

Field properties quick reference

This article provides quick reference information about data types and other field properties.

Data type	Use	Size
ShortText	Use for alphanumeric characters, including text, or text and numbers, that are not used in calculations (for example, a product ID).	Up to 255 characters
LongText	Use for text greater than 255 characters in length, or for text that uses rich text formatting. Examples include notes, lengthy descriptions, and paragraphs that use text formatting, such as bold or italics.	Up to 1 gigabyte of characters, or 2 gigabytes of storage (2 bytes per character), of which you can display 65,535 characters in any single control.
	Use the Text Format property of a Memo field to specify whether the field supports formatted text.	Note: The maximum size for an Office Access database file is 2 gigabytes.
	Set the Append Only property of a Memo field to Yes to retain previous versions of the field value when the value changes.	
Number	Use for storing numeric values (integers or fractional) that will be used in calculations, except for monetary values.	1, 2, 4, 8, or 12 bytes (16 bytes when used for a replication ID)
	Note: Use the Currency data type for monetary values.	For more information, refer to the Number Field Size entry in the Field properties reference table.

Data type	Use	Size
Date/Time	Use for storing date and time values. Note that each stored value includes both a date component and a time component.	8 bytes
Currency	Use for storing monetary values (currency).	8 bytes
AutoNumber	Use for generating unique values that can be used as a primary key, which Access inserts when a record is added. Note that AutoNumber fields can be incremented sequentially or by a specified increment, or assigned randomly.	4 bytes (16 bytes when used for replication ID)
Yes/No	Use for Boolean values: Yes/No, True/False, or On/Off.	1 bit (0.125 bytes)
OLE Object	Use for storing OLE objects from other Microsoft Windows programs.	Up to 1 gigabyte
Attachment	Use for storing binary files (that is, files that you cannot read by using a text editor), such as digital images (photos and graphics) or files created by using other Microsoft Office products.	For compressed attachments, 2 gigabytes. For uncompressed attachments, approximately 700kb, depending on the degree to which the attachment can be compressed.
Hyperlink	You can attach more than one file per record to an Attachment field. Use for storing hyperlinks, which provide single-click access to Web	Note: The maximum size for an Office Access 2007 database file is 2 gigabytes. Up to 1 gigabyte of characters, or 2 gigabytes of

Data type	Use	Size
	pages through a URL (Uniform Resource Locator) or to files through a name in UNC (universal naming convention) format. You can also link to Access objects that are stored in a database.	storage (2 bytes per character), of which you can display 65,535 characters in any single control.
Lookup Wizard	Use to start the Lookup Wizard so that you can create a field that uses a combo box to look up a value in another table, query, or list of values. Note that Lookup Wizard is not an actual data type.	<p>Note: The maximum size for an Office Access 2007 database file is 2 gigabytes. If the lookup field is bound to a table or a query, the size of the bound column.</p> <p>If the lookup field is not bound to another column (and stores a list of values), the size of the Text field used to store the list.</p>

Top of Page

Automatic data type detection examples

You can create a new field in Datasheet view by typing in an empty column. Office Access 2007 automatically assigns a data type to each field that you create in this way. The following table shows how automatic data type detection works.

If you enter:	Office Access 2007 creates a field with a data type of:
John	Text

Office Access 2007
creates a field with a data
type of:

If you enter:

http://www.contoso.com

You can use any valid Internet protocol prefix. For example, http://, https://, and mailto: are valid prefixes.

Hyperlink

1

Number, Long Integer

50,000

Number, Long Integer

50,000.99

Number, Double

50000.389

Number, Double

12/67

The date and time formats recognized are those of your user locale.

Date/Time

December 31, 2006

Date/Time

10:50:23

Date/Time

10:50 am

Date/Time

17:50

Date/Time

\$12.50

The currency symbol recognized is that of your user locale.

Currency

21.75

Number, Double

123.00%

Number, Double

3.46E+03


Number, Double

Note: In addition to determining the data type, Access may automatically set the **Format** property for a new field, depending on what you type into that field. For example, if you type **10:50 am** in the field, Access sets the data type to Date/Time and the **Format** property to **Medium Time**.

Top of Page

Field properties

The following table lists field properties and their availability and effects by data type.

Tip: To provide more space in which to enter or edit a property setting in the property box, press SHIFT+F2 to display the **Zoom** box. If you are entering an input mask or validation expression and want help in building it, click  next to the property box to display the appropriate builder tool.

Use this field property...	With these data types...	To...
Field Size		Set the maximum size for data stored as a Text, Number, or AutoNumber data type.
		More information about property settings for these data types:
		Text
	<ul style="list-style-type: none">• Text• Number• AutoNumber	Enter a value from 1 to 255. Text fields can range from 1 to 255 characters. For larger text fields, use the Memo data type. Note: For data in a Text field, Access does not reserve space beyond what is necessary to hold actual values. The Field Size property is the maximum field value size.
		Number
		Select one of the following:

Use this field property... With these data types...

To...

- **Byte** — For integers that range from 0 to 255. Storage requirement is a single byte.
- **Integer** — For integers that range from -32,768 to +32,767. Storage requirement is two bytes.
- **Long Integer** — For integers that range from -2,147,483,648 to +2,147,483,647. Storage requirement is four bytes.

Tip: Use the Long Integer data type when you create a foreign key to relate a field to another table's AutoNumber primary key field.

- **Single** — For numeric floating point values that range from -3.4×10^{38} to $+3.4 \times 10^{38}$ and up to seven significant digits. Storage requirement is four bytes.
- **Double** — For numeric floating point values that range from -1.797×10^{308} to $+1.797 \times 10^{308}$ and up to 15 significant digits. Storage requirement is eight bytes.
- **Replication ID** — For storing a globally unique identifier that is required for replication. Storage requirement is 16 bytes. Note that replication is not supported using the .accdb file format.

Use this field property... With these data types...

To...

- **Decimal** — For numeric values that range from $-9.999... \times 10^{27}$ to $+9.999... \times 10^{27}$. Storage requirement is 12 bytes.

AutoNumber

Select one of the following:

- **Long Integer** — For unique, numeric values that range from 1 to +2,147,483,648 when the **New Values** field property is set to **Increment**, and -2,147,483,648 to +2,147,483,647 when the **New Values** field property is set to **Random**. Storage requirement is four bytes.
- **Replication ID** — For storing a globally unique identifier required for replication. Storage requirement is 16 bytes. Note that replication is not supported using the .accdb file format.

Tip: For best performance, always specify the smallest sufficient **Field Size**.

Customize the way that the field appears by default when it is displayed or printed.

Format

- Text
- Memo
- Number
- Date/Time
- Currency
- AutoNumber
- Yes/No

More information about property settings for these data types:

Text

Use this field property... With these data types...

- Hyperlink

To...

You can define a custom format for a Text field. For more information, see the article [Format data in tables](#).

Number

Select one of the following:

- **General Number** — Displays the number as it was entered.

For example, 3456.789 is displayed as 3456.789.

- **Currency** — Displays the number by using the thousand separator, and applies the settings in the Regional and Language Options in Control Panel for negative amounts, decimal and currency symbols, and decimal places.

For example, 3456.789 is displayed as \$3,456.79.

- **Euro** — Displays the number using the Euro currency symbol, regardless of the symbol specified in the Regional and Language Options.

For example, 3456.789 is displayed as €3,456.79, and 3 456,789 becomes 3 456,79€.

Use this field property... With these data types...

To...

- **Fixed** — Displays at least one digit and applies the settings in the Regional and Language Options in Control Panel for negative amounts, decimal and currency symbols, and decimal places.

For example, 3456.789 is displayed as 3456.79.

- **Standard** — Displays the number by using the thousand separator and applies the settings in the Regional and Language Options in Control Panel for negative amounts, decimal symbols, and decimal places. This format does not display a currency symbol.

For example, 3456.789 is displayed as 3,456.79.

- **Percent** — Multiplies the value by 100 and displays the number with a percent sign appended to the end. Applies the settings in the Regional and Language Options in Control Panel for negative amounts, decimal symbols, and decimal places.

For example, 0.3456 is displayed as 35%.

Use this field property... With these data types...

To...

- **Scientific** — Displays the value in standard scientific notation.

For example, 3456.789 is displayed as 3.46E+03.

Date/Time

Select one of the following predefined display formats:

- **General Date** — Displays the value by using a combination of the Short Date and Long Time settings.
- **Long Date** — Displays the value by using the Long Date setting of the Regional and Language Options in Control Panel.
- **Medium Date** — Displays the value by using the format dd-mmm-yy (14-Jul-06, for example).
- **Short Date** — Displays the value by using the Short Date setting of the Regional and Language Options in Control Panel.
- **Long Time** — Displays the value by using the Time setting of the Regional and Language Options in Control Panel.
- **Medium Time** — Displays the value by using the format HH:MM PM, where HH represents the hour, MM represents the minute, and PM

Use this field property... With these data types...

To...

represents either AM or PM. The hour value can range from 1 to 12. The minute value can range from 0 to 59.

- **Short Time** — Displays the value using the format HH:MM where HH is the hour and MM is the minute. The hour can range from 0 to 23 and the minute from 0 to 59.

Yes/No

Select one of the following:

- **True/False** — Displays the value as either True or False.
- **Yes/No** — Displays the value as either Yes or No.
- **On/Off** — Displays the value as either On or Off.

Notes:

True=Yes=On

and

False=No=Off

Decimal Places

- Number
- Currency

Specify the number of decimal places to use when displaying numbers.

New Values

- AutoNumber

Set whether an AutoNumber field is incremented or assigned a random value when a new record is added.

Use this field property...	With these data types...	To...
Input Mask	<ul style="list-style-type: none"> • Text • Number • Date/Time • Currency 	Display editing characters to guide data entry.
Caption	All data types	Set the text displayed by default in labels for forms, reports, and queries.
Default Value	<ul style="list-style-type: none"> • Text • Memo • Number • Date/Time • Currency • Yes/No • Hyperlink 	Automatically assign the specified value to a field when a new record is added.
Validation Rule	<ul style="list-style-type: none"> • Text • Memo • Number • Date/Time • Currency • Yes/No • Hyperlink 	Supply an expression that must be true to add or change the value in this field.
Validation Text	<ul style="list-style-type: none"> • Text • Memo • Number • Date/Time • Currency • Yes/No • Hyperlink 	Enter text that appears when a value entered in this field violates the expression in the Validation Rule box.

Use this field property...	With these data types...	To...
Required	All data types except AutoNumber	Require that this field must contain a value in every record.
Allow Zero Length	<ul style="list-style-type: none"> Text Memo Hyperlink 	Allow entry (by setting to Yes) of a zero-length string ("") in a Text or Memo field.
Indexed	<ul style="list-style-type: none"> Text Memo Number Date/Time Currency AutoNumber Yes/No Hyperlink 	<p>Speed up read access to data in this field by creating and using an index.</p> <p>Note: The Memo and Hyperlink fields support indexes on only the first 255 characters of the field.</p> <p>Important: An index on a field causes append, delete, and update operations to take longer, because the index must be updated to reflect any changes.</p>
Unicode Compression	<ul style="list-style-type: none"> Text Memo Hyperlink 	Compress the data in this field when fewer than 4,096 characters are stored (always true for a Text field). Has no effect when more than 4,096 characters are stored.
IME Mode	<ul style="list-style-type: none"> Text Memo Date/Time Hyperlink 	Control conversion of characters in East Asian versions of Windows.
IME Sentence Mode	<ul style="list-style-type: none"> Text Memo Date/Time Hyperlink 	Control conversion of sentences in East Asian versions of Windows.
Smart Tags	<ul style="list-style-type: none"> Text 	Attach a smart tag to the field.

Use this field property...	With these data types...	To...
	<ul style="list-style-type: none"> • Memo • Number • Date/Time • Currency • AutoNumber • Hyperlink 	<p>Track field value history by setting this property to Yes.</p> <p>Warning: Changing this property to No will erase field value history.</p> <p>More information about Append Only</p> <p>When you set Append Only to Yes, Access keeps track of changes to the field values.</p> <p>You can view the history of an Append Only field by right-clicking a value in the field, and then clicking Show column history on the shortcut menu. Access displays a history of changes to the field value.</p>
Append Only	<ul style="list-style-type: none"> • Memo • Hyperlink 	<p>Select Rich Text to store field data as HTML and allow rich text formatting. Select Plain Text to store only text.</p>
Text Format	<ul style="list-style-type: none"> • Memo 	<p>Select Rich Text to store field data as HTML and allow rich text formatting. Select Plain Text to store only text.</p>
Text Align	All data types except Attachment	Specify the default alignment of text within a control.
Show Date Picker	<ul style="list-style-type: none"> • Date/Time 	Specify whether Access displays a date picker (calendar control) when users edit a field value.

Use this field property... With these data types...

To...

Note: If you use an input mask for a Date/Time field, the **Date Picker** control is unavailable regardless of how you set this property.