**A. Using NULL in a subquery to still return a result set**

The following example returns a result set with NULL specified in the subquery and still evaluates to TRUE by using EXISTS.

|  |  |
| --- | --- |
|  | ms-help://MS.SQLCC.v10/MS.SQLSVR.v10.en/s10de_6tsql/local/copycode.gifCopy Code |
| USE AdventureWorks ;  GO  SELECT DepartmentID, Name  FROM HumanResources.Department  WHERE EXISTS (SELECT NULL)  ORDER BY Name ASC ; | |

**B. Comparing queries by using EXISTS and IN**

The following example compares two queries that are semantically equivalent. The first query uses EXISTS and the second query uses IN.

|  |  |
| --- | --- |
|  | ms-help://MS.SQLCC.v10/MS.SQLSVR.v10.en/s10de_6tsql/local/copycode.gifCopy Code |
| USE AdventureWorks ;  GO  SELECT a.FirstName, a.LastName  FROM Person.Contact AS a  WHERE EXISTS  (SELECT \*  FROM HumanResources.Employee AS b  WHERE a.ContactId = b.ContactID  AND a.LastName = 'Johnson');  GO | |

The following query uses IN.

|  |  |
| --- | --- |
|  | ms-help://MS.SQLCC.v10/MS.SQLSVR.v10.en/s10de_6tsql/local/copycode.gifCopy Code |
| USE AdventureWorks ;  GO  SELECT a.FirstName, a.LastName  FROM Person.Contact AS a  WHERE a.LastName IN  (SELECT a.LastName  FROM HumanResources.Employee AS b  WHERE a.ContactId = b.ContactID  AND a.LastName = 'Johnson');  GO | |

Here is the result set for either query.

|  |  |
| --- | --- |
|  | ms-help://MS.SQLCC.v10/MS.SQLSVR.v10.en/s10de_6tsql/local/copycode.gifCopy Code |
| FirstName LastName  -------------------------------------------------- ----------  Barry Johnson  David Johnson  Willis Johnson  (3 row(s) affected) | |

**C. Comparing queries by using EXISTS and = ANY**

The following example shows two queries to find stores whose name is the same name as a vendor. The first query uses EXISTS and the second uses = ANY.

|  |  |
| --- | --- |
|  | ms-help://MS.SQLCC.v10/MS.SQLSVR.v10.en/s10de_6tsql/local/copycode.gifCopy Code |
| USE AdventureWorks ;  GO  SELECT DISTINCT s.Name  FROM Sales.Store s  WHERE EXISTS  (SELECT \*  FROM Purchasing.Vendor v  WHERE s.Name = v.Name) ;  GO | |

The following query uses = ANY.

|  |  |
| --- | --- |
|  | ms-help://MS.SQLCC.v10/MS.SQLSVR.v10.en/s10de_6tsql/local/copycode.gifCopy Code |
| USE AdventureWorks ;  GO  SELECT DISTINCT s.Name  FROM Sales.Store s  WHERE s.Name = ANY  (SELECT v.Name  FROM Purchasing.Vendor v ) ;  GO | |

**D. Comparing queries by using EXISTS and IN**

The following example shows queries to find employees of departments that start with P.

|  |  |
| --- | --- |
|  | ms-help://MS.SQLCC.v10/MS.SQLSVR.v10.en/s10de_6tsql/local/copycode.gifCopy Code |
| USE AdventureWorks;  GO  SELECT c.FirstName, c.LastName, e.Title  FROM Person.Contact c JOIN HumanResources.Employee e  ON e.ContactID = c.ContactID WHERE EXISTS  (SELECT \*  FROM HumanResources.Department d  WHERE e.DepartmentID = d.DepartmentID  AND d.Name LIKE 'P%');  GO | |

The following query uses IN.

|  |  |
| --- | --- |
|  | ms-help://MS.SQLCC.v10/MS.SQLSVR.v10.en/s10de_6tsql/local/copycode.gifCopy Code |
| USE AdventureWorks;  GO  SELECT c.FirstName, c.LastName, e.Title  FROM Person.Contact c JOIN HumanResources.Employee e  ON e.ContactID = c.ContactID WHERE DepartmentID IN  (SELECT DepartmentID  FROM HumanResources.Department  WHERE Name LIKE 'P%');  GO | |

**E. Using NOT EXISTS**

NOT EXISTS works the opposite as EXISTS. The WHERE clause in NOT EXISTS is satisfied if no rows are returned by the subquery. The following example finds employees who are not in departments and have names that start with P.

|  |  |
| --- | --- |
|  | ms-help://MS.SQLCC.v10/MS.SQLSVR.v10.en/s10de_6tsql/local/copycode.gifCopy Code |
| USE AdventureWorks;  GO  SELECT c.FirstName, c.LastName, e.Title  FROM Person.Contact c JOIN HumanResources.Employee e  ON e.ContactID = c.ContactID WHERE NOT EXISTS  (SELECT \*  FROM HumanResources.Department d  WHERE e.DepartmentID = d.DepartmentID  AND d.Name LIKE 'P%')  ORDER BY LastName, FirstName  GO | |

Here is the result set.

|  |  |
| --- | --- |
|  | ms-help://MS.SQLCC.v10/MS.SQLSVR.v10.en/s10de_6tsql/local/copycode.gifCopy Code |
| FirstName LastName Title  ------------------------------ ------------------------------ ------------  Syed Abbas Pacific Sales Manager  Hazem Abolrous Quality Assurance Manager  Humberto Acevedo Application Specialist  Pilar Ackerman Shipping & Receiving Superviso  François Ajenstat Database Administrator  Amy Alberts European Sales Manager  Sean Alexander Quality Assurance Technician  Pamela Ansman-Wolfe Sales Representative  Zainal Arifin Document Control Manager  David Barber Assistant to CFO  Paula Barreto de Mattos Human Resources Manager  Shai Bassli Facilities Manager  Wanida Benshoof Marketing Assistant  Karen Berg Application Specialist  Karen Berge Document Control Assistant  Andreas Berglund Quality Assurance Technician  Matthias Berndt Shipping & Receiving Clerk  Jo Berry Janitor  Jimmy Bischoff Stocker  Michael Blythe Sales Representative  David Bradley Marketing Manager  Kevin Brown Marketing Assistant  David Campbell Sales Representative  Jason Carlson Information Services Manager  Fernando Caro Sales Representative  Sean Chai Document Control Assistant  Sootha Charncherngkha Quality Assurance Technician  Hao Chen HR Administrative Assistant  Kevin Chrisulis Network Administrator  Pat Coleman Janitor  Stephanie Conroy Network Manager  Debra Core Application Specialist  Ovidiu Crãcium Sr. Tool Designer  Grant Culbertson HR Administrative Assistant  Mary Dempsey Marketing Assistant  Thierry D'Hers Tool Designer  Terri Duffy VP Engineering  Susan Eaton Stocker  Terry Eminhizer Marketing Specialist  Gail Erickson Design Engineer  Janice Galvin Tool Designer  Mary Gibson Marketing Specialist  Jossef Goldberg Design Engineer  Sariya Harnpadoungsataya Marketing Specialist  Mark Harrington Quality Assurance Technician  Magnus Hedlund Facilities Assistant  Shu Ito Sales Representative  Stephen Jiang North American Sales Manager  Willis Johnson Recruiter  Brannon Jones Finance Manager  Tengiz Kharatishvili Control Specialist  Christian Kleinerman Maintenance Supervisor  Vamsi Kuppa Shipping & Receiving Clerk  David Liu Accounts Manager  Vidur Luthra Recruiter  Stuart Macrae Janitor  Diane Margheim Research & Development Enginee  Mindy Martin Benefits Specialist  Gigi Matthew Research & Development Enginee  Tete Mensa-Annan Sales Representative  Ramesh Meyyappan Application Specialist  Dylan Miller Research & Development Manager  Linda Mitchell Sales Representative  Barbara Moreland Accountant  Laura Norman Chief Financial Officer  Chris Norred Control Specialist  Jae Pak Sales Representative  Wanda Parks Janitor  Deborah Poe Accounts Receivable Specialist  Kim Ralls Stocker  Tsvi Reiter Sales Representative  Sharon Salavaria Design Engineer  Ken Sanchez Chief Executive Officer  José Saraiva Sales Representative  Mike Seamans Accountant  Ashvini Sharma Network Administrator  Janet Sheperdigian Accounts Payable Specialist  Candy Spoon Accounts Receivable Specialist  Michael Sullivan Sr. Design Engineer  Dragan Tomic Accounts Payable Specialist  Lynn Tsoflias Sales Representative  Rachel Valdez Sales Representative  Garrett Vargar Sales Representative  Ranjit Varkey Chudukatil Sales Representative  Bryan Walton Accounts Receivable Specialist  Jian Shuo Wang Engineering Manager  Brian Welcker VP Sales  Jill Williams Marketing Specialist  Dan Wilson Database Administrator  John Wood Marketing Specialist  Peng Wu Quality Assurance Supervisor  (91 row(s) affected) | |