**Create the Oracle tables**

This example uses tables that are defined in the Oracle Scott/Tiger schema. By default, the Oracle Scott/Tiger schema is included with a standard Oracle installation.  
  
If this schema does not exist, you must run the following "create table and insert" scripts for the tables:

CREATE TABLE DEPT

(DEPTNO NUMBER(2,0) NOT NULL,

DNAME VARCHAR2(14) NULL,

LOC VARCHAR2(13) NULL,

PRIMARY KEY (DEPTNO)

);

INSERT INTO Dept VALUES(11,'Sales','Texas');

INSERT INTO Dept VALUES(22,'Accounting','Washington');

INSERT INTO Dept VALUES(33,'Finance','Maine');

CREATE TABLE EMP

(EMPNO NUMBER(4,0) NOT NULL,

ENAME VARCHAR2(10) NULL,

JOB VARCHAR2(9) NULL,

MGR NUMBER(4,0) NULL,

HIREDATE DATE NULL,

SAL NUMBER(7,2) NULL,

COMM NUMBER(7,2) NULL,

DEPTNO NUMBER(2,0) NULL,

FOREIGN KEY (DEPTNO) REFERENCES DEPT(DEPTNO),

PRIMARY KEY (EMPNO)

);

INSERT INTO Emp VALUES(123,'Bob','Sales',555,'28-JAN-79',35000,12,30);

INSERT INTO Emp VALUES(321,'Sue','Finance',555,'12-MAY-83',42000,12,10);

INSERT INTO Emp VALUES(234,'Mary','Account',555,'14-AUG-82',33000,12,20);

**Create the Oracle packages**

Create the following Oracle package on the Oracle server:

CREATE OR REPLACE PACKAGE curspkg\_join AS

TYPE t\_cursor IS REF CURSOR ;

Procedure open\_join\_cursor1 (n\_EMPNO IN NUMBER, io\_cursor IN OUT t\_cursor);

END curspkg\_join;

/

Create the following Oracle package body on the Oracle server:

CREATE OR REPLACE PACKAGE BODY curspkg\_join AS

Procedure open\_join\_cursor1 (n\_EMPNO IN NUMBER, io\_cursor IN OUT t\_cursor)

IS

v\_cursor t\_cursor;

BEGIN

IF n\_EMPNO <> 0

THEN

OPEN v\_cursor FOR

SELECT EMP.EMPNO, EMP.ENAME, DEPT.DEPTNO, DEPT.DNAME

FROM EMP, DEPT

WHERE EMP.DEPTNO = DEPT.DEPTNO

AND EMP.EMPNO = n\_EMPNO;

ELSE

OPEN v\_cursor FOR

SELECT EMP.EMPNO, EMP.ENAME, DEPT.DEPTNO, DEPT.DNAME

FROM EMP, DEPT

WHERE EMP.DEPTNO = DEPT.DEPTNO;

END IF;

io\_cursor := v\_cursor;

END open\_join\_cursor1;

END curspkg\_join;

/

**Create the Visual Basic .NET application**

1. Follow these steps to create a Visual Basic Windows Application project:
   1. Start Microsoft Visual Studio .NET.
   2. On the **File** menu, point to **New**, and then click **Project**.
   3. Click **Visual Basic Projects** under **Project Types**, and then click **Windows Application** under **Templates**. By default, Form1 is added to the project.
2. On the **Project** menu, click **Add Reference**, and then set a reference for System.Data.OracleClient.
3. Drag a **Button** control and a **DataGrid** control from the toolbox to the form.
4. Add the following code at the top of the Code window:

Imports System.Data.OracleClient

Add the following code to the **Button1\_Click** event of Form1:

Dim x As Exception

Dim Ds As New DataSet()

Dim Oraclecon As New OracleConnection("Server=YourOracle;Uid=uid;Pwd=pwd")

Oraclecon.Open()

Dim myCMD As New OracleCommand()

myCMD.Connection = Oraclecon

myCMD.CommandText = "curspkg\_join.open\_join\_cursor1"

myCMD.CommandType = CommandType.StoredProcedure

myCMD.Parameters.Add(New OracleParameter("n\_empno", OracleType.Number)).Value = 123

myCMD.Parameters.Add(New OracleParameter("io\_cursor", OracleType.Cursor)).Direction = ParameterDirection.Output

Dim MyDA As New OracleDataAdapter(myCMD)

Try

MyDA.Fill(Ds)

Catch x

MessageBox.Show(x.Message.ToString)

End Try

DataGrid1.DataSource = Ds.Tables(0)

Oraclecon.Close()