**Example 19.1**

SET SHOWPLAN\_TEXT ON;

GO

USE AdventureWorks;

SELECT \* FROM HumanResources.Employee e JOIN Person.Address a

ON e.BusinessEntityID = a.AddressID

AND e.BusinessEntityID = 10;

GO

SET SHOWPLAN\_TEXT OFF;

**Example 19.2**

USE sample;  
SELECT \* into new\_addresses  
 FROM AdventureWorks.Person.address;  
GO  
CREATE INDEX i\_stateprov on new\_addresses(StateProvinceID);

**Example 19.3**

-- high selectivity  
USE sample;  
SELECT \* FROM new\_addresses a  
 WHERE a.StateProvinceID = 32;

**Example 19.4**

-- low selectivity

USE sample;

SELECT \* FROM new\_addresses a

WHERE a.StateProvinceID = 9;

**Example 19.5**

USE AdventureWorks;

SELECT \* FROM HumanResources.Employee

WHERE HumanResources.Employee.BusinessEntityID = 10;

**Example 19.6**

USE AdventureWorks;

SELECT \* FROM HumanResources.Employee e JOIN

Person.Address a

ON e.BusinessEntityID = a.AddressID

AND e.BusinessEntityID = 10;

**Example 19.7**

USE AdventureWorks;

SELECT \* FROM Person.Address a JOIN Person.StateProvince s

ON a.StateProvinceID = s.StateProvinceID;

**Example 19.8**

##### USE AdventureWorks;

##### CREATE INDEX i\_unitprice

##### ON Sales.SalesOrderDetail(UnitPrice)

##### WHERE UnitPrice > 1000;

##### SELECT SalesOrderDetailID, UnitPrice

##### FROM Sales.SalesOrderDetail

WHERE UnitPrice > 2000;

**Example 19.9**

USE master;

SELECT counter, occurrence, value  
 FROM sys.dm\_exec\_query\_optimizer\_info  
 WHERE value IS NOT NULL  
 AND counter LIKE 'search 1%';

**Example 19.10**

SELECT ecp.objtype AS Object\_Type ,

(SELECT t. text FROM sys.dm\_exec\_sql\_text(qs.sql\_handle) AS t) AS

Adhoc\_Batch ,qs. execution\_count AS Counts ,

qs. total\_worker\_time AS Total\_Worker\_Time ,

(qs.total\_physical\_reads / qs.execution\_count ) AS Avg\_Physical\_Reads ,

(qs.total\_logical\_writes / qs.execution\_count ) AS Avg\_Logical\_Writes ,

(qs.total\_logical\_reads / qs.execution\_count ) AS Avg\_Logical\_Reads ,

qs.total\_elapsed\_time AS Total\_Elapsed\_Time,

(qs.total\_elapsed\_time / qs.execution\_count ) AS Avg\_Elapsed\_Time ,

qs.last\_execution\_time AS Last\_Exec\_Time,

qs.creation\_time AS Creation\_Time

FROM sys.dm\_exec\_query\_stats AS qs

JOIN sys.dm\_exec\_cached\_plans ecp ON qs.plan\_handle = ecp.plan\_handle

ORDER BY Counts DESC;

**Example 19.11**

SELECT TOP 5 total\_worker\_time/execution\_count AS [Avg CPU Time],

SUBSTRING(st.text, (qs.statement\_start\_offset/2)+1,

((CASE qs.statement\_end\_offset

WHEN -1 THEN DATALENGTH(st.text)

ELSE qs.statement\_end\_offset

END - qs.statement\_start\_offset)/2) + 1) AS statement\_text

FROM sys.dm\_exec\_query\_stats AS qs

CROSS APPLY sys.dm\_exec\_sql\_text(qs.sql\_handle) AS st

ORDER BY total\_worker\_time/execution\_count DESC;

**Example 19.12**

USE sample;

CREATE TABLE State

(State\_ID int IDENTITY PRIMARY KEY,

State\_name varchar(120) NOT NULL);

INSERT State (State\_name)

VALUES ('Idaho'), ('Iowa'), ('Indiana'), ('Texas');

GO

CREATE STATISTICS State\_Stats

ON State (State\_Name) ;

GO

SELECT object\_id,stats\_id,range\_high\_key,range\_rows,equal\_rows

FROM sys.dm\_db\_stats\_histogram(OBJECT\_ID('State'), 2);

**Example 19.13**

USE sample;

SELECT \* FROM new\_addresses a WITH ( INDEX(i\_stateprov))

WHERE a.StateProvinceID = 9;

**Example 19.14**

SET SHOWPLAN\_TEXT ON;

GO

USE AdventureWorks;  
SELECT \* FROM Person.Address a   
 WITH(INDEX(0))  
 WHERE a.StateProvinceID = 32;

GO  
SET SHOWPLAN\_TEXT OFF;

**Example 19.15**

USE AdventureWorks;

SELECT e.BusinessEntityID, e.LoginID, d.DepartmentID

FROM HumanResources.Employee e, HumanResources.Department d,

HumanResources.EmployeeDepartmentHistory h

WHERE d.DepartmentID = h.DepartmentID

AND h.BusinessEntityID = e.BusinessEntityID AND h.EndDate IS NOT NULL

OPTION(FORCE ORDER);

**Example 19.16**

USE AdventureWorks;

SELECT \* FROM Person.Address a JOIN Person.StateProvince s

ON a.StateProvinceID = s.StateProvinceID OPTION (MERGE JOIN);

**Example 19.17**

USE AdventureWorks;  
SELECT \* FROM Person.Address a INNER MERGE JOIN Person.StateProvince s  
 ON a.StateProvinceID = s.StateProvinceID;

**Example 19.18**

USE AdventureWorks;

DECLARE @city\_name nvarchar(30)  
SET @city\_name = 'Newark'  
SELECT \* FROM Person.Address WHERE City = @city\_name  
 OPTION ( OPTIMIZE FOR (@city\_name = 'Seattle') );

**Example 19.19**

sp\_create\_plan\_guide @name = N'Example\_19\_15',

@stmt = N'SELECT \* FROM Person.Address a JOIN Person.StateProvince s

ON a.StateProvinceID = s.StateProvinceID',

@type = N'SQL',

@module\_or\_batch = NULL,

@params = NULL,

@hints = N'OPTION (HASH JOIN)'