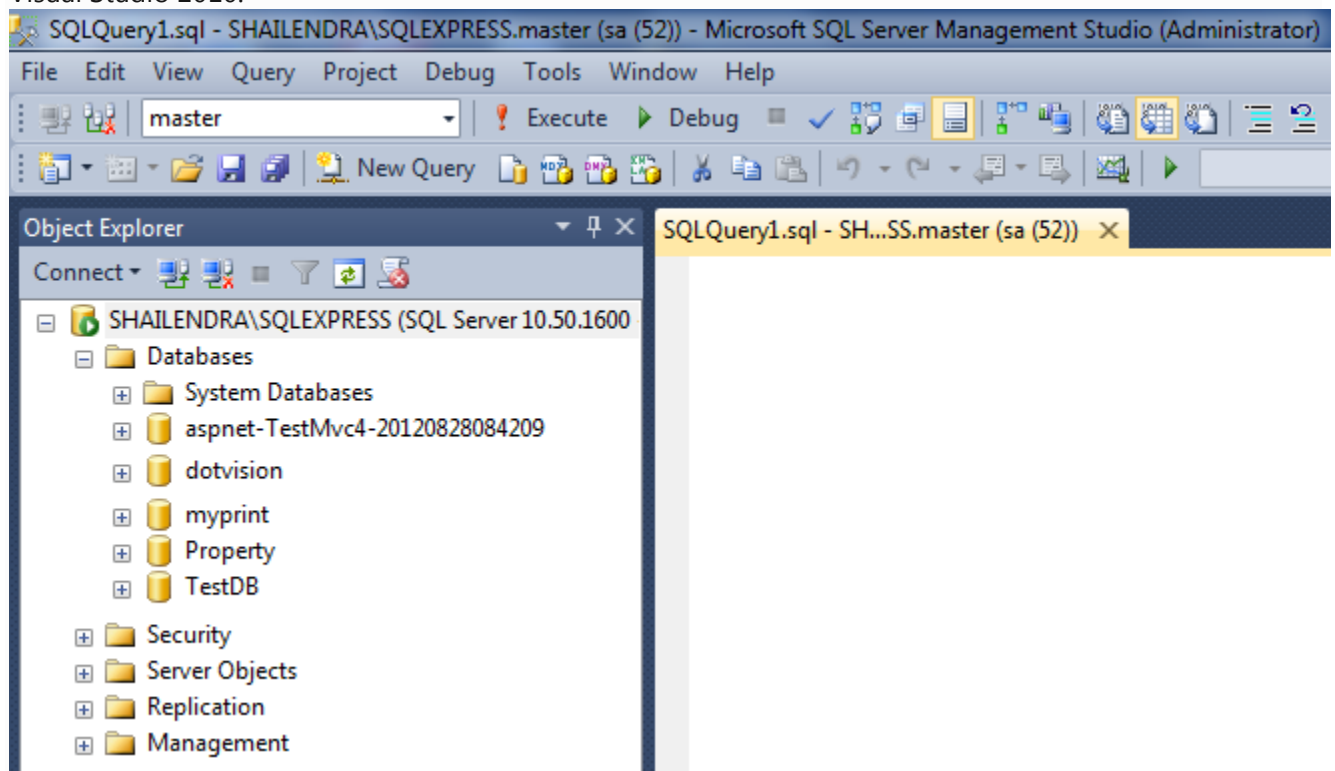


SQL SERVER 2012 NEW FEATURES AND PROGRAMMABILITY ENHANCEMENTS

SQL Server 2012 has a powerful set of features to increase productivity of developers and database administrators. SQL Server 2012 has a new SSMS that is built on Visual Studio 2010 and support various productivity features of Visual Studio 2010 like multi monitor support and pull out the tabs from main work area to different monitor or out side the IDE. Now, you can also use Visual Studio short-cut keys with SQL Server 2012. More over SQL Server 2012 supports business intellisense and debugging like Visual Studio 2010.



SQL Server 2012 Programmability Enhancements

SQL Server 2012 supports a great programmability enhancements and functions that developers and database administrators will enjoy. Some new programmability enhancements and functions are listed below:

1. T-SQL THROW Statement

Now SQL Server 2012 has improved error handling by introducing throw statement for throwing exception in T-SQL. However this statement has some limitations and does not provide powerful features like RAISERROR.

2. Conversion Functions

SQL Server 2012 has support for new conversion functions TRY_CONVERT, and TRY_PARSE for converting numeric, date, and time values to desired format. These functions are very helpful while programming T-SQL.

3. T-SQL built-in pagination

SQL Server 2012 also supports built-in pagination with the help of OFFSET and FETCH like MySQL. Actually, OFFSET and FETCH will act as a replacement for TOP in SQL Server.

```
1.  --Suppose Employee tables has 500 records
2.  --Below query skip 200 rows and fetch the next 20 records
3.  SELECT EmpID, EmpName, Salary FROM dbo.Employee
4.  ORDER BY EmpID
5.  OFFSET 200 ROWS
6.  FETCH NEXT 20 ROWS ONLY
```

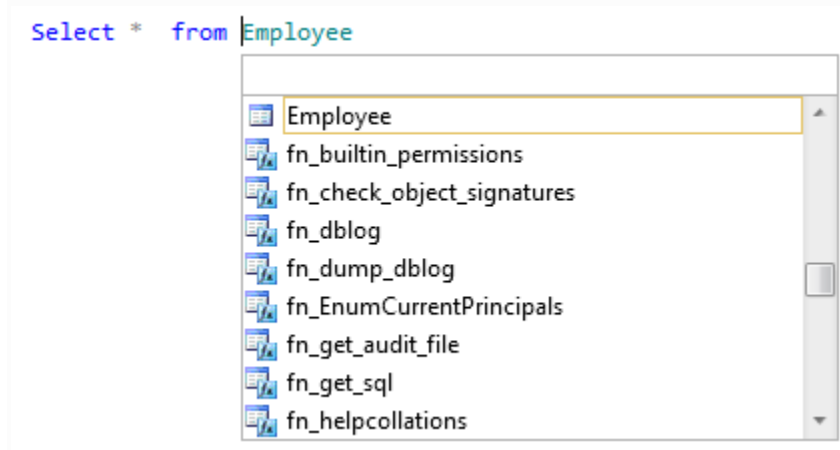
4. T-SQL Sequence

SQL Server 2012 also supports sequence like Oracle database. It works like as IDENTITY field without being a field. The main advantage of sequence is that you can use it in the same way as GUIDs and with better performance than GUIDs when used as a clustered index key.

```
1.  --Create Sequence object
2.  CREATE SEQUENCE objSequence
3.  START WITH 1
4.  INCREMENT BY 1;
5.  --Create Employee object
6.  DECLARE @Employee TABLE
7.  (
8.  ID int NOT NULL PRIMARY KEY,
9.  FullName nvarchar(100) NOT NULL
10. )
11. --Insert values
12. INSERT @Employee (ID, FullName)
13. VALUES (NEXT VALUE FOR objSequence, 'Mohan'),
14. (NEXT VALUE FOR objSequence, 'Deepak'),
15. (NEXT VALUE FOR objSequence, 'Pavan');
16. --Show data
17. SELECT * FROM @Employee
```

5. Metadata Discovery Enhancements

SQL Server 2012 also has improved metadata discovery, which allow you to determine the shape of projected output from queries, tables, stored procedure, views, and other objects. As a result SQL Server supports business intellisense and debugging.



6. T-SQL Format() Function

SQL Server 2012 introduces a new function format() for formatting string data like as C#. It is a CLR based function.

```
1. SELECT FORMAT(GETDATE(), 'yyyy-MM-dd') AS [ISO Formatted Date],  
   FORMAT(GETDATE(), 'yyyy-MM-dd hh:mm:ss') AS [Full ISO],  
   FORMAT(GETDATE(), 'MMMM dd, yyyy') AS [Long-EN Date],  
   FORMAT(22.7, 'C', 'en-US') AS [US Currency],  
   FORMAT(99 * 2.226, '000.000') AS [Padded Decimal],  
   FORMAT(12345678, '0,0') AS [Commas in Large Numbers]
```

Source : <http://www.dotnet-tricks.com/Tutorial/sqlserver/W4b4021012-SQL-Server-2012-New-Features-and-Programmability-Enhancements.html>