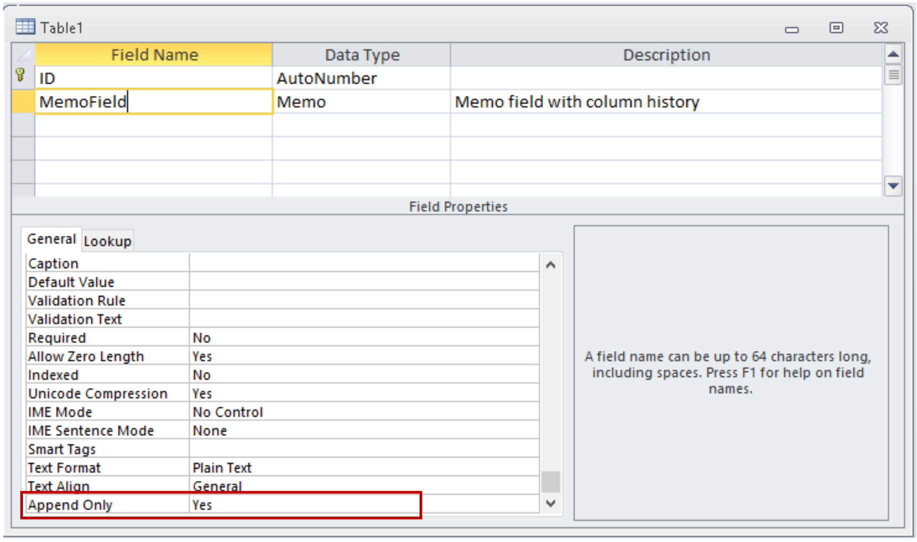
Using Column History to store historical data in memo fields

See http://www.fmsinc.com/MicrosoftAccess/2007/ColumnHistory/Index.asp

1. *Using Column History*

Create a table with a memo (long text) field.
Set its 'Append Only' property to Yes to store the history of all changes to this memo field

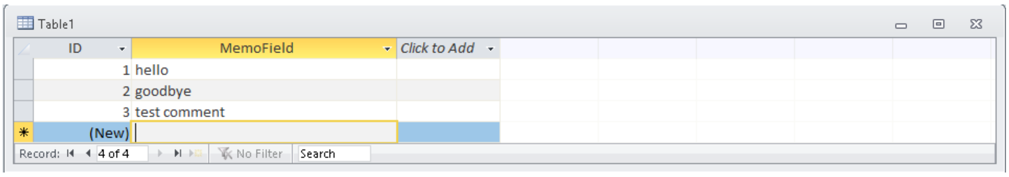


Field Name	Data Type	Description
ID	AutoNumber	
MemoField	Memo	Memo field with column history

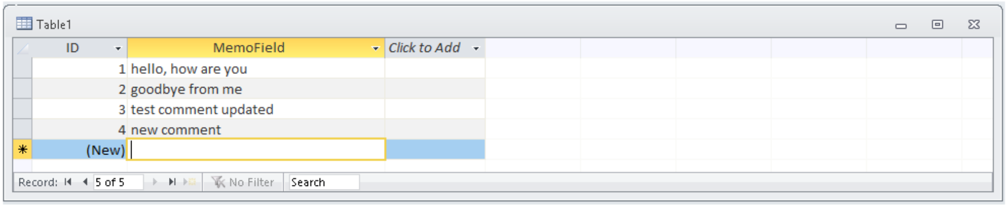
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Allow Zero Length	Yes
Indexed	No
Unicode Compression	Yes
IME Mode	No Control
IME Sentence Mode	None
Smart Tags	
Text Format	Plain Text
Text Align	General
Append Only	Yes

A field name can be up to 64 characters long, including spaces. Press F1 for help on field names.

Enter some data in the field then edit one or more of the records

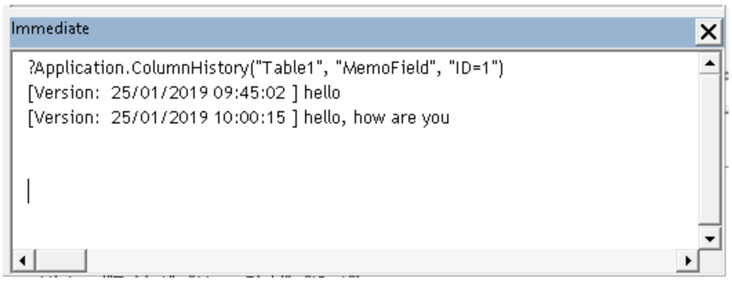


ID	MemoField	Click to Add
1	hello	
2	goodbye	
3	test comment	
(New)		



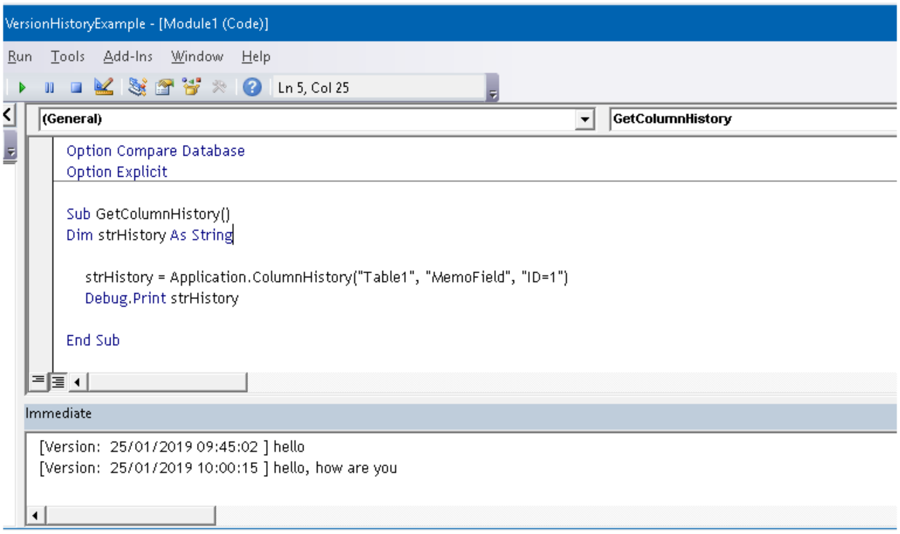
ID	MemoField	Click to Add
1	hello, how are you	
2	goodbye from me	
3	test comment updated	
4	new comment	
(New)		

You can view a history of an individual record in various ways
e.g. by typing this in the VBE Immediate window:
?Application.ColumnHistory("Tabke1", "MemoField", "ID=1")



```
?Application.ColumnHistory("Table1", "MemoField", "ID=1")
[Version:  25/01/2019 09:45:02 ] hello
[Version:  25/01/2019 10:00:15 ] hello, how are you
```

Or you can create a procedure to do this:

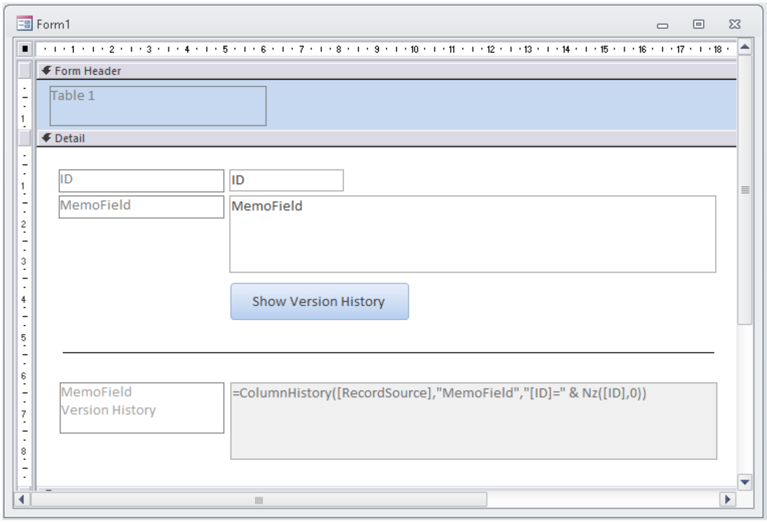

VersionHistoryExample - [Module1 (Code)]
Run Tools Add-Ins Window Help
Ln 5, Col 25
(General)
GetColumnHistory

```
Option Compare Database
Option Explicit

Sub GetColumnHistory()
Dim strHistory As String

    strHistory = Application.ColumnHistory("Table1", "MemoField", "ID=1")
    Debug.Print strHistory

End Sub
```

Immediate

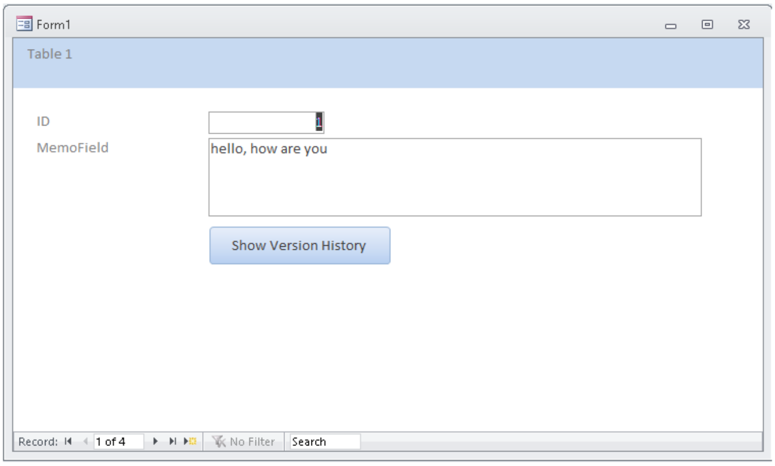
```
[Version:  25/01/2019 09:45:02 ] hello
[Version:  25/01/2019 10:00:15 ] hello, how are you
```

However, to make the feature have any real value, you can include the column history on a form. In this case I have added an extra control with control source =ColumnHistory([RecordSource],"MemoField","[ID]=" & Nz([ID],0))
The control is hidden and disabled (as it cannot be edited by end users)



=ColumnHistory([RecordSource],"MemoField","[ID]=" & Nz([ID],0))

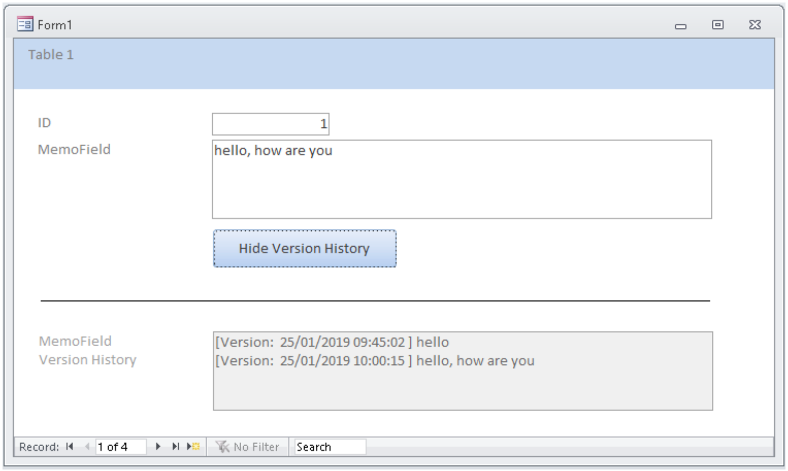
The default view is:



ID

MemoField: hello, how are you

After clicking the button, the column history is shown



ID 1

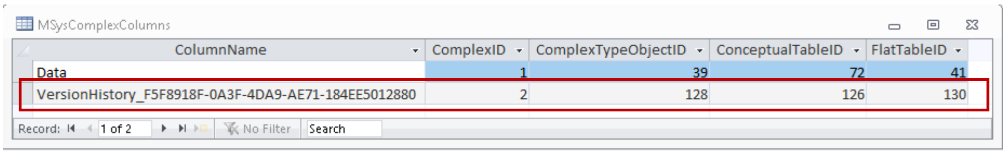
MemoField hello, how are you

MemoField Version History

[Version: 25/01/2019 09:45:02] hello
[Version: 25/01/2019 10:00:15] hello, how are you

2. *How the ColumnHistory property works*

When the column history property was specified (by setting 'Append Only' to Yes), a new record was added in the system table MSysComplexColumns.
NOTE: Set Show System Objects to True in Navigation Options to view this table

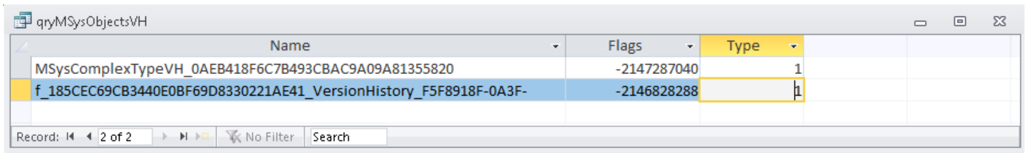


ColumnName	ComplexID	ComplexTypeObjectID	ConceptualTableID	FlatTableID
Data	1	39	72	41
VersionHistory_F5F8918F-0A3F-4DA9-AE71-184EE5012880	2	128	126	130

This record indicates new system tables have been created.

Two new system tables are created for each table with a memo field where the 'Append Only' property = Yes
These tables are deep hidden and do not appear in the navigation pane list
However, the new system table names can be identified by creating a query on the MSysObjects table

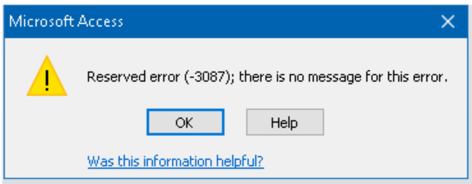
SELECT MSysObjects.Name, MSysObjects.Flags, MSysObjects.Type
FROM MSysObjects
*WHERE (((MSysObjects.Name) Like "*VH*" Or (MSysObjects.Name) Like "*Version*") AND ((MSysObjects.Flags)<>1) AND ((MSysObjects.Type)=1));*



Name	Flags	Type
MSysComplexTypeVH_0AEB418F6C7B493CBAC9A09A81355820	-2147287040	1
f_185CEC69CB3440E0BF69D8330221AE41_VersionHistory_F5F8918F-0A3F-	-2146828288	1

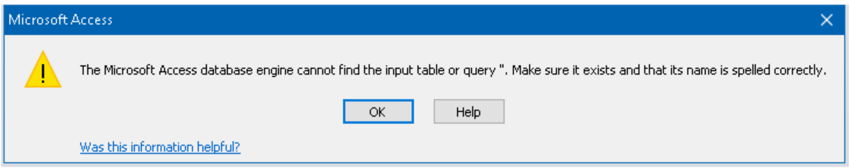
However, for security Access makes it difficult for us to view the contents of these tables
If we create this query, a reserved error occurs

*SELECT * FROM MSysComplexTypeVH_0AEB418F6C7B493CBAC9A09A81355820*



Reserved error (-3087); there is no message for this error.

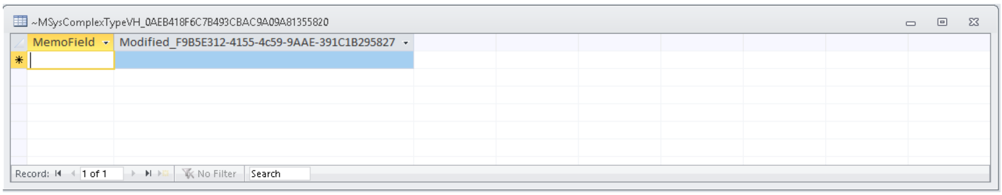
Trying to view the other table gives a different error.
Square [] brackets are needed due to the table name ending in ‘-‘
*SELECT * FROM [f_185CEC69CB3440E0BF69D8330221AE41_VersionHistory_F5F8918F-0A3F-]*



Microsoft Access

The Microsoft Access database engine cannot find the input table or query ''. Make sure it exists and that its name is spelled correctly.

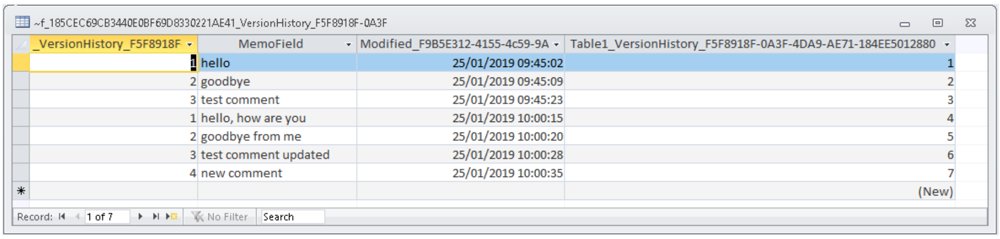
To view the contents of these tables, we need to use a bit of trickery
Surprisingly the first of these tables is empty:



~MSysComplexTypeVH_0AEB418F6C7B493CBAC9A09A81355820

MemoField	Modified_F9B5E312-4155-4c59-9AAE-391C1B295827

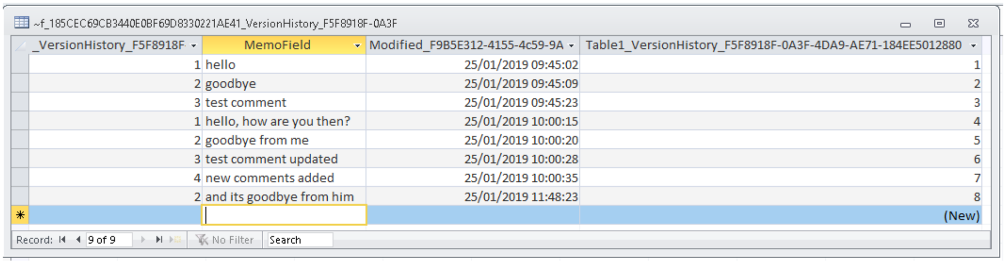
The version history data is stored in the second table:



~f_185CEC69CB3440E0BF69D8330221AE41_VersionHistory_F5F8918F-0A3F

_VersionHistory_F5F8918F	MemoField	Modified_F9B5E312-4155-4c59-9A	Table1_VersionHistory_F5F8918F-0A3F-4DA9-AE71-184EE5012880
1	hello	25/01/2019 09:45:02	1
2	goodbye	25/01/2019 09:45:09	2
3	test comment	25/01/2019 09:45:23	3
1	hello, how are you	25/01/2019 10:00:15	4
2	goodbye from me	25/01/2019 10:00:20	5
3	test comment updated	25/01/2019 10:00:28	6
4	new comment	25/01/2019 10:00:35	7
			(New)

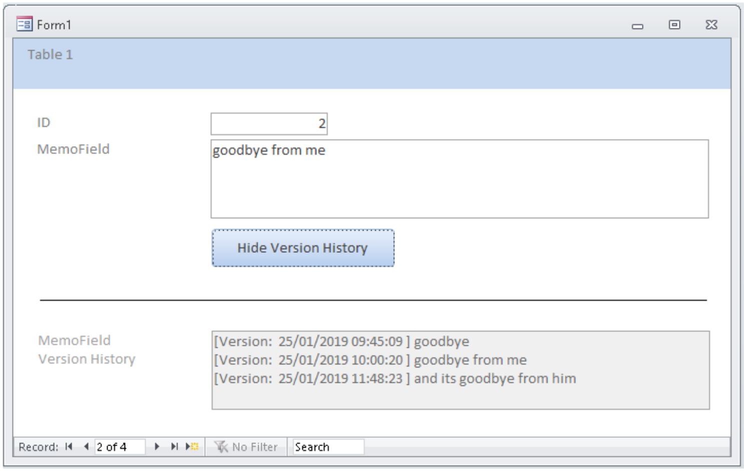
Although Microsoft have made it very difficult to view this table, once it is visible, it can actually be edited.
For example, I have edited 2 records and added a new record



~f_185CEC69CB3440E0BF69D8330221AE41_VersionHistory_F5F8918F-0A3F

_VersionHistory_F5F8918F	MemoField	Modified_F9B5E312-4155-4c59-9A	Table1_VersionHistory_F5F8918F-0A3F-4DA9-AE71-184EE5012880
1	hello	25/01/2019 09:45:02	1
2	goodbye	25/01/2019 09:45:09	2
3	test comment	25/01/2019 09:45:23	3
1	hello, how are you then?	25/01/2019 10:00:15	4
2	goodbye from me	25/01/2019 10:00:20	5
3	test comment updated	25/01/2019 10:00:28	6
4	new comments added	25/01/2019 10:00:35	7
2	and its goodbye from him	25/01/2019 11:48:23	8
			(New)

Any changes are of course then shown in the form we created earlier



Form1

Table 1

ID	2
MemoField	goodbye from me
MemoField Version History	[Version: 25/01/2019 09:45:09] goodbye [Version: 25/01/2019 10:00:20] goodbye from me [Version: 25/01/2019 11:48:23] and its goodbye from him