





Let's set up a many-to-many field to the *Employees* page in a *Web Site Factory* application. As you can see below, the *EmployeeTerritories* junction table links together *Employees* and *Territories*.

	55 C				cilipioyees		
m	ployeeTerritorie	:s			Column Name	Data Type	Allow Null
	Column Name	Data Type	Allow Nulls		P EmployeeID	int	
8	EmployeeID	int	(FT)	x	LastName	nvarchar(20)	
8	TerritoryID	nvarchar(20)	[[***]	-	FirstName	nvarchar(10)	
			[FT]		Title	nvarchar(30)	1
					TitleOfCourtesy	nvarchar(25)	
		0			BirthDate	datetime	
		Q			HireDate	datetime	
					TilleDate	croice cirre	E. al
					Address	nvarchar(60)	
		Ŷ		-	Address City	nvarchar(60) nvarchar(15)	
[ei	rritories	P			Address City Region	nvarchar(60) nvarchar(15) nvarchar(15)	
[ei	rritories	P Data Type	Allow Nulls		Address City Region PostalCode	nvarchar(60) nvarchar(15) nvarchar(15) nvarchar(10)	
e 8	rritories Column Name TerritorvID	Data Type	Allow Nulls		Address City Region PostalCode Country	nvarchar(60) nvarchar(15) nvarchar(15) nvarchar(10) nvarchar(15)	V V V V V
ei 8	rritories Column Name TerritoryID TerritoryDescription	Data Type nvarchar(20) nchar(50)	Allow Nulls		Address City Region PostalCode Country HomePhone	nvarchar(60) nvarchar(15) nvarchar(15) nvarchar(10) nvarchar(15) nvarchar(24)	
ei 8	Column Name Column Name TerritoryID TerritoryDescription RegionID	Data Type nvarchar(20) nchar(50) int	Allow Nulls		Address City Region PostalCode Country HomePhone Extension	nvarchar(60) nvarchar(15) nvarchar(15) nvarchar(10) nvarchar(15) nvarchar(24) nvarchar(4)	
e	Column Name Column Name TerritoryID TerritoryDescription RegionID	Data Type nvarchar(20) nchar(50) int	Allow Nulls		Address City Region PostalCode Country HomePhone Extension Photo	nvarchar(60) nvarchar(15) nvarchar(15) nvarchar(10) nvarchar(10) nvarchar(15) nvarchar(24) nvarchar(4) image	
e	Column Name Column Name TerritoryID TerritoryDescription RegionID	Data Type nvarchar(20) nchar(50) int	Allow Nulls		Address City Region PostalCode Country HomePhone Extension Photo Notes	nvarchar(60) nvarchar(15) nvarchar(15) nvarchar(10) nvarchar(10) nvarchar(15) nvarchar(24) nvarchar(4) image ntext	
ei 8	rritories Column Name TerritoryID TerritoryDescription RegionID	Data Type nvarchar(20) nchar(50) int	Allow Nulls		Address City Region PostalCode Country HomePhone Extension Photo Notes ReportsTo	nvarchar(60) nvarchar(15) nvarchar(15) nvarchar(10) nvarchar(10) nvarchar(15) nvarchar(24) nvarchar(24) image ntext int	
¶ ₽	rritories Column Name TerritoryID TerritoryDescription RegionID	Data Type nvarchar(20) nchar(50) int	Allow Nulls		Address City Region PostalCode Country HomePhone Extension Photo Notes ReportsTo PhotoPath	nvarchar(60) nvarchar(15) nvarchar(15) nvarchar(10) nvarchar(10) nvarchar(24) nvarchar(24) image ntext int nvarchar(255)	

Below, you can see how the *Employees* page is presented in a non-customized *Web Site Factory* application. There is a long list of fields going down the page, and several tabs below for the child record lists. One of these lists contain all the relevant territories to the selected employee.

Employees								
These are the field	s of the employees record that can be e	dited.						
Last Name	Fuller							
First Name	Andrew							
Title	Vice President, Sales							
Title Of Courtesy	Dr.							
Birth Date	2/19/1952							
Hire Date	8/14/1992							
Address	908 W. Capital Way							
City	Tacoma							
Region	WA							
Postal Code	98401							
Country	USA							
Home Phone	(206) 555-9482							
Extension	3457							
Photo	S							
Notes	Andrew received his BTS comm the company as a sales represe Roundtable, the Seattle Chamb	ercial in 1974 and a Ph.D. in interr entative, was promoted to sales m er of Commerce, and the Pacific F	national marketing nanager in January Rim Importers Asso	from the Universe 1992 and to vio ociation.	sity of Dallas in 1981. He is fluen te president of sales in March 199	t in French and Italian a 93. Andrew is a member	nd reads Germ of the Sales M	nan. He joined Management
Reports To Last N	lame N/A							
Photo Path	http://accweb/emmployees/full	er.bmp						
† 4						Edit	Delete	Close
Employees	Orders Employee Territories							
This is a list of emp	loyees.							
	🔎 🖃 New Employees 🛛 Ad	tions • Report •					View	Employees •
Last Name F	irst Name Title	Title Of Courtesy	Birth Date	Hire Date	Address	City	Region	Postal Code
Davolio N	lancy Sales Representative	Ms.	12/8/1948	5/1/1992	507 - 20th Ave. E.Apt. 2A	Seattle	WA	98122
Leverling J	anet Sales Representative	Ms.	8/30/1963	4/1/1992	722 Moss Bay Blvd.	Kirkland	WA	98033

We would like to make the form more compact, and move the *Territories* directly onto the *Employees* form, as well as make *Territories* more easily editable.

Bring up *Code On Time Generator*, select the project name, and press *Design*. From the list of *All Controllers*, select *Employees*. First, let's make the presentation of the data more compact by switching to *Categories* tab. Change both *New Column* and *Floating* to "Yes" for both categories.

Project Designer exit											
G Home > Controller: Employees											
Controller	Commands	Fields	Views	Categories	Data Fields	Action Groups	Actions				
This is a list o	of data field ca	tegories in	the view	. Categories are	not supported	l in grid views.					
Quick Find	Q	Record	•								View: Categories •
Header Text		View		Desc	ription		1	New Column	Tab	Floating	Collapsed
New Employees createForm1		\$Def	\$DefaultNewDescription		١	/es	n/a	Yes	n/a		
Employees		editF	form 1	\$De	faultEditDescri	ption		Yes 🔻		Yes 🔻	N/A 🔻
Save	Ca	ancel									

Now, switch to *Fields* tab and create a new *Field*. Give it the *Name* "Territories", *Type* "String", and enable "Allow null values". Enable "The value of this field is computed at run-time", and specify the *SQL Formula* of "NULL". *Label* will be "Territories".

New Field	Name *
Specify field name, type, and data properties of the field.	Territories
Server Default is a SQL expression used as a field value when no value is provided for the field in INSERT and UPDATE statement.	Type* String ←
Indicate that the field is <i>computed</i> if the field is not physically present in the dataset produced by controller's command. Computed field requires a mandatory <i>formula</i> that must be defined as a valid SQL expression. This expression is automatically inserted in SELECT statements when needed.	 Allow null values. The value of this field is computed at run-time by SOL expression.
Calculated field values can be produced by business rule methods with attribute ControllerAction. You must list the context fields that will cause the calculation. Optional code formula is is embedded into an automatically created business rule and is calculated	SQL Formula NULL

The last step will be to indicate how the items will be displayed. From *Items Style*, choose "Checkbox List". *Items Data Controller* will be "Territories", *Data Value Field* is "TerritoryId", and *Data Text Field* is "Territory Description". *Target Controller* will be "EmployeeTerritories". Save the field, and select it from the list.

Lookup	Items Style
Lookup settings can be based on another data controller or defined as static items. Follow the link to learn more about lookup item styles.	Check Box List
You can list static lookup items on the <i>Items</i> tab.	Items Data Controller Territories
Property <i>Copy</i> specifies the fields that must be copied from the lookup data row when a lookup value is selected. Specify one copy source per line in format <i>FieldName=LookupFieldName</i> .	Data Value Field TerritoryID
Items style <i>Check Box List</i> allows to configure the field as many-to-many if you set the data type to <i>String</i> , indicate that the value of the field is <i>computed at runtime</i> and select a <i>Target Controller</i> .	Data Text Field TerritoryDescription
Lookup is rendered in search mode if <i>Search on Start</i> is checked.	Target Controller

Select the field you just created, *Territories*, and then click on *Data Fields* tab. We will need to bind the new field to several views. Create a new data field with *View* of "createForm1", *Category* of "New Employees", and set *Columns* to "5".

Project Designer exit										
G Home > Controller: Employees > Field: Territories										
Field Items Validators Data Fields	Field Outputs									
Please fill this form and click OK button to create a new data field record. Click Cancel to return to the previous screen.										
			View: New Data Field 🔹							
* - indicates a required field		(OK Cancel							
New Data Field		View *								
Complete the form. Make sure to enter all requ	uired fields.	createForm1 🥥								
		Category New Employees 🖉 📑								
		Alias (select)								
Presentation Specify visual properties of the data field.		Columns 5								
		Rows								
		Values of this field cannot be edited. *								
		Text Mode * N/A ▼								

Save this data field and create a new one. The next data field will be of *View* "editForm1", *Category* of "Employees", with *Columns* set to "5".

Field	Items	Validators	Data Fields	Field Outputs				
Please	fill this for	m and click Oł	K button to creat	e a new data fiel	d record. Click Cancel to re	turn to the previous screen.		
							View: Ne	w Data Field 🔹
* - indic	ates a rec	uired field					ОК	Cancel
New D	ata Field	I				View *		
Comple	te the for	m. Make sure	e to enter all requ	ired fields.		editForm1 🥜		
						Category Employees 🥢 📑		
						Alias (select)		
Prese	ntation					Columns		
Specify	visual pro	operties of th	e data field.			5		
						Rows		
						Values of this field cannot be edited. * Default		
						Text Mode * N/A		

Save, and press the *Preview* button on the action bar.

The new *Employees* page will appear in a browser window. Select an employee and you can see that the detail view is much more compact. There is also a list of territories associated with that employee.

Home > Employees Employees											
Please review employees information below. Click Edit to change this record, dick Delete to delete the record, or click Cancel/Close to return back.											
New Employees Actions Report View: Review Employees View: Review Employees											
Edit Delete Close Employees											
These are the fields of the employees record that can be edited.											
Last Name First Name Title Title Of Courtesy Birth Date Hire Date Address City Region Postal Code Country Home Phone Fuller Andrew Vice President, Sales Dr. 2/19/1952 8/14/1992 908 W. Capital Way Tacoma WA 98401 USA (206) 555-9482											
Extension Photo 3457											
Notes Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.											
Reports To Last Name Photo Path Territories N/A http://accweb/emmployees/fuller.bmp Bedford , Boston , Braintree , Cambridge , Georgetow , Louisville , Westboro											
Edit Delete Close											

If you press the *Edit* button, then the fields will become editable. You will notice that the new *Territories* field becomes a list of checkboxes. You can mark however many selections, and the application will save your selection when you press *Ok*.

Employees					
These are the fields of the employees record that can be e	dited.				
Last Name * First Name * Fuller Andrew	Title Vice President, Sales	Title Of Courte	sy Bi	rth Date I	Hire Date 8/14/1992
Address 908 W. Capital Way	City Tacoma	Region	Postal Code 98401	Country USA	
Home Phone Extension Pl (206) 555-9482 3457	hoto	es photo file.	Notes Andrew received his Ph.D. in internation of Dallas in 1981. I and reads German. sales representative Reports To Last Name (select)	s BTS commercial in 1 al marketing from the te is fluent in French a He joined the compa e, was promoted to se	1974 and a A University E and Italian A Italian A Italia
Photo Path http://accweb/emmployees/fuller.bmp	Territories Atlanta Austin Beachwood Ø Bedford Bellevue Bentonville Ø Boston Ø Braintree Ø Cambridge Campbell	Cary Ho Chicago Ho Colorado Springs V Lo Columbia Me Dallas Me Denver Mi Edison Mo Fairport Ne Findlay Ne Georgetow Ne Greensboro Or	iffman Estates Philadelphi Ilis Phoenix uisville Portsmoutt Ilvile Providence Inneapolis Redmond vrristown Rockville w York Roseville w York Santa Clar Iando Santa Cruz	a Santa Monica Savannah Scottsdale Seattle Southfield Tampa Troy Westboro sco Wilton	
👚 🦺 * - indicates a required field				ОК	Delete Cancel