



Creating Custom Objects

Veeva Professional Services

Module Objectives

- **Create a custom object**
- **Add custom fields to a custom object:**
 - Lookup
 - Master-Detail
 - Picklist
- **Configure field dependency**
- **Modify columns displayed in tabs, related lists, and search layouts**
- **Review Salesforce.com Platform Limits**

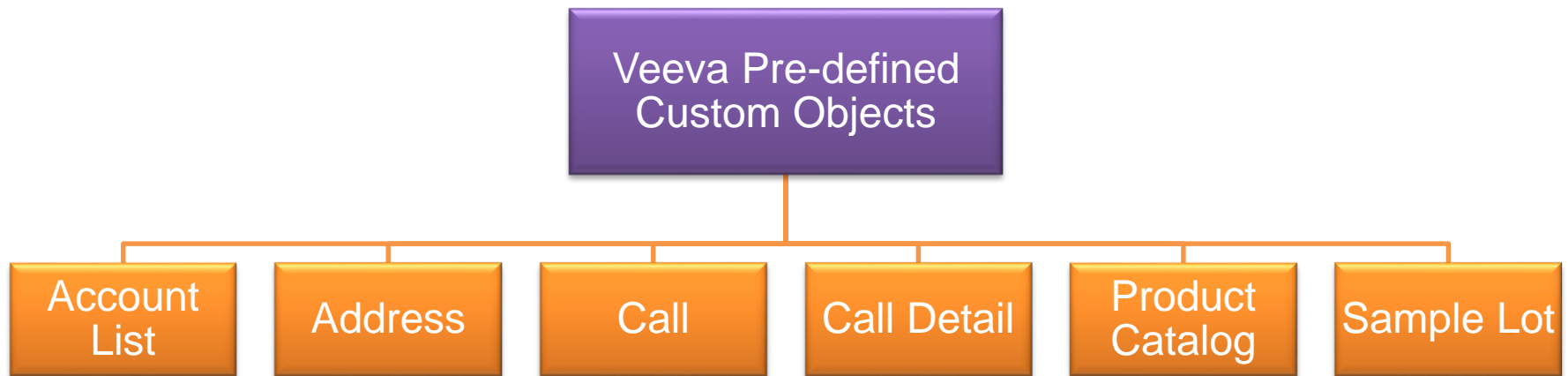


Custom Objects



What is a Custom Object?

- **Custom objects are custom database tables that allow you to store information unique to your organization**

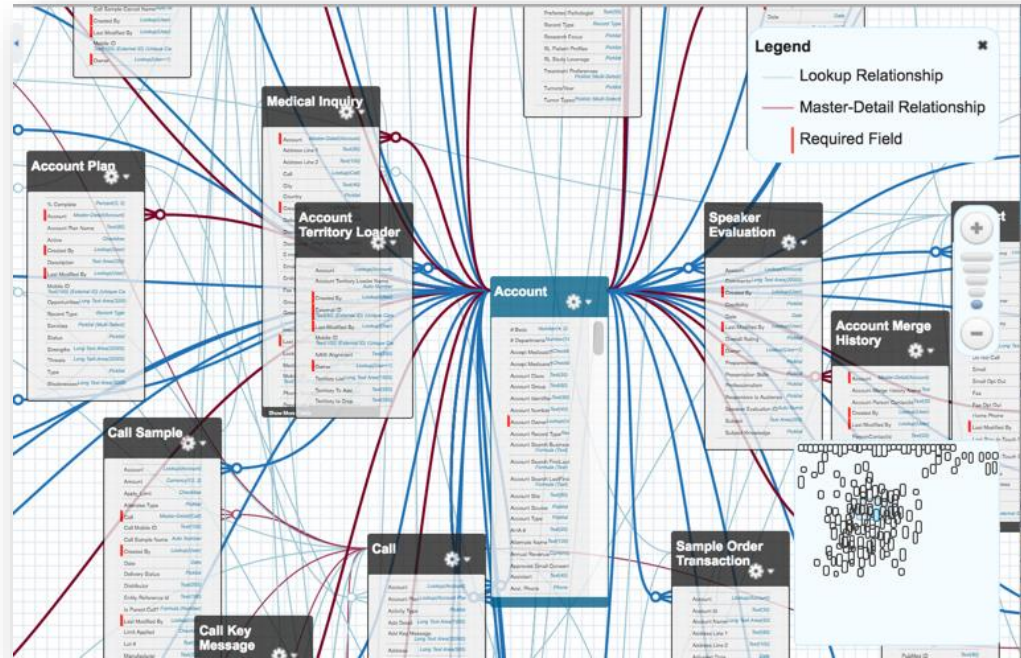


- **Your organization may need to define custom objects**
 - For example: Training custom object to store information about training classes a Professional has attended



Schema Builder

- Dynamic environment for viewing and modifying the objects and relationships in the Veeva app
- Good way to visualize the objects in the Veeva application
 - Go to Setup → Schema Builder
- Almost all objects are related to Account



Custom Object Components



Steps to Create a Custom Object

- **Create custom object**
- **Create custom fields and relationships**
- **Configure page layout(s)**
- **Configure fields to display in**
 - List view
 - Search layouts
- **Configure record types**
- **Assign page layouts per profile**
- **Create a custom object tab**

[Cheat Sheet for Creating Custom Objects](#)



Create Custom Object

- Setup → Create → Objects → click the New Custom Object button

Custom Object Information

The singular and plural labels are used in tabs, page layouts, and reports.

Label Example: Account

Plural Label Example: Accounts

Starts with vowel sound ☐

The Object Name is used when referencing the object via the API.

Object Name Example: Account

Description

Context-Sensitive Help Setting

☒ Open the standard Salesforce.com Help & Training window

☐ Open a window using a custom s-control

☐ Open a window using a Visualforce page

Content Name

Naming convention best practice is to include company's initials as the prefix

Create Custom Object

Enter Record Name Label and Format

The Record Name appears in page layouts, key lists, related lists, lookups, and search results. For example "Training Number". Note that the Record Name field is always called "Name" when referenced via the API.

Record Name	Training Number	Example: Account Name
Data Type	Auto Number	Example: A-{00000} What Is This?
Display Format	TR-{00000}	
Starting Number	001	

Optional Features

- ☒ Allow Reports
- ☒ Allow Activities
- ☒ Track Field History
- ☐ Allow in Chatter Groups

Object Classification

When these settings are enabled, this object is classified as an Enterprise Application object. When these settings are disabled, this object is classified as a Standard object. [Learn more.](#)

- ☒ Allow Sharing
- ☒ Allow Bulk API Access
- ☒ Allow Streaming API Access

Deployment Status

☐ In Development

☒ Deployed

Search Status

When this setting is enabled, your users can find records of this object type when they search. [Learn more.](#)

☒ Allow Search

Object Creation Options (Available only when custom object is first created)

- ☒ Add Notes and Attachments related list to default page layout
- ☒ Launch New Custom Tab Wizard after saving this custom object

Auto Number creates an auto number standard field. Every record will have a value automatically generated starting with 001 and up to 10 digits long.

Create the custom object tab as part of the wizard or add it later manually

Standard Fields

- All objects have standard fields

- Standard fields cannot be deleted

Custom Object
Training

[Standard Fields \[4\]](#) | [Custom Fields & Relationships \[0\]](#) | [Validation Rules \[0\]](#) | [Page Layouts \[1\]](#) | [Field Sets \(BETA\) \[0\]](#) | [Compact Layouts \[1\]](#) | [Search Layouts \[4\]](#) | [Buttons, Links, and Actions \[8\]](#) | [Record Types \[0\]](#) | [Apex Sharing Reasons \[0\]](#) | [Apex Sharing Recalculation \[0\]](#) | [Object Limits \[10\]](#)

Custom Object Definition Detail Edit Delete

Singular Label	Training
Plural Label	Trainings
Object Name	VS_Training
API Name	VS_Training__c

Deployment Status: Deployed

Help Settings: Standard salesforce.com Help Window

Created By: [Henry Almeida](#), 11/4/2013 7:08 AM

Standard Fields

Action	Field Label	Field Name	Data Type
	Created By	CreatedBy	Lookup(User)
	Last Modified By	LastModifiedBy	Lookup(User)
Edit	Owner	Owner	Lookup(User,Queue)
Edit	Training Number	Name	Auto Number

Salesforce.com adds __c to the API Name which is used to reference the object in configuration and code

Standard fields are created when the object was defined, including the (Name) Auto Number field

Create Custom Fields

Custom Object Definition Detail

[Edit](#)[Delete](#)

Singular Label Training
Plural Label Trainings
Object Name VS_Training
API Name VS_Training__c

Description Object will be used to keep track of training sessions.

Enable Reports ☒

Track Activities ☒

Allow in Chatter Groups ☐

Allow Sharing ☒

Allow Bulk API Access ☒

Allow Streaming API Access ☒

Track Field History ☒

Deployment Status Deployed

Help Settings Standard salesforce.com Help Window

Modified By Training Attendee 1, 7/13/2015 10:59 AM

Created By Training Attendee 1, 7/13/2015 10:59 AM

Standard Fields

[Standard Fields Help](#) ?

Action	Field Label	Field Name	Data Type	Controlling Field	Indexed	Track History
	Created By	CreatedBy	Lookup(User)			<input type="checkbox"/>
	Last Modified By	LastModifiedBy	Lookup(User)			<input type="checkbox"/>
Edit	Owner	Owner	Lookup(User,Queue)		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Edit	Training Number	Name	Auto Number		<input checked="" type="checkbox"/>	<input type="checkbox"/>

Custom Fields & Relationships

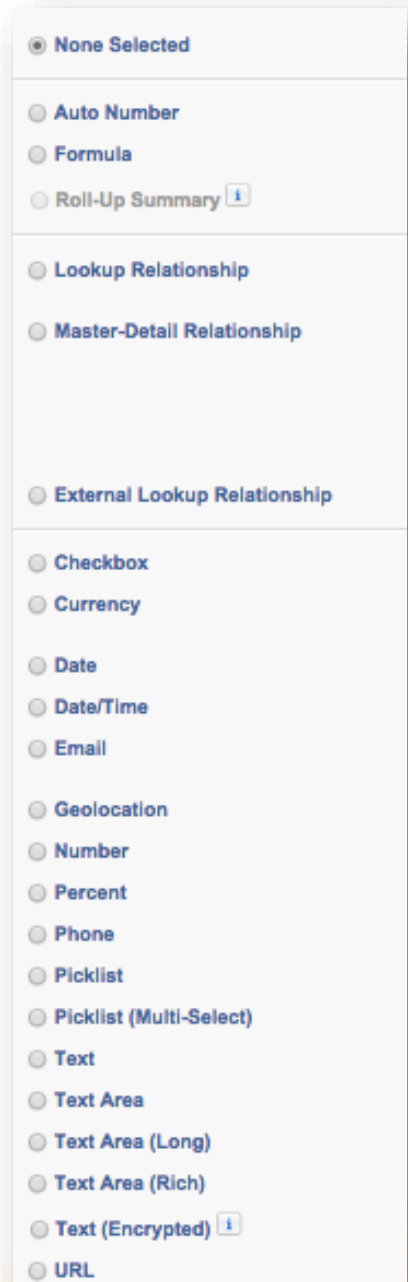
[New](#)[Field Dependencies](#)[Set History Tracking](#)[Custom Fields & Relationships Help](#) ?

No custom fields defined



Create Custom Fields

- Field types are explained in the wizard and in the SFDC [Custom Field Types Definition](#) help page
- Select the desired field type and click Next



A screenshot of the Salesforce Custom Field Type Selection screen. The screen displays a list of field types with radio buttons for selection. The 'None Selected' option is currently selected. The list includes: Auto Number, Formula, Roll-Up Summary (with an information icon), Lookup Relationship, Master-Detail Relationship, External Lookup Relationship, Checkbox, Currency, Date, Date/Time, Email, Geolocation, Number, Percent, Phone, Picklist, Picklist (Multi-Select), Text, Text Area, Text Area (Long), Text Area (Rich), Text (Encrypted) (with an information icon), and URL.

- ☒ None Selected
- ☐ Auto Number
- ☐ Formula
- ☐ Roll-Up Summary ⓘ
- ☐ Lookup Relationship
- ☐ Master-Detail Relationship
- ☐ External Lookup Relationship
- ☐ Checkbox
- ☐ Currency
- ☐ Date
- ☐ Date/Time
- ☐ Email
- ☐ Geolocation
- ☐ Number
- ☐ Percent
- ☐ Phone
- ☐ Picklist
- ☐ Picklist (Multi-Select)
- ☐ Text
- ☐ Text Area
- ☐ Text Area (Long)
- ☐ Text Area (Rich)
- ☐ Text (Encrypted) ⓘ
- ☐ URL

Create Custom Fields – Naming Convention

- Field label should be self explanatory
- Add company initials as a prefix to custom object/field names
 - Ex: VS_Medical_Inquiry_ID (where VS is the company name)
 - Don't restrict it by adding country or business unit codes as they will become useless when expanding down the road

Custom Field Definition Edit

Change Field TypeSaveCancel

Field Information

Field Label	Medical Inquiry ID	Data Type	Text
Field Name	VS_Medical_Inquiry_ID		
Description	US and CA. Primary Care. Use to capture third-party system med inquiry ID.		
Help Text	<div></div> <div>i</div>		

Create Custom Fields – Establish FLS

- For every custom field you create, the wizard allows you to establish the Field Level Security

Step 4. Establish field-level security Step 4 of 5

[Previous](#) [Next](#) [Cancel](#)

Field Label: Reminder Date
Data Type: Formula
Field Name: Reminder_Date
Description:

Select the profiles to which you want to grant edit access to this field via field-level security. not add to field-level security.

Field-Level Security for Profile	<input type="checkbox"/> Visible	Read-Only
Contract Manager	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
EMEA - Managed Markets Sales - Platform	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Standard User	<input type="checkbox"/>	<input checked="" type="checkbox"/>
System Administrator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VExample Primary Care Sales Management - Platform	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VExample Primary Care Sales - Platform	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Previous](#) [Next](#) [Cancel](#)

Make the field visible
for all profiles or
specific profiles



Create Custom Fields – Add to Page Layout

- For every custom field you create, the wizard allows you to add the field to a page layout

Step 5. Add to page layouts

Field Label	Reminder Date
Data Type	Formula
Field Name	Reminder_Date
Description	

Select the page layouts that should include this field. The field will be added as the last field in the first 2-column section of these page layouts. select a layout.

To change the location of this field on the page, you will need to customize the page layout.

<input checked="" type="checkbox"/> Add Field	Page Layout Name
<input checked="" type="checkbox"/>	Training Layout

When finished, click **Save & New** to create more custom fields, or click **Save** if you are done.


Custom object wizard automatically creates the page layout which you can edit later

Object Relationships

- **In order to view data for custom objects offline from Veeva CRM on the iPad or Windows devices**
 - Relate the custom object to the Account object
 - Custom object data will be visible from a related list on the Account page layout(s)
- **Salesforce.com supports two types of relationships**
 - Lookup Relationship
 - Master-Detail Relationship



Field Type – Lookup Relationship

- **Creates a relationship that links this object to another object**
 - Example: Associate a particular Account with a Training record
- **Allows users to click a lookup icon  and select a record (Account) from a popup list**
- **On the associated record (Accounts), you can display a related list to show the records (Training) that are related to it**

Field Type – Lookup Relationship

- **When defining the lookup field you can decide what to do if the associated record is deleted**
 - Clear the value of the lookup field
 - Prevent the associated record from being deleted if is referenced in the system

Required ☐ Always require a value in this field in order to save a record

What to do if the lookup record is deleted?

☒ Clear the value of this field. You can't choose this option if you make this field required.

☐ Don't allow deletion of the lookup record that's part of a lookup relationship.

Field Type – Master-Detail Relationship

- **Creates a special type of parent-child relationship between this object (the child, or detail) and another object (the parent, or master) where:**
 - The relationship field is required on all detail records
 - The ownership and sharing of a detail record are determined by the master record
 - When a user deletes the master record, all detail records are deleted
- **Available for custom objects only**
 - You can create a master-detail relationship field on a custom object that links to a standard object
 - Standard objects (Accounts) can only be the “master” and not the “detail”



Create Relationship Fields

- Once you decide which object is the master and which is the detail, go to the detail object and create a Master-Detail Relationship or Lookup Relationship field(s)



Field Type – Picklist

- **Allows users to select a value from a pre-defined list of values**
 - For example, Course Status picklist should have values “Planned,” “Confirmed,” and “Canceled”

Enter each
picklist field value
on a separate line

The screenshot shows the configuration interface for a Picklist field in Veeva CRM. The 'Field Label' is 'Course Status'. Below it, a text box contains the values 'Planned', 'Confirmed', and 'Canceled', each on a new line. A red box highlights this text box and the two checkboxes below it: 'Sort values alphabetically, not in the order entered. Values will be displayed alphabetically everywhere.' and 'Use first value as default value'. The 'Field Name' is 'VS_Course_Status'. The 'Description' is 'Use to store the course status values.' and the 'Help Text' field is empty.

Field Label

Enter values for the picklist, with each value separated by a new line.

Planned
Confirmed
Canceled

☐ Sort values alphabetically, not in the order entered. Values will be displayed alphabetically everywhere.
☐ Use first value as default value

Field Name

Description

Help Text

Field Dependencies

- Make values in one field dependent on values of another field
- To create a new field dependency:
 - Setup → Create → Objects → [Object] and click the Field Dependencies button
 - Click the New button to create a new dependency
 - Select the Controlling Field and the Dependent Field

Step 1. Select a controlling field and a dependent field. Click Continue when finished.

Step 2. On the following page, edit the filter rules that control the values that appear in the dependent field for each value in the controlling field.

		<input type="button" value="Continue"/>	<input type="button" value="Cancel"/>
Controlling Field	<input type="text" value="Course Registration"/>		
Dependent Field	<input type="text" value="Course Status"/>		
		<input type="button" value="Continue"/>	<input type="button" value="Cancel"/>



Dependent Picklists

- Configure the dependent picklist field value(s) for each controlling picklist field value

Controlling Field Course Registration

Dependent Field Course Status

Instructions

- Double click on a cell to toggle its visibility for the Controlling Field value shown in the column heading.
- To change multiple cells at once, select multiple cells and then click the Include Values or Exclude Values button to change the visibility of all selected cells.
- Use the mouse to select multiple cells that are not adjacent.

Legend

Excluded Value

When Course Registration value is Open then all Course Status values are available

When Course Registration value is Closed then all Course Status values are excluded and field is grayed-out

Showing Columns: 1 < Previous Next > View All Go to	
Course Registration: Open	Closed
Course Status: Cancelled	Cancelled
Confirmed	Confirmed
Planned	Planned

Course Registration: Open

Course Status: --None--
Cancelled
Confirmed
Planned

Course Registration: Closed

Course Status: --None--

Creating Records Offline on iPad or Windows

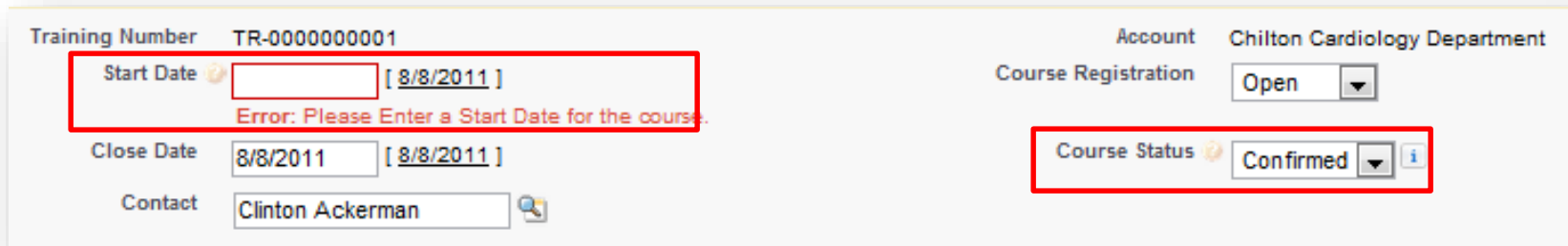
- **Ability to create records offline is driven by two things:**
 - User has create permission on the object
 - Object has the field Mobile_ID_vod and users have FLS access to it
- **Veeva objects already have the Mobile ID field**
 - Define it for the custom objects only
- **Mobile ID must have the following configuration**
 - Text (100) (External ID) (Unique, Case Insensitive)

General Options	
Required	<input type="checkbox"/>
Unique	<input checked="" type="checkbox"/>
Case Sensitive	<input type="checkbox"/>
External ID	<input checked="" type="checkbox"/>
Default Value	



Object Validation Rules

- **Validation rules verify that the data a user enters in a record meets the standards you specify before the user can save the record**
 - Display an error message to the user when the rule returns a value of “True” due to an invalid value
 - For example, you may require users to enter a Start Date for a training course when the Course Status value is “Confirmed”



Training Number TR-0000000001

Start Date [8/8/2011]

Error: Please Enter a Start Date for the course.

Close Date 8/8/2011 [8/8/2011]

Contact Clinton Ackerman

Account Chilton Cardiology Department

Course Registration Open

Course Status Confirmed

- **Validation rules can be configured to be enforce offline**

Object Validation Rules – Continued

- Enter the error condition formula using the wizard

1. Build the error condition formula

2. Check Syntax to detect errors in the formula

3. Specify the error message users will see

4. Indicate where the error message should be displayed

The screenshot shows the 'Error Condition Formula' wizard. It includes an example formula 'Discount_Percent__c > 0.30' and a 'Check Syntax' button. The formula being entered is 'AND(ISPICKVAL(Course_Status__c , "Confirmed"), ISBLANK(Start_Date__c))'. The 'Error Message' section shows the message 'Please Enter a Start Date for the course.' and the 'Error Location' is set to 'Field' for 'Start Date'.

Error Condition Formula

Example: `Discount_Percent__c > 0.30` [More Examples ...](#)
Display an error if Discount is more than 30%

If this formula expression is **true**, display the text defined in the Error Message area

`AND(ISPICKVAL(Course_Status__c , "Confirmed"), ISBLANK(Start_Date__c))`

Functions

-- All Function Categories --

ABS
AND
BEGINS
BLANKVALUE
BR
CASE

ABS(number)
Returns the absolute value of a number, a number without its sign

[Help on this function](#)

Error Message

Example: `Discount percent cannot exceed 30%`

This message will appear when Error Condition formula is **true**

Error Message: `Please Enter a Start Date for the course.`



This error message can either appear at the top of the page or below a specific field on the page

Error Location: ☐ Top of Page ☒ Field `Start Date`

Create a Custom Tab for the Object

- If users will need to access the custom object from its own tab then define a custom tab for the object:
 - Setup → Create → Tabs and click the New button
 - Select the Object and Tab Style
 - Tabs for custom objects only appear online

Select an existing custom object or create a new custom object now.

Object	<input type="text" value="Training"/>
Tab Style	 <input type="text" value="Dice"/> 

(Optional) Choose a Home Page Custom Link to show as a splash page the first time your users click on this tab.

Splash Page Custom Link	<input type="text" value="--None--"/>
-------------------------	---------------------------------------

Configure Page Layouts

- **To modify a page layout for a custom object:**

- Setup → Create → Objects → [Object] → Page Layout section and click the Edit button
- Administrator can also access the page layout configuration page by clicking the Edit Layout link when viewing the detail page of an object

Training
TR-0000000001

[Back to List: Custom Object Definitions](#)

[Open Activities](#) | [Activity History](#) | [Notes & Attachments](#)

[Customize Page](#) [Edit Layout](#)

Training Detail [Edit](#) [Delete](#) [Clone](#)

Training Number	TR-0000000001	Account	Chilton Cardiology Depart
Start Date	8/8/2011	Course Registration	Open
Close Date	8/8/2011	Course Status	Confirmed
Reminder Date	8/1/2011		

Configure Search Layouts

- To modify search layouts for a custom object:
 - Setup → Create → Objects → [Object] → Search Layouts section and click the Edit button next to one of the search layouts

Search Layouts			
Action	Layout	Columns Displayed	Buttons Displayed
Edit	Search Results	Training Number	
Edit	Lookup Dialogs	Training Number	N/A
Edit	Lookup Phone Dialogs	Training Number	N/A
Edit	Training Tab	Training Number, Account, Contact, Start Date, Close Date, Reminder Date, Course Status, Course Registration	N/A
Edit	Training List View	N/A	New,Accept,Change Owner
Edit	Search Filter Fields		N/A



SFDC / Veeva Platform Limits



SFDC / Veeva Platform Limits

Key System Limits	
Custom Objects	2,000 per org
Custom Fields	800 per object
Custom Picklist	Up to 1,000 entries Up to 255 characters per entry
Field History Tracking (audit trail)	20 per object
Master-Detail Relationship	2 per object
Lookup Relationship	25 per object
External IDs	7 per object



SFDC / Veeva Platform Limits – Continued

- Requests can be made to SFDC to increase limits
- SFDC considers business case, performance implications, and other factors when deciding whether to increase a limit
- Limits are subject to change in future SFDC releases
- [Salesforce.com Features and Edition Limits](#) help page
 - Look in the Unlimited and Performance Edition column

Salesforce Features and Edition Limits							A A 	
Limits for Salesforce features by edition.								
Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition	
Action Plans: Maximum Number of Tasks	N/A	N/A	N/A	N/A	75	75	75	
Active Lookup Filters	5 per object	5 per object	5 per object	5 per object	5 per object	5 per object	5 per object	
Active Validation Rules	N/A	20 per object	20 per object	20 per object	100 per object	500 per object	100 per object	

Module Summary

- **Created a custom object**
- **Added custom fields to a custom object:**
 - Lookup
 - Master-Detail
 - Picklist
- **Configured field level dependency**
- **Modified columns displayed in tabs, related lists, and search layouts**
- **Reviewed Salesforce.com Platform Limits**



Labs

Create a custom object

