

Access 2007: Tables Learning Guide

Tables

Access 2007 uses relational databases, which allow you to link information in multiple tables. This feature enables one specific category of information to be stored in each table and avoids repetitive data entry. This guide will show you advanced techniques for customizing tables, along with importing existing data into Access tables.

Importing Data into Access

You can create databases from pre-existing spreadsheets and tables by importing or linking existing data into Access. These methods provide an efficient way to keep your data up to date.

Importing Data from an Excel Spreadsheet

• From the **External Data** ribbon, locate the area labeled **Import**



• Click on the button labeled **Excel**







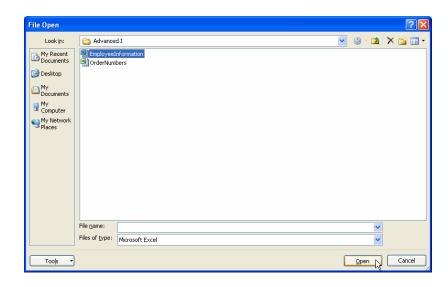
• The Select the source and destination of the data view of the Get External Data – Excel Spreadsheet window will appear

External Data	- Excel Spreadsh	eet			
Select the so	urce and destina	tion of the data			
Specify the sourc	e of the data.				
Eile name:					Browse
Specify how and	where you want to sto	re the data in the current	database.		
Import	the source data in	to a new table in the c	urrent database.		
with the	imported data. Chang	exist, Access will create it es made to the source da	ta will not be reflected in	ready exists, Access migh the database.	t overwrite its contents
Access	vill create a table that	-	ource data in Excel. Cha	nges made to the source o within Access.	lata in Excel will be
				0	Cancel

• From the **Specify the source of the data** area, click on the button labeled **Browse**

Specify the source	e of the data.	
<u>F</u> ile name:		Browse

- The File Open window will appear
- Navigate to the file you wish to import data from
- Click on the button labeled **Open**







- The name of your file will appear in the box labeled **File name**
- Confirm that the option button labeled **Import the source data into a new table in the current database** is selected
- Click on the button labeled **OK**

iet External Data	- Excel Spreadsheet			?
Select the so	urce and destination of the	e data		
Specify the source	e of the data.			
Eile name:	EmployeeInformation.xls			Browse
Specify how and	where you want to store the data in	the current database.		
If the sp with the Link to Access	the source data into a new tal ecified table does not exist, Access imported data. Changes made to th the data source by creating a vill create a table that will maintain a i in the linked table. However, the s	will create it. If the specified table e source data will not be reflected linked table. I link to the source data in Excel. O	d in the database. Changes made to the source d	
			ОК	Cancel

- The Import Spreadsheet Wizard window will appear
- Confirm that the spreadsheet containing your data is selected
- Click on the button labeled **Next**

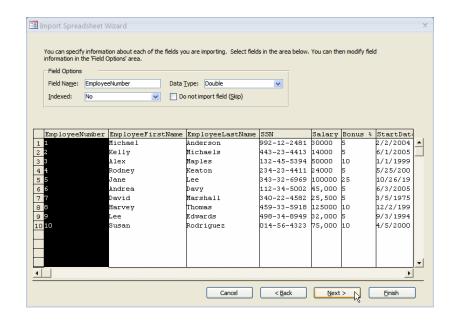
 Show Worksheets 	EmployeeInformation					
Show Named Range						
ample data for worksheet 'i	' EmployeeInformation'.					
1 EmployeeNumber	EmployeeFirstName	EmployeeLastName	SSN	Salary	Bonus 🗧	StartDat
2 1	Michael	Anderson	992-12-2481	30000	5	2/2/2004
3 2	Kelly	Michaels	443-23-4413	14000	5	6/1/2005
4 3	Alex	Maples	132-45-5394	50000	10	1/1/1999
5 4	Rodney	Keaton	234-23-4411	24000	5	5/25/200
6 5	Jane	Lee	343-32-6969	100000	25	10/26/19
7 6	Andrea	Davy	112-34-5002	45,000	5	6/3/2005
8 7	David	Marshall	340-22-4582	25,500	5	3/5/1975
98	Harvey	Thomas	459-33-5918	125000	10	12/2/199
109	Lee	Edwards	498-34-8949	β2,000	5	9/3/1994
1110	Susan	Rodriguez	014-56-4323	75,000	10	4/5/2000



- If applicable, click to place a check-mark in the box labeled **First Row Contains Column Headings**
- Click on the button labeled **Next**

	w specified contain col	umn headings?					
	First Row Contains Co	lumn Headings					
E	mployeeNumber	EmployeeFirstName	EmployeeLastName	SSN	Salary	Bonus %	StartDat
1 1				992-12-2481		5	2/2/2004
22		Kelly	Michaels	443-23-4413	14000	5	6/1/2005
3 3		Alex	Maples	132-45-5394	50000	10	1/1/1999
44		Rodney	Keaton	234-23-4411	24000	5	5/25/200
5 5		Jane	Lee	343-32-6969	100000	25	10/26/19
6 6		Andrea	Davy	112-34-5002	45,000	5	6/3/2005
77		David	Marshall	340-22-4582	25,500	5	3/5/1975
88		Harvey	Thomas	459-33-5918	125000	10	12/2/199
99		Lee	Edwards	498-34-8949	32,000	5	9/3/1994
1010	D	Susan	Rodriguez	014-56-4323	75,000	10	4/5/2000
							1

- If you want to exclude information from your spreadsheet
 - o Click on the name of the field you want to exclude
 - Click on the button labeled **Do no import field (Skip)**
 - Repeat the previous steps for each additional field you wish to exclude
- Click on the button labeled **Next**







• Click on one of the following option buttons to specify the primary key (a unique value used to identify each record in your table)

If you wish to	Click on
Let access define your primary key	• Let <u>Access add primary key</u>
Choose your own primary key	⊙ <u>C</u> hoose my own primary key
Assign the primary key later	⊙ N <u>o</u> primary key

• Click on the button labeled **Next**

100 000 000 100 000 000 100 000 0	Microsoft Access recommenc uniquely identify each record Let Access add primary ② Choose my own primary ③ No primary Key.	key.			ry key is used	l to
EmployeeNumber	EmployeeFirstName	EmployeeLastName	SSN	Salarv	Bonus %	StartDat
1 1	Michael	Anderson	992-12-2481	30000	5	2/2/2004
2 2	Kellv	Michaels	443-23-4413	14000	5	6/1/2005
3 3	Alex	Maples	132-45-5394	50000	10	1/1/1999
4 4	Rodnev	Keaton	234-23-4411	24000	5	5/25/200
5 5	Jane	Lee	343-32-6969	100000	25	10/26/19
6 6	Andrea	Davy	112-34-5002	45,000	5	6/3/2005
77	David	Marshall	340-22-4582	25,500	5	3/5/1975
88	Harvey	Thomas	459-33-5918	125000	10	12/2/199
9 9	Lee	Edwards	498-34-8949	\$2,000	5	9/3/1994
10 10	Susan	Rodriguez	014-56-4323	75,000	10	4/5/2000
•	_	·			·	•

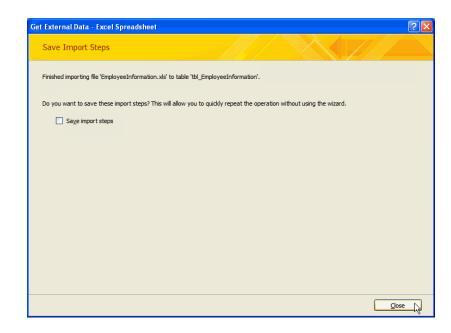




- In the box labeled **Import to Table**, type a descriptive name for the table you are importing (for example, tbl_EmployeeInformation)
- Click on the button labeled **Finish**

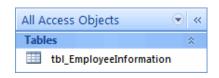
Import Spreadshee	t Wizard	х
	That's all the information the wizard needs to import your data. [mport to Table: [bl_EmployeeInformation	
	I would like a wizard to analyze my table after importing the data.	
	Cancel < Back Next > Enish	ļ

- The Save Import Steps view of the Get External Data Excel Spreadsheet window will appear
- Click on the button labeled **Close**





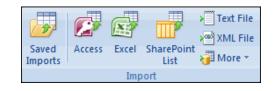
• Your table will appear in the Navigation Pane



Inserting a Linked Table from Excel

A link is an action that establishes a connection to data from another application so that you can view and can edit the data in both the original application and in Access. To link a table from a separate file:

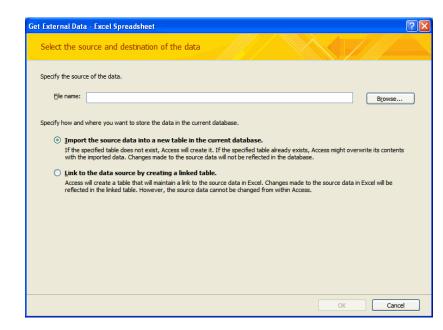
• From the External Data ribbon, locate the area labeled Import



• Click on the button labeled **Excel**



• The Select the source and destination of the data view of the Get External Data – Excel Spreadsheet window will appear







• From the **Specify the source of the data** area, click on the button labeled **Browse**



- The File Open window will appear
- Navigate to the file you wish to import data from
- Click on the button labeled **Open**

Look in:	🚞 Advanced	I				*	🄄 - 🔁	$ \rangle$	(📺
My Recent Documents	EmployeeIr	formation							
	CrderNumb	ers							
🞯 Desktop									
Documents									
G My Computer									
My Network Places									
	File <u>n</u> ame:				 			•	





- The name of your file will appear in the box labeled **File name**
- Confirm that the option button labeled **Link to the data source by creating a linked table** is selected
- Click on the button labeled **OK**

t Externat Dat	a - Excel Spreadsheet			?
Select the s	ource and destination of the	e data		
Specify the sour	ce of the data.			
Eile name:	EmployeeInformation.xls			Browse
Specify how and	I where you want to store the data in	the current database.		
· · ·	rt the source data into a new tab specified table does not exist, Access		e already exists. Access might o	verwrite its contents
with th	e imported data. Changes made to th	e source data will not be reflected		
Access	o the data source by creating a l will create a table that will maintain a	link to the source data in Excel. (a in Excel will be
reflecte	ed in the linked table. However, the s	ource data cannot be changed fro	om within Access.	

- The Link Spreadsheet Wizard window will appear
- Confirm that the spreadsheet containing your data is selected
- Click on the button labeled **Next**

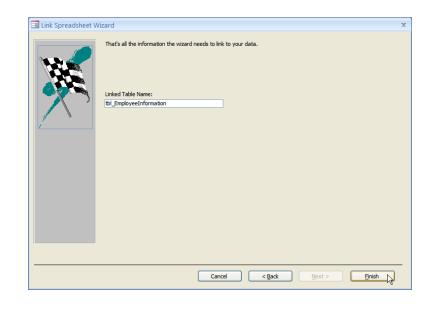
Show Worksheets	EmployeeInformation					
Show Named Range	s					
iample data for worksheet						
	EmployeeFirstName	EmployeeLastName		-		
2 1	Michael	Anderson	992-12-2481	1	5	2/2/2004
3 2	Kelly	Michaels	443-23-4413		5	6/1/2005
4 3	Alex	Maples	132-45-5394		10	1/1/1999
5 4	Rodney	Keaton	234-23-4411		5	5/25/200
6 5	Jane	Lee	343-32-6969	100000	25	10/26/19
7 6	Andrea	Davy	112-34-5002			6/3/2005
8 7	David	Marshall	340-22-4582			3/5/1975
9 6	Harvey	Thomas	459-33-5918	125000	10	12/2/199
109	Lee	Edwards	498-34-8949	32,000	5	9/3/1994
1110	Susan	Rodriguez	014-56-4323	75,000	10	4/5/2000



- If applicable, click to place a check-mark in the box labeled **First Row Contains Column Headings**
- Click on the button labeled **Next**

	contain column headings?					
First Row (Contains Column Headings					
Employee	Number EmployeeFirstN	Jame EmployeeLastN:	ame SSN	Salary	Bonus %	StartDat
1 1	Michael	Anderson	992-12-2481		5	2/2/2004
2 2	Kelly	Michaels	443-23-4413	14000	5	6/1/2005
3 3	Alex	Maples	132-45-5394	50000	10	1/1/1999
4 4	Rodney	Keaton	234-23-4411	24000	5	5/25/200
5 5	Jane	Lee	343-32-6969	100000	25	10/26/19
6 6	Andrea	Davy	112-34-5002	45,000	5	6/3/2005
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99	Lee	Edwards	498-34-8949	\$2,000	5	9/3/1994
1010	Susan	Rodriguez	014-56-4323	75,000	10	4/5/2000
		_		· ·		

- In the box labeled **Linked Table Name**, type a descriptive name for the table you are linking (for example, tbl_EmployeeInformation)
- Click on the button labeled **Finish**





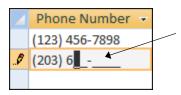


• A link to the selected table will appear in the Navigation pane (the linked table may be identified by a blue arrow to the left of the Excel icon)

All Access	Objects	• •
Tables		*
⁺ <mark>lis</mark> tbl_Er	mployeeInform	ation

Applying Field Properties Creating an Input Mask

Sometimes called a field template, an input mask consists of literal display characters (such as parentheses, periods, and hyphens) that format data and provide some control over what values may be entered into a field. In the following example, an input mask requires that all phone number entries contain exactly enough digits to make up a U.S. area code and telephone number.



If a field has an input mask, you enter data into the blanks

To create an input mask:

- From the Navigation pane, double-click on the name of the table you wish to customize
- From the **Home** ribbon, locate the area labeled **Views**



• Click on the button labeled **View**





• The **Design** view of your table will appear

F	ield Name	Data Type		Description	
Employee	Number	Number			
Employee		Text			
Employeet	astName	Text			
SSN 1		Text			
Salary		Number			
Bonus %		Number			
StartDate		Text			
		Text			
		Field Prope	rties		
		Field Prope	erties		
Field Size	Double		erties		
Field Size Format	Double General		erties		
Field Size Format Decimal Places	Double General		erties		
Field Size Format Decimal Places Input Mask	Double General		erties		
Field Size Format Decimal Places Input Mask Caption	Double General		erties		
Field Size Format Decimal Places Input Mask Caption Default Value	Double General Auto		erties	A field name can be up to 64 characters long	
Field Size Format Decimal Places Input Mask Caption Default Value Validation Rule	Double General Auto		erties	A field name can be up to 64 characters long including spaces. Press F1 for help on field names.	
Field Size Format Decimal Places Input Mask Caption Default Value Validation Rule Validation Text	Double General Auto		erties	including spaces. Press F1 for help on field	
Field Size Format Decimal Places Input Mask Caption Default Value Validation Rule Validation Text Required	e No	Number		including spaces. Press F1 for help on field	
Field Size Format Decimal Places Input Mask Caption Default Value Validation Rul Validation Text Required Indexed	e No			including spaces. Press F1 for help on field	
General Looku Field Size Format Decimal Places Input Mask Caption Default Value Validation Tust Validation Tust Required Indexed Smart Tags	e No	Number	erties	including spaces. Press F1 for help on field	

- In the column labeled Field Name, select the field to which you wish to add an input mask
- Click on the tab labeled General
- Click in the box labeled **Input Mask**
- Click on the ... button that appears to the right of the field

Field Size	Double	
Format	General Number	
Decimal Places	Auto	
Input Mask		
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	No	
Indexed	Yes (No Duplicates)	
Smart Tags	2020	
Text Align	General	

- The Input Mask Wizard window will appear
- Click on the button labeled **Yes** to save your table





• The Input Mask Wizard window will appear

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on.

- From the list that appears, select the input mask that you would like to use (for example, Phone Number)
- Click on the button labeled **Next**

To see how a selected mask wo	
Fo change the Input Mask list, (Input Mask:	dick the Edit List button. Data Look:
Phone Number	(206) 555-1212
Social Security Number	831-86-7180
Zip Code Extension	98052-6399 63215
Password	******
Long Time	1:12:00 PM





- Confirm that _ appears next to the box labeled **Placeholder character**
- Click on the button labeled **Next**

Do you want to chan	ge the input mask?
Input Mask Name:	Phone Number
Input Mask:	!(999) 000-0000
What placeholder cha	aracter do you want the field to display?
Placeholders are repla	aced as you enter data into the field.
Placeholder character	r:
Try It:	
Try It:	
	ancel < Back Next > N Finish

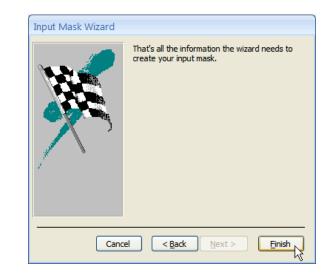
- Click on the option button labeled with the storage type you prefer (for example, with the symbols in the mask)
- Click on the button labeled **Next**

How do you v	vant to store the	data?		
With the second seco	symbols in the ma	ask, like this:		
(264) 316	-8517			
O Without t	he symbols in the	e mask, like this	s:	
44423152	281			
	Cancel	< Back	Next > N	Finis





• Click on the button labeled **Finish**



• Access will return to the **Design** view window and will display the syntax of your input mask in the **Input Mask** field under the tab labeled **General**

General	
Field Size	255
Format	
Input Mask	!\(999") "000\-0000;0;_
Caption	

Requiring Field Data Entry

To ensure that data is entered into a specific field:

- Click on the tab labeled General
- Click in the field labeled **Required**
- Click on the down-facing arrow that appears to the right of the field
- From the drop-down menu that appears, select Yes

Field Size	255	
Format		
Input Mask	!\(999") "000\-0000;0;_	
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	No	~
Allow Zero Length	Yes	
Indexed	No	
Unicode Compression	No	
IME Mode	No Control	
IME Sentence Mode	None	
Smart Tags		





Creating a Lookup Column

A lookup column(s) displays a list of values to choose from when entering data into a field. A lookup column may be created from an existing table or by entering values.

Creating a Lookup Column from an Existing Table

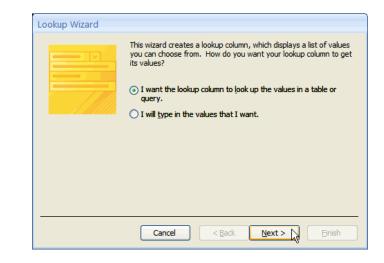
- Open up your table in **Design View**
- Locate the name the of the field you wish to edit (for example, EmployeeNumber)
- Click on the down-facing arrow next to the data type of the field
- From the drop-down menu that appears, select Lookup Wizard

	Field Nar	ne	Data Type		Description	
2	OrderNumber		AutoNumber			
	EmployeeNumber		Text	~		
	ClientNumber		Text			
	DateOrdered		Memo			
	UnitsOrdered		Number			
	PricePerUnit		Date/Time			
				_		
	DateShipped		Currency			
			AutoNumber			
			Yes/No			
			OLE Object			
			Hyperlink			
			Attachment	ies		
			Attachment	103		
6	eneral Lookup		Lookup Wizard	L,		
	ieneral Lookup	255				
F	ield Size ormat	255				
F F I	ield Size format nput Mask	255				
F I I	ield Size format nput Mask aption	255				
F In C	ield Size ormat nput Mask Caption Default Value	255				
F II C V	ield Size ormat nput Mask Caption Default Value 'alidation Rule	255				
F F C C V V	ield Size format apput Mask aption Default Value falidation Rule falidation Text				that users can store in the field. Press F1 fo	
FIC	ield Size ormat nput Mask aption Default Value 'alidation Rule alidation Text Required	No				
F II C V V F A	ield Size ormat aption Jefault Value faildation Rule (aildation Text Lequired Ilow Zero Length	No Yes			that users can store in the field. Press F1 fo	
FFICCVVFA	ield Size ormat nput Mask aption Jefault Value (alidation Rule alidation Text Lequired Jlow Zero Length ndexed	No Yes No			that users can store in the field. Press F1 fo	
FFICEVVFAIL	ield Size format nput Mask aghtion Vefault Value alidation Rule alidation Text Lequired Ulow Zero Length ndexed nicode Compression	No Yes No Yes	Lookup Wizard		that users can store in the field. Press F1 fo	
FFICOVVFAIIUI	ield Size ormat nput Mask aption Jefault Value (alidation Rule alidation Text Lequired Jlow Zero Length ndexed	No Yes No	Lookup Wizard		The data type determines the kind of value that users can store in the field. Press F1 fo help on data types.	





- The Lookup Wizard window will appear
- Click on the option button labeled **I want the lookup column to look up the values in a table or query**
- Click on the button labeled **Next**



- A list of the tables in your database (excluding the table you are editing) will appear
- Click on the name of the table that contains the data you wish to use in your lookup column (for example, tbl_EmployeeInformation)
- Click on the button labeled **Next**

Which table or query should provide the values for your lookup column? Table: tbl_EmployeeInformation
View ⊙ Iables O Queries O Both
 Cancel < Back Next > N





• A list of the fields in the table you selected will appear

	Which fields contain the values you want included in you column? The fields you select become columns in your lo column.	ır lookup okup
Available Fields:	Selected Fields:	
EmployeeNumber EmployeeFirstName		
EmployeeLastName		
SSN		
Salary		
Bonus %		
StartDate Phone Number	<<	
Phone Number		

- In the box labeled **Available Fields**, click on the name of the field you wish to include in your lookup column
- Click on the button labeled >
- Your field name will appear in the box labeled Selected Fields

Available Fields:	Selected Fields:
EmployeeNumber EmployeeLastName SSN Salary Bonus % StartDate Phone Number	EmployeeFirstName

- Repeat the previous steps until you have added all desired fields
- Click on the button labeled **Next**

	Which fields contain the values you want included in your lookup column? The fields you select become columns in your lookup column.
Available Fields: SSN Salary Bonus % StartDate Phone Number	Selected Fields: Selected Fields: FinployeeNumber EmployeeEirstName EmployeeLastName C C C
·	Cancel < Back Next > State Einish



Training

- Click on the down-facing arrow next to the box labeled **1**
- From the list that appears, select the field you wish to sort

1	~	Ascending
	(None) EmployeeNumber EmployeeFirstName	
	EmployeeLastName	

- Repeat the previous steps until you have selected all fields you wish to sort
- Click on the button labeled **Next**

TO	u can sort records by up to h	our neic	ds, in either ascending or descending order.
1	EmployeeLastName	~	Ascending
2	EmployeeFirstName	*	Ascending
3		~	Ascending
4		~	Ascending

- If necessary, adjust the width of the columns in your lookup table
- Click on the button labeled **Next**

		column headin		ne width yo	u want, or o	louble-click t
			, ,			
Z Hio	de key colu	mn (recommen	ded)			
Er	mployeeFir	EmployeeLas				
M	ichael	Anderson				
Ar	ndrea	Davy				
Le	e	Edwards				
R	odney	Keaton				
Ja	ane	Lee				
A	ex	Maples				
Da	avid	Marshall				
	-					





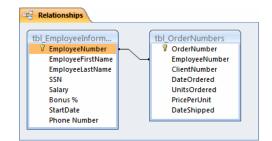
- If desired, change the label for your lookup column
- Click on the button labeled **Finish**

	What label would you like for your lookup column? EmployeeNumber Do you want to store multiple values for this lookup? Allow Multiple Values Those are all the answers the wizard needs to create your lookup column.
--	---

• Save your table by clicking on the button labeled Yes



• A relationship will automatically be created between the tables



- Navigate to the Datasheet view of your table
- Your lookup column will be available to use for data entry

	tbl_OrderNumbe	ers			
	OrderNumb 👻	Employee	eNt ▼	Clien	tNumb 👻
	1	Lee	*		
	2	Michael	And	erson	
*	(New)	Andrea	Davy	/	
		Lee	Edw	ards	
		Rodney	Keat	on	
		Jane	Lee		
		Alex	Мар	les	

Creating a Lookup Column by Entering in Values

A value list should only be used for values that will not change very often and that do not need to be stored in a table. For example, a list for bonus percentages would work well in this type of lookup column.

- Locate the name the of the field you wish to edit (for example, Bonus%)
- Click on the down-facing arrow next to the field name
- From the drop-down menu that appears, select Lookup Wizard

4 Field I	Name	Data Type		Description
EmployeeNum	ber	Number		
EmployeeFirstN	lame	Text		
EmployeeLastN		Text		
SSN		Text		
Salary		Number		
Bonus %		Number	1	
StartDate		Text		
Phone Number		Memo		
Phone Number		Number		
		Date/Time		
		Currency		
		AutoNumber	ies	
General Lookup		Yes/No		
Field Size	Double	OLE Object		
Format	General Num	Hyperlink		
Decimal Places	Auto	Attachment		
Input Mask		Lookup Wizard		
Caption		LOOKup Wizaru	9	
Default Value				The data type determines the kind of values
Validation Rule				that users can store in the field. Press F1 for
Validation Text				help on data types.
Required	No			
Indexed	No			
Smart Tags				
Text Align	General			

- The Lookup Wizard window will appear
- Click on the option button labeled I will type in the values that I want
- Click on the button labeled **Next**





- Type the values you wish to appear in the lookup column
- If necessary, adjust the width of the column
- Click on the button labeled **Next**

To a	adjust th	e width of	a column,	drag its rig to get the	ht edge t		nt, or dou	ble-click the
Nun	nber of <u>c</u>	olumns:	1					
4	Col1							
	2.5							
	5							
	7.5							
	10							
	12.5							
	15							
*								

- If desired, change the label for your lookup column
- Click on the button labeled Finish

What label would you like for your lookup column?

- Navigate to the Datasheet view of your table
- If necessary, click on the button labeled Yes to save your table





t	bl_EmployeeInfor	mation				
	EmployeeNi 🗸	EmployeeFii 🗸	EmployeeLa 👻	SSN -	Salary 👻	Bonus %
+	1	Michael	Anderson	992-12-2481	30000	5
+	2	Kelly	Michaels	443-23-4413	14000	2.5
						5
						7.5
						10
						12.5
						15

vill be vilabla t o f r dat .1.



