Decision Table to Decide Data Type for a Column

General Considerations			
Must this Column always have data		Will this column seldom have data 20% - 40% empty	
Yes → set to Null	**No** → Set to Allow Null	**Yes** → set to Sparse	**No** → Do not set to Sparse
Type Considerations			
Text Data			

Local Text	International Text	<= 20 characters or always fixed no of characters	> 20 characters < 8000 characters variable length	> 8000 characters variable length
Yes →Non Unicode	**Yes** →Unicode	**Yes** → (n)char	**Yes** → (n)varchar	**Yes** →(n)varchar(max)

Numeric Data

Money Data

< +/- 214,748.3648	>+/- 922,337,203,685,477.5807
Smallmoney	Money

Whole Number Data

0 to 255	+/- 32,767	+/- 2,147,483,647	+/- 9,223,372,036,854,775,807
Tinyint	Smallint	Int	Bigint

Decimal Data

Scientific Data		Precise data	
float	Real	Decimal	Numeric

Date Time Data

0001-01-01 through 9999-12-32	24 hour clock	Date and time	Time zone aware
Date	Time	Datetime2	Datetimeoffset

Special Types

True or false	Xml	x,y co-ordinates flat earth	x,y co-ordinates globe	Picture	Tree structure	Miscellaneous
Bit	Xml	Geometry	Geography	Image	Hyerarchid	cursor, timestamp, table, sql_variant