SQL Server Data Types & Ranges #1

SQL Server Data Types & Ranges (Applies to: SQL Server 2000, 2005, 2008, and 2012)

Exact Numerics

Type	From	To
bigint	-9,223,372,036,854,775,808	9,223,372,036,854,775,807
int	-2,147,483,648	2,147,483,647
smallint	-32,768	32,767
tinyint	0	255
bit	0	1
decimal	-10^38 +1	10^38 −1
numeric	-10^38 +1	10^38 −1
money	-922,337,203,685,477.5808	+922,337,203,685,477.5807
smallmoney	-214,748.3648	+214,748.3647

Numeric and Decimal are fixed precision and scale data types, and are functionally equivalent.

Approximate Numerics

Type	From	To
float	-1.79E + 308	1.79E + 308
real	-3.40E + 38	3.40E + 38

datetime and smalldatetime

Type	From	To
datetime (3.33 milliseconds accuracy)	Jan 1, 1753	Dec 31, 9999
smalldatetime (1 minute accuracy)	Jan 1, 1900	Jun 6, 2079

Character Strings

Type	Description
char	Fixed-length non-Unicode character data with a maximum length of 8,000 characters.
varchar	Variable-length non-Unicode data with a maximum of 8,000 characters.
varchar(max)	Variable-length non-Unicode data with a maximum length of 2^{31} characters (**SQL Server 2005 only**).
text	Variable-length non-Unicode data with a maximum length of 2,147,483,647 characters.

Unicode Character Strings

Type	Description
nchar	Fixed-length Unicode data with a maximum length of 4,000 characters.
nvarchar	Variable-length Unicode data with a maximum length of 4,000 characters.
nvarchar(max)	Variable-length Unicode data with a maximum length of 2^{30} characters (**SQL Server 2005 only**).
ntext	Variable-length Unicode data with a maximum length of 1,073,741,823 characters.