id] INT NOT NULL PRIMARY KEY,
4     [nom] NCHAR(10) NULL,
5     [prenom] NCHAR(10) NULL
6 )
```

Cliquer sur update  Update

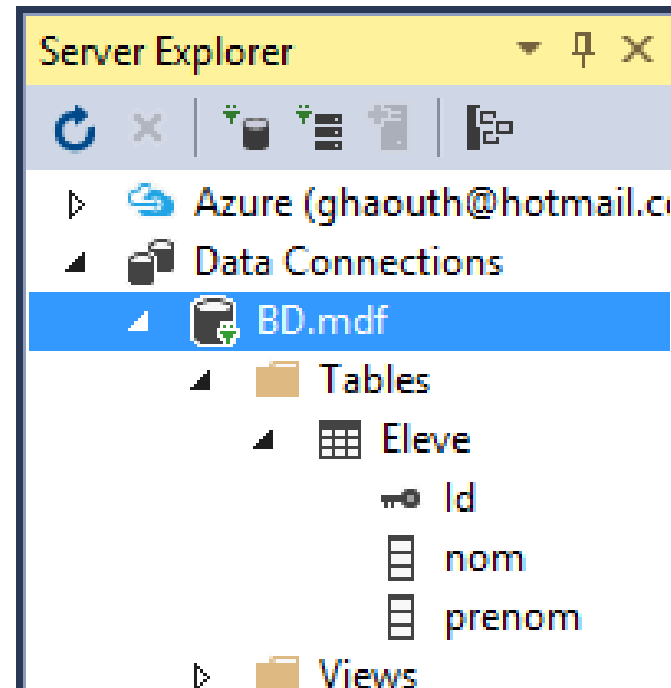
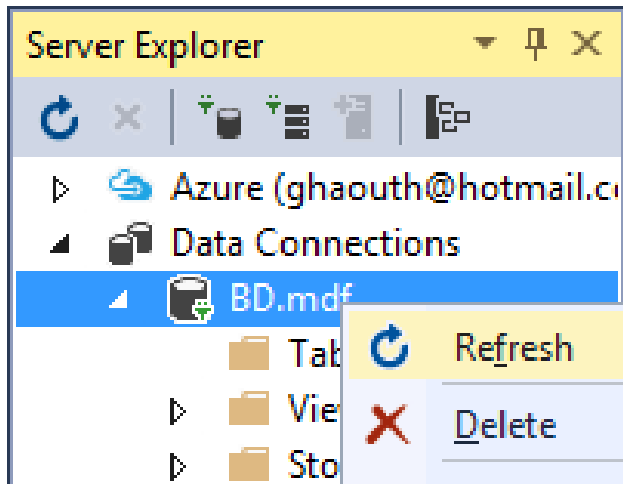
# ADO.Net

- Cliquer sur Update Database



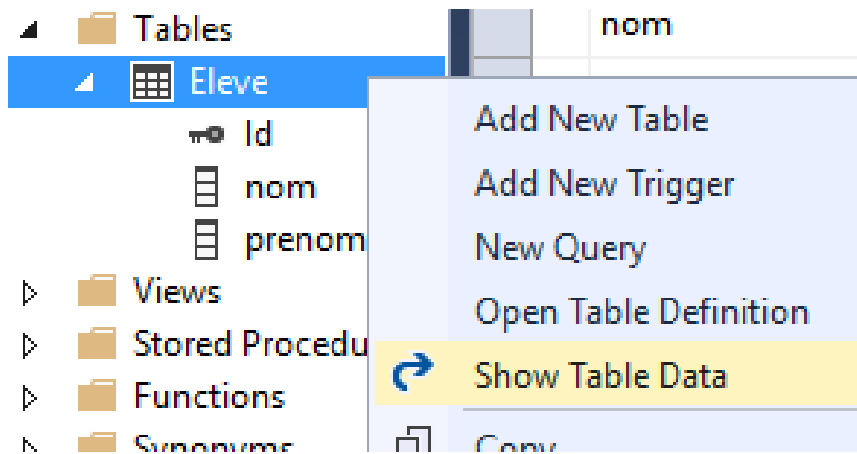
# ADO.Net

## Raфраichir



# ADO.Net

## Ajouter des lignes à la table



A screenshot of the 'dbo.Eleve [Data]' view in SQL Server Enterprise Manager. The view shows a table with four columns: 'Id', 'nom', 'prenom', and an unnamed column. The 'Max Rows' is set to 1000. The table contains four rows of data, with the last row being a new entry with 'NULL' values.

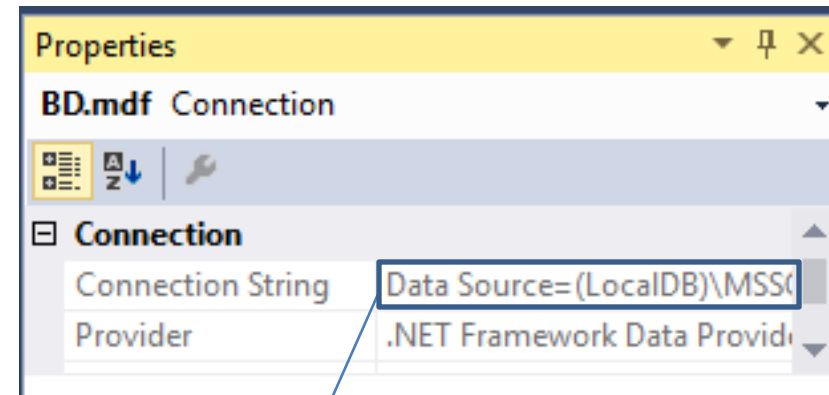
	Id	nom	...	prenom	...
	11	ALAMI	...	Alem	...
	12	RACHDI	...	Rachid	...
	13	SAL		NULL	
	NULL	NULL		NULL	



# ADO.Net

Compléter le code comme suit

```
6  using System.Data.SqlClient;
7
8  namespace tpADO
9  {
10     class Program
11     {
12         static void Main(string[] args)
13         {
14             SqlConnection sqlCn = new SqlConnection("Data Source= .....");
15             SqlCommand reqEleve = new SqlCommand("SELECT * from Eleve", sqlCn);
16
17             sqlCn.Open();
18
19             SqlDataReader reader = reqEleve.ExecuteReader();
20
21             Console.WriteLine("\tId\tNom\tPrénom");
22             while (reader.Read())
23             {
24                 Console.WriteLine("\t{0}\t{1}\t{2}", reader[0], reader[1], reader[2]);
25             }
26
27             reader.Close();
28             sqlCn.Close();
29             sqlCn.Dispose();
30         }
31     }
32 }
```



```
C:\WINDOWS\system32\cmd.exe

Id      Nom      Prénom
11      ALAMI    Alem
12      RACHDI   RACHID
13      SALHI    Saleh

Appuyez sur une touche pour continuer...
```

# ADO.Net

## Utiliser using pour se passer de Close et Dispose

```
using System.Data.SqlClient;

namespace tpADO
{
    class Program
    {
        static void Main(string[] args)
        {
            using(SqlConnection sqlCn = new SqlConnection("Data Source=(LocalDB)\\MSSQLLocalDB;AttachDbFi:
            {
                SqlCommand reqEleve = new SqlCommand("SELECT * from Eleve", sqlCn);

                sqlCn.Open();

                SqlDataReader reader = reqEleve.ExecuteReader();

                Console.WriteLine("\tId\tNom\tPrénom");
                while (reader.Read())
                {
                    Console.WriteLine("\t{0}\t{1}\t{2}", reader["id"], reader["nom"], reader["prenom"]);
                }

                reader.Close();
            }
            //sqlCn.Close();
            //sqlCn.Dispose();
        }
    }
}
```

C:\WINDOWS\system32\cmd.exe

Id	Nom	Prénom
11	ALAMI	Alem
12	RACHDI	RACHID
13	SALHI	Saleh

Appuyez sur une touche pour continuer...

# ADO.Net

## Encore une fois pour le close du reader

```
using System.Data.SqlClient;

namespace tpADO
{
    class Program
    {
        static void Main(string[] args)
        {
            using (SqlConnection sqlCn = new SqlConnection("Data Source=(LocalDB)\\MSSQLLocalDB;AttachDbFilename=..."))
            {
                SqlCommand reqEleve = new SqlCommand("SELECT * from Eleve", sqlCn);

                sqlCn.Open();

                using (SqlDataReader reader = reqEleve.ExecuteReader())
                {
                    Console.WriteLine("\tId\tNom\tPrénom");
                    while (reader.Read())
                    {
                        Console.WriteLine("\t{0}\t{1}\t{2}", reader["id"], reader["nom"], reader["prenom"]);
                    }
                }
            }
        }
    }
}
```

```
C:\WINDOWS\system32\cmd.exe

Id      Nom      Prénom
11      ALAMI    Alem
12      RACHDI   RACHID
13      SALHI    Saleh

Appuyez sur une touche pour continuer...
```

# ADO.Net

- Insertion d'une ligne

```
static void Main(string[] args)
{
    using (SqlConnection sqlCn = new SqlConnection("Data Source=(LocalDB)\\MSSQLLocalDB;AttachDbFilename=
    {
        SqlCommand reqEleve = new SqlCommand("SELECT * from Eleve", sqlCn);
        SqlCommand insEleve = new SqlCommand("INSERT INTO Eleve VALUES (14, 'TAIBI', 'Tayeb')", sqlCn);
        sqlCn.Open();
        insEleve.ExecuteNonQuery();
        using (SqlDataReader reader = reqEleve.ExecuteReader())
        {
            Console.WriteLine("\tId\tNom\tPrénom");
            while (reader.Read())
            {
                Console.WriteLine("\t{0}\t{1}\t{2}", reader["id"], reader["nom"], reader["prenom"]);
            }
        }
    }
}
```

C:\WINDOWS\system32\cmd.exe

Id	Nom	Prénom
11	ALAMI	Alem
12	RACHDI	RACHID
13	SALHI	Saleh
14	TAIBI	Tayeb

Appuyez sur une touche pour continuer...

# ADO.Net

- Requête paramétré

```
static void Main(string[] args)
{
    using (SqlConnection sqlCn = new SqlConnection("Data Source=(LocalDB)\\MSSQLLocalDB;AttachDbFilename=|DataDirectory|Database1.sdf;"))
    {
        SqlCommand reqEleve = new SqlCommand("SELECT * from Eleve ORDER BY id", sqlCn);
        SqlCommand insEleve = new SqlCommand("INSERT INTO Eleve VALUES (@id, @nom, @prenom)", sqlCn);
        sqlCn.Open();
        insEleve.Parameters.AddWithValue("@id", 10);
        insEleve.Parameters.AddWithValue("@nom", "NAFAI");
        insEleve.Parameters.AddWithValue("@prenom", "Nafea");
        insEleve.ExecuteNonQuery();
        using (SqlDataReader reader = reqEleve.ExecuteReader())
        {
            Console.WriteLine("\tId\tNom\tPrénom");
            while (reader.Read())
            {
                Console.WriteLine("\t{0}\t{1}\t{2}", reader["id"], reader["nom"], reader["prenom"]);
            }
        }
    }
}
```

C:\WINDOWS\system32\cmd.exe

Id	Nom	Prénom
10	NAFAI	Nafea
11	ALAMI	Alem
12	RACHDI	RACHID
13	SALHI	Saleh
14	TAIBI	Tayeb

Appuyez sur une touche pour continuer...

# ADO.Net

## Exercice 1:

- Écrire un code qui récupère les informations sur un élève (saisies au clavier par l'utilisateur) et les insère dans la table Eleve

## Exercice 2:

- Ecrire un code qui donne les information sur l'élève dont l'id est récupéré sur console
  - Gérer l'exception d'un id inexistant