

Le Package

```
CREATE OR REPLACE PACKAGE GESTIONEMPLOYES AS

-- DECLARATION DE LA VARIABLE DE TYPE REF CURSOR

-- DECLARATION DES PROCÉDURES ET FONCTIONS

TYPE EMPRESULTAT IS REF CURSOR;

--PROCEDURE INSERTION(NUM IN EMPLOYES.NUMEMP%TYPE, NOM VARCHAR2, PRENOM IN VARCHAR2, PPHOTO IN BLOB, SALAIRE IN
NUMBER);

PROCEDURE INSERTION(NUM IN EMPLOYES.NUMEMP%TYPE, NOM VARCHAR2, PRENOM IN VARCHAR2, SALAIRE IN NUMBER, PPHOTO IN
BLOB);

PROCEDURE SELECTION(REQUETE OUT EMPRESULTAT);

FUNCTION TOTAL RETURN NUMBER;

PROCEDURE CHERCHER (NOMR IN VARCHAR2, RESULTAT OUT EMPRESULTAT);

PROCEDURE SUPPRESSION (NUM IN EMPLOYES.NUMEMP%TYPE);

PROCEDURE LISTE (REQUETE2 OUT EMPRESULTAT );

END GESTIONEMPLOYES;
```

Le corps du package

```
CREATE OR REPLACE PACKAGE BODY GESTIONEMPLOYES AS
```

```
PROCEDURE INSERTION(NUM IN EMPLOYES.NUMEMP%TYPE, NOM VARCHAR2, PRENOM IN VARCHAR2,SALAIRE IN NUMBER, PPHOTO IN BLOB)  
AS
```

```
BEGIN
```

```
    INSERT INTO EMPLOYES (NUMEMP,NOM,PRENOM,SALAIRE,PHOTO) VALUES (NUM, NOM, PRENOM,SALAIRE,PPHOTO);
```

```
    COMMIT;
```

```
END INSERTION;
```

```
PROCEDURE SELECTION(REQUETE OUT EMPRESULTAT) AS
```

```
BEGIN
```

```
    OPEN REQUETE FOR SELECT * FROM EMPLOYES;
```

```
END SELECTION;
```

```
FUNCTION TOTAL RETURN NUMBER AS
```

```
TOTALEMP NUMBER;
```

```
BEGIN
```

```
SELECT COUNT(*) INTO TOTALEMP FROM EMPLOYES;
```

```
RETURN TOTALEMP;
```

```
END TOTAL;
```

```
PROCEDURE CHERCHER (NOMR IN VARCHAR2, RESULTAT OUT EMPRESULTAT) AS
```

```
BEGIN
```

```
OPEN RESULTAT FOR SELECT * FROM EMPLOYES WHERE NOM LIKE NOMR || '%';
```

```
END CHERCHER;
```

```
PROCEDURE SUPPRESSION (NUM IN EMPLOYES.NUMEMP%TYPE) AS
```

```
BEGIN
```

```
DELETE FROM EMPLOYES WHERE NUM=NUMEMP;
```

```
COMMIT;
```

```
END SUPPRESSION;
```

```
PROCEDURE LISTE (REQUETE2 OUT EMPRESULTAT )AS
```

```
BEGIN
```

```
OPEN REQUETE2 FOR SELECT numemp, nom,prenom,salaire FROM EMPLOYES;
```

```
END LISTE;
```

```
END GESTIONEMPLOYES;
```

Le code C#

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using Oracle.DataAccess.Client;
using Oracle.DataAccess.Types;
using System.IO;

namespace EmpProceduresStockees
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }
        private OracleConnection conn = new OracleConnection();
        private DataSet monDantaSet = new DataSet();
        string nomFichier;
        //byte monbuffimage;
        //string monImage;
    }
}
```

```
private void Form1_Load(object sender, EventArgs e)
{
    //string maBase = "(DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST =
205.237.246.251)"
    //      + "(PORT = 1521)))(CONNECT_DATA =(SERVICE_NAME = orcl)))";

    string maBase = "primogene";

    string ChaineConnexion = "Data Source =" + maBase
        + ";User ID = user1 ;Password = oracle1";

    conn.ConnectionString = ChaineConnexion;

    conn.Open();

    MessageBox.Show(conn.State.ToString());
}

private void Quitter_Click(object sender, EventArgs e)
{
    conn.Close();
    Application.Exit();
}
```

```

private void Afficher_Click(object sender, EventArgs e)
{
    OracleCommand ObjetCmd = new OracleCommand("GestionEmploye", conn);
    ObjetCmd.CommandText = "GestionEmployes.SELECTION";

    ObjetCmd.CommandType = CommandType.StoredProcedure;

    ObjetCmd.Parameters.Add(new OracleParameter("REQUETE", OracleDbType.RefCursor)).Direction =
ParameterDirection.Output;
    OracleDataAdapter oradap = new OracleDataAdapter(ObjetCmd);
    if (monDantaSet.Tables.Count > 0)
    {
        monDantaSet.Tables["ListeEmp"].Clear();
    }
    oradap.Fill(monDantaSet, "ListeEmp");
    oradap.Dispose();
    Lister();
}

private void Lister()
{
    TextNum.DataBindings.Add("Text", monDantaSet, "ListeEmp.Numemp");
    TextNom.DataBindings.Add("Text", monDantaSet, "ListeEmp.nom");
    TextPrn.DataBindings.Add("Text", monDantaSet, "ListeEmp.Prenom");
    TextSal.DataBindings.Add("Text", monDantaSet, "ListeEmp.Salaire");
    Photoemp.DataBindings.Add("Image", monDantaSet, "ListeEmp.photo", true);
}

```

```

private void Suivant_Click(object sender, EventArgs e)
{
    this.BindingContext[monDantaSet, "ListeEmp"].Position+=1;
}

private void Precedent_Click(object sender, EventArgs e)
{
    this.BindingContext[monDantaSet, "ListeEmp"].Position -= 1;
}

private void Rechercher_Click(object sender, EventArgs e)
{
    OracleCommand ObjetCmd = new OracleCommand("GestionEmploye", conn);
    ObjetCmd.CommandText = "GestionEmployes.chercher";
    ObjetCmd.CommandType = CommandType.StoredProcedure;
    ObjetCmd.Parameters.Add(new OracleParameter("NOMR", OracleDbType.Varchar2, 30)).Direction =
ParameterDirection.Input;
    ObjetCmd.Parameters["NOMR"].Value = TextNom.Text;
    ObjetCmd.Parameters.Add(new OracleParameter("RESULTAT", OracleDbType.RefCursor)).Direction =
ParameterDirection.Output;
    OracleDataAdapter oradap = new OracleDataAdapter(ObjetCmd);
    if (monDantaSet.Tables.Count > 0)
    {
        monDantaSet.Tables["ListeEmp"].Clear();
    }
    oradap.Fill(monDantaSet, "ListeEmp");
    oradap.Dispose();
    Lister();
}

```

```

// pour faire une insertion automatique, il faudra activer le trigger insertion.
private void Ajouter_Click(object sender, EventArgs e)
{
    OracleCommand ObjAjout = new OracleCommand("GestionEmployes", conn);
    ObjAjout.CommandText = "GestionEmployes.INSERTION";
    ObjAjout.CommandType = CommandType.StoredProcedure;
    ObjAjout.Parameters.Add(new OracleParameter("num", OracleDbType.Int32, 4)).Direction =
ParameterDirection.Input;
    ObjAjout.Parameters["num"].Value = TextNum.Text;
    ObjAjout.Parameters.Add(new OracleParameter("nom", OracleDbType.Varchar2, 30)).Direction =
ParameterDirection.Input;
    ObjAjout.Parameters["nom"].Value = TextNom.Text;

    //ou ces trois lignes pour le param nom
    //OracleParameter pnom = new OracleParameter(":nom", OracleDbType.Varchar2, 30);
    //pnom.Value = TextNom.Text;
    //ObjAjout.Parameters.Add(pnom).Direction = ParameterDirection.Input;
    ObjAjout.Parameters.Add(new OracleParameter("prenom", OracleDbType.Varchar2, 30)).Direction =
ParameterDirection.Input;
    ObjAjout.Parameters["prenom"].Value = TextPrn.Text;
    ObjAjout.Parameters.Add(new OracleParameter("salaire", OracleDbType.Int32, 8)).Direction =
ParameterDirection.Input;
    ObjAjout.Parameters["salaire"].Value = TextSal.Text;

    //ici on traite le fichier image pour insertion
    FileStream Streamp = new FileStream(nomFichier, FileMode.Open, FileAccess.Read);
    byte[] buffer1 = new byte[Streamp.Length];
    Streamp.Read(buffer1, 0, System.Convert.ToInt32(Streamp.Length));
    Streamp.Close();

    ObjAjout.Parameters.Add(new OracleParameter("pphoto", OracleDbType.Blob)).Direction =
ParameterDirection.Input;
    ObjAjout.Parameters["pphoto"].Value = buffer1;

    // insertion effective
    ObjAjout.ExecuteNonQuery();
    vider();
}

```

```

private void Suppression_Click(object sender, EventArgs e)
{
    OracleCommand ObjSupprimer = new OracleCommand("GestionEmployes", conn);
    ObjSupprimer.CommandText = "GestionEmployes. SUPPRESSION";
    ObjSupprimer.CommandType = CommandType.StoredProcedure;
    ObjSupprimer.Parameters.Add(new OracleParameter("num", OracleDbType.Int32, 4)).Direction =
ParameterDirection.Input;
    ObjSupprimer.Parameters["num"].Value = TextNum.Text;
    ObjSupprimer.ExecuteNonQuery();
    vider();
}

private void TotalEmp_Click(object sender, EventArgs e)
{
    OracleCommand ObTotal = new OracleCommand("GestionEmployes", conn);
    ObTotal.CommandText = "GestionEmployes.TOTAL";
    ObTotal.CommandType = CommandType.StoredProcedure;
    ObTotal.Parameters.Add(new OracleParameter("TOTALEMP", OracleDbType.Int32, 2)).Direction =
ParameterDirection.ReturnValue;
    ObTotal.ExecuteScalar();
    textTotal.Text = ObTotal.Parameters["TOTALEMP"].Value.ToString();
}

private void Chercher_Photo_Click(object sender, EventArgs e)
{
    string nomFichier;
    nomFichier = RechercherFichier();
    if (nomFichier != null)
    {
        Photoemp.Image = System.Drawing.Image.FromFile(nomFichier);
        Photoemp.ImageLocation = nomFichier;
    }
}

```

```
private string RechercherFichier()
{
    OpenFileDialog fImage = new OpenFileDialog();

    fImage.Title = "selectionner une image";
    fImage.CheckFileExists = true;
    fImage.InitialDirectory = @":C\\";

    //fImage.InitialDirectory = Application.StartupPath;
    fImage.Filter = "Fichiers images (*.BMP;*.JPG;*.GIF)|*.BMP;*.JPG;*.GIF|All files (*.*)|*.*";
    fImage.FilterIndex = 1;
    fImage.RestoreDirectory = true;

    if (fImage.ShowDialog() == DialogResult.OK)
    {
        nomFichier = fImage.FileName;
        Bitmap bitmap1 = new Bitmap(nomFichier);

    }
    else
    {
        nomFichier = null;
    }
    return nomFichier;
}
```

```

// afficher dans un DataGridView
private void Liste_Click(object sender, EventArgs e)
{
    BindingSource maSource;
    OracleCommand ObjetCmd = new OracleCommand("GestionEmploye", conn);
    ObjetCmd.CommandText = "GestionEmployes.LISTE";
    ObjetCmd.CommandType = CommandType.StoredProcedure;
    ObjetCmd.Parameters.Add(new OracleParameter("REQUETE2", OracleDbType.RefCursor)).Direction =
ParameterDirection.Output;
    OracleDataAdapter oradap = new OracleDataAdapter(ObjetCmd);
    if (monDantaSet.Tables.Count > 0)
    {
        monDantaSet.Tables["ListeEmp"].Clear();
    }
    oradap.Fill(monDantaSet, "ListeEmp");
    oradap.Dispose();
    maSource = new BindingSource(monDantaSet, "ListeEmp");
    ListeEmp.DataSource = maSource;
}

```

```
private void vider()
{
    TextNum.DataBindings.Clear();
    TextNum.Clear();

    TextNom.DataBindings.Clear();
    TextNom.Clear();

    TextPrn.DataBindings.Clear();
    TextPrn.Clear();

    TextSal.DataBindings.Clear();
    TextSal.Clear();

    Photoemp.DataBindings.Clear();
    Photoemp.Image = null;
}

private void Effacer_Click(object sender, EventArgs e)
{
    vider();
}
```

```
}
}
```