

Character Data Types		
Data Type	Size in Bytes	Notes / Comments
CHAR(n)	Defined by length * 1 byte	Fixed length up to 8,000 characters
VARCHAR(n)	Defined by length * 2 bytes	Variable length character up to 8,000 characters
VARCHAR(max)	1 byte per character	Variable length character up to 2 Gigabytes or (1,073,741,824 characters)

Numeric Data Types		
Data Type	Size in Bytes	Notes / Comments
Bit	1 byte	1 or 0 only (or NULL) (NULL meaning UnKnown Value)
Tinyint	1 byte	0 - 255
smallint	2 bytes	Up to + or - 32,767
Int	4 bytes	Up to + or - 2,147,483,647
Bigint	8 bytes	Trillions + or - (9,223,372,036,854,775,807)
Decimal / Numeric	Varies according to length	Decimal(p,s) / Numeric(p,s) *p=Precision (total number of digits) s=Scale (digits after the decimal)
Money	8 bytes	Up to + or - 922,337,203,685,477.5807
SmallMoney	4 bytes	Up to + or - 214,748.00
Float or Float(n)	4 or 8 bytes	See "Conversion Notes" below. 1 Character = 1 byte
Real	4 bytes	Float with 24 bit precision

(For FLOAT) The value (n) must be between 1 and 53. 53 is the default. Values 1-24 have a precision of 7 digits, 25-53 a precision of 15 digits

Date/Time Data Types		
Data Type	Size in Bytes	Notes / Comments
Datetime	8 bytes	From Jan 1, 1553 to Dec 31, 9999 (Julian Calendar)
SmallDateTime	4 bytes	From Jan 1, 1900 to June 6, 2079 (Gregorian Calendar)
Datetime2(0)	6-8 bytes (depending on precision)	From Jan 1, 0001 to Dec 31, 9999 (Gregorian Calendar)
Date	3 bytes	From Jan 1, 0001 to Dec 31, 9999 (Gregorian Calendar)
Time(2)	3-5 bytes (depending on precision)	Accuracy from .01 to 100 nanoseconds
DatetimeOffSet	8-10 bytes (depending on precision)	From Jan 1, 0001 to Dec 31, 9999 (Gregorian Calendar)

Conversion Notes:	8 bits = 1 byte 1024 bytes = 1 kilobyte 1024 kilobytes = 1 megabyte 1024 megabytes = 1 gigabyte
-------------------	---

CRUD	SQL command
Create	INSERT
Read	SELECT
Update	UPDATE
Delete	DELETE

ACID	Value	Notes
A	Atomic	Every transaction change succeeds or none of them do.
C	Consistent	Every Transaction leaves the database in a consistent state.
I	Isolated	Every Transaction can stand on its own.
D	Durable	Every Transaction endures through an interruption of service.