

Input Masking for Access® 2013

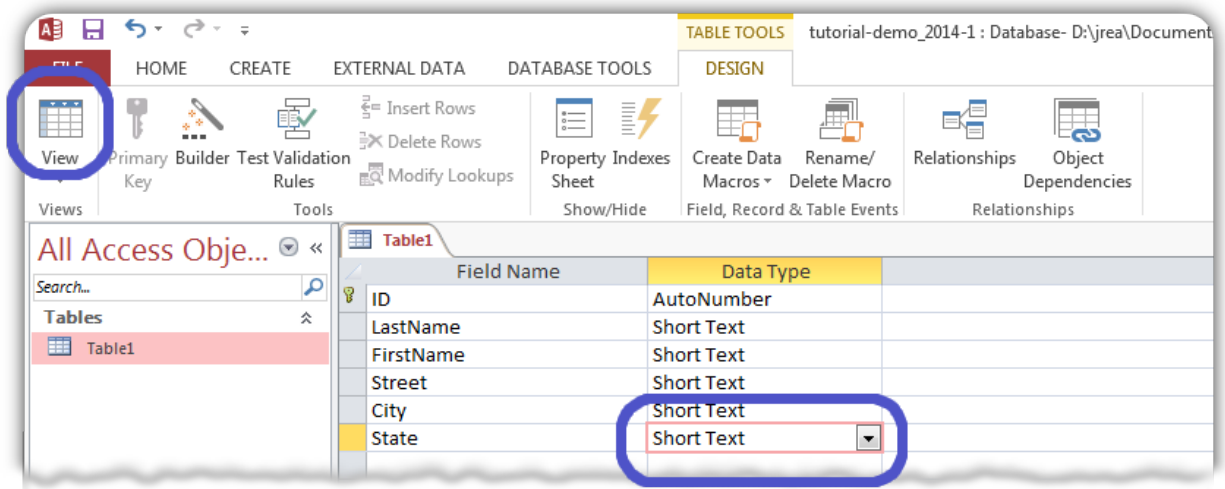
*A Student Computing Center Tutorial for
South Puget Sound Community College
Written by James Rea*

This tutorial covers the fundamentals of data input masking in Access 2013.

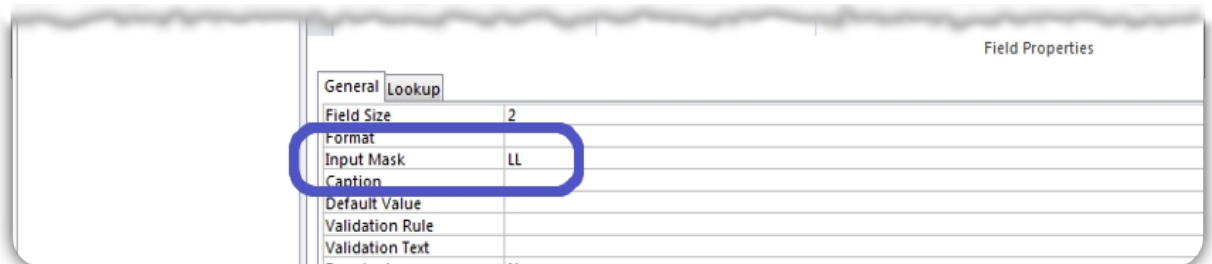
Data input masks use codes to dictate the type and layout of information input into a field. For example, a social security number always consists of 3 digits, a hyphen, 2 digits, another hyphen, and 4 digits. We might, then, want to create a field which looks like this ___-__-____, and would allow only digits to be entered into the provided placeholders (in this case, an underscore, "_").

Where to set up the Input Mask

From **Design View**, add the desired field name and data type



When you select the **Data Type** menu, the **Field Properties** form will appear at the bottom of the window. In the first tab (**General**) of that form, there is a line for **Input Mask**. The mask code will be entered there.



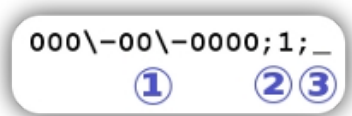
The Basic Mask Rules (Syntax)

To create the input mask in the above example, we can use the the mask code `000\ -000\ -000;1;_`. This code phrase has three sections separated by semicolons.

Section 1: The layout and format of the input mask

Here the zeros dictate that the user must input a digit in that place. The hyphens are simply the hyphens we see in the mask. They are preceded by a back-slash (\) so we know they are literal characters and not part of the mask code

Section 2: This section governs whether or not the literal characters, in this case the hyphens (-) will be stored along with the data input into the field.



The number "1" indicates that the literal characters are NOT to be stored, and the number "0" indicates that the characters are to be stored.

Section 3: In this 3rd section, we provide the placeholder character that will show up in the field to denote the expected entries.

Here, we used the underscore (which is also the default character). This will produce a pre-entry display of ___-__-___. We could have put a pound sign (#) in this position to produce ###\ -##\ -####.

The Code Character Meanings (Lexical Semantic)

In our example, we used the zero (0) character to allow only digits to be entered in that place. This code character also denotes that an entry must be made. If a nine (9) was used (e.g. 999\ -99\ -9999; 1; _) then no entry would be required in that position, but if one is made, it must be a digit.

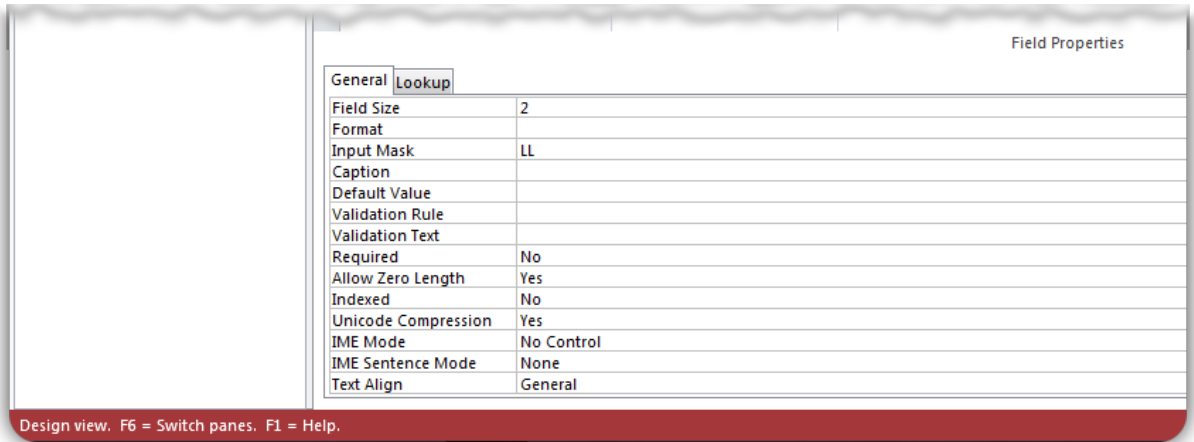
Character Code	Denotes	Mask Example	Produces	Accepted Input Examples	Rejected Input Examples	
0	Digit [0 - 9] Entry required	\(000") "000\ -0000;0;_	(_) __-__	(123) 867-5309	(+12) 867-5309 (916) cal-turk () 867-5309	The "+" is invalid. The letters are invalid. The blanks are invalid.
9	Digit [0 - 9] Entry optional	\(999") "000\ -0000;0;#	(###) ###-####	(123) 867-5309 () 867-5309	9s make the area code optional. () cal-turk (--) 867-5309	The letters are invalid. The dashes are invalid.
#	Digit or plus or minus [0 - 9] or [+] or [-] Entry optional	#####\ #####\ #####;1;_	_____-_____-	+044 8675 3091	+04 8675 309	The 1st set requires 4 digits.
L	Letter [a - z] or [A - Z] Entry required	LLL000;0;*	*****	CIS168 Hwy101	CS143 CS&143 ENGL98 Mr.007	First 3 characters must be numbers, and the last 3 must be digits
?	Letter [a - z] or [A - Z] Entry optional	LL??000;0;-	-----	PHIL120 CS 143 ENG 098	Only the 1st two letters are required. ENGL 98 Mr.007 Jun2004	All 3 digits are required. The period is invalid. A digit cannot be used in a letter place.
A	Letter or digit [a - z] or [A - Z] or [0 - 9] Entry required	AAAA\ -AAAAAAA;0;_	_____-_____	K743-JMPS5QR6 Code-Cruncher 1234-56789010	KEy-1234abcd	4 letters are required before the dash.
a	Letter or digit [a - z] or [A - Z] or [0 - 9] Entry optional	aaaaaaaa;0;*	*****	UserName User1234 User 21	Entries are optional so spaces are okay. Me@large	The "@" is invalid.
&	Any character Entry required	&&&&&&&&&&1;_	_____	Poe**EA{49R}	Almost any character is okay, but all 12 are required. Fox M J 662GT	The spaces are invalid.

C	Any character Entry optional	CCCCCCCCCCC;_	_____	Doo**SD[765] 7 + 5 = 12	Almost any character is okay, and entries are optional so blanks are okay.	700 + 800 = 1500	Spaces are counted, so there are too many characters. You would not be able to enter the last 4 numbers.
>	All letters following are changed to upper-case	>???-999;0;_	__-__	CIS-184 C - 4	The letters will be capitalized automatically.	867-5309	First 3 character must be letters, and there are too many numbers.
<	All letters following are changed to lower-case	>L<LLL;0;*	****	John	The first letter will be capitalized and all the rest will be made lower case.	Buffy	There are too many characters. You will not physically be able to enter the "y".

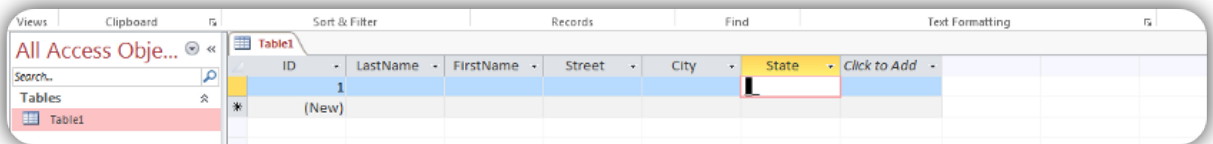
Examples of Setting Up an Input Mask

Example 1:

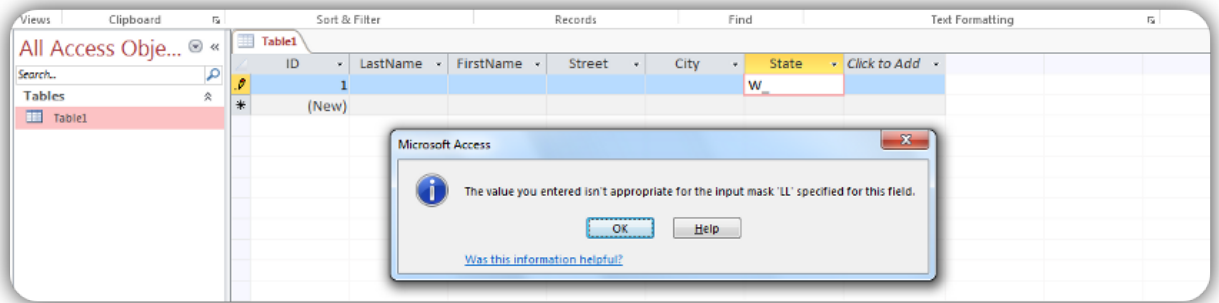
Sections 2 and 3 of the mask code phrase are not required, so for a simple mask, we need only supply the format code. In this case, we want a required 2 letter state entry. The "L" code denotes a required letter entry, so we simply enter LL on the Input Mask line.



Access supplies the default placeholders (), and so we get what we expect, __.

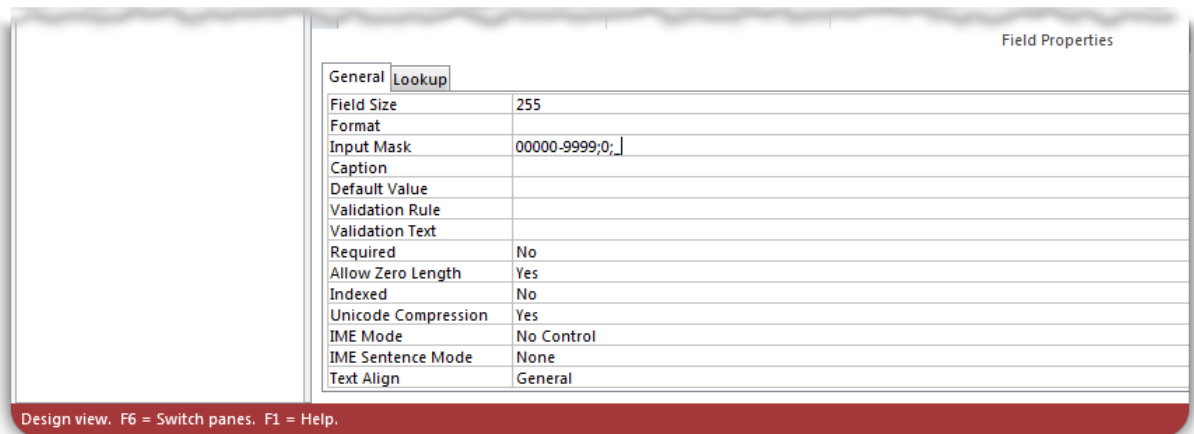


Because the "L" code denotes a required entry, if we do not supply 2 letters, we get an error, and we physically cannot enter more than 2 characters.



Example 2:

US zip codes have a 4 digit suffix that most people ignore. For this reason, we may not wish to require that this suffix be entered. We can use the nine (9) code character in these places to make that data optional.



Unlike the required input code character used above, when we skip over the last 4 entries in this example, we do NOT get an error. We simply move on to the next data field.

